DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE — Idm-E NO. 1957 — DMEA NO. 397

Application
- [ ] Denied
- [ ] Withdrawn

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

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

Folder No. 1:

Left Side

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

Right Side

- [x] Project summary (final)
- [x] Work Completed analysis (final)
- All other material filed in chronological order including the following reports if checked:
- [ ] Field Team Semi-Annual Report for Certified Project
- [x] Final Field Team Report (Tab)
- [x] Operator's Final Report (Tab)
- [ ] 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. 2 : Reports
- [x] Analysis of Semi-Annual Inspection Reports & FT Semi-annual reps.
- [ ] Project Summary (Interim) by DMEA Engineers

Right Side

- [ ] Field Team Semi-Annual Report for Certified Project
- [ ] Field Team Interim Reports
- [x] Operator's Monthly Reports with transmittal, narrative and maps.
- [x] Settlement Sheets

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

Folders No. _____ : Settlement Sheets

Folders No. _____ : Drill Logs

Folders No. _____ : Royalty material

17963

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF ROYALTY REVIEW

I have reviewed the files of the Washington Office pertaining to Contract Idm-E397, Docket DMEA-1957 (uranium), dated September 4, 1952, with

Ellihill Mining Company
c/o William F. Reves, C.P.A.
First National Bank Bldg.
Price, Utah

for the purpose of determining the amount of royalty payable to the U. S. Government on sales of minerals from property referred to as the Jemac Mine located in San Juan County, Utah, during the period November 18, 1954, through November 22, 1961.

A certification of discovery or development was issued on November 4, 1955, and, in accordance with Article 6 of the contract, royalty is payable on all minerals produced from the land described in Article 2 of the contract for a period of 10 years from the date of the contract or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first. A Report of Review dated February 19, 1954, indicated accepted costs under the exploration contract amounting to $18,975.11 with the Government's contribution on a 90 percent basis being $17,075.80.

The status of the project, the scope of review, and the reasons therefor are stated on page 2.

This review established no sales subject to the Government's royalty subsequent to the period covered by a prior Royalty Audit Certificate, which found the sales subject to the Government's royalty through November 17, 1954, to be $75,222.89. The royalty account as of November 17, 1954, was:

Total Royalty Payable	$3,761.15
Total Royalty Paid	3,714.42
Balance of Royalty Due	$ 46.73

At November 22, 1961, the royalty account of this project was found to be:

Total Royalty Payable	$3,761.15
Total Royalty Paid	3,761.15
Balance of Royalty Due	$ -0-

E. D. Talbert, OME Auditor

December 1, 1961

STATUS OF PROJECT, SCOPE OF REVIEW
AND REASONS THEREFOR

The files indicate that the property under this contract, consisting of the Jomac I, Jomac II, and Jomac III claims owned by the Operator, have been inactive since December 1954. A report of a March 19, 1955, examination of the property by a regional engineer states "No work has been done at the mine since operation ceased in December 1954. It is assumed that most of the unmined material is considered to be below commercial-grade ore". Subsequent inspections, checks of A.E.C. production records, and inquiries by regional engineers have confirmed the continued inactivity of the property.

All sales of production from the date of the contract are covered by a Royalty Audit Report and Certificate dated June 7, 1955. The $46.73 balance stated therein as due the Government was received during July 1955.

This review was made in lieu of an on-site audit of the Operator's accounts and records for the following reasons:

(1) The property has been inactive since December 1954;

(2) All sales of production have been reported and proper royalty thereon paid; and

(3) The administrative cost to the Government of an on-site royalty audit at this time would be excessive in relation to the amount of possible additional royalty which might be disclosed.

MME Form 22
Dec. 60

DEPARTMENT OF THE INTERIOR
Office of Minerals Exploration

CHECK SHEET OF EXAMINING ENGINEER

Operator's Name and Address

Ellihill Mining Company
c/o William F. Reves
First National Bank Bldg.

Price, Utah

Contract No.	Docket No.
Idm E397	DMA 1957

Prepared by (Signature)	Date
Hugh M. Connors	11-22-61

Hugh M. Connors

Yes	No		
		1. (a)	Does the Operator stockpile ore subject to royalty repayment?
		(b)	If so, is segregation and identification procedure adequate?
		2. (a)	Does the Operator commingle production subject to DMEA or OME royalties with exempt production?
		(b)	If so, is the allocation of the commingled production equitable?
		3. (a)	Does the Operator stockpile mine or mill rejects (low grade ore, tailing, middlings, etc.) that may have potential value within the royalty payment period?
		(b)	If so, are adequate records maintained on such material to protect the Government's interest?
		4.	Are the assay controls in effect adequate?
		5.	Does the manner of disposing of production give the Government its fair royalty returns?
		6.	Do your periodic examinations of operations indicate the Operator is properly reporting his production of ores subject to DMEA or OME royalties?
		7.	Does the Operator buy from or sell to other Operators?

8. Current status of property. (Check one).

	Operating.
X	Inactive.
	Abandoned.

Dec. 1954 Date of last production if not operating.

Comment on items 1(b), 2(b), 3(b), and 4 to 6, if answer is No:

The A.E.C. production records for the first and second quarters of 1961 have been checked and no production from the Jomac claims is shown.

84861-60

6/20/55 gla

DEFENSE MINERALS EXPLORATION ADMINISTRATION

CONTRACT ADMINISTRATION AND AUDIT DIVISION

FIRST ROYALTY AUDIT CERTIFICATE

I have examined the records and sales documents pertaining to the sale of Uranium Ores for the period December 18, 1953 through November 17, 1954, by

Ellihill Mining Company
c/o William F. Reves, C.P.A.
First National Bank Building
Price, Utah

produced from the Jomac Mine near White Canyon, thirteen miles northeast of Hite, San Juan County, Utah, under the terms of Contract Idm-E397, Docket No. DMEA 1957.

My examination was made in accordance with generally accepted standards applicable in the circumstances.

The audit established the total net sales of Uranium Ore for this period to be $75,222.89, including all applicable bonus, premiums and allowances. Royalty due the United States Government at the contract rate of 5% is $3,761.15. The royalty paid and balance due are as follows:

Total Royalties Due	$3,761.15
Total Royalties Received	3,714.42
Balance of Royalties Due	$46.73

June 7, 1955

Donald T. Finch

Donald T. Finch, Auditor

FIRST ROYALTY AUDIT REPORT

RECEIVED
JUN 1 1955

I INTRODUCTION

On May 2, 3 and 16, 1955 an audit of royalty payments due, covering the period December 18, 1953, through November 17, 1954, was made of the ore sales data pertaining to Contract Idm-E397, Docket DMEA 1957, with

Ellihill Mining Company
c/o William F. Reves, C.P.A.
First National Bank Building
Price, Utah

covering a project of exploration for Uranium located at the Jomac Mine, near White Canyon, thirteen miles northeast of Hite, San Juan County, Utah.

Sales data consisted of copies of settlement sheets furnished to the Executive Officer, DMEA Field Team, Region III, by the purchaser. This purchaser was the Colorado Plateau Uranium Ore Project, operated by the American Smelting and Refining Company.

II GENERAL INFORMATION

The original contract (short form) dated September 4, 1952, authorized a total exploration cost of $19,050.00 with Governmental participation of 90%, or $17,145.00. According to a Report of Review, dated February 19, 1954, by B. J. Brekhus, DMEA Auditor, the accepted costs of exploration amounted to $18,973.11 with Governmental participation of $17,075.80.

The DMEA Certificate of Discovery is dated November 14, 1953. The production area subject to DMEA royalty is described in this certificate and in Article 2 of the Exploration Contract.

Shipments for the period December 18, 1953 through October 14, 1954 were delivered to the receiving station located at Monticello, Utah. The last reported shipment on November 17, 1954 was delivered to the then recently established receiving station located at White Canyon, Utah.

Sales of ores from this project were under A.E.C. License No. 1002. Production bonus was payable under designation D.U.P.C-6-C-89. The ores produced contained Uranium and Copper. Copper content was less than 1% and, therefore, the purchaser made no payment for Copper.

According to a report by the Examining Engineer, U.S.B.M., all operation ceased in December, 1954.

III SCOPE OF AUDIT AND FINDINGS

The Audit was limited to determining the accuracy and propriety of royalty payments received by the Finance Officer, which were applicable to production and sales of ores during the period December 18, 1953 through November 17, 1954, and a determination that all indicated sales of ores subject to repayment royalties under the Exploration Contract have been properly accounted for.

The extent of the audit and the findings follow:

A. Conference with the Examining Engineer, U.S.B.M.

In lieu of a conference with the Examining Engineer, reference was made to "Semiannual Report of Certified Project" - July 1, to December 31, 1954, which was transmitted to the Executive Officer, DMEA Field Team, on April 12, 1955.

During the audit the production shown on this report was reconciled with the audit compilation.

B. Audit of Settlement Sheets

During the audit an itemized statement of production, sales and royalties was prepared from copies of ore settlement sheets received by the Executive Officer, DMEA Field Team, Region III. A condensed summary of this statement is as follows:

Purchaser: Colorado Plateau Uranium Project, A.S.&R.
Period: December 18, 1953 through November 17, 1954.
Number of Lots of Ore: Sixty-two

Gross Wet Weight, Pounds	6,260,580 Lbs.
Net Dry Weight, Pounds	6,027,407 Lbs.
Net Dry Weight, Tons	3,013.7035 Tons
Settlement Assay U_3O_8 (Average)	.161157
Pounds U_3O_8	9,713.58 Lbs.
Price Per Lb. U_3O_8 (Average)	$2.76823
Payment U_3O_8	$26,889.39
Development Allowance @ 50¢ per lb.	$ 4,856.79

Premiums

Excess 4 Lbs. U_3O_8 per Ton

Pounds U_3O_8	16.29 Lbs.
Amount @ 75¢ per lb.	$12.22

Haulage Allowance	
Wet Tons of Ore	3,130.29 Tons
Allowance per Wet Ton (Average)	$5.647
Amount of Haulage Allowance	$17,677.75
Lime Penalty	$380.80
Sampling Charge	$ 3.00
Total Payments by Receiving Station	$49,052.35
Production Bonus	26,170.54
Total Value Subject to DMEA Royalty	$75,222.89
Average Value Per Ton of Ore	$24.96
DMEA Royalty Due @ 5%	$ 3,761.15
DMEA Royalty Received	3,714.42
Balance DMEA Royalty Due	$46.73

The itemized detail for the foregoing statement is filed as part of the audit working papers.

Discussion of the above data and the degree of confirmation follows:

Gross Weight, Pounds

Gross weight in pounds represents the total weight shown on the ore settlement sheets. All gross weight totals were recomputed where applicable.

Dry Weight, Pounds

This item is the total of the dry weight of individual lots. Moisture percentage as determined by the assay was shown for each lot. All computations of this nature for the period December 18, 1955 through November 17, 1954, were recomputed during the audit.

Dry Weight, Tons

Dry weight in tons was recomputed during the audit and used to determine the applicable percentage of DMEA royalty.

Settlement Assays U_3O_8

The settlement assays were shown on each settlement sheet. The assay shown in the condensed summary of this report is a weighted average. Actual settlement assays ranged from .1307 to .210144 percent for the period December 18, 1953 through November 17, 1954.

Price Per Pound U_3O_8

Prices paid by the Purchaser were based on A.E.C. established prices. The Purchaser, however, instead of making payment on the basis of the nearest .01 percent of U_3O_8 content, used the assay content carried to eight decimals and derived an interpolated price per pound ranging five decimal places. All

computations of prices were confirmed during the audit. It was ascertained that the purchaser's method of determining the price per pound of U_3O_8 was to the seller's advantage in the majority of instances. These prices ranged from $2.11316 to $3.50 per lb. of U_3O_8. The price shown on the condensed summary in this report is a weighted average for the period under review.

Pounds, U_3O_8

This item represents the total pounds of U_3O_8 as shown on each settlement sheet. The pounds of U_3O_8 applicable to each lot were determined by applying the appropriate assay grade to the dry pounds of ore. All computations for each lot and all totals for the period December 18, 1953, through November 17, 1954, were recomputed during the audit.

Payments for U_3O_8

All base payments were at the prices derived in the manner previously described in this report. Extensions for all payments applicable to the period audited were recomputed during the audit.

Development Allowance

Development allowance was at the A.E.C. prescribed rate of 50¢ per lb. of U_3O_8. All computations of development allowance for the period were recomputed during the audit.

Premiums

Excess of 4 lbs. U_3O_8 per Ton

Payments for this premium were at the A.E.C. prescribed rate of 75¢ per excess pound. There were only two lots during the period December 18, 1953 through November 17, 1954 that were eligible for this premium. All applicable computations were recomputed during the audit.

Excess of 10 lbs. U_3O_8 per Ton

There were no shipments eligible for this premium.

Haulage Allowance

Haulage allowances paid by the purchaser were at the A.E.C. prescribed rate of 6¢ per wet ton mile. All computations involved in the payment of haulage allowance for the audit period were recomputed.

Lime Penalty

Five lots of the operator's ores were assessed a penalty for lime content in excess of 6%. This lime penalty ranged from $1.12 to $1.15 per ton of ore. All computations involved in the determination of the amounts of lime penalties were recomputed during the audit.

Total Receiving Station Payment

The computation of all total Receiving Station payments during the period December 18, 1953, through November 17, 1954, was confirmed during the audit.

Production Bonus

Correspondence by the Auditor with the Grand Junction Operations Office of the Atomic Energy Commission revealed the following situation in respect to production bonus:

Balance of Pounds of U_3O_8 subject to Production Bonus on September 4, 1952 (the effective date of the Exploration Contract)			9,534.12 lbs.
Production December 18, 1953 through October 14, 1954		9,127.98 lbs.	
Liquidation Settlement No. 6539 November 17, 1954	585.60 lbs.		
Exempt from Bonus	179.46 "	406.14 "	
Total as above			9,534.12 lbs.

Further analysis of this item and the status of applicable DMEA Royalty follows:

Total value of earned Production Bonus upon which DMEA Royalty has been paid	$25,236.42
Value of earned Production Bonus upon which DMEA Royalty has not been paid, Liquidation Settlement No. 6539, November 17, 1954 (406.14 lbs. U_3O_8 @ $2.30 per lb.)	934.12
Total value of earned Production Bonus as confirmed during the audit and as shown on the Summary in this report:	$26,170.54

DMEA Royalties Due

DMEA royalty due for the period December 18, 1953, through November 17, 1954, at the contract rate of 5% of total sales value of $75,222.89 amounts to $3,761.15.

DMEA Royalties Received

On April 26, 1955, the Auditor confirmed that the DMEA Finance Officer had received payment on royalties due from the Operator of $3,714.42.

Balance of DMEA Royalties Due

The balance of DMEA Royalties Due from the Operator consists of a minor mill adjustment and 5% of the A.E.C. Production Bonus applicable to Liquidation Settlement No. 6539, dated November 17, 1954, and previously discussed in this report under the analysis of Production Bonus.

Audit of Operator's Records

As previously stated in this report, operations at the Jomac Mine ceased in December, 1954. Production data compiled during the audit from settlement sheets obtained directly from the ore purchaser, was reconciled with the Examining Engineer's report and with data secured from the A.E.C. In view of this reconciliation, examination of the Operator's records was not considered necessary at this time.

IV CONCLUSIONS

The audit has confirmed the accuracy and propriety of the royalty payments received by the Finance Officer, which are applicable to reported ore sales during the period December 18, 1953, through November 17, 1954, with the exception of the balance of royalty due described in the preceding section of this report. It has also determined that all indicated sales of ores during the subject period for which settlement sheets have been received, have been accounted for.

June 7, 1955

Donald T. Finch

Donald T. Finch, Auditor

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

April 12, 1955

Memorandum

To: W. H. Stratton, Executive Assistant, Office Field Exam, Denver 2, Colo.

From: Stephen R. Wilson

Subject: Docket No. [illegible] (Uranium), Contract [illegible], [illegible] Mining Co., San Juan County, Utah

Attached are the original and eight copies of a Semi-annual Report of Certified Project covering the subject property for the period July 1, 1954 to December 31, 1954. The report was prepared by W. E. Young and has been corrected to conform with information contained in your memorandum of April 6, 1955.

The company ceased operations on the property during December 1954. Inasmuch as the total number of pounds of U_3O_8 produced since the start of operations totals more than 10,000 pounds, the AEC bonus has expired. It is probable that the company terminated operations primarily because of this reason.

Stephen R. Wilson
Stephen R. Wilson

Enclosure

[illegible] OF [illegible]

July 1, 1954 to December 31, 1954

Docket:	[illegible]-1957, Contract [illegible]
Commodity:	Uranium
Contractor:	[illegible] Mining Corp. [illegible], White Canyon, Utah
County and State:	San Juan County, Utah
Date of Certification:	November 4, 1953
Date of examination for this report:	March 19, 1955
Total Contract amount:	$19,090.00
Total expended:	$16,973.11
Government participation:	$17,675.00 (92%)
Expiration date of royalty payments:	September 4, 1962
Production this period:	1,047.29 dry tons
Royalties this period:	$1,311.70
Royalties to date:	$3,714.42

The uranium mineralization in the Jenne mine occurs in association with carbonaceous material at and near the erosional contact of the Upper Triassic Shinarump formation and the underlying Lower Triassic Moenkopi formation.

Royalty received by the Government during the reporting period totals $1,311.70. The ore produced totals 1,047.29 dry tons. The pounds of uranium produced since the start of operation totals 10,013.57 pounds. No work has been done at the mine since operation ceased in December 1954. It is assumed that most of the mined material is considered to be below commerical-grade ore.

None of the company personnel was present at the time the property was visited. All equipment had been moved except the old compressors.

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CERTIFICATION BY THE UNITED STATES OF AMERICA
OF A DISCOVERY OR DEVELOPMENT UNDER
AN EXPLORATION PROJECT CONTRACT

Thayer
Hedges
Fehlmann

To: Milihill Mining Company - a corporation
White Canyon via Cortez, Colorado

Pursuant to the provisions of Exploration Project Contract No. Ium-3397, dated September 4, 1952, (Docket No. DMA-1957), hereinafter called the "contract" between you and the United States of America, hereinafter called the "Government"; to establish and fix the Government's percentage royalty on production and its lien thereon and on the land described in the contract, the Government considers and therefore certifies that discovery or development from which production may be made has resulted from the exploration work.

The nature of said discovery or development is described broadly or indicated as follows:

Uranium ore occurs in the Triassic Shinarump conglomerate, where certain ancient erosion channels have cut the surface of the underlying Moenkopi formation, on claims described in Article 2 of the contract. The uranium is contained in a dark, carbonaceous-appearing mineral, and to a lesser extent in carnotite. Copper minerals are also present.

Dated: NOV 4 - 1953

THE UNITED STATES OF AMERICA

By C. Mittendorf
Administrator, Defense Minerals
Exploration Administration

Copies to: Operator (original)
Contract Adm. & Audit Div.
Field Team, Reg. IV (2)
Finance Office
Rare & Misc. Metals Div.
Mails & Files (Docket)
Mr. Irving Gumbel, Director, DMEA
Administrator's Reading File
Operating Committee
Mr. Hedges, Rm. 4604
Mr. Thayer, Rm. 5216 O.A. Bldg.
Mr. P. L. Johnson
Mr. Murphy

Porter
Dykes
Talbot

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

Ellihill Mining Company
White Canyon, Utah

pertaining to Exploration Project Contract No. Idm-E397, Docket No. DMEA 1957, and including Amendments No. 1, 2, 3, 4 and 5, for the months of January to October, 1953, covering a project of exploration for Uranium, located in San Juan County, Utah, commonly known as Jomac Mine.

My review included an examination of the Monthly Reports (Form MF-104) and supporting documents attached thereto, comparison of costs claimed with the contract and pertinent schedules, consultation with the Executive Officer of the Field Team in charge of the project, and a determination of the reasonableness and propriety of the costs.

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

All of the costs incurred were under a contract provision for payment by the Government on the basis of agreed estimated costs of units of work actually performed.

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

Total cost as billed by Contractor		$18,973.11
Exceptions:		
By DMEA Finance Officer	-0-	
Herewith	-0-	
Total Accepted Cost		$18,973.11

The contract calls for a 90 percent participation of exploration expenses by the United States Government. Therefore, payment to the contractor by the Government in the amount of Seventeen Thousand Seventy-Five and 80/100ths Dollars

- $17,075.80 -

is considered valid and proper, provided that the Regional Executive Officer, the Administrator, or other competent official has accepted or will accept the project as having otherwise met the terms of the contract.

Date: February 19, 1954.

B. J. Brekhus, Auditor

Report of Review
dated February 19, 1954

No. 5

addtone
11/2/53

AMENDMENT OF CONTRACT: No. Idm-E397

Contract Docket No. DMEA 1957, dated September 14, 1952, between the United States of America and Ellihill Mining Company is hereby amended as follows, effective as of the date of said contract:

> Referring to "Article 3. Exploration Project" of Exploration Project Contract Form MF-200(A) (February, 1952), following the words "within a period of" delete "thirteen (13) months" and in lieu thereof insert "fifteen (15) months".

This amendment shall not be construed to increase the estimated total cost of the project, the amount of the Government's contribution, or any item of allowable cost which is expressly designated "allowable maximum."

Dated OCT 26 1953

ELLIHILL MINING COMPANY

By J. B. Plosser
J. B. Plosser, President

Attest:

M. L. Jordan
Secretary

(SEAL)

UNITED STATES OF AMERICA

By W. H. King
W. H. King, Executive Officer
DMEA Field Team, Region IV

No. 4

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9/10/53
Putin

AMENDMENT OF CONTRACT: No. Idm-3997

Contract Docket No. DMEA-1957, dated September 4, 1952, between the United States of America and Ellihill Mining Company is hereby amended as follows, effective as of the date of said contract:

> Referring to "Article 3. Exploration Project" of Exploration Project Contract Form MF-200(A), delete "eleven (11) months" and in lieu thereof insert "thirteen (13) months".

This amendment shall not be construed to increase the estimated total cost of the project, the amount of the Government's contribution, or any item of allowable cost which is expressly designated "allowable maximum".

Dated AUG 12 1953

ELLIHILL MINING COMPANY

By J. P. Glosser
President

Attest M. L. Jordan
Secretary

Seal

UNITED STATES OF AMERICA Jwo

By W. H. King
W. H. King, Executive Officer,
DMEA Field Team, Region IV

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No. 3

AMENDMENT OF CONTRACT: No. Idm-E397

Contract Docket No. DMEA 1957, dated September 4, 1952, between the United States of America and Ellihill Mining Company is hereby amended as follows, effective as of the date of said contract:

> Referring to Amendment No. 1 dated December 23, 1952, which amended "Article 3. Exploration Project" of Exploration Project Contract Form MF-200(A), further referring to said Amendment No. 1, delete "eight (8) months" and in lieu thereof substitute "eleven (11) months".

This amendment shall not be construed to increase the estimated total cost of the project, the amount of the Government's contribution, or any item of allowable cost which is expressly designated "allowable maximum".

Dated MAY 12 1953

ELLIHILL MINING COMPANY

By J. B. Plosser
PRES.

UNITED STATES OF AMERICA

By W. H. King
W.H. King, Executive Officer
DMEA Field Team, Region IV

Attest M. L. Jordan
Secy.

Seal

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 15 1953

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

April 21, 1953

Memorandum

To: W. H. King, Chief, Mining Division, Region IV

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: DMEA-1957, Contract Idm-E397, Killihill Mining Co., San Juan County, Utah. Amendment request submitted by operator.

Attached are six copies of an amendment request letter submitted by the subject contractor.

The operator desires that the duration of the contract be extended three months, because of difficulties resulting from unfavorable weather and sickness of the diamond drilling subcontractor.

It is recommended that the above request be granted.

Stephen R. Wilson
Stephen R. Wilson

Enclosure

April 20, 1953

Mr. Stephen Wilson
Bureau of Mines
1600 East, 1st South
Salt Lake City, Utah

Re: Contract No. Idm-E397

Dear Mr. Wilson:

We find it necessary to request an extension of three month's time under the above contract, which would allow it to run until August 4, 1953.

Due to bad weather and sickness during January and February we will not be able to complete the allowed drilling by the present expiration date of May 4, 1953.

This extension of time, if granted, will in no way alter the financial aspects of our contract with the government.

Very truly yours,

J. B. Plosser
President

JBP/mj

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 2 1953

No. 2

ar Vace
3/18/53
Rutin

AMENDMENT OF CONTRACT: No. Idm-E397

Contract Docket No. DMEA 1957, dated September 4, 1952, between the United States of America and Ellihill Mining Company is hereby amended as follows, effective as of the date of said contract:

> Referring to "EXHIBIT 'A'" attached to Exploration Project Contract Form MF-200(A), caption "Description of the Work", delete the following: "The diamond drill holes are to be spaced 30 feet apart along the indicated scour channels." In lieu thereof substitute the following: "The tentative plan of diamond drilling is to space the holes 30 feet apart along the scour channels, as shown on the attached map, however, the spacing and general location of the holes may be varied, depending on field conditions, contingent on prior approval of the DMEA representative."

This amendment shall not be construed to increase the estimated total cost of the project, the amount of the Government's contribution, or any item of allowable cost which is expressly designated "allowable maximum".

Dated February 18 1953.

ELLIHILL MINING COMPANY

By J.B. Plosser
J.B. Plosser, President

Attest

Seal

UNITED STATES OF AMERICA

By C. H. King
Executive Officer, DMEA
Field Team, Region IV

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 9 1953

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

January 27, 1953

Memorandum

To: W. H. King, Chief, Mining Division, Region IV

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: DMEA-1957, Contract Ida-E397, Ellihill Mining Co., San Juan County, Utah. Amendment request submitted by applicant.

Attached are six copies of a letter from the subject contractor requesting changes in the existing contract to allow more flexibility in location of diamond drill holes on the project.

The contract states, "The diamond drill holes are to be placed 30 feet apart along the indicated scour channels." It is believed that the first line of holes, as shown on figure 4A, should be extended to the south. Locations of all holes should be agreed upon by conversations between the operator and DMEA representatives.

It is recommended that the contract be amended to permit the operator's request.

Stephen R. Wilson
Stephen R. Wilson

Enclosure

S. R. Wilson

January 26, 1953

H. K. Thurber, Jr.

DMEA 1957, Contract Idm-E397, Blackhill Mining Co., San Juan Co., Utah. Request for amendment to contract.

The above-named company has requested an amendment to their contract to allow the following:

1. An extension of the first line of drill holes (the line closest to the existing underground work) to explore the entire width of the projected channel, as indicated on Fig. 4A, attached. This extension will require approximately 10 holes total rather than the 6 holes total indicated originally on Fig. 4A.

2. Latitude in spacing of holes along projected lines of holes, as required by conditions of topography and other practical considerations, to allow economical drilling and the most effective exploration of the ore horizon, as determined by mutual agreement between the operator and the DMEA representative.

Both of the above changes are logical, practical, and necessary to the most efficient conduct of the diamond drilling phase of this exploration project. Neither will increase the estimated total cost of the project.

H. K. Thurber, Jr.

H. K. Thurber, Jr.

C O P Y

ELLIHILL MINING COMPANY, INC.

WHITE CANYON, UTAH

January 19, 1953

Mr. Stephen R. Wilson
Bureau of Mines
1600 East First South Street
Salt Lake City 1, Utah

Re: Docket No. 1957
Contract No. Idm-E397

Dear Mr. Wilson:

We wish to request an amendment to Contract No. Idm-E397 to allow for the following:

1. An extension of line 1, as depicted in Fig. 4A, to allow for a maximum of 10 holes instead of the 6 now shown. This would extend line 1 across what is believed to be the ore channel and make possible a deliniation of its outside limits.

2. Latitude in the spacing and placing of drill sites along the projected lines to take care of topographical difficulties. In some areas the hill is very precipitate, making the spacing of drill sites, as projected on Fig. 4A, next to impossible.

We appreciate Mr. Thurber's visit to us last Saturday. He gave us a much better understanding of the reports to be submitted in connection with our contract.

Very truly yours,

/s/ J. B. Plosser
President

JBP/mj

Hoffman

No. 1

AMENDMENT OF CONTRACT: No. Idm-E397

Contract Docket No. DMEA 1957, dated September 4, 1952, between the United States of America and Ellihill Mining Company is hereby amended as follows, effective as of the date of said contract:

> Referring to "Article 3. Exploration Project" of Exploration Project Contract Form MF-200(A), after the words "the operator, within", delete "-60-" and in lieu thereof substitute "-120-". Further referring to first said "Article 3" after the words "and shall bring the project to completion within a period of", delete "6 months" and in lieu thereof substitute "eight (8) months".

This amendment shall not be construed to increase the estimated total cost of the project, the amount of the Government's contribution, or any item of allowable cost which is expressly designated "allowable maximum".

Dated December 23 1952.

ELLIHILL MINING COMPANY

By J.B. Blosser
J.B. Blosser, President

UNITED STATES OF AMERICA

By W. L. King
Executive Officer, DMEA
Field Team, Region IV

Attest:

M. L. Jordan
Secy.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
Received
DEC 26 1952

MF-200 (A)
(February 1952)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 8 1952

DOCKET No. DMEA 1957

COMMODITY URANIUM

Idm-E397

Mails and Files Copy

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

EXPLORATION PROJECT CONTRACT[1]

(Short Form)

IT IS AGREED this 4th day of September, 1952, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] ELLIHILL MINING COMPANY - A CORPORATION
White Canyon via ~~Hanksville, Utah~~
J.P.R. → CORTEZ, COLORADO.

hereinafter called the "Operator," as follows:

ARTICLE 1. *Authority for contract.*—This agreement is entered into under the authority of the Defense Production Act of 1950, as amended, pursuant to DMEA Order 1 entitled "Government Aid in Defense Exploration Projects."

ARTICLE 2. *Operator's property rights.*—With respect to that certain land situated in the State of Utah, County of San Juan, described as follows:[3] Three Contiguous Mining Claims known as Jomac 1, Jomac 11, and Jomac 111; all claims are recorded in Book R-2, page 354 in the Recorder's Office, San Juan County Court House, Monticello, Utah

the Operator represents and undertakes:[4]

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

NONE

(*b*) ~~That the Operator is a lessee in possession and entitled to possession under the Owner's Consent to lease attached.~~
The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof.

ARTICLE 3. *Exploration project.*—The Operator, within - 60 - days from the date of this contract shall commence work on a project of exploration for[5] Uranium

in or upon the described land; and shall bring the project to completion within a period of 6 Months from the date of this contract. The work to be performed is more fully described in Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, are made a part of this contract. The Government will contribute to the cost of this work as hereafter provided. The work shall be performed by the Operator or by independent contractor or contractors efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for workmen's compensation and employers' liability insurance, with suitable and adequate equipment, materials, and labor, to bring the project to completion within the time fixed. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

ARTICLE 4. *Costs of the project.*—The agreed, estimated costs of performing the work, expressed in terms of units of work to be performed (per foot of drifting, per foot of drilling, per cubic yard of material to be moved, etc.) are set forth in Exhibit "A," attached hereto. The Government will pay - 90 - percent of these agreed, estimated costs, as they accrue, for units of work actually performed that conform with the description or specifications for the work set forth in this contract, in an aggregate total amount not in excess of $17,145.00, which is 90 percent of $19,050.00, the agreed, estimated total cost of the project in which the Government will participate: *Provided,* That until the Operator's final report and final accounting have been rendered to the Government and any final check or auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of ten (10) percent of the maximum total which the Government might have been called upon to pay under the terms of the contract. The Government may, as it sees fit, make payments direct to the Operator's independent contractors, if any, for the account of the Operator, rather than to the Operator.

ARTICLE 5. *Reports, accounts, audits.*—(*a*) *Progress reports.* The Operator shall provide the Government with monthly reports of units of work performed under the contract, in quintuplicate (five copies), upon forms provided by the Government. These progress reports shall be certified by the Operator, and shall constitute both the Operator's invoice of units of work performed on the project during the period covered by the report and his voucher for repayment by the Government, unless the Government requires the use of a standard voucher form with invoice attached. Progress reports shall include surface and/or underground engineering-geological maps or sketches showing the progress of the exploration, with assay-reports on samples taken concurrently with the advance in mineralized ground.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property, particularly excluding any land or interest therein to which the Government's lien is not to attach or the production from which is not to be subject to the Government's percentage royalty.
[4] Strike out the provision not applicable.
[5] Name of mineral or minerals.

(*b*) *Final report.*—Upon completion of the exploration work or termination of the contract the Operator shall provide the Government with an adequate geological and engineering report, in quintuplicate (five copies), including an estimate of ore reserves resulting from the exploration work.

(*c*) *Compliance with requirements.*—If, in the opinion of the Government, any of the Operator's reports are insufficient or incomplete, the Government may procure the making or completion of such reports and attachments as an expense of the exploration work; and the Government may withhold approval and payment of any vouchers depending upon insufficient or incomplete reports.

(*d*) *Accounts and audits.*—The Operator shall keep suitable records and accounts of the units of work performed, which the Government may inspect and audit at any time. The Government may at any time require a check of the work performed and an audit of the Operator's records and accounts, by a certified public accountant or otherwise, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract. Upon the completion of the project or termination of the contract the Operator shall render a final account and statement of work performed to accompany his final report.

ARTICLE 6. *Repayment by Operator.*—(*a*) If, at any time, the Government considers that a discovery or a development from which production may be made has resulted from the exploration work, the Government, at any time not later than 6 months after the Operator has rendered the required final report and final account, may so certify in writing to the Operator. The certification shall describe broadly or indicate the nature of the discovery or development. In the event of such certification, any minerals mined or produced from the land described in Article 2 within 10 years from the date of this contract, including any mined or produced before the certification, shall be subject to a percentage royalty which the Operator or his successor in interest shall pay to the Government, upon the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production, in whatever form disposed of, including ore, concentrates, or metal, until the total amount contributed by the Government, without interest, is fully repaid, or said 10 years have elapsed, whichever occurs first, as follows:

(1) One and one-half (1½) percent of any such net amounts not in excess of eight dollars ($8.00) per ton.

(2) One and one-half (1½) percent of any such net amounts, plus one-half (½) percent of such net amounts for each additional full fifty cents ($0.50) by which such net amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such net amounts.

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

(*b*) As here used, "net smelter returns," "net concentrator returns," and "other net amounts realized from the sale or other disposition," mean gross revenue from sales, or if not sold, the market value of the material after it is mined in the form in which and the place where it is held. In the case of integrated operations in which the material is not disposed of as such, these terms mean what is or would be the gross income from mining operations for percentage depletion purposes in income-tax determination.

(*c*) To secure the payment of its percentage royalty, the Government shall have and is hereby granted a lien upon the land described in Article 2 and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

(*d*) This article is not to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations.

ARTICLE 7. *Assignment, transfer, or loss of Operator's interest.*—Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder. The Operator shall not make any voluntary nor permit any involuntary transfer or conveyance of the Operator's rights in the land described in Article 2, without making suitable provision for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof; *Provided*, that mere failure by the Operator to maintain the Operator's rights in the land, without any consideration running to the Operator other than relief from the cost of maintaining such rights (as by surrender of a leasehold, failure to perform assessment work, or failure to exercise an option), coupled with complete abandonment by the Operator of all interest in or operations on the land for a period of 10 years from the date of this contract, shall not constitute such a transfer or conveyance. Should the Operator make or permit any transfer or conveyance in violation of this provision, the Operator shall be and remain liable for payment to the Government of the same amounts, at the same times, as would have been paid under the terms of the percentage royalty on production. If for any reason the net smelter returns, net concentrator returns, or other net amounts realized from the sale or other disposition of such production are not available as a means of measuring the amount of the Operator's liability, the amount thereof shall be estimated as well as may be, and in the event of dispute as to such estimates, the determination thereof by the Administrator of Defense Minerals Exploration Administration or by his successor shall be final and binding upon the Operator.

ARTICLE 8. *Termination and completion.*—The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if, in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worth while discovery and in the opinion of the Government further operations are not justified.

ARTICLE 9. *Changes and added provisions* **A certified drill log must accompany each copy of Monthly Progress Report, Form MF-104. Reimbursement will be made only for diamond drill holes completed to the satisfaction of the DMEA representative.**

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

ELLIHILL MINING COMPANY
(Operator)

By J. B. Plosser PRES.

By W. H. King
Executive Officer - DMEA
Field Team, Region IV

I, Eleanor A. Alexander, certify that I am the secretary of the corporation named as Operator herein; that J. B. PLOSSER, who signed this contract on behalf of the Operator, was then PRESIDENT of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

Eleanor A. Alexander [CORPORATE SEAL]

Exhibit "A"

Description of the Work

Explore the scour channels in the basal Shinarump conglomerate by 3000 feet of diamond drilling to test for concentrations of uranium minerals. The diamond drill holes are to be spaced 30 feet apart along the indicated scour channels. Drift 200 feet on the ore that is exposed in the face of the No. 2 drift.

The attached map shows the location of the work.

Estimated Cost of the Work

Cost per foot of diamond drilling including preparation of drill sites -	$4.66 -	3,000 feet -	$13,980
Cost per foot of drifting -	$25.35 -	200 feet -	5,070
		TOTAL -	$19,050

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

OFFICE OF
REGIONAL DIRECTOR

REGION IV

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

DMA-1951

August 8, 1951

Memorandum

To: Landon Strobel, Executive Secretary
Defense Minerals Administration

From: Executive Officer, DMA Field Team, Region IV

Subject: DMA Application, Form MF-103

Enclosed herewith is application for exploration aid, Form MF-103, for the following:

Ellihill Mining Company
White Canyon via
Hanksville, Utah

J. H. East, Jr.

Enclosure

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 13 1951

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

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

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

DO NOT FILL IN THIS BLOCK

Docket No. DMA 1957

Date received 8-13-51

Participation

Ellihill Mining Company
White Canyon via
Hanksville
Utah

Name and address of applicant

Date August 2, 1951

FILL IN THIS BLOCK

Date of application August 2, 1951

Estimated cost $ 19,831.88

Mineral or metal Uranium

Percentage of Government participation 90%

Location of mine Seven miles Northeast of the Hite Ferry on the Colorado River in San Juan County, Utah.

Date of filing MF-100 Did not file

DMA Docket Number, if available 1957

INSTRUCTIONS

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 13 1951

THE APPLICANT

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

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

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

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

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

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

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

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

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

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

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

*16. History:

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.

(*b*) State briefly the known history and production of adjoining and neighboring properties.

(*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:

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

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

*18. Ore or mineral reserves: (If property is or has been operating.)

(*a*) Describe the ore or mineral deposits briefly.

(*b*) Submit available maps and assay data.

(*c*) Give estimated tonnage and grade of each class of ore reserves.

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

THE EXPLORATION

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

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

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

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

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.

(*b*) Supervisors, by numbers and positions, with salaries of each.

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(*f*) Cost of rental for equipment which the operator proposes to rent.

(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.

(*i*) Cost of power, water, utilities, and any other items not provided for above.

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

CERTIFICATION

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

Ellihill Mining Company
(Name of company)

By J. B. Plosser
(Signature of authorized official)

August 2, 1951
(Date)

J. B. Plosser
President
(Title)

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

*Same as footnote on page 1.

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

Ellihill Mining Company
White Canyon, via Hanksville, Utah

1. Corporation

3. J. B. Plosser, Pres. White Canyon via Hanksville, Utah
A. L. MacLeod, V. Pres. " " " " "
E. Alexander, Sec'ty - Treas. " " " " "
V. W. Barrett, Dir. & Stockholder " " " "
L. O. Davis, " " " " " "

4. (a) The Ellihill Mining Co. was formed for the sole purpose of exploring for and developing Uranium resources.
(b) J. B. Plosser, Pres., who will manage and direct the project, worked in a copper mine in Bisbee, Arizona, as mucker, in 1916. He spent 1949 and 1950 prospecting desert and mountain regions of Calif., Nev., and Utah. From 1932 to 1945, he owned and operated his own flying service and directed the operations of a Government Contract flying school in Glendale, Calif.
A. H. MacLeod, V. Pres., has prospected, worked in mines, and been Superintendent of mines throughout the West for 45 years.
L. O. Davis has worked in mines in Colo. and is now Foreman of the mill operated by the Vanadium Corp. of America in White Canyon, Utah.

5. Owner

6. None

8. The Corporation is newly formed, and has not yet received its Corporate papers. All expenses thus far incured have been borne by the Officers and stockholders as private investments, and no financial report or profit and loss statement can be issued at this date.
Expenses and liabilities that have transpired are listed as follows:

		Paid to date	Due
Compressor contract.....	$1,450.00	$ 504.00	$ 974.10
8 miles of road and airstrip construction		750.00	-
Jack hammer, tanks, hand tools, dynamite, and misc. mining equipment...	$ 652.76	375.72	277.04
Labor for 120 feet of tunnel @	$6.00 ft.	720.00	-
		$2,350.62	$1,251.14

Cash on hand in Bank.....$ 260.80

9. $ 1,983.19. This amount is 10% of the total cost of the project as detailed in question 23.

10. (a) The real property involved in the exploration project consists of three contiguous Copper - Uranium mining claims known as the Jomac 1, Jomac 11, and Jomac 111.
(b) The claims are situated in the unsurveyed area of White Canyon, about seven air miles Northeast of the Hite Ferry on the Colorado River in San Juan County, Utah.
NOTE. Both areas are the same.

11. Three contiguous mining claims: Jomac 1, Jomac 11, and Jomac 111.

12. Property is located about 80 miles West of Blanding, Utah , over an unimproved dirt road. It is about 110 miles South of Green River, Utah, over an unimproved dirt road. Green River is on the D & R G W railroad, and U.S. Highway 50. It is 13 miles form the Vanadium

Ellihill Mining Company
White Canyon via Hanksville, Utah

12. (continued)
Corporation of America mill at White Canyon on the Colorado River.

13. At all seasons, a sufficient quantity of water is available from a spring in Farley Canyon, and the Colorado River, a distance of 12 and 13 miles respectively.

14. Facilities: One 45' tunnel with 21' and 40' cross drifts, and a second tunnel 34' along the face of the ore ledge from tunnel #1. T Tunnel #2 is 50' long. An ore bin which will hold approximately 6 - 7 tons.
Equipment: Compressor, jack hammer, water tanks, hand tools, Geiger Counter, Scintillometer, 2 Airplanes, and a Jeep.
Buildings or structures: None
(The President has built a 12' by 24' house in White Canyon, for living quarters, and to serve as a temporary office for the Corporation.

15. Trucked by road to a mill. The closest mill is situated only 13 miles from the claims at White Canyon, Utah, on the Colorado River, and is operated by the Vanadium Corp. of America.

16. The claims were discovered by J. E. Plosser and A. M. MacLeod with the aid of a Geiger Counter, in November, 1950. Surface samples assayed 0.19% - 0.20% U3O8. Eight miles of unimproved road were built to the claims. A useable airstrip was leveled off 1½ miles from the claims. In May and June of 1951, the claims were worked by the G & G Mining Co. (Archie Garwood and Clare Gerlach)of Cortez, Colo.) They received a contract from the A.E.C. in Grand Junction to deliver 200 tons of ore to the mill at Monticello, Utah prior to June 30, 1951. (Said mill being 114 miles distant. 12 miles of which is paved - 20 miles gravel, and the rest is unimproved dirt road.) About 80 tons were delivered on this contract. A tunnel 45' was driven on the Jomac 1 claim, and then all operations were suspended by the G & G Mining Co. The reason for suspension of operations is as follows: The entire diggings from the tunnel were being shipped, and the assay report of their ore ran only 0.10% - 0.15% U3O8. The returns did not justify a continuance of operations. All parties deemed it advisable to suspend operations until further exploratory work could be accomplished.
(b) There are no adjoining properties. The closest neighboring property is the now famous Cooper - Bronson "Happy Jack" mine, which is situated in White Canyon, Utah.
(c) Regret - none available.

17. Mine is not in production at this date.

18. (a) A large rectangular hill or island of Shinarump conglomerate resting on the Moenkopi formation, comprising three claims with at least six contact points of radioactive indications.
(b) Regret no maps available. Attached is an assay report from the labrotory of the Vanadium Corp. of America mill at White Canyon, Utah.
(c) Regret cannot answer.

20. Uranium and allied ores of sufficient high grade to profitably mine.

21. To continue driving at least two tunnels with cross cuts for ventilation to prove or disprove ore deposits. Time required not more than six months.

Ellihill Mining Company
White Canyon, via Hanksville, Utah

22. The property, or claims are located along the Moenkopi and Shinarump formations. Some valuable ore along these layers has been recovered in this area. There are five good outcrops which indicate radioactive ore on the Geiger Counter.
We regret that this area is unsurveyed, and to our knowledge no Geological maps are available. Neither has the applicant prepared any proposed or assay maps.

23.

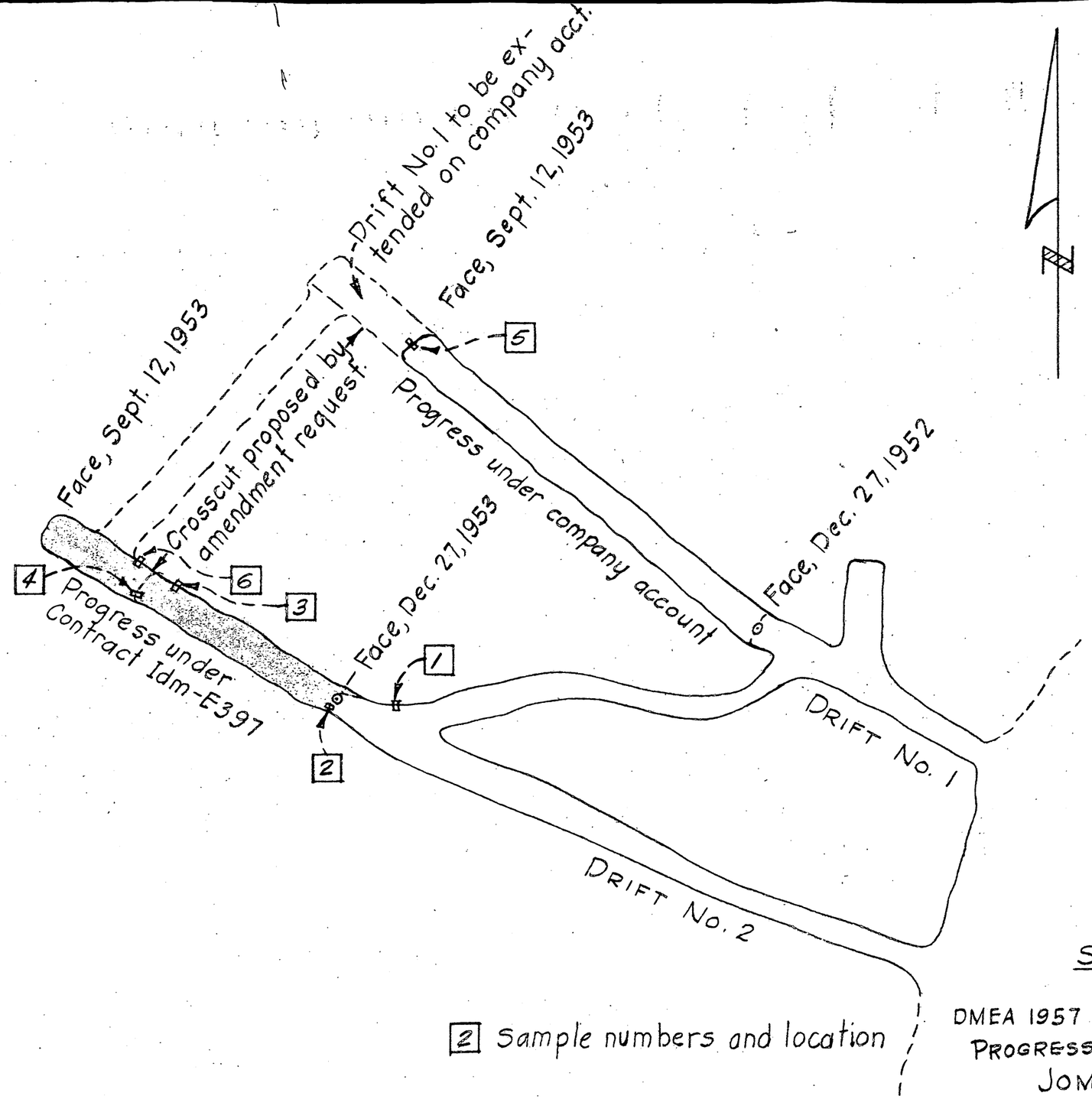
	OBJECT	LABOR	WAGE	COST
(a)	1000' of exploratory tunnel.	1 miner	$ 6.00 per. ft.	
		2 muckers		$ 6,000.00
(b)	6 months wage	1 supervisor	500.00 per. mo.	3,000.00
(c)	None			
(d)	improving road and area aroundtunnels - bulldozer work			1,000.00
	construction of 12' x 24' building			750.00
	ore shoot and bin			600.00
(e)	2000' single track rail @ $ 0.43 lineal ft.			860.00
	car			245.00
	1000''ties @ $ 0.20 ft.			200.00
	2 kegs of spikes @ $32.00			64.00
	jack hammer			250.00
	jack leg			250.00
(f)	Balance due on equipment now on property			1,251.14
(g)	Use of Jeep for 6 months			400.00
	mining equipment (compressor $504.90. Other equipment $375.72)			880.62
(h)	dynamite, fuse, and caps - $ 1.60 a ft. for 1000'			1,600.00
	1000' 1" pipe @ $ 0.31 ft.			310.00
	gas and oil for drilling purposes - $ 0.90 ft. for 1000'			900.00
	6 pieces 2' steel @ $ 3.95			23.70
	12 pieces 4' steel @ $ 5.15			61.80
	12 pieces 5' steel @ $ 6.35			76.20
	200 knock on bits @ $ 1.75			350.00
	50' air hose			36.00
	50' water hose			28.00
	tank hose			12.00
	dummy hose			12.50
	oiler hose			12.00
	jack tank			35.00
	oiler			18.25
	wheel barrow			33.00
	6 shovels @ $ 3.00			18.00
	6 picks @ $ 4.95			29.70
	3 double jacks @ $ 6.49			19.47
	3 single jacks @ $ 3.50			10.50
	100 of the following: pipe and hose connections, spuds, nipples, "T's", "L's", unions, bushings			75.00
	100 lbs. of Carbide @ $ 0.20 lb.			20.00
(i)	cost of water hauling to location			400.00
				$ 19,831.88

Ellihill Mining Company
White Canyon via Hanksville, Utah

24. Time schedule 6 months. Bulldozer work at location and road construction Building 12' x 24' house. Building ore bins and chutes. Money to be spent the first month will total $ 5,000.00.
Remaining 5 months to be devoted to exploratory tunneling. Money to be spent will total $ 3,000.00 a month.

SPOKANE, WASH.
JY 2 6PM
1953

Contract Administration and Audit Division,
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.



SCALE:- 1" = 20'

2 Sample numbers and location

DMEA 1957 CONTRACT Idm-E397
PROGRESS SKETCH MAP
JOMAC MINE
ELLIHILL MINING COMPANY
SAN JUAN COUNTY, UTAH
SEPT 24, 1953 H.K.T.

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

DOCKET COPY

Ellh

PROJECT SUMMARY REPORT

By: Michael Ching April 7, 1954

1. Docket No. DMEA-1957 (Uranium)
Contract Idm-E397
Property - Jomac mine, White Canyon area
San Juan County, Utah

Operator - Ellihill Mining Company
White Canyon via Cortez, Colorado

Operator's Property Rights - Owner of three mining claims, Jomac I, II, and III, recorded in Book R-2, page 354 Recorder's Office, San Juan County Courthouse, Monticello, Utah.

2. Contract - Dated September 4, 1952

Work authorized - Unit Cost basis

Diamond drilling 3000 feet @ $4.66	$13,980
Drifting 200 feet @ $25.35	5,070
Total	$19,050
Government participation @ 90%	17,145

Amendments

Amendment No. 1, December 23, 1952. Postpones starting date and extends completion date from 6 months to 8 months.

Amendment No. 2, February 18, 1953. Makes the location and spacing of diamond drill holes flexible, but contingent on prior approval of DMEA representative.

Amendment No. 3, May 12, 1953. Extends completion date from 8 months to 11 months.

Amendment No. 4, August 12, 1953. Extends completion date from 11 months to 13 months.

Amendment No. 5, October 26, 1953. Extends completion date from 13 months to 15 months.

Work completed

Diamond drilling 31 holes 2983.5 feet @ $4.66	$13,903.11
Drifting 200 feet @ 2535	5,070.00
Total cost	$18,973.11
Government participation @ 90%	17,075.80

The work was started December 27, 1952 and completed November 4, 1953

3. Audit Report of Review, dated February 19, 1954

Total cost as billed by Operator	$18,973.11
Exceptions	None
Total accepted cost	18,973.11
Government participation @ 90%	17,075.80

4. Certification - Dated November 4, 1953

5. Comments

The project was designed to explore a large scour channel in the basal Shinarump conglomerate for uranium mineralization, by diamond drilling and drifting. All work was confined to the Jomac No. 1 claim. Previous mine workings consisted of two adits and a connecting crosscut totalling 232 feet in length. The project drifting consisted of extension of the No. 2 adit in a northwesterly direction for a distance of 200 feet. It was driven along the contact between the Shinarump formation and the underlying Moenkopi formation. The Operator also did some drifting and crosscutting for his own account during the term of the project.

The diamond drill pattern consisted roughly of lines of three to eight irregularly spaced holes drilled across the scour channel at intervals ranging from 50 to 150 feet along the channel. The holes ranged from 33.8 to 159.0 feet in depth and in most cases were collared in the Chinle formation, penetrated the Shinarump conglomerate and bottomed in the Moenkopi formation.

Six of the 31 drill holes penetrated material having a minimum of 0.10% U_3O_8 and three of these holes contained material having more than 0.20% U_3O_8. Eight of fourteen samples taken from the underground workings indicated ore ranging from 0.10% to 0.58% U_3O_8.

Total production from the Jomac Mine prior to the exploration project amounted to 141 tons of ore averaging 0.16% U_3O_8.

Production figures since completion of the exploration project are available for two months, and show a total production of 479 tons of ore averaging 0.14% U_3O_8.

Two separate ore reserve estimates by Field Team examiners differ widely in respect to the tonnage indicated. Albert F. Trites, Jr., and G. A. Hadd estimate indicated reserves as 18,000 tons averaging 0.23% U_3O_8, based on a deposit 500 feet long, 250 feet wide and 2 feet in average thickness. H. K. Thurber, Jr., estimates indicated reserves as 4370 tons averaging 0.27% U_3O_8, based on a deposit roughly 177 feet long, 150 feet wide and 2.3 feet thick.

Trites and Hadd arrived at their average grade by taking the average grade of four shipments of ore, mined selectively by the Operator prior to the exploration project, as indicative of the grade that may be expected in the ore-bearing ground outlined by them.

Thurber's average grade was based on the combined weighted average of the drill hole samples containing ore and four underground samples of ore grade.

The Operator's estimate of ore reserves is 18,000 tons of unspecified grade.

It is believed that Trites and Hadd, as well as the Operator, are somewhat optimistic in arriving at the 18,000 ton figure. Such optimism is based on the belief that assays of drill cores do not represent the actual grade of the mineralized sandstone penetrated, since the carbonized wood containing much of the uranium values is difficult to recover in the cores, and is erratic in its distribution. Core samples assaying 0.05% U_3O_8, or even less, were accordingly interpreted as representative of 0.20% ore or better. If we assume that the tonnage and the dimensions of the deposit as outlined are correct the indicated average grade of 0.23% would appear to be too high since such grade is based on four higher-grade shipments resulting from selective mining. A more representative grade for the deposit as a whole would be the average for all ore shipped from the property through 1953, or 620 tons of 0.14% ore.

Thurber appears to have been conservative in his estimate in that comparatively high grade samples taken underground by the Operator were omitted from his calculations and core drill assays were taken at their face values. If all samples, both core drill and underground, taken within the area outlined, were included, we would arrive at an indicated reserve of 5480 tons of 0.27% ore. With allowance for dilution in mining, and extraction from fringe areas, shipping tonnage could work out to 11,000 - 12,000 tons of 0.16% ore as compared with the foregoing

optimistic estimate of 18,000 tons of 0.14% ore.

Efficiency of operations was impaired by sickness of the drilling and mining crews, the fractured nature of mudstone lenses of the Chinle formation penetrated by the core drilling, and failure of underground equipment. Otherwise the project was carried out reasonably well. The Operator's monthly and final reports were adequate.

Michael Ching
Michael Ching

MChing/foc/gla
4-7-54
cc to: Adm.Reading file
Docket (original)
Code 700
Mr. Ching

[X] Audited

[X] Certified

WORK ANALYSIS SHEET - DMEA PROJECT

Analysis as of 12-2-54
Incl. Voucher for Oct., 1953

[ ] Actual Cost

[X] Agreed Unit Costs

Name Ellihill Mining Co.

Docket No. 1957

State Utah

Commodity Uranium

Idm-E No. 397

OPERATION	AUTHORIZED Units	AUTHORIZED Cost	COMPLETED Units	COMPLETED Cost	NET COST
Drifting & Crosscutting	200	5,070.00	200	5,070.00	5070.00
Raising					
Shafts					
Winzes					
Drilling D.D. (Specify)	3000	13,980.00	2983.5	13,903.11	13,903.11
Surface Excavation					
Underground Excavation					
Roads and Trails					
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation					
New Building, Improvements, etc.					
Other (Specify)					
Totals		19,050.00		18,973.11	18,973.11

Prepared by Michael Ching

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
9/14	Murphy	500
	Hiemold	500
9/14	Talbert	800
"	on leave	120
9/17	Thomson	110
9/17	Furmich	100
		220

SEP 1 7 1962

Ellihill Mining Company
c/o Mr. William F. Reves
First National Bank Building
Price, Utah

Re: DMEA-1957 (Uranium)
Ellihill Mining Company
Jomac Mine
San Juan County, Utah
Contract Idm-E397

Gentlemen:

By the terms of the referenced Exploration Project Contract and the certification of discovery or development dated November 4, 1953, all minerals mined or produced from September 4, 1952, to September 4, 1962, were subject to the Government's percentage royalty as set forth in said contract.

As the period during which production was subject to royalty has now expired, the Government according to its present records 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 this 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.

Sincerely yours,

George Fumich, Jr.

Director

FMMurphy/ama 9-14-62

cc:
Docket
Director's Reading File
CA & A Division
Region III (2)
Code 500

43683

OFFICIAL FILE COPY O. M. E. RECEIVED DEC 11 1961		
DATE	INITIALS	CODE
12/11	[illegible]	800
		~~500~~
	[illegible]	~~600~~
		720

Building 20 - Federal Center
Denver 25, Colorado

December 7, 1961

Memorandum

To: Fiscal Section, Division of Administrative Services
Office of the Secretary, Department of the Interior
Washington 25, D. C.

From: Hugh M. Connors, Acting Field Officer, OME, Region III

Subject: DMRA-1957 (Uranium)
Contract Idm E397
Hillihill Mining Company
(Jeanne Mine)
San Juan County, Utah

Attached is the original Report of Royalty Review on the subject property dated December 1, 1961 covering the period November 18, 1954 through November 28, 1961.

Original signed by [illegible]

for Hugh M. Connors

Attachment

HMC/lm

cc Chief, Division of Field Operations (2)
E. D. Talbert, Acting Chief
Contract Administration and Audit Division
Royalty Corres Idm E397
Chron

Building 20 - Federal Center
Denver 25, Colorado

OFFICIAL FILE COPY
O. M. E
RECEIVED DEC 11 1961

DATE	INITIALS	CODE
12/11		800
12/11		500
		500
		220

December 7, 1961

Kilihill Mining Company
c/o William F. Reves
First National Bank Bldg.
Price, Utah

Re: EMEA-1957 (Uranium)
Kilihill Mining Company
(Jonas Mine)
San Juan County, Utah
Contract Idm-E397

Gentlemen:

Enclosed is a copy of the Report of Royalty Review on the captioned property dated December 1, 1961 for the period November 18, 1954, through November 22, 1961, which shows that no royalty is due the Government at this time.

Yours very truly,

Original signed by NIK

for Hugh M. Connors
Acting Field Officer, OME
Region III

Enclosure

HMC/lm
cc Chief, Division of Field Operations
E. D. Talbert, Acting Chief
Contract Administration and Audit Division
Royalty Corres. Idm E397
Chron

Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
		220

DEC 1 1961

Memorandum

To: Acting Field Officer, Region III

From: E. D. Talbert, Acting Chief (Signed) E. D. Talbert
Contract Administration and Audit Division

Subject: DMEA-1957 (Uranium)
Ellihill Mining Company
Jomac Mine
San Juan County, Utah
Contract Idm-E397

The original and two copies of a Report of Royalty Review covering the subject contract are attached. If you concur in the facts stated therein, please make the following distribution:

(a) Original to the Fiscal Section, Division of Administrative Services, Office of the Secretary, Department of the Interior, Washington 25, D. C.;
(b) One copy for the Operator; and
(c) One copy for your files.

As evidence of your concurrence, a copy of your letter transmitting the copy of the report to the Operator should be furnished this Division. If for any reason you do not concur, the original and both copies of the report should be returned to this Division with your comments.

Attachments

EDTalbert/ama 12-1-61

cc:
Docket
Director's Reading File
CA & A Division
Mr. Rothrock

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
		220

NOV 2 0 1961

Memorandum

To: Acting Field Officer, Region III

From: E. D. Talbert, Acting Chief (Signed) E. D. Talbert
Contract Administration and Audit Division

Subject: DMEA-1957 (Uranium)
Ellihill Mining Company
Jomac Mine
San Juan County, Utah
Contract Idm-E397

This Division is preparing a Report of Royalty Review on the subject contract. Accordingly, your submission of an original and one copy of MME Form 22, Check Sheet of Examining Engineer, will be appreciated.

It appears that this project has been inactive since December 1954. If this is so, please make an appropriate statement under item 8 of MME Form 22.

EDTalbert/ama
November 20, 1961

Copy to: Docket
Director's Reading File
CA & A Division

43683

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
Building 20 - Federal Center
Denver 25, Colorado
February 2, 1960

OFFICIAL FILE COPY
O. M. E.
RECEIVED FEB 8 1960

DATE	INITIALS	CODE
2-8	gad	VVO
2/8	[illegible]	800
"	Murphy	~~800~~
		VVS

Mr. William F. Reves,
Certified Public Accountant
First National Bank Building
Price, Utah

Re: Docket No. DMEA 1957 (Uranium)
Contract No. Mm-E397
(Whithill Mining Company)
White Canyon, Utah
San Juan County, Utah

Dear Mr. Reves:

In reference to the "Certification by the United States of America of a Discovery or Development under an exploration Project Contract" and the instructions in the Washington Office letter of transmittal of the Certification on the captioned project, please indicate your answer to the following questions and return one copy of the questionnaire immediately to this office.

Very truly yours,

Original signed by

J. W. Townsend
Executive Officer, OME
Field Team, Region III

1. Has the property been sub-leased or any change made in ownership other than this office has been notified? Yes ___ No___. If yes, please furnish details of the transaction on a separate sheet and include a true or signed copy of any instrument that was executed in conjunction with the matter.

2. Has there been production from the land subordinated under the referenced contract since January 1, 1959? Yes___ No___. If yes, and shipments made, who was the purchaser? _____

3. Is any of the following material stockpiled? Yes___ No___.

(a) Ore, Tons _____ Estimated grade _____
(b) Concentrates, lbs. _____ Estimated grade _____
(c) Low grade ore, tons _____ Estimated grade _____
Place stockpiled _____

Signed _____

Title _____ Date _____

HMC:ltm cc: Chmn. Op. Comm. ✓ Roy. Corres. E397 Chron.

1957

OFFICIAL FILE COPY

Date	Surname	Code
2/18	Ching	700
"	Ellis	700
2/18	Selfridge	130
"	Johnson	110
"	Wittenberg	100
		220

FEB 18 1957

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

Re: Semiannual Reports of
Certified Projects

Dear Mr. Traver:

Please refer to the latest semiannual reports on Docket DMEA-2771, Gramlich Exploration Company, Docket DMEA-1957, Ellihill Mining Company, and Docket DMEA-3003, Ol Jato Uranium Company, forwarded with your memoranda, dated February 11, 1957.

Under "Initial Production Bonus," on page 2 of each report, there appears to be a misinterpretation of the meaning of the last two items: Bonus Royalty Paid and Bonus Royalty Due. The engineer has interpreted these items as applying to the initial bonus itself and not the royalty therefrom.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

APPROVED:

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

Thor H. Kiilsgaard (GCS)
Member, Geological Survey

MChing/gla
2-18-57
cc to: Admr.'s Reading File
Operating Committee
DMEA-2771,
DMEA-~~1951~~ 1957
DMEA-3003
THKiilsgaard, Rm. 5224
Code 700 - 3 files
Mr. Ching

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

RECEIVED
JUL 1 3 1955

224 New Customhouse
Denver 2, Colorado

July 13, 1955

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: Royalty Payment - DMEA Docket 1957 (Uranium), Contract Idn-E397, Ellihill Mining Company - White Canyon - Utah

Enclosed is check No. 603 from Ellihill Mining Company in the amount of $46.73 which completes royalty payments to date as per Royalty Audit dated June 7, 1955.

W. M. TRAVER

W. M. Traver

Enclosure

vj

cc: Royalty File E397
S. R. Wilson
Sec. Opr. Comm. (2)
Royalty Report File
Chron.

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

RECEIVED
JUN 24 1955

224 New Customhouse
Denver 2, Colorado

June 20, 1955

Mr. J. B. Plosser, President
Ellihill Mining Company
c/o William F. Reeves
Certified Public Accountant
First National Bank Building
Price, Utah

Re: Royalty payments, DMEA Docket 1957 (Uranium) Contract Idm-E397, Ellihill Mining Company, White Canyon, Utah

Dear Mr. Plosser:

An amount of $46.73 is due as royalty payment under the subject contract as per the First Royalty Audit. A copy of this report was furnished to Ellihill Mining Company, c/o William F. Reeves, C.P.A. with our letter of June 16, 1955.

Please send your check in the amount of $46.73 to the Executive Officer, DMEA Field Team, Region III, Room 224 New Customhouse, Denver 2, Colorado in order that royalty payments may be kept current. Your check is to be made payable to the Defense Minerals Exploration Administration.

Very truly yours,

W. M. Traver

W. M. Traver

RDB/vj

cc: Royalty File E397
S. R. Wilson
Sec Opr. Comm.(2)
Berkenkotter
Chron.

Talbert

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

JUN 1 4 1955

Mr. Donald T. Finch
DMEA Auditor
224 New Customhouse
Denver 2, Colorado

Re: Royalty Audit
Idm-E397, DMEA-1957
Fillihill Mining Company

Dear Mr. Finch:

Receipt is acknowledged of your First Royalty Audit Certificate and Audit Report of the above-cited Exploration Project Contract.

The Report is acceptable and may be distributed in the usual manner.

Sincerely yours,

(Signed) E. D. Talbert

E. D. Talbert, Acting Chief
Contract Administration
and Audit Division

WBorovies/wb
June 14, 1955

Copy to: Docket
Admr. Reading File
Mr. Chambers

R.S.B.

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

224 New Customhouse
Denver 2, Colorado

January 27, 1955

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: Royalty Payment - Ellihill Mining Company, Docket DMEA 1957, Contract Idm-E397 - Utah

Enclosed is check No. 589 from Ellihill Mining Company in the amount of $25.92 representing additional payment due on DMEA royalty on Liquidation No. 6539.

Settlement sheet was forwarded to your office December 21, 1954.

W. M. TRAVER
W. M. Traver

Enclosure

Copy to: Dec. Opr. Comm. (2)
S. R. Wilson
Royalty File E397
Chron

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

December 29, 1954

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: Royalty - Ellihill Mining Company
Docket No. DMEA 1957, Contract Idm-E397, Utah

Enclosed is check No. 583 from Ellihill Mining Company in the amount of $155.12 representing the balance of royalty due on Liquidation No. 6331 as follows:

Royalty	$68.55
A.E.C. Production Bonus	86.57
	$155.12

Settlement sheet was forwarded to you on November 8, 1954.

W. H. KING

W. H. King

Enclosures

1d

Copy to: Royalty File 397
Sec. to Opr. Comm. (2) ~~w/settlement sheets~~
Wilson w/~~settlement sheet~~
chron

700

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

Ching
Ellis

DEC 27 1954

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

Re: Docket No. DMEA-1957 (Uranium)
Contract No. Idm-E397
Ellihill Mining Company
Jomac Mine
San Juan County, Utah

Dear Mr. King:

With reference to your memorandum of December 20, 1954, regarding royalties due on a shipment of ore by the subject company, your interpretation of the DMEA royalty regulation is correct and you should request the balance of the payment from the Operator.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

MChing/gla
12-23-54
cc to: Admr.'s Reading File
Operating Committee
Docket
Messrs. J. E. Crawford, Rm. 3641
T. H. Kiilsgaard, Rm. 5224
J. O. Hosted, Rm. 3210, GSA
Code 700
Mr. Ching

R.C.G.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
NOV 22 1954

224 New Customhouse
Denver 2, Colorado

November 15, 1954

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: Royalty - Ellihill Mining Company
Docket No. 1957, Contract No. E397, Utah

Enclosed is Ellihill Mining Company's check, in the amount of $234.26, which represents the balance of royalty due on Liquidation No. 6429 as follows:

Royalty	$ 97.29
A.E.C. Production Bonus	136.97
	$234.26

Settlement sheet was forwarded to you October 15, 1954.

W. H. King

mn

cc: Royalty File E397
Sec. to the Oper. Comm. (2)
Wilson
Chron.

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

224 New Customhouse
Denver 2, Colorado

October 7, 1954

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: Royalty - Ellihill Mining Company
Docket No. 1957, Contract No. E397, Utah

Enclosed is Ellihill Mining Company's check, in the amount of $222.73, which represents the balance of royalty due on Liquidation No. 5931 as follows:

Royalty	$100.08
A.E.C. Production Bonus	122.65
	$222.73

Settlement sheet was forwarded to you on September 23, 1954.

W. H. King

mn

cc: Royalty File E397
Sec. to the Oper. Comm. (2)
Wilson
Chron.

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

224 New Customhouse
Denver 2, Colorado

September 13, 1954

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: Royalty and A.E.C. Production Bonus
Ellihill Mining Company
Docket No. 1957, Contract E397, Utah

Enclosed is check in the amount of $165.27 from Ellihill Mining Company covering the following:

Balance of Royalty Due on Lot #5769	$34.41
Balance of Royalty Due on Lot #5770	33.23
A.E.C. Production Bonus Lot #5769	39.00
A.E.C. Production Bonus Lot #5770	58.63
	$165.27

John F. Shaw
John F. Shaw
For W. H. King

cc: Royalty File E397
Sec. to the Oper. Comm. (2)
Wilson
Chron.

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

224 New Customhouse
Denver 2, Colorado

July 14, 1954

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: Royalty-Ellihill Mining Company, Docket No. 1957, Contract No. E397, Utah

Enclosed is check from the Ellihill Mining Company in the amount of $328.98 which represents the following:

Balance on Liq. No. 5406	$189.72
A.E.C. Production Bonus on Liq. No. 5406	139.26
	$328.98

W. H. King

Enclosures

es

cc: Royalty File E397
Sec. to the Oper. Comm. (2)
Wilson
Chron.

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

224 New Customhouse
Denver 2, Colorado

May 25, 1954

Mr. J. B. Plosser, President
Ellihill Mining Company
White Canyon, Utah

Re: Royalty payments, DMEA Docket 1957 (Uranium), Contract Idm-E397, Ellihill Mining Company

Dear Mr. Plosser:

Receipt is acknowledged of your check No. 501 in the amount of $378.56 for payment of the balance of royalty payment due on Liquidation Nos. 5251 and 5252.

We require four copies of payment sheets (photostats acceptable) in support of the A.E.C. Production Bonus. As we have none of the past payment sheets in this office, please send one copy for Liquidation Nos. 4718, 4810, 4963, 5090, 5251, and 5252, and we will have the required number of copies made in this office. Your copies will be returned to you if you so desire.

We have sufficient copies of all mill settlement sheets.

Very truly yours,

W. H. King
Executive Officer
DMEA Field Team
Region IV

RDB:es
cc: Royalty File E397
Wilson
Christensen
Sec. to the Op. Comm. (2)
Berk
Chron.

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

224 New Customhouse
Denver 2, Colorado

May 25, 1954

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: Royalty-Ellihill Mining Company, Docket No. 1957, Contract No. E397, Utah

Enclosed is check in the amount of $378.56 from Ellihill Mining Company, which represents the following:

Balance due on royalty on Liquidation Nos. 5251 and 5252	$1[illegible].22
Royalty on A.E.C. Production Bonus on Liq. Nos. 5251 and 5252	228.34
	$ 378.56

es

cc: Royalty File
Sec. to the Oper. Comm. (2)
Wilson
Chron.

W. H. King

Enclosure

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

4-23-54

TO : E. Wm. Ellis, DMEA Member, Uranium Commodity Committee

DATE: Defense Minerals Administration RECEIVED MAY 4 - 1954

FROM : Arthur P. Butler, Jr., USGS Member, Uranium Commodity Committee

SUBJECT: Final Field Team Report, DMEA Docket 1957 (Uranium), Contract Idm-E 397, Ellinhill Mining Company, Jomac Mine, White Canyon area, San Juan County, Utah

The final Field Team report on the results of exploration under DMEA contract of the property identified above has been reviewed.

Comment

Exploration by drilling about 2,980 feet of core hole and driving 200 feet of drift at a cost of $18,973.11 found 4,370 tons of reasonably assured ore, averaging about 0.25 percent U_3O_8. In addition, the geologist examiners believe that the drilling outlined an area of mineralized ground 500 feet long and 250 feet wide, ranging from 1 to 4.5 feet thick in which further underground drifting will probably find additional ore. They believe that the chances are good for finding about 18,000 tons of ore at about the same average grade as the ore that is reasonably well defined. If this inference is borne out, the discovery will probably be of sufficient value to return the full share of the Government's loan.

The Field Team has recommended certification of discovery and I concur.

Arthur P. Butler, Jr.

Copy to: E. Wm. Ellis (2)

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

224 New Customhouse
Denver 2, Colorado

April 23, 1954

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: Royalty-Ellihill Mining Company, Docket No. 1957, Contract No. E397, Utah

Enclosed is check in the amount of $163.20 from Ellihill Mining Company in payment of the following royalty:

Balance due on royalty on Liquidation No. 5090	$71.80
A.E.C. Production Bonus Royalty	91.40
	$163.20

W H King
W. H. King

Enclosure

es

cc: Royalty File
Sec. to the Oper. Comm. (2)
Wilson
Chron.

Surname
Docket copy

700

Ching
Ellis
Johnson

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

APR 14 1954

Mr. Irving Gumbel, Acting Director
Materials Division,
Emergency Procurement Service
Room 5002, General Services Administration Bldg.,
7th and D Streets, S. W.
Washington 25, D. C.

Re: Docket No. DMEA-1957 (Uranium)
Contract No. Idm-E397
Ellihill Mining Company
Jomac Mine
San Juan County, Utah

Dear Mr. Gumbel:

This is with reference to our letter dated November 5, 1953, in which you were advised that a copy of the final Field Team report on the captioned project would be forwarded to you as soon as it was received in Washington.

As the procedure of forwarding copies of the final Field Team report has been discontinued in favor of a brief description of the work authorized and the results accomplished, we are setting forth this information below:

The contract was dated September 4, 1952, and covers an exploration project estimated to cost $19,050.00, with Government participation to the extent of 90 per cent, or $17,145.00. Project work under the contract was started December 27, 1952, and completed November 4, 1953. An auditor's Report of Review shows total expenditures during the life of the contract amounting to $18,973.11, with Government participation amounting to $17,075.80.

The contract provided for exploration of a large scour channel in the basal Shinarump conglomerate for uranium mineralization, by means of 3,000 feet of diamond drilling and 200 feet of drifting.

The work completed consisted of 31 diamond drill holes totalling 2,983 feet, and 200 feet of drifting. This work has indicated the existence of an ore deposit which may eventually yield 12,000 tons of 0.16 percent U_3O_8 ore.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

MChing/gla 4-12-54
cc to: Adm. Reading file
Docket
Messrs. APButler, Jr. Rm. 3212, GSA
JOHosted, Rm. 3210 GSA
HDKeiser, Rm. 3641
Code 700 Mr. Ching
DMEA Field Team, Region IV (2)

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

224 New Customhouse
Denver 2, Colorado

April 13, 1954

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: Royalty-Ellihill Mining Company, Docket No. 1957, Contract No. E397, Utah

Enclosed is check in the amount of $200.76 from Ellihill Mining Company. This remittance represents the following:

$ 83.71-Balance of royalty on Liquidation No. 4963
117.05-Bonus Royalty Payment
$200.76

W. H. King

Enclosure

es

cc: Royalty File
Sec. to the Oper. Comm. (2)
Wilson
Chron.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
MAR 23 1954

224 New Customhouse
Denver 2, Colorado

March 18, 1954

Memorandum

To: Secretary to the Operating Committee, DMEA

From: DMEA Field Team, Region IV

Subject: Docket DMEA 1957 (Uranium), Contract Idm-E397, Ellihill Mining Company, San Juan County, Utah

Enclosed are the following final reports pertaining to the work completed under the subject contract:

1. Original and one copy of the operator's final report

2. Original and three copies of the final geologic report by the U.S. Geological Survey.

3. Original and three copies of the final engineering report by the Bureau of Mines.

Final payment to the operator was processed by this office today in conformance with the final report of review by the Contract Administration and Audit Division dated February 19, 1954, which was released to this office March 16, 1954.

The exploration work consisted of 2983.5 feet of diamond drilling and 200 feet of drifting at a total accepted cost of $18,973.11, in which the Government participated to the extent of 90 percent or an amount of $17,075.80. The exploration work resulted in a discovery of uranium ore for which a certification of discovery or development was issued November 4, 1953.

W H King
W. H. King

A. H. Koschmann
A. H. Koschmann

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
3-29-54
(date)

IN REPLY REFER TO:

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 25 1954

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver 2, Colorado

February 19, 1954

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 1957, Ellihill Mining Company, White Canyon, San Juan County, Utah

Enclosed are 11 copies of the final geologic report by A. F. Trites, Jr., and G. A. Hadd of the U. S. Geological Survey covering the above docket.

A. H. Koschmann

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (11)

Reviewed by
DMEA OPERATING COMMITTEE
3-29-54
(date)

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 360
GRAND JUNCTION, COLORADO

February 12, 1954

MEMORANDUM

To: A. H. Koschmann, DMEA Field Team, Region IV

From: R. P. Fischer, Supervisor, Colorado Plateau District

Subject: DMEA 1957, Ellihill Mining Co., White Canyon, San Juan County, Utah

Transmitted herewith are eleven copies of the final geologic report on the DMEA exploration work done on the subject docket. The report was prepared by Albert F. Trites, Jr., and George A. Hadd.

The authors conclude that the work was successful in finding significant reserves of uranium ore, and that mining operations, which are now in progress, should return the government's share of the exploration costs through royalty payments.

R. P. Fischer

R. P. Fischer

Enclosures 11

RPF/mlr

cc: S. R. Wilson

Reviewed by
DMEA OPERATING COMMITTEE
3-29-54
(date)

UNITED STATES DEPARTMENT OF THE INTERIOR

DOUGLAS McKAY, SECRETARY

FINAL GEOLOGIC REPORT

DMEA Docket 1957, Ellihill Mining Company

White Canyon, San Juan County, Utah

Albert F. Trites, Jr. and George A. Hadd

U. S. Geological Survey

February 12, 1954

Reviewed by
DMEA OPERATING COMMITTEE
3-29-54
(date)

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Conclusions and recommendations

It is concluded that the exploration work at the Jomac mine under financial assistance by the DMEA was successful in finding significant reserves of uranium ore. The indicated reserves are aproximately 18,000 tons having an estimated average grade of 0.23 U_3O_8. The deposit should be mineable at a profit by selective mining with a complete return to the government for its loan to the company.

No additional exploratory work is recommended at the present time.

Introduction

The Ellihill Mining Company applied (DMEA Docket 1957) for a loan of $19,831.88 to be used for the exploration of uranium at the Jomac mine near White Canyon, San Juan County, Utah. The application was received on August 13, 1951, and was approved by the Defense Minerals Exploration Administration on September 4, 1952. The cost of the exploratory work approved was estimated to be $19,050.00, of which the government participation was 90 percent or $17,145.00. This work was to explore the scour channels in the basal Shinarump conglomerate by 3,000 feet of diamond drilling to test for concentrations of uranium minerals, and to drift 200 feet on the ore that was exposed in the face of adit No. 2. This report summarizes the work done on the loan and the significant results.

Location and accessibility

The Jomac mine is on the east side of the Colorado River, 13 miles northeast of the town of White Canyon, San Juan County, Utah (fig. 1). The property is reached from White Canyon by Utah Highway 95 and a rough bulldozer road. An alternate route to the mine is via Monticello and Blanding to White Canyon by the way of Utah Highway 95. The Monticello mill is the nearest plant for receiving uranium ore and is 112 miles by road from the Jomac mine. The mine workings are on the southeast side of the Jomac Hill, at an altitude of about 5200 feet.

History and production

The Jomac mine is on an unpatented claim located by J. B. Plosser and A. M. McLeod in November 1950. The property is owned by the Ellihill Mining Company, a corporation recently formed to explore for and to develop uranium deposits. The property owned by the Ellihill Mining Company consists of three contiguous lode claims known as the Jomac I, Jomac II, and Jomac III, in an unsurveyed area. Mine workings at the time the loan application was made consisted of two drifts: No. 1, 47 feet long, and No. 2, 120 feet long. A crosscut, 65 feet long, connected the two drifts.

Mining was begun at the property in 1951, and a total of 141 tons of uranium ore, ranging in grade from 0.10 to 0.27 percent U_3O_8 was shipped between May 10 and November 11 of that year (table 1). The average grade of all rock shipped was 0.16 percent U_3O_8, and the average grade of ore mined selectively was 0.23 percent U_3O_8.

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DMEA 397

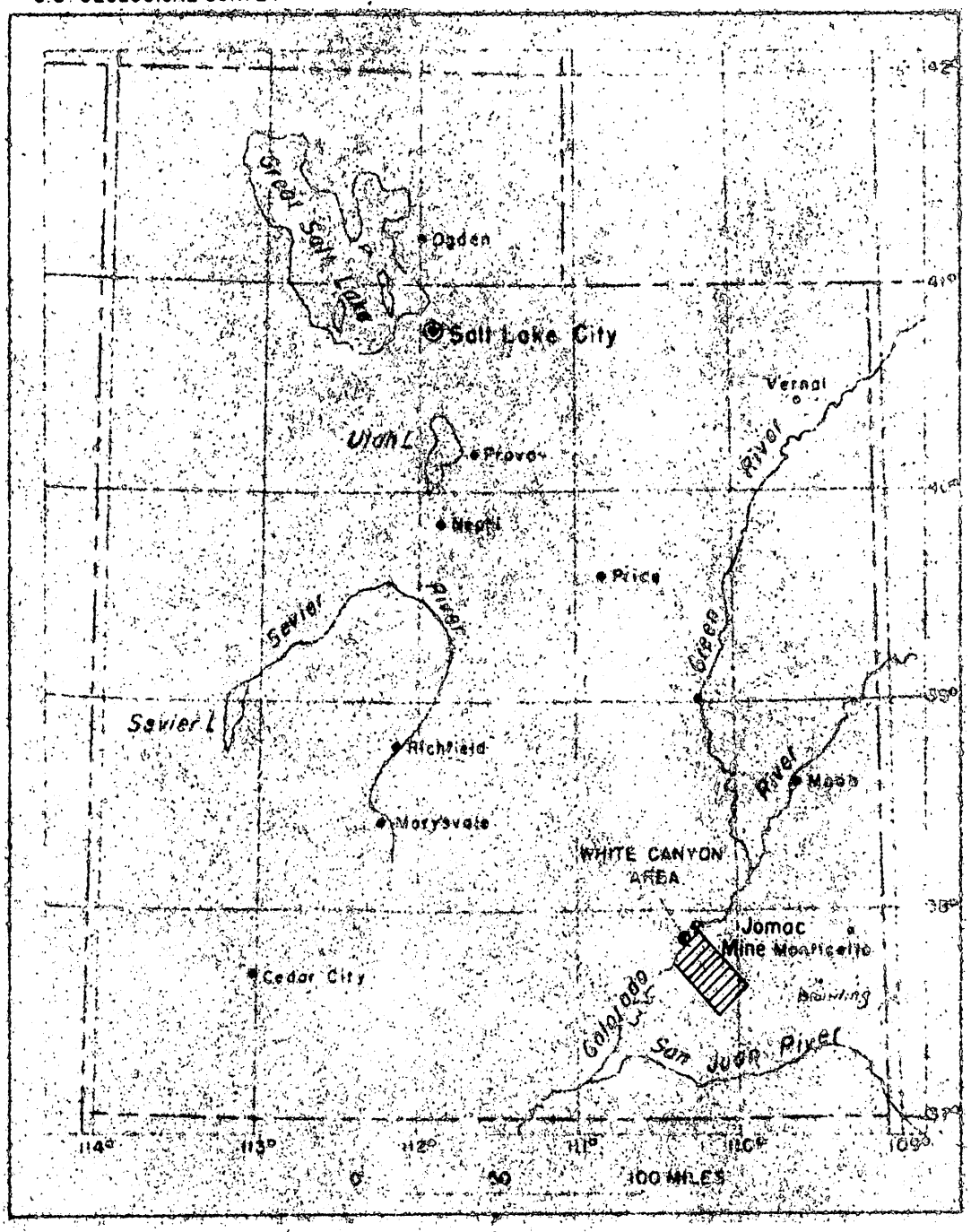

FIGURE 1.- INDEX MAP SHOWING LOCATION OF THE JOMAC MINE, WHITE CANYON AREA, SAN JUAN COUNTY, UTAH

Table 1. Uranium ore shipments, Jomac claim

Date Shipped	Source	Amount shipped (lbs.)	U_3O_8 (percent)	Shipper
5/10/51	Adit no. 1, all footage	20,110	0.12	Lessees
5/22/51	do	31,630	0.15	do
6/1/51	do	26,200	0.10	do
6/11/51	do	47,290	0.10	do
8/21 & 8/28/51	Adit no. 2 & crosscut, selective mining	22,940	0.16	Owners
8/31 & 9/6/51	do	35,360	0.27	do
9/14 & 9/17/51	do	24,780	0.25	do
9/21, 24 & 27/51	do	36,140	0.25	do
10/30/51	Breast of adit no. 2, all footage	18,730	0.10	do
10/12/51	do	18,970	0.12	do

Geology and Ore deposits

The Jomac Hill is comprised of sedimentary rocks of Permian to Upper Triassic age. These rocks are on the west flank of the Monument Upwarp; the beds strike N. 2° W. and dip 2° SW.

The hill is capped by the lower member of the Chinle formation that is composed of carbonaceous siltstone and claystone and three prominent beds of sandstone or conglomerate. The Shinarump conglomerate, the uranium-bearing formation, is present only on the northeast side of the hill, where it crops out as a ledge beneath the Chinle formation. The Shinarump is underlain by reddish brown siltstone of the Moenkopi formation. This siltstone has been bleached as much as 2.5 feet beneath the Shinarump conglomerate.

The Shinarump conglomerate ranges from 10 to 23 feet thick in the area of the mine workings, and consists of beds of sandstone, conglomeratic sandstone, and siltstone. The lower Shinarump sandstone fills a channel that has been cut partly in Shinarump siltstone and partly in Moenkopi siltstone (fig. 2). The channel trends approximately N. 20° W.; it is about 300 feet wide and 6 feet deep. Three basin-like depressions on the floor of the channel range from 3 to 5 feet deeper than the channel. The larger scour southwest of the mine workings may be the bottom of a tributary channel; this depression has a depth of about 9 feet.

Carbonized wood and wood replaced by iron oxides occur in many of the sandstone and conglomerate beds. The carbonized wood is abundant in the basal sandstone where it occurs in fragments as much as 4 feet long and 5 inches thick. This carbonized wood can be burned over a gas flame, giving off considerable quantities of volatiles, and is believed to be a low-rank coal.

Wood replaced by iron oxides occurs above the basal sandstone, and is abundant in conglomerate beds exposed in the upper parts of the mine workings.

The Shinarump rocks are closely jointed at the Jomac mine; many of these joints have been filled by gypsum or by iron oxides. No faults have been observed in the vicinity of the mine.

Most of the uranium is contained in the carbonized wood. Torbernite (?) has been found coating fracture surfaces in some of the carbonized wood, and it is not known whether the uranium is contained wholly in secondary minerals, or if some of it is in an organic compound. The caronized wood is associated with jarosite and gypsum.

Minor amounts of chalcopyrite impregnate a sandstone lens near the intersection of Adit no. 2 and the crosscut, and traces of chalcopyrite have been found in the basal uranium-bearing sandstone. Pyrite replaces carbonaceous material in some of the Shinarump and Chinle claystone beds. Secondary copper minerals, including chalcanthite, malachite, and azurite occur locally at the base of the Shinarump conglomerate in the outer 100 feet of the mine workings and along the outcrop.

Exploratory work

Exploratory work at the Jomac mine completed under DMEA contract consisted of 2,983.5 feet of diamond drilling and 200 feet of underground drifting. The preparation of diamond drilling sites was begun on December 27, 1952, and the diamond drilling was completed during June 1953. These holes tested the eastern part of the Jomac Hill (figs. 2 and 3), where favorable beds of Shinarump are indicated by surface exposures. The drill holes ranged from 33.8 to 159.0 feet deep; all of the holes were collared in beds of the Chinle formation, and all except four of the holes were bottomed in beds of the Moenkopi formation. Core was recovered in both the Chinle and Shinarump beds, and geologic logs were made by the company and were transmitted with the monthly reports.

Underground exploratory drifting was begun on July 6, 1953, immediately following the completion of the diamond drilling. This work consisted of a 200-foot extension of Adit no. 2 (figs. 2 and 3), beginning of the crosscut. This underground work was completed during October 1953, and the ore body is being developed now by the company.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 25 1954
Mining Division
Rec'd.

FEB 23 1954
BUREAU OF MINES
Denver, Colorado

February 18, 1954

Memorandum

To: W. H. King, Executive Officer, DMEA Field Team, Region IV

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: Docket No. DMEA 1957 (Uranium), Contract Idm-E397, Ellihill Mining Co., San Juan County, Utah

Enclosed are the original and 10 copies of a final engineering report prepared by H. K. Thurber, Jr., covering all work accomplished under ~~the~~ subject contract.

Stephen R. Wilson
Stephen R. Wilson

Enclosure

Reviewed by
DMEA OPERATING COMMITTEE
3-29-54
(date)

ELLIHILL MINING COMPANY
JOMAC MINE
SAN JUAN COUNTY, UTAH
DMEA-1957
Contract Idm-E397
Uranium

Final Engineering Report

By H. K. Thurber, Jr.
Mining engineer
Bureau of Mines

Reviewed by
DMEA OPERATING COMMITTEE
3-29-54
(date)

ELLIHILL MINING COMPANY
JOMAC MINE
SAN JUAN COUNTY, UTAH

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ILLUSTRATIONS

Fig. 1 Map of diamond drill samples, ore reserve, and underground work, Jomac mine, Ellihill Mining Company, San Juan County, Utah

Fig. 2 Map of underground workings and sampling, Jomac mine, Ellihill Mining Company, San Juan County, Utah

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Exploratory work under Contract Idm-E397 on property owned by the Ellihill Mining Co., White Canyon, San Juan County, Utah, was completed November 4, 1953. The property known as the Jomac mine consists of three claims and is located approximately 7 miles northeast of the settlement of White Canyon. The exploration consisted of diamond drilling a total of 2,983.5 feet of AX-size hole and driving 200 linear feet of underground drifts on a single claim of the group. The area of the exploratory work is shown on the attached map, figure 1.

The work delimited the area of uranium mineralization and discovered ore in the area north of the original underground workings. An ore reserve calculation, made for the purpose of certifying a discovery on the property, shows that approximately 4,370 tons of ores averaging 0.25 percent U_3O_8 and averaging 2.3 feet thick was discovered by the drilling and drifting. This reserve is estimated to be 65 percent recoverable; thus a minable reserve of approximately 2,840 tons is believed to be present. Under existing AEC price schedule, this ore will net approximately $66,000, assuming a mining and transportation cost of $15 per ton.

The exploration on the Jomac claims was limited to a small area on one claim of the group of three claims. Further exploratory work

on the two remaining claims, covering the remaining area of the mesa, should be undertaken by the operator. Such work might take the form of bulldozer rim stripping and geologic study, followed by a program of diamond drilling, if favorable geologic conditions are shown to exist by the preliminary work.

The quantity and grade of ores discovered by the DMEA work on the Jomac claims warrant the certification of a discovery, and such a certification was issued November 4, 1953. Royalty payments have been made on ores mined as a result of the exploratory work.

Production from the mine is economically feasible, provided selective mining is conducted and care is taken not to dilute the ores in mining, storing or shipping. The irregularity of the mineralization will limit the production to a relatively small daily tonnage. Based upon the production of November and December 1953, it is estimated that the mine will produce 15 tons of uranium ores per day averaging 0.16 percent U_3O_8.

A tabulated summary of the production since completion of the project work follows:

Month	Tonnage, Dry Tons	Average grade, Percent U3O8	Gross Value	Royalty Repayment
Nov.	134.10	0.13	$1,749.64	$87.33
Dec.	344.85	0.15	5,131.46	256.57
Totals	478.95	0.14 avg.	$6,881.10	$343.90

It is believed the average grade of the ore produced may increase to approximately 0.25 percent U_3O_8 as the lessee becomes more accustomed to the ore occurrence.

DESCRIPTION OF THE WORK

The DMEA contract for exploration at the Jomac mine permitted 3,000 linear feet of diamond core drilling at $4.66 per foot and 200 linear feet of drifting at $25.35 per foot. The construction of drill-site access roads and the preparation of drill sites began December 27, 1952, and was completed January 4, 1953. This work was contracted on an hourly basis by a bulldozer owner from White Canyon, Utah. The cost of the work was included in the agreed contract unit cost of diamond core drilling, and thus no accounting pertaining to this work was reported to DMEA.

The drilling contractor placed his equipment on the claims during the first week in January 1953 and drilling was begun on January 12, 1953, on hole No. 1, shown on the attached map, figure 1. Some difficulty was encountered in drilling the first hole, as well as succeeding holes, because of water loss in highly fractured mudstone lenses in the Triassic Chinle formation overlying the Shinarump formation, the "ore horizon" on the property. Cementing was necessary in hole No. 1 in an attempt to retain water in the hole. Succeeding holes were cased or water was retained by use of various cereal fillers.

Although the sludges were not saved for sampling purposes, water return was necessary to reduce the time-consuming hauling of water. The loss of water was also noted in other strata, including the coarse sandstone lenses of the ore horizon.

No other difficulties directly connected with drilling were encountered, with the exception of low core recovery in some parts of the Shinarump formation. Core recovery averaging greater than 70 percent was obtained in the strata cored, however. The loss in the Shinarump was in a large part due to the crushed carbonaceous material, generally found to have a high uranium content.

A total of 31 holes was drilled under the contract to an average depth of 94.2 feet, for a total of 2,983.5 feet. The deepest hole, No. 18, high on the shoulder of the mesa, is 159.9 feet deep. The shallowest hole is No. 31, drilled entirely in the Shinarump formation, to a depth of 33.7 feet. The location and approximate collar elevations are shown on the attached map, figure 1.

The underground work in drift No. 2, allowed under the contract, was begun July 6, 1953, and completed October 31, 1953. The 200 linear feet of drift was driven along the contact of the Shinarump formation and the underlying Moenkopi formation, carrying the floor of the drift from 0.5 feet to 1.5 feet into the siltstone of the latter formation, except where a rise in the contact brought the siltstone near the back of the drift. The thickening of the siltstone began at approximately

60 feet from the point of beginning of the work, reached its maximum at approximately 150 feet, and slowly declined until, at the face of the drift, it was approximately 3 feet thick. The course of the drift is shown on figure 2, attached.

This map also shows the work done on company account during the term of the project. Drift No. 1 was advanced 95 feet and a crosscut was begun from drift No. 2 toward drift No. 1, with the hope of providing natural ventilation in the workings. When the operator resumes the advance of the face of drift No. 2 on company account, the crosscut will be completed.

The advance of drift No. 2 was considerably slowed by the siltstone roll described above. The siltstone is difficult to drill wet because of the balling of the cuttings behind the bit, even when a maximum flow of water is employed. Dry drilling was finally attempted in the sections of greatest thickness of siltstone. Improper use of "jacklegs" caused the breaking of steel and, in some cases, stuck steel required blasting. The siltstone is reported to have broken very erratically.

The advance in other sections of the drift through the coarse sandstone of the Shinarump formation was made with no difficulty. Drilling was done with light jackhammers mounted on air-feed jacklegs, and tramming was done, during most of the work, with a Diesel-powered,

rubber-tired, self-dumping, 1-ton-capacity shuttle car. Because of the remote location of the mine, repair of the shuttle car was difficult, and it was abandoned in favor of a horse-drawn, rubber-tired cart now in use.

DESCRIPTION OF GEOLOGY

The oldest exposed rocks in the Jomac mine area are the red-to-gray siltstones and sandstones of the Lower Triassic Moenkopi formation. Unconformably overlying the Moenkopi formation are the coarse, buff-colored sandstones and conglomerate lenses of the Upper Triassic Shinarump formation. These sediments contain some inclusions and discontinuous lenses of gray-green mudstone and an abundance of fossil wood and "trash carbon," the greatest concentration of which lies near the contact with the underlying Moenkopi formation. The uranium mineralization in the Jomac mine workings occurs at or near this contact, and apparently in association with the carbonaceous material. It was noted that, although some of the carbon masses in place in the mine are highly radioactive, some of the carbonaceous material is entirely lacking in radioactivity. This necessitates close observation with the Geiger counter during mining.

Conformably overlying the Shinarump formation are the sandstones, mudstones and conglomerate lenses of the Upper Triassic Chinle formation. The sandstones are buff-to-brown color, while the mudstones are

gray, green and maroon color, some being variegated gray and maroon. The mudstones of this formation in the area drilled are "fractured" due, probably, to simple drying out which made drilling difficult, as noted in a foregoing paragraph.

The attached map, figure 1, shows the approximate location of the 31 diamond core drill holes completed under the DMEA contract. The following tabulation lists the depth of the individual holes and the assay value of the mineralized section :

Hole No.	Total Depth	Sample Thickness	Percent U_3O_8
1	94.2	0.9	1.37
2	99.1	1.3	0.09
3	91.0	2.0	0.05
4	84.7	2.8	0.11
5	81.8	2.7	0.12
6	83.5	4.0	0.08
7	83.8	1.4	0.23
8	84.3	1.4	0.02
9	98.7	1.2	0.04
10	107.2	0.8	0.25
11	102.8	1.8	0.01
12	84.2	4.2	0.06
13	94.8	3.6	0.17
14	117.5	1.8	0.06
15	122.7	2.5	0.05
16	135.3	3.6 (Sample a)	0.02
		1.7 (Sample b)	0.02
17	152.4	2.3	0.02
18	159.9	1.4	0.03
19	115.7	2.1	0.02
20	104.1	1.7	0.02
21	107.9	1.5	0.02
22	80.2	1.9	0.03
23	82.0	1.3	0.02

Hole No.	Total Depth	Sample Thickness	Percent U_3O_8
24	84.1	1.6	0.02
25	81.5	2.8	0.03
26	89.3	2.5	0.03
27	152.5	2.5	0.05
28	67.2	2.3	0.04
29	62.0	2.3	0.07
30	45.7	2.3	0.05
31	33.7	3.0	0.01

Samples taken underground by the operator and the inspecting engineer are listed below with the source indicated. These samples are plotted on figure 2, attached.

Sample No.	Length of cut, feet	Percent U_3O_8	Percent $CaCO_3$	Source
1	1.2	0.27	2.5	DMEA
2	2.1	0.04	5.0	"
3	2.0	0.08	4.1	"
4	3.0	0.03	3.9	"
5	3.2	0.47	5.4	"
6	1.5	0.58	5.0	"
57	1.6	0.10	5.0	"
T-10	5.0	0.41	---	Ellihill
T-20	3.2	0.26	---	"
1	4.8	0.34	---	"
2	4.8	0.40	---	"
3	4.8	0.02	---	"
4	4.4	0.02	---	"
5	3.6	0.07	---	"

From the above tabulation of the diamond drill holes, it may be seen that holes Nos. 1, 4, 5, 6, 7 and 13 penetrated uranium mineralization of sufficient thickness and grade to be termed ore. These holes, along with the limits of the ore underground shown by sampling in the drifts, allow the arbitrary outlining of an indicated ore reserve shown on figure 2. The combined weighted average of the drill

hole samples and the underground samples is 0.27 percent U_3O_8 and the average thickness of ore indicated by the samples is 2.3 feet. Based upon the plan area shown in figure 1 and the average thickness of ore, the tonnage estimated in the ore body is 4,370 tons of ore averaging 0.27 percent U_3O_8. It is estimated that approximately 65 percent of this tonnage is recoverable; thus approximately 2,840 tons of ore is minable. Assuming a gross value of $38.25 per ton, the minable ore is valued at $108,630. Further assuming a mining and transportation cost of $15 per ton, the minable ore will net $66,230.

A tabulation of the recent shipments shows that ore of lower grade has been shipped, probably in part resulting from the lessee being unfamiliar with the ore and use of the Geiger counter underground.

EXPENDITURES

The total amount of money approved for the exploratory work by the contract was $19,050.00, of which $18,973.11 was expended by the operator. The Government's participation, 90 percent, totals $17,075.80. The Government's share unexpended totals $69.20.

Total production from the property since the effective date of the contract to December 31, 1953, is 478.95 dry tons of ore, with a gross value of $6,881.10. The calculated royalty on this amount is $343.90.

EFFICIENCY OF OPERATIONS

Some delay in pursuing the drilling phase of the exploratory work under the contract resulted from sickness of the driller during the early part of the drilling. A minor amount of equipment failure was encountered, but the difficulty of drilling in the fractured mudstone lenses was responsible for much of the slowness of progress.

Underground work was slowed by equipment failure and inadequacy of original equipment. Again, sickness of the contract mining crew contributed to the low monthly advance.

A major difficulty inherent in all operations in White Canyon is the distance to supply points and repair shops, over poor roads. This factor also contributed to delays in the exploratory work, in spite of the fact that many repair parts and supply items were transported to the property by airplane.

The monthly report forms, with supporting maps, drill logs and assay sheets, were well and intelligently prepared. The operator's final report is adequate in describing the work done and the results accomplished under the contract. It may be said that the project proceeded with reasonable efficiency in view of the difficulties encountered.

EQUIPMENT PURCHASED FOR THE PROJECT

Inasmuch as the work was done under a short-form contract, no equipment or supplies were purchased in which the Government has an equity.

Results of exploratory work

The exploration program completed at the Jomac mine with financial assistance from the DMEA has discovered additional reserves of uranium ore. Further, the work has aided materially in understanding the occurrence of uranium in carbonaceous sandstone deposits.

The diamond drilling has indicated a uranium deposit approximately 500 feet long, 250 feet wide, and from 1 to 4.5 feet thick (fig. 3). This deposit has an average thickness of 2.0 feet and is believed to have an average grade of 0.23 percent U_3O_8. On a basis of 14 cubic feet per ton, this deposit contains about 18,000 tons of ore.

A smaller deposit is indicated by drill hole no. 30 (fig.3). This deposit is 1.5 feet thick, and is believed to have a grade similar to that of the larger deposit. This deposit is not exposed on the rim, and was not penetrated by drill hole no. 23. The deposit is inferred to be 50 feet long, 50 feet wide, and to contain about 270 tons.

Both of these deposits are in the basal sandstone bed of the Shinarump conglomerate. Uranium occurs also in sandstone and conglomerate beds above the basal sandstone, but these occurrences are too erratic and low grade to be included in the ore reserves. The grade of these deposits will be lower than 0.05 percent U_3O_8.

Samples of the core assayed by the Vanadium Corporation of America contained from 0.01 to 1.37 percent U_3O_8 (table 2). A total of six holes (nos. 1, 4, 5, 7, 10, and 13) contained rock having a minimum of 0.10 percent U_3O_8, and three of these holes (nos. 1, 7, and 10) contained rock having more than 0.20 percent U_3O_8.

Detailed study of the walls of the underground workings indicates that the uranium is in carbonized wood. Jarosite is associated nearly everywhere with the carbonized wood and, together with the wood, is believed to be an important guide for the recognition of the ore-bearing sandstone. In portions of diamond drill cores in which the carbonized wood, although present, was not recovered, or in cores that passed between pieces of carbonized wood, jarosite may be used to recognize the uraniferous sandstone.

Table 2. - Partial logs of diamond-drill cores at the Jomac mine, showing interval sampled by the company, the content of U_3O_8 (percent), and the interval believed to contain a minimum of 0.20 percent U_3O_8.

Diamond drill hole no.	Unit sampled by company			Unit believed to contain a minimum of 0.20 percent U_3O_8.		Description
	Interval	Thickness (feet)	Percent U_3O_8	Interval	Thickness (feet)	
1				86.0-88.0	2.0	Siltstone-pebble conglomeratic sandstone containing carbonized wood and jarosite. (0.3 feet of core was lost.)
	86.9-88.0	1.1	0.03			
	88.0-88.4	0.4	1.37	88.0-88.4	0.4	Siltstone-pebble conglomeratic sandstone containing carbonized wood, pyrite, limonite, and gypsum.
	88.4-88.9	1.5	0.03			Bleached Moenkopi siltstone.
2	92.9-94.1	1.2	0.09	93.1-94.1	1.0	Medium-grained sandstone containing limonite and carbonized wood. 3.0 feet of core lost between 85.4 and 94.2
	94.1-94.2	0.1				Bleached Moenkopi siltstone.
3	84.3-86.2	1.9	0.05	84.3-86.2	1.9	Medium- to fine-grained sandstone containing abundant carbonaceous siltstone seams, gypsum, and jarosite. (1.1 feet of core was lost between 84.5 and 88.5.)
4	78.7-81.6	2.9	0.112	78.0-81-6	1.9	Medium-to coarse-grained sandstone containing carbonized wood, limonite, gypsum, and manganese oxide.(1.6 feet of core was lost.)

Table 2. - Partial logs of diamond-drill cores -- Continued.

Diamond drill hole no.	Unit sampled by company			Unit believed to contain a minimum of 0.20 percent U_3O_8.		Description
	Interval	Thickness (feet)	Percent U_3O_8	Interval	Thickness (feet)	
5	74.0-75.3	1.3		74.0-75.3	1.3	Coarse-grained sandstone containing jarosite, carbonized wood, limonite and gypsum.
	75.3-77.7	2.4		75.3-77.7	2.4	Fine-grained sandstone containing jarosite and carbonized wood.
	77.7-78.5	0.8	0.120	77.7-78.5	0.8	Sandy siltstone containing seams of carbonaceous material and gypsum, jarosite, and torbernite(?)
	78.5-81.8	3.3				Bleached Moenkopi siltstone.
6	74.8-75.0	0.2				Coarse- to medium-grained sandstone containing limonite and manganese oxide.
	75.0-76.1	1.1				Coarse- to fine-grained sandstone containing jarosite, gypsum, limonite, and seams of carbonaceous material.
	76.1-77.8	1.7	0.083	76.1-77.8	1.7	Medium- to fine-grained sandstone containing siltstone pebbles, carbonaceous material, limonite, jarosite, and gypsum, carbonized wood near the bottom.
	77.8-78.8	1.0		77.8-78.8	1.0	Coarse-grained sandstone containing limonite, pyrite, and torbernite(?)

Table 2. - Partial logs of diamond-drill cores -- Continued.

Diamond drill hole no.	Unit sampled by company			Unit believed to contain a minimum of 0.20 percent U_3O_8.		Description
	Interval	Thickness (feet)	Percent U_3O_8	Interval	Thickness (feet)	
7				77.0-78.0	1.0	Medium-grained sandstone containing carbonized wood, jarosite, limonite, and manganese oxide.
	77.5-78.0	0.5				
	78.0-78.3	0.3		78.0-78.3	0.3	Fine-grained sandstone containing carbonized wood, carbonaceous seams, jarosite, and limonite.
	78.3-78.8	0.5	0.216	78.3-78.8	0.5	Siltstone containing secondary copper minerals and torbernite.
	78.8-79.0	0.2				Siltstone-pebble conglomerate
8	75.2-75.5	0.3				Siltstone containing carbonaceous material.
	75.5-76.4	0.9	0.02	75.5-76.4	0.9	Medium- to coarse-grained sandstone containing carbonaceous material, limonite, and gypsum.
	76.6-76.8	0.2		76.6-76.8	0.2	Siltstone containing carbonaceous material and jarosite.
9	92.2-92.7	0.5				Medium- to fine-grained sandstone containing limonite, and hematite.

Table 2. - Partial logs of diamond-drill cores -- Continued.

Diamond drill hole no.	Unit sampled by company			Unit believed to contain a minimum of 0.20 percent U_3O_8.		Description
	Interval	Thickness (feet)	Percent U_3O_8	Interval	Thickness (feet)	
9	92.7-93.2	0.5	0.02	92.7-93.2	0.5	Siltstone-pebble conglomeratic sandstone containing limonite and jarosite.
	93.2-93.4	0.2				Siltstone containing carbonaceous material. (1.2 feet of core was lost between 92.2 and 93.4)
10				100.9-101.4	0.5	Medium- to coarse-grained sandstone containing limonite and carbonaceous streaks.
	101.2-101.4	0.2				
	101.4-101.5	0.1	0.25	101.4-101.5	0.1	Carbonized wood containing torbernite(?)
	101.5-102.1	0.6		101.5-102.1	0.6	Siltstone containing carbonaceous material. (0.3 feet of core was lost between 101.2 and 102.1)
11	96.0-97.7	1.7	0.01	None		Medium- to coarse-grained sandstone containing limonite.
12	77.9-79.9	2.0		79.1-79.9	0.8	Medium- to coarse-grained sandstone containing carbonaceous material, limonite, jarosite, hematite, and gypsum.

Table 2. Partial logs of diamond-drill cores -- Continued.

Diamond drill hole no.	Unit sampled by company			Unit believed to contain a minimum of 0.20 percent U_3O_8.		Description
	Interval	Thickness (feet)	Percent U_3O_8	Interval	Thickness (feet)	
12	79.9-80.0	0.1		79.9-80.0	0.1	Claystone containing limonite and gypsum.
	80.0-80.4		0.06	80.0-80.4	0.4	Fine- to coarse-grained sandstone containing carbonized wood, limonite, and jarosite.
	80.4-80.5	0.1		80.4-80.5	0.1	Clayey sandstone containing carbonized wood.
	80.5-80.8	0.3		80.5-80.8	0.3	Fine- to medium-grained sandstone containing limonite, jarosite, and carbonaceous material.
	80.8-82.1	1.3				Siltstone containing carbonaceous material, gypsum, and jarosite.
13	84.7-86.5	1.8		84.7-86.5	1.8	Siltstone-pebble conglomeratic sandstone containing siltstone seams, carbonized wood, limonite, and jarosite.
	86.5-87.6	1.1		86.5-87.6	1.1	Medium- to coarse-grained sandstone containing carbonaceous material, jarosite, unidentified greenish-yellow uranium mineral, and gypsum.
	87.6-88.6	1.0	0.172	87.6-88.6	1.0	Medium-grained sandstone containing carbonaceous material, siltstone pebbles jarosite, and limonite.

Table 2. - Partial logs of diamond-drill cores -- Continued.

Diamond drill hole no.	Unit sampled by company			Unit believed to contain a minimum of 0.20 percent U_3O_8.		Description
	Interval	Thickness (feet)	Percent U_3O_8	Interval	Thickness (feet)	
13	88.6-89.3	0.7				Siltstone containing carbonaceous material.
	89.3-89.7	0.4				Siltstone-pebble conglomerate containing gypsum and carbonaceous material. (1.4 feet of core was lost between 84.7 and 89.7)
14	105.4-106.2	0.8		102.5-106.2	3.7	Coarse- to fine-grained sandstone containing carbonized wood, siltstone-pebbles, hematite, jarosite, and gypsum.
			0.061			
	106.2-108.1	1.9				Sandy siltstone, containing carbonaceous material. (1.3 feet of core was lost between 99.7 and 111.2)
15				110.5-111.9	1.4	Medium- to coarse-grained sandstone containing clay pebbles and carbonaceous material.
	112.7-115.2	2.5	0.050			Siltstone containing carbonaceous material and an unidentified yellow-green uranium mineral. (2.5 feet of core was lost between 104.9 and 115.2.)
16	127.3-128.8	1.5				Coarse-grained sadnstone containing limonite, jarosite, carbonaceous material, gypsum, and unidentified hellowish-green uranium mineral.
			0.020	127.8-128.8	1.0	

Table 2. - Partial logs of diamond-drill cores -- Continued.

Diamond drill hole no.	Unit sampled by company			Unit believed to contain a minimum of 0.20 percent U_3O_8.		Description
	Interval	Thickness (feet)	Percent U_3O_8	Interval	Thickness (feet)	
16	128.8-129.0	0.2				Siltstone containing carbonaceous material and sulfide minerals(?)
	129.0-131.1	2.1				do
	131.1-132.1	1.0	0.017			Siltstone, mottled, containing small clay pebbles.(0.5 feet of core was lost between 123.9 and 129.0; 0.7 feet of core was lost between 129.0 and 131.2)
	132.1-132.6	0.5				
17	135.0-136.9	1.9	0.023	None		Fine- to medium-grained sandstone containing limonite and carbonaceous specks.
	136.9-137.3	0.4				Siltstone containing carbonaceous material.
18	148.2-149.6	1.4	0.026	None		Siltstone containing carbonaceous material.
	149.6-149.7	0.1				Siltstone, variegated.
19				91.7-92.5	0.8	Fine-grained sandstone containing carbonized wood and jarosite.
	95.1-97.2	2.1	0.024			Siltstone containing small amount of carbonaceous material.
20	88.3-88.8	0.5		None		Very fine-grained sandstone containing carbonaceous material.

Table 2. - Partial logs of diamond-drill cores -- Continued.

Diamond drill hole no.	Unit sampled by company			Unit believed to contain a minimum of 0.20 percent U_3O_8.		Description
	Interval	Thickness (feet)	Percent U_3O_8	Interval	Thickness (feet)	
20	88.8-89.8	1.0				Very fine-grained sandstone containing carbonaceous material and hematite.
	89.8-90.0	0.2				Siltstone, variegated.
21	98.8-100.1	1.3	0.022	None		Fine-grained sandstone contained siltstone seams and limonite. (0.9 foot core was lost between 98.8 and 100.1)
22	61.8-62.4	0.6		None		Fine- to medium-grained Sandstone containing siltstone pebbles and limonite.
	62.4-63.5	1.1	0.028			Very fine- to fine-grained sandstone containing carbonaceous siltstone streaks and jarosite.
	63.5-63.7	0.2				Siltstone containing carbonaceous material.
23	70.6-71.3	0.7	0.023	None		Coarse-grained sandstone containing limonite and manganese oxide.
	71.3-71.9	0.6				Bleached Moenkopi siltstone. (2.2 feet of core was lost between 65.2 and 71.9.)

Table 2. - Partial logs of diamond-drill cores -- Continued.

Diamond drill hole no.	Unit sampled by company			Unit believed to contain a minimum of 0.20 percent U_3O_8.		Description
	Interval	Thickness (feet)	Percent U_3O_8	Interval	Thickness (feet)	
24	75.0-76.2	1.2	0.022	None		Medium-grained sandstone containing limonite and hematite.
	76.2-76.6	0.4				Siltstone containing carbonaceous material, manganese oxide, and secondary copper minerals. (0.5 foot of core was lost between 70.9 and 76.2; 0.3 foot of core was lost between 76.2 and 84.1.)
25	73.7-74.8	1.1	0.027	None		Medium-grained sandstone containing limonite and manganese oxide.
	74.8-76.5					Siltstone containing carbonaceous material. (1.9 feet of core was lost between 73.9 and 76.5.)
26	80.8-81.0	0.2	0.025	None		Medium-grained sandstone containing limonite.
	81.0-82.8	1.8				Siltstone containing carbonaceous material.
	82.8-83.3	0.5				Siltstone, mottled. (2.4 feet of core was lost between 75.8 and 83.6.)
27	136.3-136.6	0.3	0.05			
	136.6-138.8	2.2		136.6-138.8	2.2	Coarse-grained sandstone containing jarosite and limonite.

Table 2. - Partial logs of diamond-drill cores -- Continued.

Diamond drill hole no.	Unit sampled by company			Unit believed to contain a minimum of 0.20 percent U_3O_8.		Description
	Interval	Thickness (feet)	Percent U_3O_8	Interval	Thickness (feet)	
28	57.8-60.1	2.3	0.035	58.6-60.1	1.5	Medium- to coarse-grained sandstone containing carbonized wood, jarosite, limonite, torbernite(?), and secondary copper minerals.
29	57.2-59.5	2.3	0.065	55.0-59.5	4.5	Coarse-grained sandstone containing carbonaceous material, jarosite, limonite, and torbernite(?). (9.0 feet of core was lost between 30.9 and 62.0.)
30	38.9-39.6	0.7	0.05			Fine-grained sandstone containing limonite and specks and seams of carbonaceous material.
	39.6-41.1	1.5		39.6-41.1	1.5	Medium-grained sandstone containing concentrated specks and seams of carbonaceous material and limonite. (2.3 feet of core was lost between 0 and 45.7.)
31	27.3-30.3	3.0	0.01	None		Fine-grained sandstone containing siltstone seams and limonite. (3.5 feet of core was lost between 23.7 and 33.7.)

In addition to the five holes in which the assay has indicated significant amounts of uranium, the core from 14 other holes contains carbonized wood and jarosite similar to that found in the ore-bearing bed exposed in the mine workings. These cores contained from 0.01 to 0.09 percent U_3O_8, but the assay is not believed to represent the grade of the uraniferous sandstone penetrated. The assay value from each core is probably lower than the true grade of the uraniferous unit.

The writers believe that the best knowledge of the grade of the uranium ore body may be obtained in the underground workings. There, too, accurate sampling is difficult to attain because of the erratic distribution of pieces of carbonized wood.

This sampling problem can be solved by the collecting of sufficiently large samples to minimize the effects of non-uniformity in the distribution of the carbonized wood. Ore shipments from the uranium-bearing unit are believed most nearly comparable to such large samples to indicate an average grade that may be expected from similar material cut by diamond drill holes.

The grade of the ore mined selectively and shipped by the owners has ranged from 0.16 to 0.27 percent U_3O_8 (table 1). Since these shipments were approximately the same size, the unweighted average of 0.23 percent U_3O_8 is believed to be representative of the grade of the ore extracted thus far and also a fair indication of the grade that may be expected in ore-bearing ground shown in figure 3.

Table 2 shows both the assay values for each of the cores, and the expected grade of the unit.

The underground drifting has confirmed the discovery of the new reserves of uranium ore.

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

224 New Customhouse
Denver 2, Colorado

March 8, 1954

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: Royalty-Ellihill Mining Company, Docket No. 1957, Contract No. E397, Utah

Enclosed is check in the amount of $341.75 from Ellihill Mining Company, which includes $172.32 balance on Liquidation No. 4810 and $169.43, which is 5% of the bonus check for ore covered by this settlement.

W. H. King

Enclosure

es

cc: Royalty File
Sec. to the Oper. Comm. (2)
Wilson
Chron.

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

Received
FEB 26 1954

224 New Customhouse
Denver 2, Colorado

February 24, 1954

Mr. J. B. Plosser, President
Ellihill Mining Company
White Canyon, Utah

Re: DMEA Docket 1957 (Uranium) Contract
Idm-E397, Ellihill Mining Company

Dear Mr. Plosser:

Royalty payment in the amount of $173.75 has been received from the Colorado Plateau Uranium Ore Project in partial payment for royalty due on Liquidation No. 4810. As in the past, royalty was not paid on the Development and Haulage Allowances, which amounted to $3446.46. Royalty at 5 percent on this amount would be $172.32. Also, the A.E.C. Production Bonus royalty in the amount of $173.75 is due on this shipment.

We are unable to make full royalty collection from the Colorado Plateau Uranium Ore Project; therefore, please send your check for the balance to W. H. King, Executive Officer, DMEA, Region IV, Room 224 New Customhouse, Denver 2, Colorado. Checks should be made payable to the Treasurer of the United States.

All future shipments you may make to this particular purchasing agent must necessarily be handled in the same way.

Very truly yours,

W H King

W. H. King
Executive Officer
DMEA Field Team, Region IV

RDB:es

cc: Royalty File
Sec. to the Oper. Comm. (2)
Wilson
Christensen
Chron.

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

224 New Customhouse
Denver 2, Colorado

February 17, 1954

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA 1957 (Uranium), Contract No. Idm-E397, Ellihill Mining Company, Jomac Mine, San Juan County, Utah

Reference is made to your letter of February 10, 1954, wherein you request to be advised the approximate date you may expect to receive the final reports of the Operator and the Field Team.

The Engineering Report will be made available to this office about February 23. No information is available on when we may receive the Geologic Report; however, it is in preparation and will be forwarded as soon as the workload of personnel involved will permit its completion.

W H King

W. H. King

700

FEB 10 1954

SURNAME
DOCKET
Ching
Ellis
Selfridge
Hedges
Larrabee

Mr. W. H. King
Executive Officer
DMEA Field Team, Region IV
[illegible] Mar Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-1957 (Uranium)
Contract No. [illegible]
[illegible] Mining Company
Jasper Mine
San Juan County, Utah

Dear Mr. King:

It is noted from recent reports from your office that the exploration work under the captioned contract was completed by the Operator about October 30, 1953. In order to keep our records current, we would appreciate being advised the approximate date we may expect to receive the final reports of the Operator and the Field Team.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (245)

APPROVED:

J. H. Hedges (245)
Member, Bureau of Mines

D. M. Larrabee (245)
Member, Geological Survey

MChing/foc
2-8-54
cc to: Adm. Reading File
Operating Committee
Docket
Messrs. HDKeiser, Rm. 3061
APButler, Rm. 3212, GSA
Ellis
Ching
DMEA Field Team - Region IV

R.C.S.
2-10-54

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

224 New Customhouse
Denver 2, Colorado

February 8, 1954

DMEA-1957

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Royalties on Development and Haulage Allowances

Further reference is made to your letter dated January 20, 1954, which was answered in our memorandum dated February 1, 1954.

We are enclosing for your information a copy of a letter from H. C. Jackson, Office Manager, Colorado Plateau Uranium Ore Project, to the Ellihill Mining Company.

W. H. King

Enclosure

COPY

COLORADO PLATEAU URANIUM ORE PROJECT
American Smelting and Refining Company
Ore Purchasing Agent For
United StatesAtomic Energy Commission
P. O. Box 986
Grand Junction, Colo.

February 4, 1954

Ellihill Mining Company, Inc.
White Canyon, Utah

Attention: Mr. J. B. Plosser, President

Gentlemen:

We have your letter of January 25th in which you advise that it was necessary for you to pay over to the DME $50.30, being the balance due on royalty deducted on Liquidation No. 4718 for account of the DMEA. As you say, the discrepancy is ~~occasioned~~ occasioned by our exclusion of decelopment and haulage allowances from values for determining DMEA royalty.

We must advise that it will be necessary for us to continue such exclusions in the future. Mr. King of the DMEA has been advised of our procedures and copy of this letter will confirm the fact that development allowance and haulage allowance must be excluded by us prior to the determination of DMEA royalties.

Yours very truly,

H. C. Jackson
Office Manager

HCJ/mit
cc: WHKing

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

DEPARTMENT OF THE INTERIOR
Mining Division
Defense Minerals Administration
RECEIVED
FEB 3 - 1954
MAR 25 1954
BUREAU OF MINES
Denver, Colorado

February 5, 1954

Memorandum

To: W. H. King, Executive Officer, DMEA Field Team, Region IV

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: Docket No. DMEA-1957 (Uranium), Contract Idm-E397, Ellihill Mining Co., San Juan County, Utah. Operator's final report

Attached are the original and four copies of the subject operator's final report covering exploration during the contract period. It is believed the report is sufficiently detailed to satisfy the requirements of Article 5, paragraph (b) of the contract.

The operator's discussion of the geology indicates that a detailed study of the diamond drill cores was made, and logical observations concerning ore occurrences beyond the area drilled were also made. The ore reserve, as shown by the operator, is believed somewhat optimistic, as it is based on the belief that drill core samples are invariably lower grade and of less thickness than disclosed by underground workings. This is sometimes true in sandstone areas, but insufficient correlation has been established to permit its use in ore reserve calculations.

It is recommended that the operator's final report be accepted.

Stephen R. Wilson

Stephen R. Wilson

Enclosures

F I N A L R E P O R T

A summary of Exploration Project accomplished
under Docket No. DMEA 1957, Contract No. Idm-E397

Date: January 22, 1954

Ellihill Mining Company

By M. L. Jordan
Secretary

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 25 1954

HISTORY

The Exploration Contract between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and Ellihill Mining Company of White Canyon, Utah, was dated September 4, 1952. Due to postal and other delays, it was not signed by Ellihill Mining Company until late October, 1952. Since the contract stipulated that work on the project of exploration should begin within 60 days from the date of the contract, it became necessary to request an extension of this time limit. The request was granted by Amendment No. 1, extending the time to 120 days.

The contract specified that exploration should consist of 3000 feet of diamond drill holes and 200 feet of drifting.

The preliminary work of preparing drill sites, by use of a dozer, was begun on December 27 and completed on January 4, 1953. Soon thereafter, the driller moved in his rig and drilling operations began on January 12.

It soon became evident that the terrain of the Jomac hill made it impossible to drill at the exact locations and distances set forth in Exhibit "A" of the contract. Therefore, the request was made for an amendment which would make allowance for field conditions. Amendment No. 2 allowed spacing and general location of holes to be varied, contingent on prior approval of the DMEA representative.

During the first two months, progress was slow owing to bad weather, sickness, lack of help for the driller, etc. Therefore, it became necessary to again request an extension of time, which was granted in Amendment No. 3.

Toward the end of March, the services of the dozer operator were again required to complete drill sites as specified by DMEA representatives, and to repair original sites and roads disturbed by winter erosion.

Between January 12 and June 30, 1953, 31 drill holes, with a total footage of 2983 feet 6 inches, were completed. Core from each hole was logged by the sampler, tested with a Geiger counter, and a sample taken for chemical assay. In general, the drilling proceeded without major difficulty. After the first hole, in which both casing and cementing were resorted to in order to drill through the two siltstone layers of the Chinle formation, the driller understood the ground and could usually anticipate and circumvent major trouble. The loose and broken nature of the sandstone allowed the escape of water in the greater number of the drill holes, and constituted a continuing problem for the driller. Caving, in the lower siltstone bed of the Chinle, also occurred in many instances. In the drill holes toward the west, a roll of siltstone under the Shinarump sandstone (attaining a thickness of 11.5 feet in Hole No. 18) slowed the drilling, but presented

no other complication.

On July 6, 1953, drifting on the ore exposed on the face of Tunnel No. 2 was begun, and continued through August, September and October, until a total of 200 feet of drift had been completed. Twice during this time it became necessary to ask for a further extension of time, which requests were granted by Amendments No. 4 and No. 5. The work of drifting progressed less rapidly than was anticipated, due partly to illness of the miners and equipment failures, but largely because of the slowness of drilling in the siltstone which was encountered at a distance of 62 feet, and which continued, in varying depth, throughout the remainder of the tunnel.

During the running of the 200 foot drift, a Geiger counter was used continually to test for radioactivity, and samples for chemical assay were taken at intervals.

The exploration project was completed October 30, 1953, at a cost for drilling of $13,903.11, and for drifting, $5,070.00, making a total of $18,973.11.

On November 4, 1953, the Government, through the Defense Minerals Exploration Administration, certified a discovery or development under the exploration project completed on the Jomac Claims.

GEOLOGIC SUMMARY

From the study of the data accumulated through the logging of the 31 drill holes, with a chemical assay from each, and through observations and assays in the original workings and the 200 foot drift, it appears that the following assumptions relating to the explored portion of the Jomac Mesa can be used as a geologic basis for development of the Jomac Mine.

Throughout the explored area, the overlying Chinle appears to be fairly consistant layered beds of siltstone and sandstone, from six to fifteen feet in thickness, except that toward the extreme west the solid sandstone beds are replaced by thin sandstone lenses and sandy siltstone. Though much of the Chinle formation showed the action of mineral solutions, such as iron, and traces of carbon were found in the sandy siltstone, no radioactivity could be detected in any portion.

The Shinarump formation appears to vary from 16 to possibly 28 to 30 feet in thickness, with concentrations of uranium minerals being generally associated with carbonized "trash", usually found on or toward the bottom of the sandstone. Some mineralization shows in the greenish-gray siltstone at its base, where it comes in contact with the Moenkopi. Traces of copper minerals are also present.

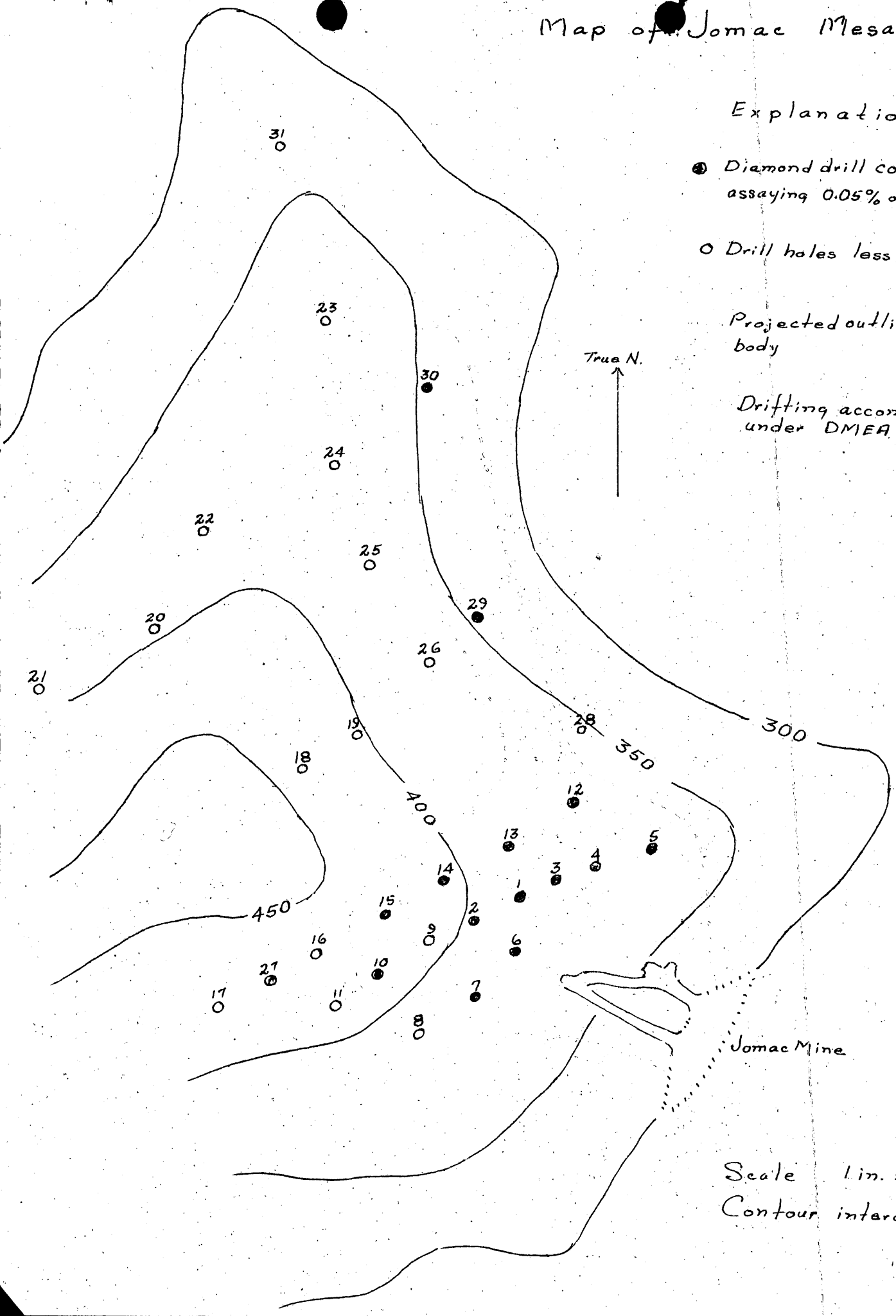
On the accompanying sketch, if a line is drawn from Hole 7, between Holes 2 and 9, through Holes 13 and 26, it will mark the general outline of a brownish-red siltatone bed that underlies the sandstone in that area, increasing to a depth of 7.9 feet in Hole 15, dropping to 3.4 feet in Hole 27, and then rising abruptly to 10.2 feet in Hole 17. It will be noted that a number of cores in that area assayed 0.05% or more U308. In all cases the sample was taken from the sandstone above the siltstone bed. It would then appear that the ore in this area overrides the clay bed. Observations made in the 200 foot drift bear out this assumption. Further exploration in this direction is indicated. It also seems reasonable to expect that a small body of ore might be found to lie in the "low" disclosed by core Holes 11 and 27, further evidence being the assay of 0.05% U308 on a 30 inch sample taken from the bottom sandstone in Hole 27.

Our estimate of ore reserves is based on a projected ore body that includes core holes from which samples assayed 0.05% or more U308. Though ore of this grade is not marketable, the factors of core loss in the critical zone, and loss of values through sand and water action during drilling, account for lower U308 content in cores than would be true of the ore body in place. This is authenticated by samples taken in the underground workings; e.g., a 48 inch sample of core from Hole 6 assayed 0.08% U308, while a 48 inch sample taken underground in approximately the same area, assayed 0.4%.

An estimated average thickness of $2\frac{1}{2}$ feet for the ore body is based on an average of samples taken from cores, taking into account core loss, and those taken underground.

By means of the foregoing, and by use of a factor of 13.5 cubic feet of sandstone in place to equal one ton, we estimate an ore reserve, as of the end of the exploration project, of approximately 18,000 tons.

Map of Jomac Mesa



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

DOCKET FILE

Murphy

Mr. J. B. Plosser, President
Ellihill Mining Company
White Canyon via Cortez, Colorado

NOV 5 1953

Re: Docket No. DMEA-1957 (Uranium)
Contract No. Idm-E397
San Juan County, Utah

Dear Mr. Plosser:

Reference is made to your above-named Exploration Project Contract for uranium. You are probably aware that in some similar cases it has been found that some part or all of the land which is the subject of the exploration project contract consists of claims located on land which was subject to prior Federal oil and gas leases. The validity of such claims is doubtful, and in some cases the Atomic Energy Commission has issued a lease to the land for whatever benefit that may afford in curing the invalidity as far as uranium is concerned.

By the recent act of Congress approved August 12, 1953 (Public Law 250, 83d Cong.), mining claims located between July 31, 1939, and January 1, 1953, on United States Lands which were then subject to oil and gas leases, may be validated by the owners of such claims, if, not later than December 10, 1953, they

> ".... post on such claim in the manner required for posting notice of location of mining claims and file for record in the office where the notice or certificate of location of such claim is of record an amended notice of location of such claim, stating that such notice is filed pursuant to the provisions of this Act and for the purpose of obtaining the benefits thereof."

If any of the land which is the subject of your Exploration Project Contract includes a located claim or claims, the validity of which might be questioned on account of a previous oil and gas lease, the statute cited is called to your attention so that you may validate your rights as above indicated, if you consider this to be in your interest. This Agency deems such validation to be desirable even though the land in question may be covered by a lease from the Atomic Energy Commission.

Sincerely yours,

C. D. Mittendorf

Administrator

FMMurphy/gla
11-5-53
cc to: Docket file
Region IV (2)
Division contract file

50811

FILE COPY
SURNAME: 913

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS ADMINISTRATION

WASHINGTON 25, D. C.

NOV 5 1953

Murphy
Ellis
Burton
Oliver
Talbert
Hodges
Hoyt
Selfridge
J. Johnson

R.C.S.
11-5-53

extended period, please notify Mr. [illegible] at six-month intervals that no production has been made, when that is the case.

Sincerely yours,

C. O. Mittendorf

Administrator

Enclosure

FMMurphy/gla
10-26-53
cc to: Adm. Reading File
Operating Committee
Docket ✓
Messrs. Hodges, Rm. 4604
Thayer, Rm. 5216 TVA Bldg.
Ellis
Murphy
F. E. Johnson
Chambers
DWPA Field Team, Region IV (2)

FILE COPY
SURNAME:

Murphy
Ellis
Britin
Burke
Tschirgi
Hedges
Hayes
Selfridge
Johnston

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

NOV 5 1953

C. S. Mittendorf (for)

Murphy/ la
1-[illegible]-53

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P
Y

DN 235 BUREAU OF MINES 11/4/53 9:06AM

C O MITTENDORF

Base metals

REURTT 11/3/53 RECOMMENDATION FOR CERTIFICATION CONTRACT IDM-E178 GLOBE-MIAMI COPPER CO., IRENE ZINC MINE AND ELLIHILL MINING COMPANY, CONTRACT IDM-E397. WE HAVE HAD DIFFICULTY WITH THE GLOBE-MIAMI COPPER COMPANY, AND ANTICIPATE FURTHER TROUBLE. THE ELLIHILL MINING COMPANY HAS SHIPPED ORE AND WE HAVE NOT RECEIVED ANY ROYALTY TO DATE. WE BELIEVE IT IS IN THE BEST INTEREST OF THE GOVERNMENT TO MAKE IMMEDIATE CERTIFICATION.

W H. KING

Certification of Dis.
Nov. 4, 1953

FILE COPY
SURNAME:

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

Defense Minerals Exploration Administration
C. O. Mittendorf
5371 1621

14X3923, Working Fund, Interior, DMEA
November 3, 1953

Mr. W. H. King, Executive Officer, Field Team, Region IV, Defense Minerals Exploration Administration, 224 New Customhouse Bldg., Denver, Colorado.
Docket DMEA-1957, Contract 397, uranium.

Reur memo. Oct. 14 recommending certification. Please advise whether your recommendation for immediate certification still holds in light of general policy stated our letter Oct. 29 re Contract 473 Irene Zinc Mine, Docket 2711.

Since Ellihill contract apparently completed it appears practicable to defer certification until final report received unless special circumstances justify immediate action. Certification withheld pending your further advice.

C. O. Mittendorf (fw)
C. O. MITTENDORF, ADMINISTRATOR

COMittendorf/fw

cc: Admr Reading File
Operating Committee
Docket
Mr. Hedges
Mr. Thayer
Mr. Ellis
Mr. Murphy
F.E.Johnson
Mr. Chambers
Field Team, Reg. IV (Confirmation)

SENT
NOV 3 1953
Clerical Service Section

R.C.H.
11-3-53

October 29, 1953

Memorandum

To: Hazel Berry, Operating Committee

From: Grace L. Ault, Rare & Misc. Metals Division

Subject: Amendment No. 5, dated October 26, 1953
Contract Idm-E397
Docket DMMA No. 1957 (Uranium)
Ellihill Mining Company

Mr. Murphy reviewed and approved the above amendment.

Grace L. Ault

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 28 1953

224 New Customhouse
Denver 2, Colorado

OCT 26 1953

Memorandum

To: C.O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA 1957 (Uranium), Contract Idm-E397, Ellihill Mining Company, San Juan County, Utah

Enclosed are the original and two copies of Amendment No. 5 to Contract Idm-E397 which has been executed under the authority delegated to this office to extend the period for completion of the contract from 13 months to 15 months. Also enclosed are three sets of data relevant to the amendment.

The operator also requested the use of approximately 70 feet of the 200 feet of drifting authorized under the contract to drive a crosscut from the No. 2 tunnel to the No. 1 tunnel for ventilation purposes. We deemed that this work would not be exploration, therefore his request for crosscutting authority has been denied.

Copies of this amendment have been given to the operator, the Fiscal Officer, Region IV, and a copy has been retained for our files.

W. H. King
W. H. King

Enclosures

RECEIVED
NOV - 2 1953
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

Cor
10-26

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

DEPARTMENT OF THE INTERIOR
Defense Minerals
OCT 1 1953

224 New Customhouse
Denver 2, Colorado

October 14, 1953

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Certification of Discovery- Docket No. DMEA 1957 (Uranium), Contract Idm-E397, Ellihill Mining Co., San Juan County, Utah.

Enclosed are four copies of a report recommending Certification of Discovery on Contract Idm-E397.

John F. Shaw
For W. H. King

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

October 12, 1953

Memorandum

To: W. H. King, Executive Officer, DMEA Field Team, Region IV

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: Docket No. DMEA-1957 (Uranium), Contract Idm-E397, Ellihill Mining Co., San Juan County, Utah

Attached are five copies of a memorandum prepared by H. K. Thurber, Jr., pertaining to a recommendation for certification of discovery on the subject property.

The contract and amendments thereto allow 3,000 feet of diamond drilling and 200 feet of drifting on the property. As of October 9, 1953, a total of 2,983.5 feet of diamond drilling and 132 feet of drifting had been completed. All assay results of samples are not at hand, but sufficient data are available for an ore estimate.

The short-form contract includes three mining claims under Article 2. All ores shipped from these claims are subject to DMEA royalty. The operator is presently stockpiling ores taken from the exploratory headings. None had been shipped to October 9, 1953.

Uranium mineralization on the Ellihill property occurs in the Shinarump conglomerate of Triassic age. Mineralization appears to follow erosion channels in the underlying Moenkopi formation. Uranium is contained in a dark, carbonaceous-appearing mineral, and to a lesser extent in carnotite. Copper minerals are also present.

It is recommended that a certification of discovery be issued on property of the Ellihill Mining Co.

Stephen R. Wilson

Stephen R. Wilson

Enclosure

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED

S. R. Wilson

Oct. 7, 1953

H. K. Thurber, Jr.

Docket No. DMEA-1957 (Uranium), Ellihill Mining Co., San Juan County, Utah. Recommendation of certification of discovery

Sufficient exploratory work has been completed on the subject property and enough sample results obtained to allow an approximate estimate of ore reserves to be made. The drilling phase of the contract has been completed with the drilling of 2,983.5 feet of AX diamond drill hole and 62 feet of underground drifting had been done to the middle of September. Sample results on record in this office are not complete, but sufficient information is available to allow at least an interim calculation of ore reserves to be made.

The following tabulation of samples is made from results reported by the operator and includes only the holes encountering ore and strong uranium mineralization. The holes are plotted on the attached map.

Hole No.	Length of Sample, feet	Percent U_3O_8
1	0.9	1.37
4	2.8	0.11
5	2.7	0.12
6	4.0	0.08
7	1.4	0.22
13	3.6	0.17

The average thickness of the ore penetrated by the holes listed above is 2.6 feet and the weighted average of the U_3O_8 contained is 0.20 percent U_3O_8.

The underground samples used in the ore reserve calculation are listed below. The unusually low samples were rejected, as well as samples taken by the operator which appeared to be inordinately high in value. The samples are plotted on the attached underground sample map.

Sample No.	Length of cut, feet	Percent U_3O_8
1	1.2	0.27
3	2.0	0.08
5	3.2	0.47
6	1.5	0.58

The average length of the underground samples listed above is 2.0 feet and the weighted average value of U_3O_8 is 0.36 percent. The average thickness of the ore from drill hole samples and the underground samples is 2.3 feet and the weighted average percentage of

U_3O_8 contained in both types of samples is 0.27 percent.

An arbitrary outline of the ore discovered by drilling and underground drifting is shown on the attached map. This outline is based on the above sample results, as well as radiometric observations along the walls of the workings and the sample results obtained from the operator, as shown on Fig. 4, "Underground Workings of the Jomac Mine, San Juan County, Utah," attached to the original examination report. A cursory calculation, for the purpose of this memorandum, based upon the above area and the thickness and grade indicated by the above-listed samples, shows an estimated ore reserve of 4,370 tons of 0.25 percent U_3O_8 ore, of which it is estimated that 2,840 tons (65 percent) is recoverable by the mining methods used in the area. Under existing price schedules, this tonnage of ore would gross $108,630. Assuming a mining and transportation cost of $15.00 per ton, the ore would net approximately $66,000.

The recorded shipments from the mine, all made before the beginning of the DMEA work, total 65.94 tons and averaged 0.21 percent U_3O_8. These ores had a gross value of $961.44.

In view of the ore reserve indicated by the available sample data, and the record of shipments made from the mine workings, it is recommended that a certification of discovery be made on the Ellihill Mining Co. property explored under the subject DMEA contract.

N. K. Thurber, Jr.

N. K. Thurber, Jr.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

September 30, 1953

Memorandum

To: W. H. King, Executive Officer, DMEA Field Team, Region IV

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: DMEA-1957 (Uranium), Contract Idm-8397, Ellihill Mining Co., San Juan County, Utah. Operator's request for amendment

Attached are six copies of a letter received from the subject operator requesting amendments to the present contract. Comments by the inspecting engineer are included in a separate memorandum.

The operator requests an amendment to extend the life of the contract two months. Permission is also requested to drive a 70-foot crosscut for ventilation purposes.

Mechanical difficulties and illness of the subcontracting crew have slowed the progress of drifting. It is believed that the remaining footage under the contract cannot be completed by the present expiration date, October 4, 1953. Recommendation is made that the life of the contract be extended two months, to December 4, 1953.

The request for amendment to allow a 70-foot crosscut for ventilation is illustrated on a sketch attached to the inspecting engineer's memorandum. The contract allows the operator to "drift 200 feet on the ore that is exposed in the face of the No. 2 drift." The face of the No. 1 drift is being advanced on company account concurrently with advance in the No. 2 drift. The contract is drawn on the short form, with an allowable cost for drifting of $25.35 per foot. In the strictest interpretation, the requested crosscut is not exploration. The short-form contract infers that the allowable unit cost includes all expenses necessary to accomplish the objective of 200 feet of drifting. Proper ventilation is necessary. It appears that installation of mechanical ventilation equipment will be required if the operator proposes to extend the No. 2 drift beyond the face, as of September 12, 1953.

It is recommended that the request for allowance of 70 feet of crosscutting for ventilation purposes be disallowed, on the basis that the proposed work is not exploration.

Stephen R. Wilson

Stephen R. Wilson

Enclosure

S. R. Wilson Sept. 28, 1953

H. K. Thurber, Jr.

Docket No. DMEA 1957 (Uranium), Contract Idm-2397, Lillihill Mining Co., San Juan County, Utah. Request for amendment

The subject operator has requested an amendment to the existing contract to (1) extend the life of the contract for two months beyond the present termination date of October 4, 1953, to December 4, 1953, and (2) to transfer approximately 70 feet of the 200 feet of allowable drifting to a crosscut between Drift No. 2 and Drift No. 1 to obtain better natural ventilation of the workings.

The request for an extension of the life of the contract is made necessary due to delays occasioned by the breakdown of the small Diesel-powered shuttle car used for haulage in the mine and the necessity of replacing the jackhammer being used for drilling underground. The subcontractor's crew was unable to work because of illness during part of the month of August which further slowed progress of the contract work. At the end of August, 136 feet of drifting remained under the contract, and it is believed that this work cannot be finished by the existing termination date.

The operator's proposal of a ventilation crosscut between Drift No. 2 and Drift No. 1 is shown on the attached sketch map. Good circulation of air in Drift No. 2 was available in the area of the junction of the original crosscut and Drift No. 2, but the operator relates that the face has now advanced to a point that little clearing of gasses after blasting is accomplished by the natural circulation through this opening. The operator believes that a second crosscut would materially aid in clearing of gasses, and therefore requests that he be allowed to use 70 feet of the drifting allowed by the contract in driving the proposed crosscut.

It is recommended, in view of the delays encountered in the underground work, that the requested extension in the life of the project be granted. It is further recommended that consideration be given the question of allowing the driving of the ventilation crosscut as requested by the operator.

H. K. Thurber, Jr.

H. K. Thurber, Jr.

September 12, 1953

Mr. Stephen Wilson
Bureau of Mines
1600 East, 1st South
Salt Lake City, Utah

Re: Docket No. DMEA-1957
Contract Idm-3397

Dear Mr. Wilson:

We find it necessary to request an extension of two month's time under the above contract, which would allow it to run until December 4, 1953. Trouble with equipment and illness of the entire crew slowed up the work and will prevent us from completing the allowed drifting by October 4, 1953.

We request, also, to be permitted to use approximately 70 feet of the 200 feet allowed under the above contract for a crosscut from Tunnel 2 to Tunnel 1 for ventillation purposes. The existing face is approximately 70 feet from the junction with the present crosscut from Tunnel 1, and the air is becoming quite foul as a result of a lack of ventillation.

This extension of time and crosscut for ventillation, if granted, will in no way alter the financial aspects of our contract with the Government.

Very truly yours,

J. B. Plesser
President

JBP/mj

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

August 31, 1953

Memorandum

To: Hazel Berry, Operating Committee

From: GraceL. Ault, Rare & Misc. Metals Division

Subject: Amendments to contracts

Amendment No. 2, dated August 25, 1953
DMEA-1896 Excalibur Uranium Corp.
Contract Idm-E488

Mr. Knouse reviewed the above amendment and approved it.

Amendment No. 4, dated August 12, 1953
DMEA-1957 Ellihill Mining Co.
Contract No. Idm-E397

Mr. Ellis reviewed and approved the above amendment.

Grace L. Ault
Grace L. Ault

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SEP 15 53
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

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

224 New Customhouse
Denver 2, Colorado

August 28, 1953

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA-1957 (Uranium), Contract Idm-E397, Ellihill Mining Co., San Juan County, Utah

Enclosed are the original and two copies of Amendment No. 4 to the subject contract, which were returned by the Acting Chairman of the Operating Committee, for signature by the Executive Officer.

W. H. King
W. H. King

Enclosures

RECEIVED
SEP 15 1953
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

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700
FILE COPY
SURNAME:

Ellis
Martin
Johnson
Thatcher

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

AUG 24 1953

Mr. [illegible] King
Executive Officer
DMEA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMA-1957 (Uranium)
Contract No. Ldu-8397
Amendment No. 4
Hillhill Mining Company
San Juan County, Utah

Dear Mr. King:

Reference is made to your memorandum of August 12, 1953, with which you forwarded the original and two copies of Amendment No. 4, dated August 12, 1953, together with three copies of data relevant to the amendment.

Inasmuch as the amendment was not signed by you, we are returning the three copies for that purpose, and are retaining the three copies of the company's letter dated July 20 and Mr. Stephen R. Wilson's memorandum dated July 21, 1953, until the amendment has been returned.

Sincerely yours,

W. S. Martin
ESJ
ACTING Chairman, Operating Committee

Enclosures 3

APPROVED:

C. H. Johnson ESJ
Member, Bureau of Mines

E. W. Larrabee ESJ
Member, Geological Survey

EWEllis/gla 8-21-53
cc to: Adm. Reading File
Operating Committee
Docket
Messrs. H. D. Keiser, Rm. 3641
A. F. Butler, Jr., Rm. 3206, GSA
Ellis

HHR
8-24-53

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

224 New Customhouse
Denver 2, Colorado

August 12, 1953

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA-1957 (Uranium), Contract Idm-E397, Ellihill Mining Company, San Juan County, Utah

Enclosed are the original and two copies of Amendment No. 4 to the subject contract which extends the life of the contract from 11 months to 13 months. Also enclosed are three sets of data relevant to the amendment.

Copies of this amendment have been given to the operator, the Fiscal Officer, Region IV, and a copy has been retained for our files.

W. H. King

W. H. King

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

July 21, 1953

Memorandum

To: W. H. King, Chief, Mining Division, Region IV

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: DMEA-1957, Contract Ida-E397, Ellihill Mining Co., San Juan County, Utah

Enclosed are six copies of a letter received from the subject operator requesting an extension of time to complete contract work. The present expiration date of the contract is August 4, 1953. As a result of operational difficulties, the contractor asks that the contract be amended to extend the expiration date to October 4, 1953. It is recommended that the request be granted.

Stephen R. Wilson
Stephen R. Wilson

Enclosure

ELLIHILL MINING COMPANY
White Canyon, Utah

July 20, 1953

Mr. Stephen Wilson
Bureau of Mines
1600 East 1st South
Salt Lake City, Utah

Re: Contract No. Idm-E397

Dear Mr. Wilson:

We find it necessary to request an extension of two months' time under the above contract, which would allow it to run until October 4, 1953.

Due to unforeseen equipment failures, we will not be able to complete the allowed drifting by the present expiration date of August 4, 1953.

This extension of time, if granted, will in no way alter the financial aspects of our contract with the Government.

Very truly yours,

J. B. Plosser

J. B. Plosser
President

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

May 27, 1953

Memorandum

To: Hazel Berry, Operating Committee

From: Grace L. Ault, Rare & Misc. Metals Division

Subject: Amendment to contract

Mr. Ellis reviewed Amendment No. 3, dated May 12, 1953, to the above contract, in Docket DMEA-1957, Ellihill Mining Company, and approves it.

Grace L. Ault
Grace L. Ault

Posted

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

224 New Customhouse
Denver 2, Colorado

May 12, 1953

Memorandum

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 15 1953

To: C.O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Amendment No. 3 to Contract Idm-E397, Docket DMEA 1957, Ellihill Mining Company

Enclosed are the original and two copies of Amendment No. 3 to Contract Idm-E397. Copies of this amendment have been given to the operator, the Fiscal Officer, Region IV, and a copy has been retained for our files.

Also enclosed are three copies of a letter from the operator requesting this amendment and three copies of a memorandum from a Bureau of Mines engineer approving this amendment.

W.H. King

W.H. King

Enclosures

RECEIVED
JUN 22 1953
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

cal
5/15

Contract File

700

March 10, 1953

MEMORANDUM

To: Hazel Berry
Operating Committee

From: Grace L. Ault
Rare and Misc. Metals Division

Subject: Docket DMFA-1957
Contract Idm-E397
Amendment No. 2

Mr. Ellis has reviewed Amendment No. 2 dated February 18, 1953, on the above-captioned contract and has approved it.

Grace L. Ault

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

224 New Customhouse
Denver 2, Colorado

March 3, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 9 1953

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Amendment No. 2 to Contract Idm-E397, Docket DMEA 1957, Ellihill Mining Company

Enclosed are two copies of Amendment No. 2 to Contract Idm-E397 which were returned here for signature.

W. H. King

W. H. King

Enclosures

Cor 3-9

RECEIVED
MAR 18 1953
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

FILE COPY
SURNAME:
200

Adams
Selfridge

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

MAR 2 1953

BW

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

Dear Mr. King:

This will acknowledge your memorandum dated February 18, 1953 transmitting the original and two copies of Amendment No. 2, DMEA Docket 1957, Contract Idm-3397, Ellihill Mining Co., Inc.

Enclosed herewith are two copies of this amendment, which you inadvertently forwarded unsigned. Please sign these copies and return as soon as possible.

Sincerely yours,

George C. Selfridge

(JHG)

George C. Selfridge, Chairman
Operating Committee

S.H.
3/2/53

APPROVED:

J. H. Hedges (JHG)

J. H. Hedges, Bureau of Mines

T. P. Thayer (JHG)

T. P. Thayer, Geological Survey

READams/meb
2-25-53
cc to: Adm.Reading File
Mails & Files Br.
~~Mr. Selfridge~~ Oper. Committee
Mr. Hedges - Rm. 4604
Mr. Thayer - Rm. 4234, GSA Bldg.
Mr. Ellis

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

224 New Customhouse
Denver 2, Colorado

February 18, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 2 1953

Memorandum

To: C. O. Mittendorf

From: Executive Officer, Field Team, Region IV

Subject: Amendment No. 2, DMEA Docket 1957, Contract Idm-E397, Ellihill Mining Co., Inc.

Enclosed are the original and two copies of Amendment No. 2 to Contract Idm-E397. Copies of this amendment have been given to the Operator, the Fiscal Office of Region IV, and a copy has been retained for our files. Also enclosed are three copies of a letter from the Operator requesting this amendment and three copies of a memorandum from a Bureau of Mines engineer approving this amendment.

W. H. King
W. H. King

Enclosures

December 31, 1952

Memorandum

To: Hazel Berry, Operating Committee

From: Grace L. Ault, Rare and Misc. Metals Division

Subject: Clearance on Amendments

Docket No. DMA-1708X, Contract No. Idm-E229
Kentucky-Utah Mining Company

Mr. Knouse has reviewed Amendment No. 3, dated December 11, 1952, submitted by Region IV, and approves it.

Docket No. DMA-1957, Contract No. Idm-E397
Allihill Mining Company

Mr. Knouse has reviewed Amendment No. 1, dated September 4, 1952, submitted by Region IV, and approves it.

Grace L. Ault

GLAult/jem
12/31/52

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

224 New Customhouse
Denver 2, Colorado

December 23, 1952

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Amendment No. 1 to Contract Idm-E397, Docket DMEA 1957, Ellihill Mining Company

Enclosed are the original and two copies of Amendment No. 1 to Contract Idm-E397. Copies of this amendment have been given to the operator, the Fiscal Officer, Region IV, and a copy has been retained for our files.

Also enclosed are three copies of a letter from the operator requesting this amendment and three copies of a memorandum from a Bureau of Mines engineer recommending this amendment.

W. H. King

W. H. King

RECEIVED
JAN 8 1953
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

Enclosures

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
DEC 30 1952

Case
12-29

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

December 2, 1952

Memorandum

To: W. H. King, Acting Chief, Mining Division, Region IV

From: Chief, Utah-Wyoming Branch, Mining Division

Subject: DMEA-1957, Contract Idm-E397, Ellihill Mining Co., San Juan County, Utah

Attached are the original and five copies of a letter from the subject contractor requesting an amendment to permit a time extension for commencing work under the contract.

The contractor will be unable to begin work until an agreement is made with a subcontractor for the diamond drilling. Services of a diamond drilling contractor were thought to be available, but, as pointed out in the contractor's letter, equipment was not suitable; thus the agreement was withdrawn.

I have had recent discussions with the contractor here in Salt Lake, and it is believed that he will have a drilling firm on the property during December, if weather permits.

It is recommended that the time for commencing work under the contract be extended to January 4, 1953.

Stephen R. Wilson
Stephen R. Wilson

Enclosure

ELLIHILL MINING COMPANY
White Canyon, Utah

November 28, 1952

Mr. Stephen R. Wilson, Chief
Utah-Wyoming Branch, Mining Division
Bureau of Mines
1600 East First South Street
Salt Lake City 1, Utah

Re: Docket No. DMEA-1957

Dear Mr. Wilson:

We acknowledge receipt of your letter of September 30, 1952, enclosing Exploration Project Contract Idm-E 397 between the Government and Ellihill Mining Company. This did not reach us until the first of November. Part of the delay in our receiving the contract was due to its being held in the Post Office in Cortez, Colorado, because of insufficient address.

The Plateau Exploration & Development Corp., which made the accepted bid for the core drilling to be done under the above mentioned contract, has written us the following:

"Since I talked to you a week ago we have had a series of additional break downs on our drill rig. Consequently, I have decided to send it back to the factory. It is obviously ill fit for this country and I am afraid never would be satisfactory without major changes. This was not an easy decision to reach but the drill's miserable performance in the field forced it upon us. Therefore, we can not do the proposed drilling for you. I am sincerely sorry."

Due to this withdrawel, it has been necessary for us to secure the services of another drilling contractor, which has caused delay in starting work under the contract. Therefore, we request that Exploration Project Contract Idm-E 397 be amended under Article 3 to allow us an additional 60 days in which to begin work, or until January 4, 1953.

We shall keep your office advised of all developments.

Please note that as of the 1st of December, 1952, we will have a Post Office here at White Canyon. Our address will then be Ellihill Mining Company, White Canyon, Utah.

Very truly yours,

J. B. Plosser

JBP/mj

J. B. Plosser
President

STANDARD FORM NO. 64

10/30/52 gla

Office Memorandum • UNITED STATES GOVERNMENT

TO : E. Wm. Ellis, DMEA Member, Uranium Commodity Committee

DATE: Oct. 24, 1952

FROM : Arthur P. Butler, Jr., USGS Member, Uranium Commodity Committee

SUBJECT: Final Report, DMEA Docket 1957, (Uranium), Ellihill Mining Co., Jomac claims, White Canyon area, San Juan County, Utah.

I concur with the recommendations of the examining members of the Field Team, as set forth in the report identified above, that exploration be granted for the Government's share ($17,137.63) of a total cost of $19,041.83.

Arthur P. Butler, Jr.

Arthur P. Butler, Jr.

Copy to E. Wm. Ellis

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 29 1952

10/17/52 gla

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 17 1952

October 16, 1952

Memorandum

To: Ernest William Ellis, DMEA Member,
Uranium Commodity Committee, Room 4640

From: H. D. Keiser, Bureau of Mines Member,
Uranium Commodity Committee

Subject: Final report, DMA Docket 1957, Ellihill Mining Co.,
White Canyon, San Juan County, Utah

I have reviewed the subject report and discussed it with Arthur P. Butler, Geological Survey Member, and Joseph O. Hosted, representative of the Atomic Energy Commission.

It is recommended that the report be approved.

H. D. Keiser

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

224 New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 2 1952

September 26, 1952

Memorandum

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

From: Field Team, Region IV

Subject: Final Report, DMA Docket 1957, (Uranium) Ellihill Mining Company, White Canyon, San Juan County, Utah

Enclosed are four copies of the final report on the subject docket.

The contract has been signed and is in effect.

for John T. Shaw
W. H. King

A. H. Koschmann
A. H. Koschmann

Enclosures

ON-SITE EXAM

cal

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

200 New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 2 1952

May 16, 1952

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMA Docket 1957, Ellihill Mining Company, White Canyon, San Juan County, Utah

Enclosed are 11 copies of the geologic report by J. W. Hasler and D. J. Sharp of the U. S. Geological Survey covering the above docket.

It has been recommended that the loan be approved.

There will be no report submitted by the U. S. Bureau of Mines.

The brochure is enclosed.

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

Enclosures (12)

Reviewed by
DMEA OPERATING COMMITTEE
10-8-52
(date)

Room 208, 222 So. West Temple
Salt Lake City 1, Utah
13 May 1952

Memorandum

To: A. H. Koschmann, Field Team, Region IV

From: Ralph J. Roberts

Subject: DMA Docket 1957, Ellihill Mining Company, White Canyon, San Juan County, Utah.

Enclosed are eleven copies of a geologic report on the Jemac Mine of the Ellihill Mining Company, White Canyon Area, San Juan County, Utah, DMA Docket 1957.

In response to a request for a mine investigation by the Field Team, Region IV, the property was visited on March 4 and 5, 1952 by J. W. Hasler and R. J. Sharp of the U. S. Geological Survey to determine the feasibility of a Defense Minerals Exploration Administration loan to explore for uranium ore.

The uranium deposits are in the Shinarump conglomerate of Triassic age, and tend to follow old erosion channels cut in the surface of the underlying Moenkopi formation. Carbonized wood fragments have been replaced by uranium bearing minerals. There are more than 12,000 tons of inferred ore averaging 0.15 percent U_3O_8 valued at $7.50 at the Jemac mine. The chances of finding uranium deposits of commercial grade are good.

It is proposed to explore scour channels in the basal Shinarump conglomerate by 3,000 feet of diamond drilling and to drift 200 feet on ore exposed in the face of the No. 2 drift. The total exploration project will amount to $19,041.83. The government's portion will be $17,137.65, based on the 90-10 percent uranium participation program under the Defense Minerals Exploration Administration.

There will not be any U. S. Bureau of Mines engineering report in conjunction with the geologic report.

I concur with the conclusions and recommendations of the examining geologists that the government enter into a contract with the applicant to do the proposed work.

For - Ralph J. Roberts

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMA Docket 1957, Ellihill Mining Company

White Canyon, San Juan County, Utah

J. W. Hasler and B. J. Sharp, Geologists
U. S. Geological Survey

May 13, 1952

Reviewed by
DMEA OPERATING COMMITTEE
10-8-52
(date)

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Drifting	8
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ILLUSTRATIONS

Figure 1. Index map of Utah.

Figure 2. White Canyon and surrounding area, San Juan County, Utah.

Figure 3. Structure contours at base of Triassic Shinarump uncorrected for regional dip (showing proposed diamond drill holes).

Figure 4. Underground workings of the Jomac Mine, San Juan County, Utah, Ellihill Mining Company, White Canyon, Utah.

Figure 4a. Jomac Mesa, showing proposed diamond drill holes and claim boundaries (claim boundaries are approximate).

DMA Docket 1957, Ellihill Mining Company

White Canyon, San Juan County, Utah

INTRODUCTION

The Ellihill Mining Company, DMA Docket 1957, has applied to the Defense Minerals Exploration Administration for a loan of $19,831.88 to be used for the exploration of uranium at the Jomac mine near White Canyon, San Juan County, Utah.

A field examination was requested by the field team, Region IV, December 10, 1951, to determine the feasibility of an exploration program on the Jomac claims I, II, and III of the Ellihill Mining Company. The examination was made on March 4 and 5, 1952 by J. W. Hasler and B. J. Sharp of the U. S. Geological Survey.

Location and Accessibility

The Jomac mine is located on the east side of the Colorado River 13 miles northeast of Hite, San Juan, Utah (fig. 1). The mine can be reached from Hite, Utah by ferrying the Colorado River to the town of White Canyon, from where a rough bulldozer road connects with the Jomac mine via Farley Canyon (fig. 2). An alternate route to the mine is via Monticello and Blanding on State Highway 47 to White Canyon by way of State Highway 95 through Natural Bridge National Monument.

History and Production

The Ellihill Mining Company is a newly formed corporation and has not yet received its corporate papers. The company was formed to explore for

and develope uranium deposits. The property owned by the Ellihill Mining Company consists of three contiguous lode claims known as the Jomac I, Jomac II, and Jomac III, located on the east side of the Colorado River in an unsurveyed area 13 miles northeast of Hite, Utah. Mine workings on the Jomac Claims consist of two drifts; No. 1, 47 feet long, and No. 2, 120 feet long. A cross-cut 65 feet long connects the two drifts (fig. 4). Production is reported by the Atomic Energy Commission to be 107 tons of uranium ore averaging 0.15 percent U_3O_8 having a gross value of $802.50, at a gross value per ton of $7.50.

GEOLOGY

The White Canyon district is in San Juan County in southeastern Utah and includes an area of about 300 square miles on either side of White Canyon.

In the White Canyon district nearly horizontal strata of sedimentary rocks that range from Permian to Jurassic in age are exposed. The nearest exposed igneous rocks are in the Henry Mountains, to the west, and the Abajo Mountains, to the east of the White Canyon area.

The sedimentary rocks in the area include a nearly complete section from the Cedar Mesa member of the Cutler formation of Permian age to the Navajo formation of the Glen Canyon group of Jurassic age. All formations dip from 2 to 3 degrees west. The following is the stratigraphic section in the White Canyon area. [1]

---

[1] The San Juan Country, U. S. Geol. Survey Prof. Paper 188, Plate 10, Columnar Section B.

Jurassic	(Navajo Sandstone (Kayenta formation (Wingate sandstone
Upper Triassic	(Chinle formation (Shinarump conglomerate (?)
Lower Triassic	(Moenkopi formation
Permian Cutler Formation	(Hoskinnini member (De Chelly sandstone member (Organ Rock member (Cedar Mesa member (Halgaito member (not exposed)

The uranium deposits are confined to the Shinarump conglomerate, and the topmost bed of the Moenkopi formation. The topmost bed of the Moenkopi is a white very fine-grained silty sandstone or siltstone, which may contain uranium and copper minerals where the overlying Shinarump conglomerate has been mineralized.

The Shinarump conglomerate rests unconformably on the Moenkopi formation. In the White Canyon area the Shinarump formation is a cross-bedded, coarse- to medium-grained quartzose sandstone containing interbedded lenses of sandy conglomerate and light colored sandy siltstone. At many places in the lower part of White Canyon the conglomerate may be missing, which may be so in the Jomac mine.

The Shinarump conglomerate and the bed of fine white silty sandstone or siltstone at the Shinarump-Moenkopi contact are the only strata in the White Canyon area that are known to contain radioactive deposits.

ORE DEPOSITS

The uraniferous deposits of the White Canyon area are in the Shinarump conglomerate or in the white silty sandstones and siltstones at the top of

the Moenkopi formation. The deposits are lenticular and contain secondary uranium minerals and copper sulfides, sulfates, and carbonates. In addition, chalcopyrite and pitchblende are present. [1]

---

[1] Gruner and Gardner in their annual report to the AEC for the period June 8, 1949 to July 1, 1950, reported that they had identified the following minerals from the Happy Jack mine in White Canyon: pitchblende, schoepite-becquerelite johannite, torbernite, uranophane (?), pyrite, gersdorffite, chalcopyrite, covellite, malachite, cyanotrichite, antlerite, and chalconthite.

Diamond drilling by the Atomic Energy Commission has indicated that the uraniferous deposits tend to follow old erosion channels cut in the surface of the Moenkopi formation, and that all the deposits are in, or are adjacent to, a porous coarse-grained sandstone or conglomerate. These facts suggest that the paths of the mineralizing solutions were controlled, at least in part, by channelways in porous beds along bedding planes. Carbonized wood fragments apparently have controlled the localization of the deposits. Malachite has partly replaced and filled cavities in the wood, and formed an aureole in the sandstone around the wood. Fossil wood fragments are also more radioactive than adjacent sandstone, however not all the carbonized wood fragments are radioactive. The uranium deposits in the Shinarump formation in the Jomac mine of the Ellihill mining company are typical of the occurrences of uranium found throughout the White Canyon area.

The Jomac mine, according to the Atomic Energy Commission, has produced 107 tons of ore averaging 0.15 percent U_3O_8 with a gross value of $802.50, which amounts to $7.50 per ton. The 107 tons of ore mined was shipped without sorting.

Uranium ore at the Jomac mine is reported to average at least 2.5 feet in width. The following table shows the production in part. The lessees who produced the ore have additional records of shipments.

Partial shipments from Jomac Mine, Ellihill Mining Company,

San Juan County, Utah

Tons		Percent U_3O_8	Gross Value
9.13		0.12	$ 41.65
11.08		0.16	95.78
16.77		0.27	317.11
11.75		0.25	205.63
17.21		0.25	301.27
65.94	Average	0.21	$961.44

A series of samples were assayed during the exploration work and are shown on figure 4. The samples averaged 0.28 percent U_3O_8 over an average width of vein material of 3.9 feet. Three additional samples taken by lessees in the ore zone averaged 0.47 percent U_3O_8, but no sample widths are quoted. The average grade is much higher than the other assays and it may be presumed that these samples were picked samples and therefore are not reliable.

ORE RESERVES

There are more than 12,000 tons of inferred ore averaging 0.15 percent U_3O_8 on the Jomac I, II, and III claims. At the present price of $7.50 per ton for ore containing 0.15 percent U_3O_8 the gross value would be $90,000.00, which will more than adequately repay a Defense Minerals Exploration loan of $19,831.88.

PROPOSED EXPLORATION

No definite plan of exploration has been proposed by the applicant. After consultation with the applicant and geologists of the Atomic Energy Commission, a revised exploration program, which has been approved by the applicant, was outlined by the examining geologists.

It is proposed to (1) explore scour channels in the basal Shinarump conglomerate with 3,000 feet of diamond drilling to test for concentrations of uranium minerals, and (2) to drift 200 feet on the ore that is exposed in the face of the No. 2 drift (fig. 3).

The diamond drill holes are to be spaced 30 feet apart along indicated scour channels (fig. 3). A maximum of 3,000 feet of diamond drilling and 200 feet of drifting should adequately determine whether or not there are uranium deposits of commercial grade on the Jomac claims of the Ellihill Mining Company.

The following is a detailed cost estimate for the exploration project:

Cost Estimate

The proposed project will consist of (1) the use of a bulldozer to prepare sites for diamond drilling, (2) diamond drilling, and (3) drifting from present underground workings. The costs are estimated as follows:

Bulldozer Operation

Rental of Bulldozer, D-7 Caterpillar or equivalent, with operator and supplies for preparation of drill sites.

80 hrs. @ $12.00 per hr.	$960.00	
Drayage allowance	100.00	
Total		$1,060.00

Diamond drilling

Contract diamond drilling-contractor to furnish all labor incident to drilling and haul necessary water. Responsibility for core and sludge will end with delivery to a company representative at the collar of each hole.

Contract

3,000 ft. of drilling @ $3.00 per foot (AX size)		$9,000.00
Estimated time for completion 4 months		

Use of Company-owned equipment

1 Jeep - Fair Value - $1,000

Depreciation $\frac{1,000}{60}$ = $16.67 per month

4 months = $66.68

Prorated 3/4 to diamond drilling		$ 50.00

Equipment to be purchased

1 core splitter		$ 150.00

Company Labor and Supervision

1 sampler @ $13.50 per 8 hr. day 100 working days	$1,350.00	
1 supervisor @ $400 per mo., 4 months prorated, 3/4 time to diamond drilling	1,200.00	

Compensation, insurance, payroll taxes, 11 percent	$ 280.50	
Total		$2,830.50

Supplies

Gas and Oil for Jeep	$ 140.00	
Repair and Maintenance	50.00	
Core boxes	40.00	
Miscellaneous drilling and sampling materials	50.00	
Analyses	450.00	
Transportation of supplies and equipment	150.00	
		$ 880.00
Total diamond drilling program		$12,910.50

Drifting

Contract labor

200 feet of drifting @ $8.00 per ft.		$1,600.00

Use of Company-owned equipment

1 Jeep - Fair Value - $1,000.00 2 months @ $16.67 per mo., 1/2 time		16.67
1 Compressor, 75 CFM	$1,450.00	
1 Jackhammer with jackleg	400.00	
Miscellaneous tools, steel hose, etc.	150.00	
	$2,000.00	
Depreciation $\frac{2,000}{60}$ = $33.33 per mo. for two months		66.66

Equipment to be purchased

1 Mine Car		$ 200.00

Company labor and supervision

1 miner @ $15.00 per 8 hr. shift 60 working days (Including construction of 12' x 14' frame building)	$900.00	
1 Supervisor at $400.00 per mo., 2 mos. prorated, 1/2 time to drifting	400.00	
Compensation, insurance, payroll taxes, 11 percent	143.00	
Total		$1,443.00

Supplies

Gasoline, oil and grease	$440.00	
Powder, fuse, and caps	290.00	
Timber	50.00	
Drill steel and bits	75.00	
12 lb. rail, 600 ft. single, with accessories	230.00	
2-inch pipe, 300 feet	110.00	
Miscellaneous, small tools, pipe fittings, and supplies	50.00	
Air and water hose	55.00	
Assaying	70.00	
Transportation	200.00	
Lumber, nails, roofing, windows for frame building	175.00	
Total		$1,745.00
Total for drifting		$5,071.33

Total project cost - $19,041.83

Cost per foot of diamond drilling including preparation of drill sites $13,970.50 ÷ 3,000	$ 4.65
Cost per foot of diamond drilling without drill site preparation. $12,910.50 ÷ 3,000	$ 4.30
Cost per foot of drifting $5,071.33 ÷ 200	$25.35

CONCLUSIONS AND RECOMMENDATIONS

The Ellihill Mining Company, DMA Docket 1957, has applied to the Defense Minerals Exploration Administration for a loan to be used to explore for uranium deposits at the Jomac mine near Hite, San Juan County, Utah.

The Jomac mine is 13 miles northeast of Hite, San Juan County, Utah. The uranium deposits are in the Shinarump conglomerate of Triassic age.

Diamond drilling by the Atomic Energy Commission has indicated that the uraniferous deposits tend to follow old erosion channels cut in the surface of the Moenkopi formation, and all the deposits are in, or adjacent to, a porous coarse-grained sandstone or conglomerate. In many places carbonized wood fragments have been replaced by uranium-bearing minerals. The wood fragments apparently have controlled, at least in part, the localization of the ore deposits. The Ellihill Mining Company has produced 107 tons of uranium ore averaging 0.15 percent U_3O_8 with a gross value of $802.50.

The applicant did not outline a plan of exploration. After consultation with the applicant and geologists of the Atomic Energy Commission, a revised exploration program was outlined, which has been approved by the applicant. The exploration project is shown on figure 3.

It is proposed to (1) explore scour channels in the basal Shinarump conglomerate by 3,000 feet of diamond drilling to test for concentrations of uranium minerals, and (2) to drift 200 feet on ore exposed in the face of the No. 2 drift.

The inferred reserves in the Jomac mine are in excess of 12,000 tons of ore containing 0.15 percent U_3O_8, valued at $7.50 per ton. The chances of finding uranium deposits of commercial grade are good. It is recommended that the Defense Minerals Exploration Administration enter into a contract with the applicant to do the proposed work, herein outlined, totaling $19,041.83. The government's portion will be $17,137.65 based on the 90-10 percent uranium participation program under Defense Minerals Exploration Administration.

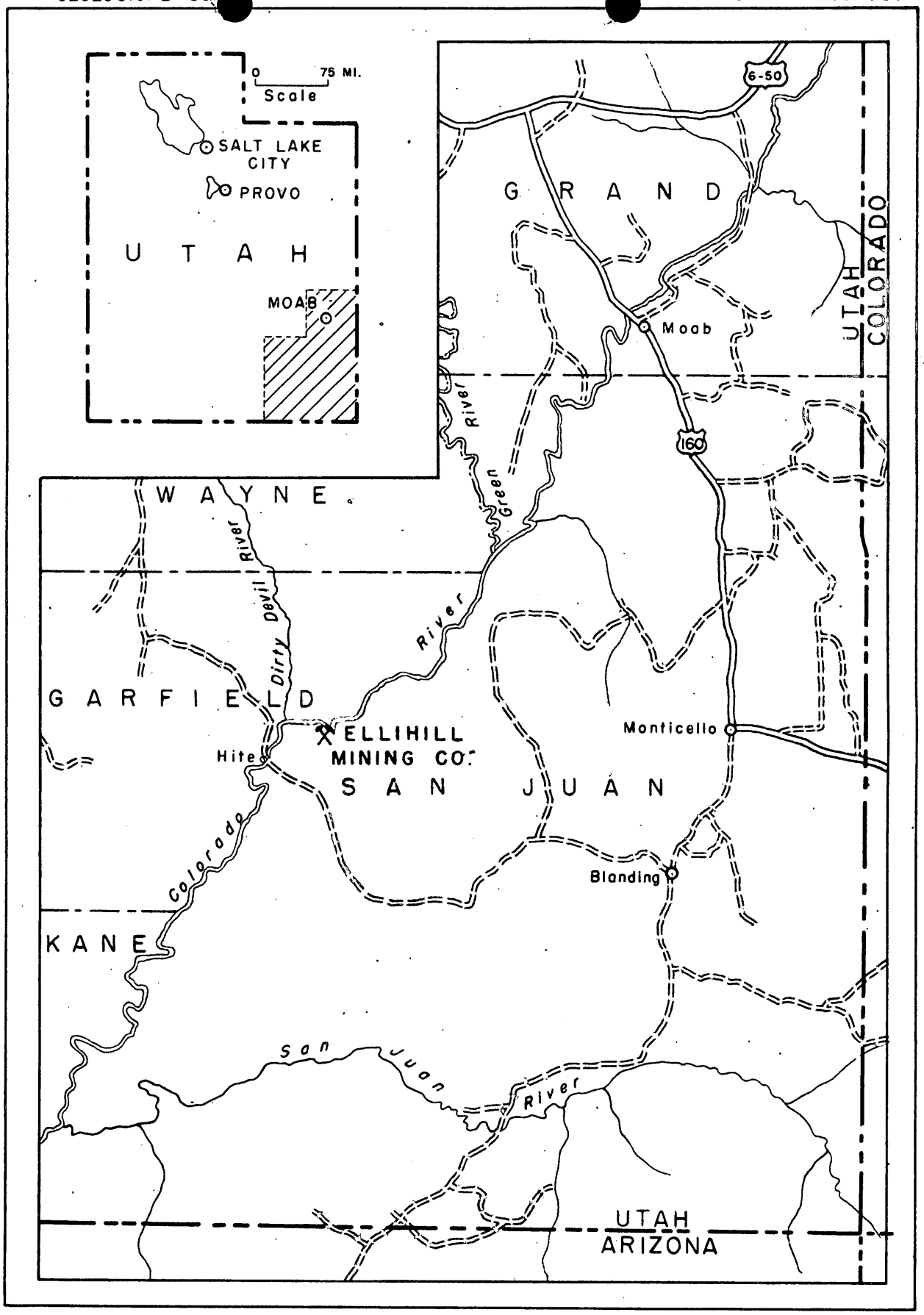


FIG. I INDEX MAP OF UTAH

0 5 10 15 20 MILES
Scale

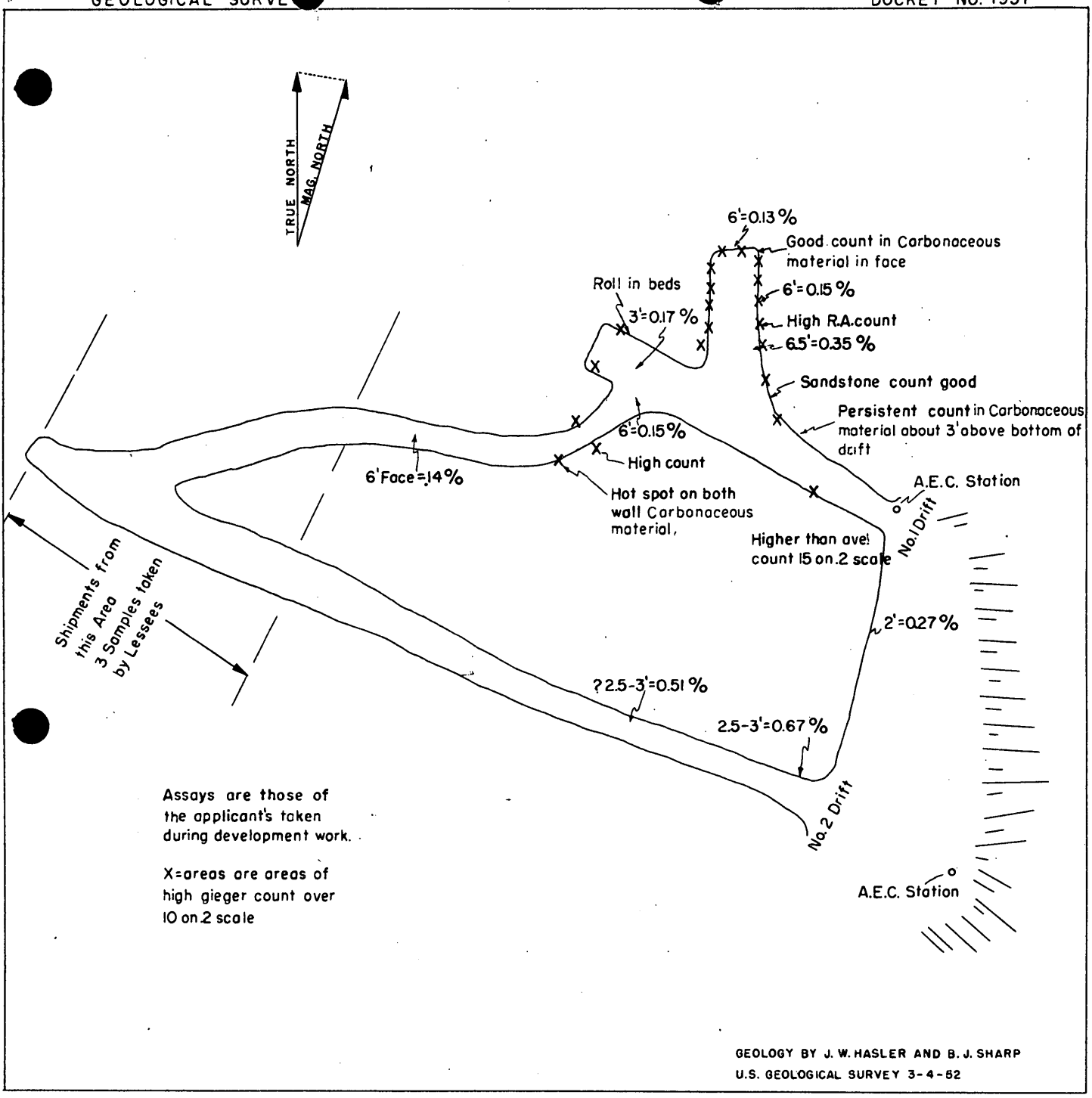


FIG. 4 UNDERGROUND WORKINGS

OF THE

JOMAC MINE, SAN JUAN COUNTY, UTAH

ELLIHILL MINING CO.

WHITE CANYON, UTAH

0 20 40 FEET
Scale

FILE COPY
SURNAME:

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

AIR MAIL

SEP 2 2 1952

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

Re: Docket No. U A-1957 (Uranium)
Contract No. Idm-2397
Gilihill Mining Company
Cortez, Colorado

Dear Mr. King:

Referring to your memorandum of September 4, 1952, forwarding six copies of the above-captioned contract for assignment of a number, we are returning the Operator's, Finance Officer's and Field Team's copy of the signed contract herewith. Kindly transmit one copy to the Operator.

Sincerely yours,

(signed) FRANK E. JOHNSON

Chairman, Operating Committee

Enclosures

APPROVED: J. H. Hedges
Member, Bureau of Mines

T. P. Thayer
Member, Geological Survey

Ellis jem 9/18/52
cc to: Adm. Reading File
Docket
Messrs. HDKeiser-1347
APButler-3206 GSA
Ellis
Opr. Committee
Field Team, Region IV

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 8 1952

224 New Customhouse
Denver 2, Colorado

September 4, 1952

Idm-E397

REGISTERED #81942

Memorandum

To: Acting Administrator, Defense Minerals Exploration Administration

From: Executive Officer, Field Team, Region IV

Subject: Contract Docket DMEA 1957, Ellihill Mining Company (Uranium)

Enclosed are six copies of a contract between the Government and Ellihill Mining Company. All copies have been signed by the Executive Officer, DMEA Field Team, Region IV, and have been properly executed by the company.

Please assign a contract number and return the required number of copies of the contract to this office.

W. H. King

W. H. King

Enclosures

RECEIVED
SEP 15 1952
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

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

224 New Customhouse
Denver 2, Colorado

May 21, 1952

BL

Memorandum

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

From: Field Team, Region IV

Subject: Final Report, DMA Docket 1957, (Uranium) Ellihill Mining Company, White Canyon, San Juan County, Utah

Exploration assistance in the amount of $19,100.00 has been approved and the contract will be prepared by this office.

Four copies of the report will be forwarded you when the contract is signed.

The original and one copy of Form 3b is attached.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 26 1952

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

Copy of memo to Rare & Miss. Metals Div. 5-26-52.

400

FILE COPY
SURNAME:

Gordon
Mittendorf
(for)

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

DEC 7 - 1957

Mr. J. B. Plosser, President
Nilihill Mining Company
White Canyon via Hanksville, Utah

Re: DMA docket 1957
Uranium
San Juan County, Utah

Dear Mr. Plosser:

Your application, docket DMA 1957, for an exploration project in the amount of $19,831.88, has been received by this office.

Before a decision can be reached on your request we find it is necessary to obtain additional information on your property. Your application, therefore, is being referred to the office of the Executive Officer of DMA field team IV, Mr. J. H. East, Jr., 224 New Customhouse Building, Denver 2, Colorado, who will get in touch with you if necessary.

Sincerely yours,

12/7

C. O. Mittendorf (for)

Acting Administrator
Defense Minerals Exploration
Administration

ERGordon:lm
12/4/51

cc: Admn. Reading File
Reports and Records
C. O. Mittendorf
Mr. Keiser, USGS
Mr. Hosted, AEC
Field Team Reg. IV
Docket

FILE COPY 400
SURNAME:

Gordon
Mittendorf

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

NOV 27 1951

Mr. J. B. Plosser, President
Ellihill Mining Company
White Canyon via Hanksville, Utah

Re: Jomac claims
San Juan County, Utah
Uranium - DMA docket 1957

Dear Mr. Plosser:

Under date of August 24, 1951, DMA requested that you remit sufficient information to enable processing your application, DMA 1957, for an exploration project. No reply has yet been received.

In view of the time elapsed, we assume that you are no longer interested in the project. Unless you advise us to the contrary within thirty (30) days, we shall accordingly close the docket.

Sincerely yours,

C. O. Mittendorf (fw)
11/27

Administrator
Defense Minerals Exploration
Administration

ERGordon'lm
11/23/51

cc: Admn. Reading File
Reports and Records
Mr. Keiser (USGS)
Mr. Hosted (AEC)
Field Team Reg. IV
Docket

BH

30

FILE COPY
SURNAME:

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

Bourret
Gore

A.E.C.

Mr. J. B. Plosser, President
Ellihill Mining Company
White Canyon via Hanksville, Utah

Re: Jumac claims
San Juan County, Utah
Uranium - DMA docket 1957X

Dear Mr. Plosser:

Your application dated August 2, 1951, for an exploration project, DMA-1957X, in the sum of $19,831.88 has been received by the Minor and Rare Metals Branch of the Supply Division.

Before we can review your application further, more information is required, together with a map or accurate sketch of your claims showing present workings and proposed new work. Under question 10, form MF-103, date, book and page of recording of claim location notices (if recorded), should be given. More detailed replies to questions 21 and 22 are necessary, with some indication as to width, grade and location of samples taken. Possibly the road and tunnel area improvements are not absolutely necessary for a strictly explorational project. Please note that only items required for the exploration may be considered. Your reply to question 14 shows the presence of a small ore bin, leading to a question regarding the need for another as listed under 23 (d).

Under 23 (f), (rental of equipment owned by others), you list "Balance due on equipment now on property". Equipment owned by you should be tabulated under 23 (g) and charged for at a monthly rate not to exceed one-sixtieth of its replacement cost; equipment to be purchased should be listed under 23 (e), in which case, although its full purchase cost is allowed as a preliminary cost, when the project is completed only the difference between initial cost and depreciated value at the rate of full depreciation in 60 months is allowable as a final cost. As the equipment under consideration falls somewhere between the two classifications, and the end result is the same, it might well be described under 23 (g).

The above comments regarding allowable monthly charges for use of equipment owned by you also apply to the jeep, compressor and other equipment specified in your reply to question 23 (g). In reforming your reply, please enumerate and describe each item separately, with its allowable monthly rental price on the basis outlined above.

Upon receipt of your reply to the above, together with any additional information you may care to submit, we shall be glad to continue review of your application.

Yours very truly,

Weston Bourret

Weston Bourret, Chief
Minor and Rare Metals Branch

FILE COPY
SURNAME:

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

EGordon/ch 8-24-51
cc: Adm. Reading File
Reports and Records
Lyon
Bourret
Keiser-Hosted - USGS
DMA docket file
Filed Grant II

7 la

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

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

Dear Sir:

We attach "Review of Application for Exploration Assistance" on:

Docket No. DMA 1957

Commodity Uranium

Applicant Ellihill Mining Company

Please expedite the consideration of this application with particular reference to the points raised in the attached "Review".

Very truly yours,

(signed) FRANK E. JOHNSON

Chairman, Operating Committee
Defense Minerals Exploration
Administration

For Bureau of Mines

For Geological Survey

6/5/51

Defense Minerals Administration

Review of Application for Exploration Assistance

Docket No. DMA 1957

Commodity Uranium

Total Amount $19,831.88

Govt. Participation $17,848.69

1. Name and Address of Applicant Ellihill Mining Company

White Canyon via Hanksville, Utah

2. Location of Property White Canyon area, San Juan County, Utah

3. Mineral or metal Uranium Is it listed in Section 9 of MO-5? Yes

If not, application will be rejected.

4. Geologic probability of discovery—based on data in application (question #16, 17, 18, 20 and 22)*

Mines or Survey reports, etc., do you rate chances:

a) Good

b) Poor

c) None

d) Don't know—needs field examination Report by Field Team is required. See Item 17.

e) Is there an alternative and favorable project?
(If so, attach an explanation)

5. Is the applicant's right to the property clearly stated? YES
(question 5, 6, 7)*

6. If applicant is a lessee, is a copy of the lease attached? not applicable

Does the lease have sufficient time to run to cover a future

productive period?

*question numbers are those of MF-103

7. Are subordination agreements necessary? No

a) MF-201? _____

b) MF-202 _____

8. From the data presented, does the proposed project appear feasible from the point of view of:

a) Available manpower YES

b) Equipment and supplies YES
(Question 14 plus general knowledge of availability)*

c) Accessibility (question 12)* YES

d) Water (question 13)* 12 MILES DISTANT - YES

e) Power (question 13)* PORTABLE UNITS - YES

Is a field check needed on any of these points? No

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4)* P

Is a field check needed on this point? YES

10. Exhibit A. (questions 21 and 22)*

a) Is the project adequately described? No

If not, are there sufficient data given so that you can describe the project? No If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? YES

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? YES

If not, what part of it is? _____

Is this part a worthwhile exploration project?_____

d) Are the cost estimates detailed?_____

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data?_____ If so, attach a draft.

e) Are the cost estimates reasonable? YES

f) Should more information be requested from applicant? YES

g) Is a field examination necessary to complete Exhibit A? YES

11. Exhibit B (question 23-d)*

a) Is it applicable? YES

b) If so, are sufficient data furnished? ✓ If so, attach a draft.

c) Is a field check needed? ORE BINS NEEDED FOR EXPLORATION?

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable? —

b) Sufficient data? ✓ If so, attach a draft.

c) Are rents and charges reasonable? SEEM SO IN THE

d) Is a field check needed? ✓

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data? YES

b) Is the schedule adequate for the work proposed? ?

c) Is the schedule excessive for the work proposed? NO

d) Are the proposed wages and salaries reasonable? ?

e) Is a field check needed? —

14. Exhibit E (question 23-c)*

a) Is it applicable? No

b) Sufficient data?

c) Reasonable?

d) Field check needed?

15. In your judgment, can the proposed work be done in the proposed time?

(All exploration must be completed within two years)

16. If field examination is not needed, attach your recommendation.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question? It is recommended that this application be reviewed with Mr. R. P. Fischer, U.S. Geological Survey, and with Mr. T. W. Oster, U.S. Atomic Energy Commission, Grand Junction, Colorado.

Reviewed by: J. D. Hosted, AEC
G. N. Houser, U.S.G.S.
E. R. Gude

Date ~~August 17,~~ Dec. 3 1951

INT.-DUP. SEC., WASH., D.C. 99009

August 14, 1951

Subject: Exploration Loan
Re: Jomac I, II, III

J. B. Plosser, President
Ellihill Mining Company
White Canyon via Hanksville Utah

Dear Mr. Plosser,

This will acknowledge receipt of your application dated August 8, 1951 for a loan under the Defense Production Act of 1950.

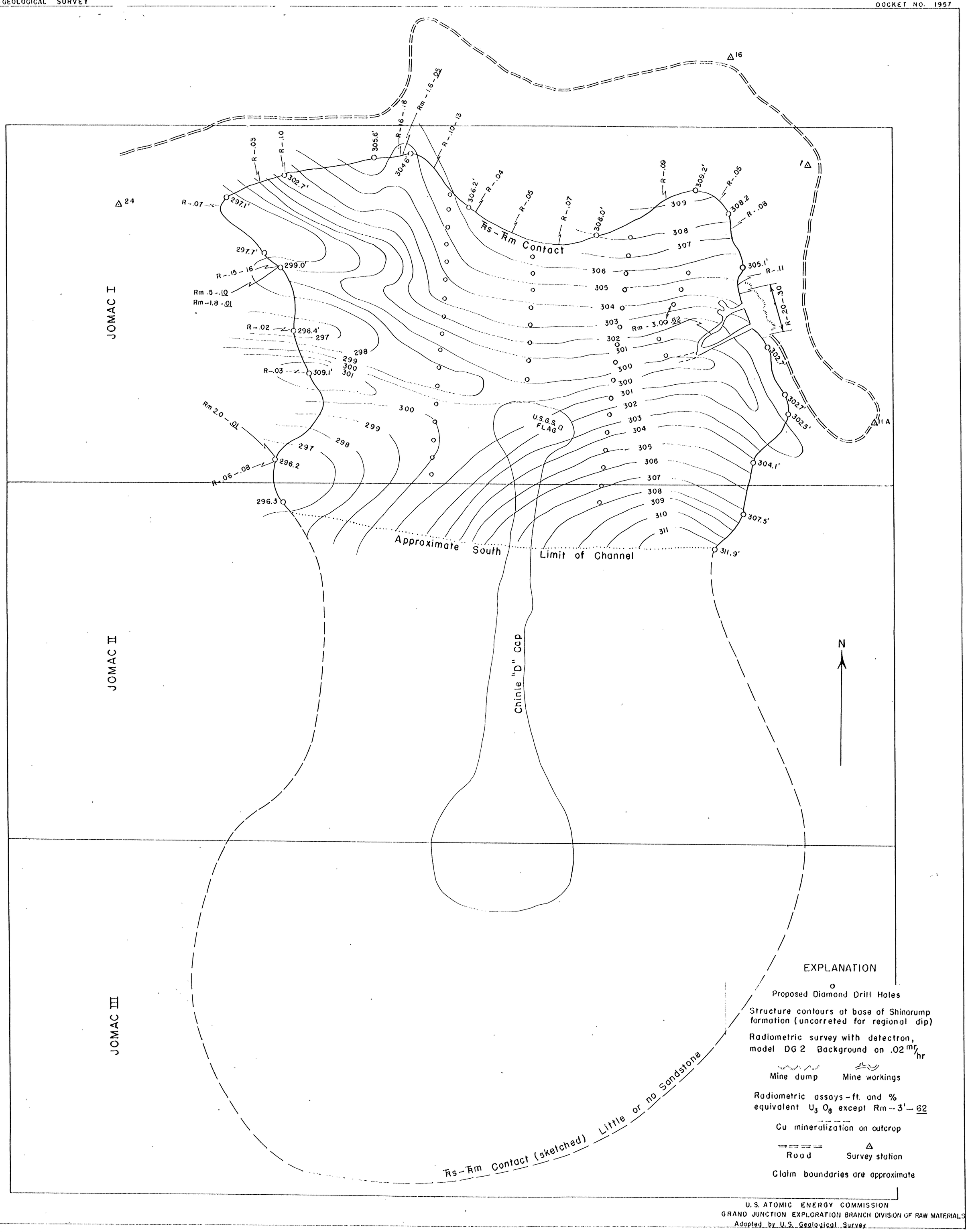
Your application was assigned Docket Number DMA- 1957 and referred to the Minor and Rare Metals Branch.

Kindly refer to DMA- 1957 in any future correspondence relating to your application.

Sincerely yours,

Robert E. Adams

Robert E. Adams, Chief
Reports and Records Unit



U. S. ATOMIC ENERGY COMMISSION
GRAND JUNCTION EXPLORATION BRANCH DIVISION OF RAW MATERIALS
Adopted by U.S. Geological Survey

FIG. 4-A

JO MAC MESA
WHITE CANYON, UTAH

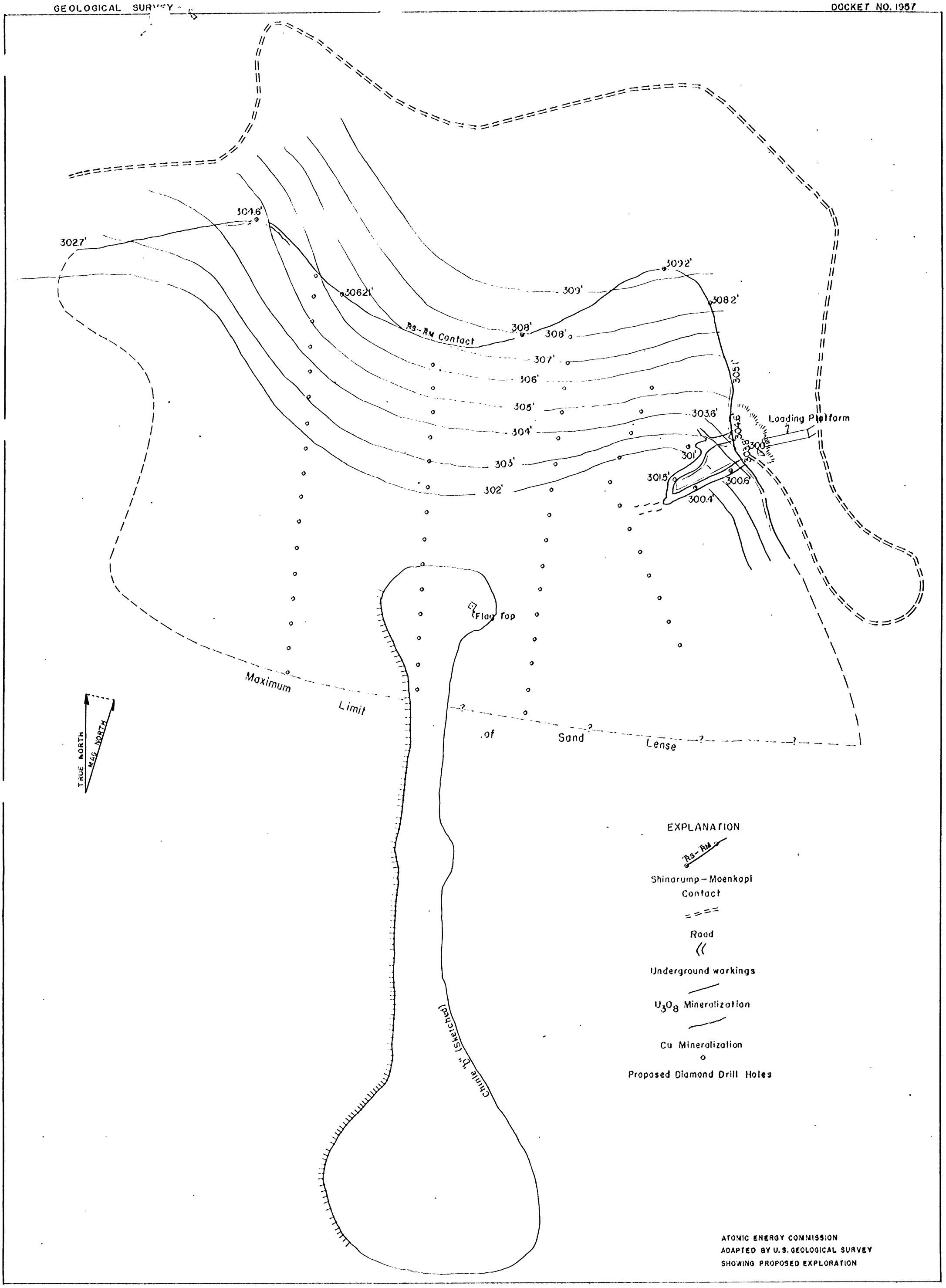
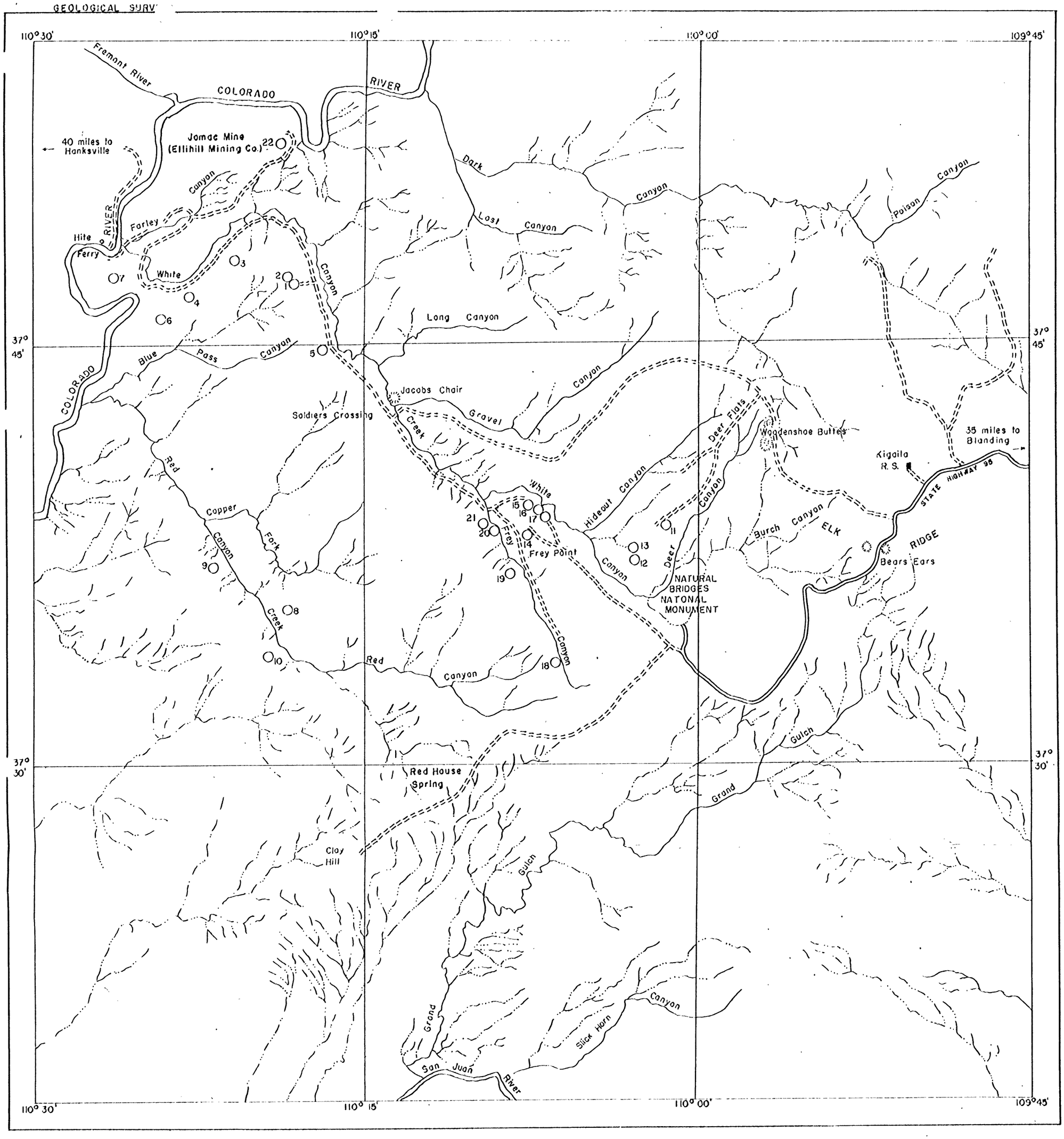


FIG. 3 STRUCTURE CONTOURS AT BASE OF TRIASSIC SHINARUMP

UNCORRECTED FOR REGIONAL DIP

JOMAC MINE

0 100 200 FEET
Scale
Contour Interval = 1'



EXPLANATION

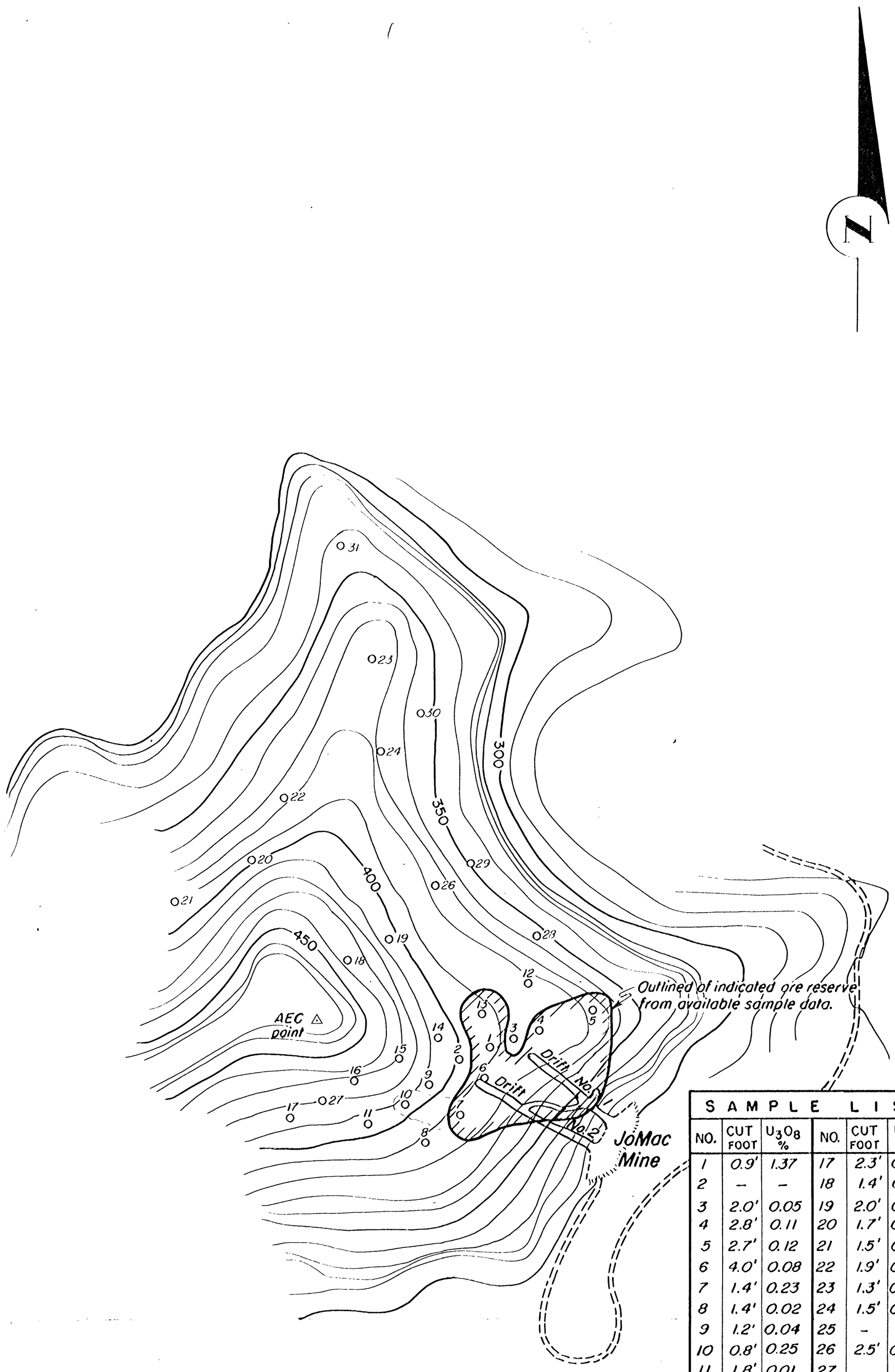
1. Happy Jack Mine
2
3. Four Aces Mine
4.
5.
6.
7.
8. Red Canyon No. 1 Claim
9. Scotty Claim
10. Posey Claim
11. Hideout No. 1 Claim
12
13
14. Scenic No. 4 Claim
15. Bear Claim
16. Saddle Claim
17. White Canyon No. 1 Claim
18. Frey Canyon No. 4 Claim
19. Frey Claim
20. Frey No. 2 Claim
21. Scenic No. 2 Claim
22. Jomac Mine (Ellihill Mining Co.)

FIG. 2

WHITE CANYON AND SURROUNDING AREA

SAN JUAN COUNTY, UTAH

0 5 10 Miles
Scale



SAMPLE LIST					
NO.	CUT FOOT	U_3O_8 %	NO.	CUT FOOT	U_3O_8 %
1	0.9'	1.37	17	2.3'	0.02
2	—	—	18	1.4'	0.03
3	2.0'	0.05	19	2.0'	0.02
4	2.8'	0.11	20	1.7'	0.02
5	2.7'	0.12	21	1.5'	0.02
6	4.0'	0.08	22	1.9'	0.03
7	1.4'	0.23	23	1.3'	0.02
8	1.4'	0.02	24	1.5'	0.02
9	1.2'	0.04	25	—	—
10	0.8'	0.25	26	2.5'	0.03
11	1.8'	0.01	27		
12	4.2'	0.06	28		
13	3.6	0.17	29		
14	3.4	0.06	30		
15	2.5	0.05	31		
16	1.7	0.02			

NOTES

1) LOCATION OF DRILL HOLES APPROXIMATE ONLY AND SUBJECT TO REVISION.
2) TOPOGRAPHY AND ORIGINAL MINE WORKINGS TRACED FROM GEOLOGICAL SURVEY MAP BY TILLMAN AND POWERS, 1952.
3) DATUM ASSUMED.

0 100 200 300
SCALE OF FEET

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DMEA 1957 CONTRACT Idm E 397

Preliminary Map of Diamond Drill Samples and Ore Reserve

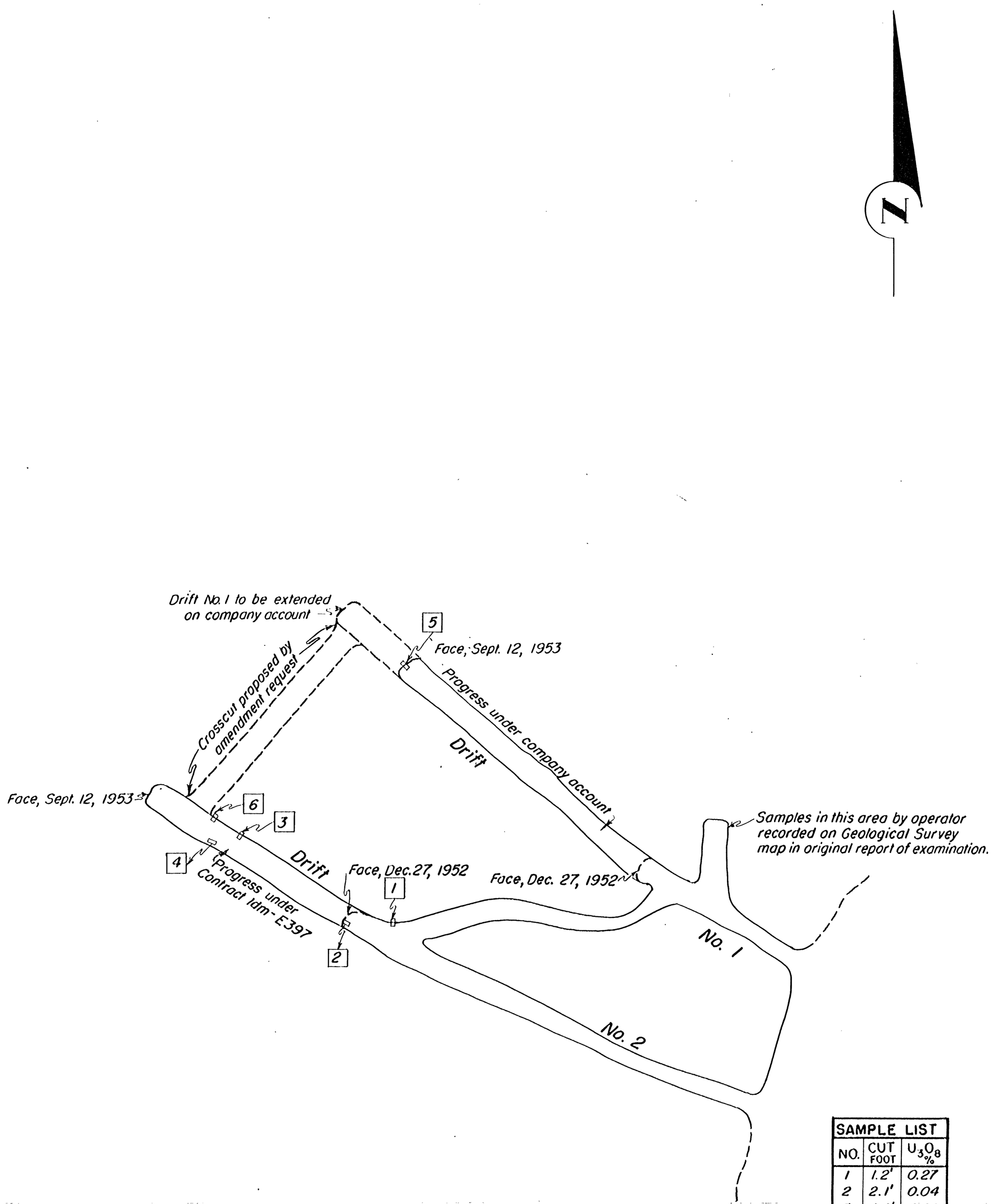
JOMAC MINE

ELLIHILL MINING COMPANY

SAN JUAN COUNTY, UTAH

ENGINEER: H. K. Thurber
DATE: OCT. 9, 1953
TRACED: OCT. 1953; BY: A. P. T. S.
CHECKED:

1900-229-D



SAMPLE LIST		
NO.	CUT FOOT	U_3O_8 %
1	1.2'	0.27
2	2.1'	0.04
3	2.0'	0.08
4	3.0'	0.03
5	3.2'	0.47
6	1.5'	0.58

LEGEND

[3] SAMPLE NUMBER AND LOCATION

0 20 40 60
SCALE OF FEET

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DMEA 1957 CONTRACT Idm E-397

Progress Sketch Map

JOMAC MINE

ELLIHILL MINING COMPANY

SAN JUAN COUNTY, UTAH

ENGINEER: H. K. Thurber | DATE: OCT. 7, 1953

TRACED: OCT. 1953; BY: A. P. T. S.

CHECKED:

1900-228-D

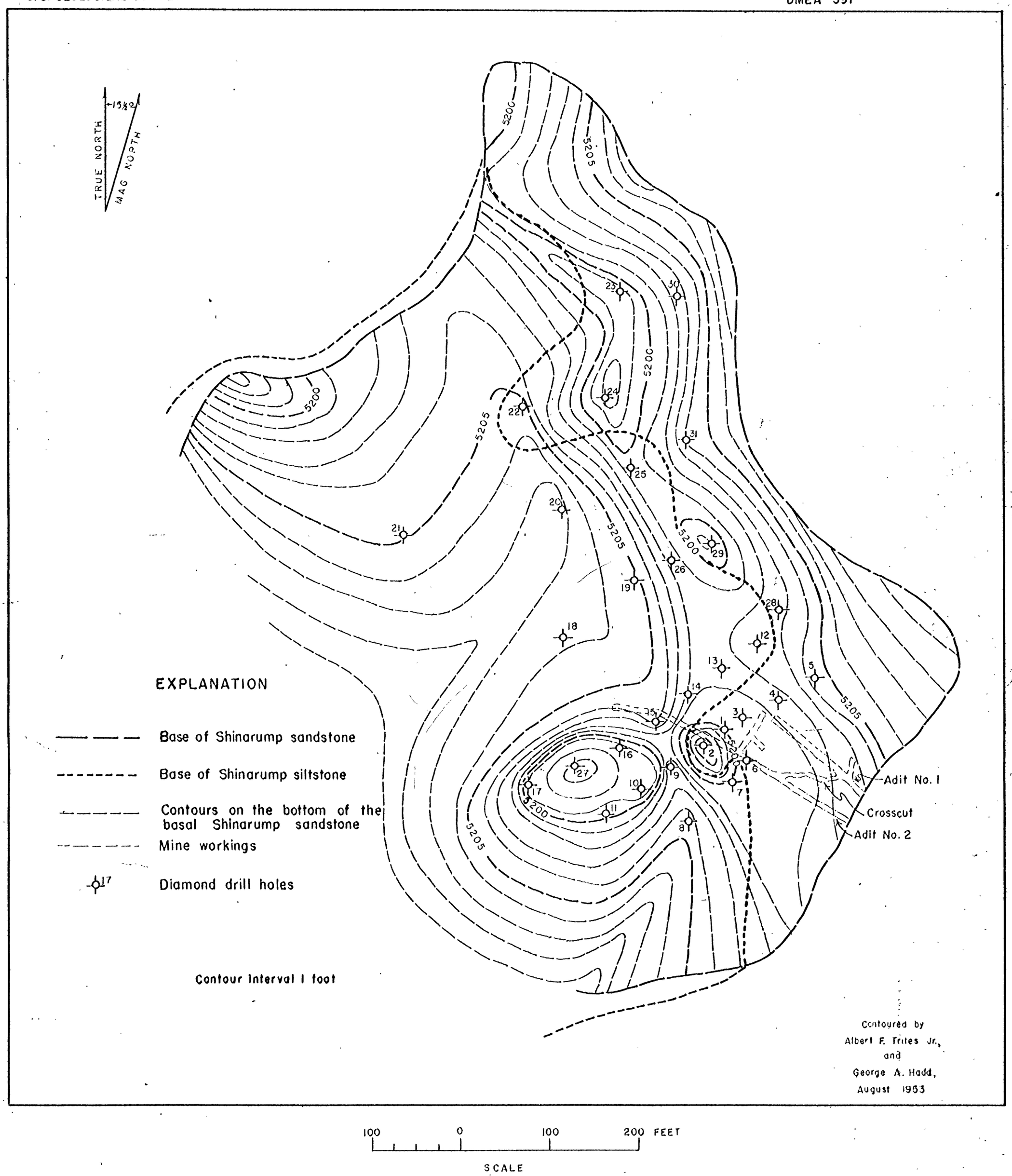
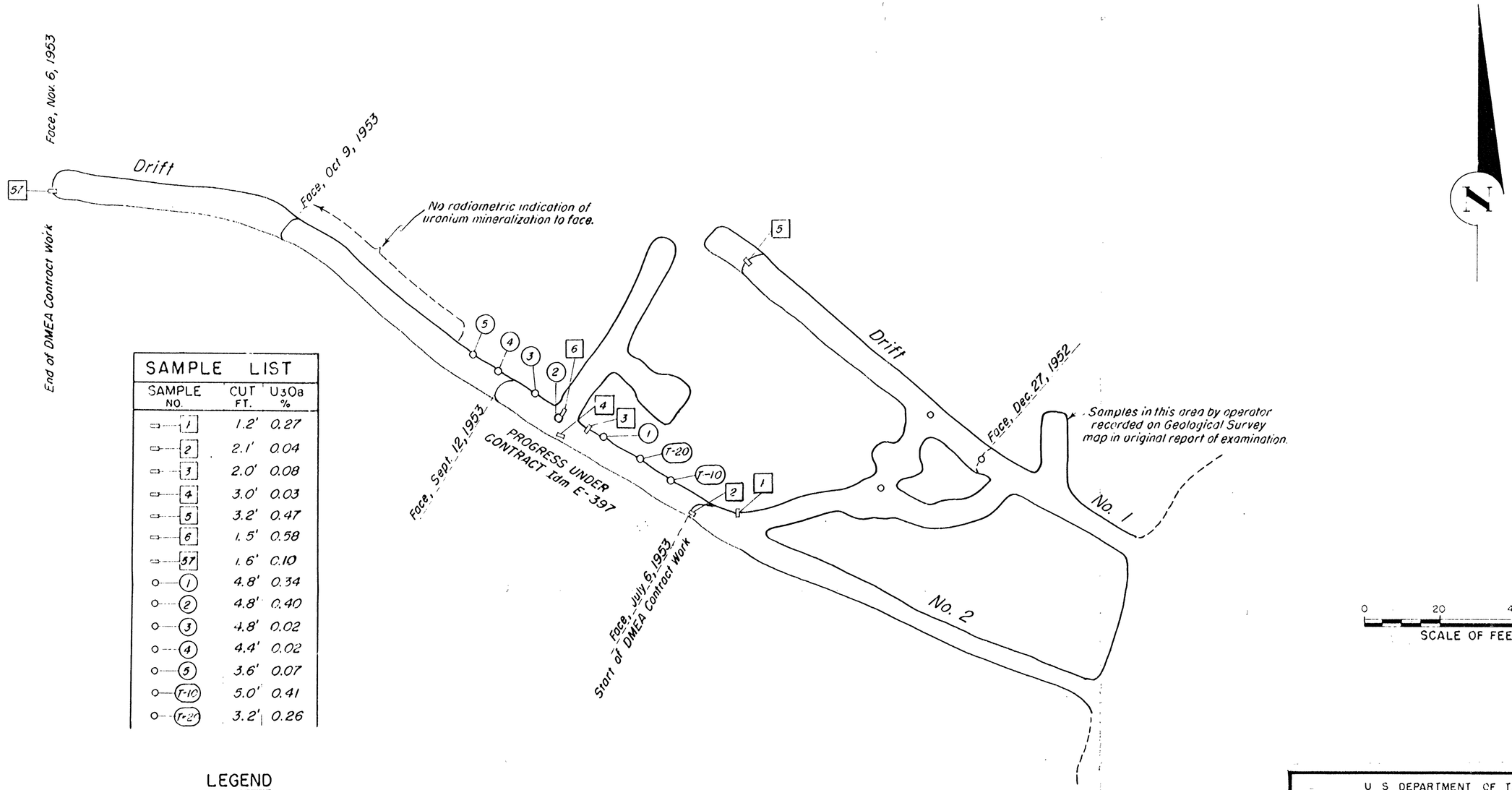


FIGURE 2.— STRUCTURAL CONTOUR MAP OF THE BOTTOM OF THE BASAL SANDSTONE OF THE SHINARUMP CONGLOMERATE, JOMAC HILL, WHITE CANYON AREA, SAN JUAN COUNTY, UTAH



SAMPLE LIST		
SAMPLE NO.	CUT FT.	U_3O_8 %
1	1.2'	0.27
2	2.1'	0.04
3	2.0'	0.08
4	3.0'	0.03
5	3.2'	0.47
6	1.5'	0.58
5'	1.6'	0.10
1	4.8'	0.34
2	4.8'	0.40
3	4.8'	0.02
4	4.4'	0.02
5	3.6'	0.07
T-10	5.0'	0.41
T-20	3.2'	0.26

LEGEND

5 — SAMPLE NUMBER, AND LOCATIONS OF DMEA SAMPLES

4 — SAMPLE NUMBER, AND LOCATIONS OF ELLIHILL MINING COMPANY SAMPLES.

U S DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

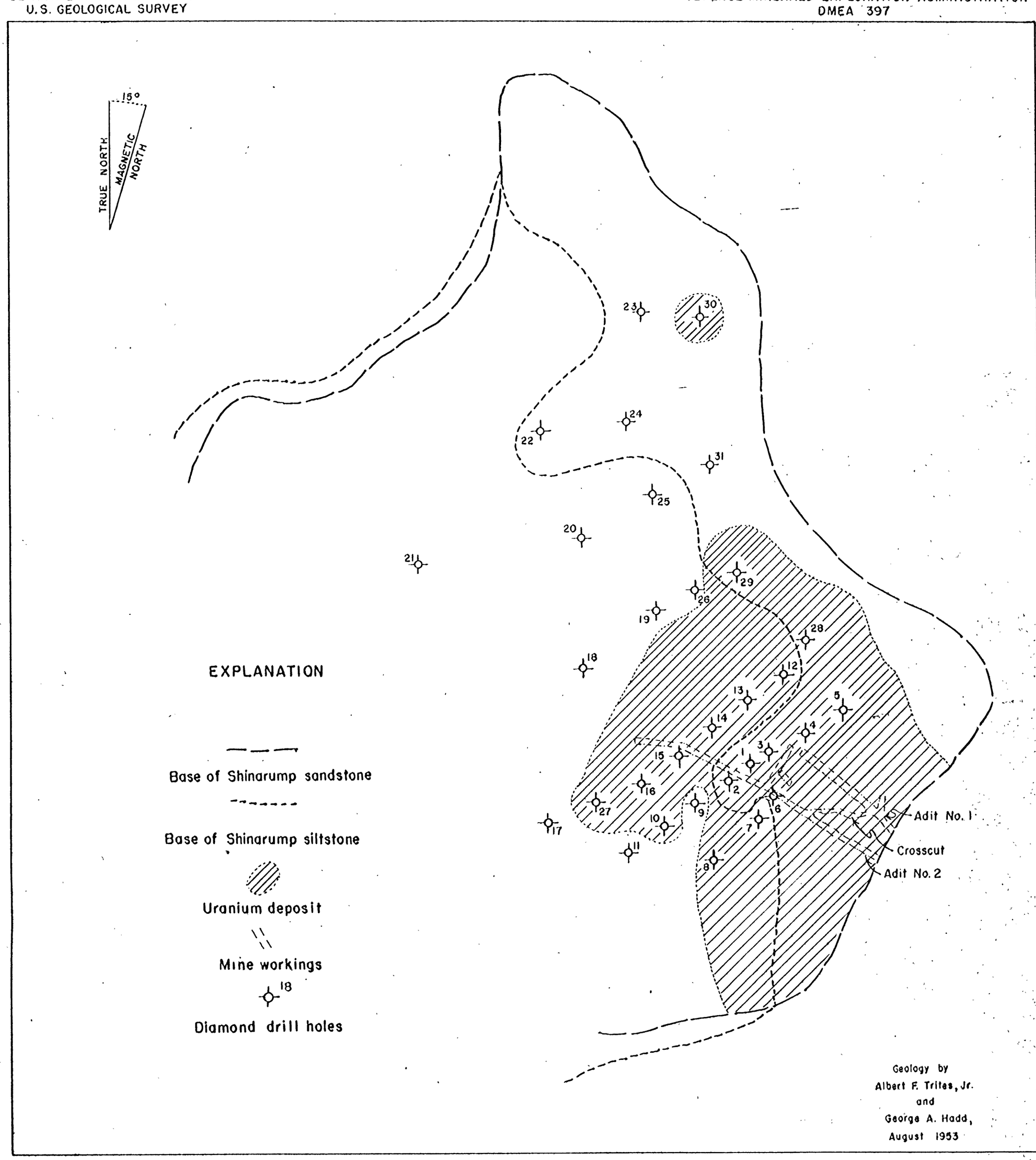
Fig. 2 DMEA 1957, Contract Idm E-397

Map of Underground Workings and Sampling

JOMAC MINE

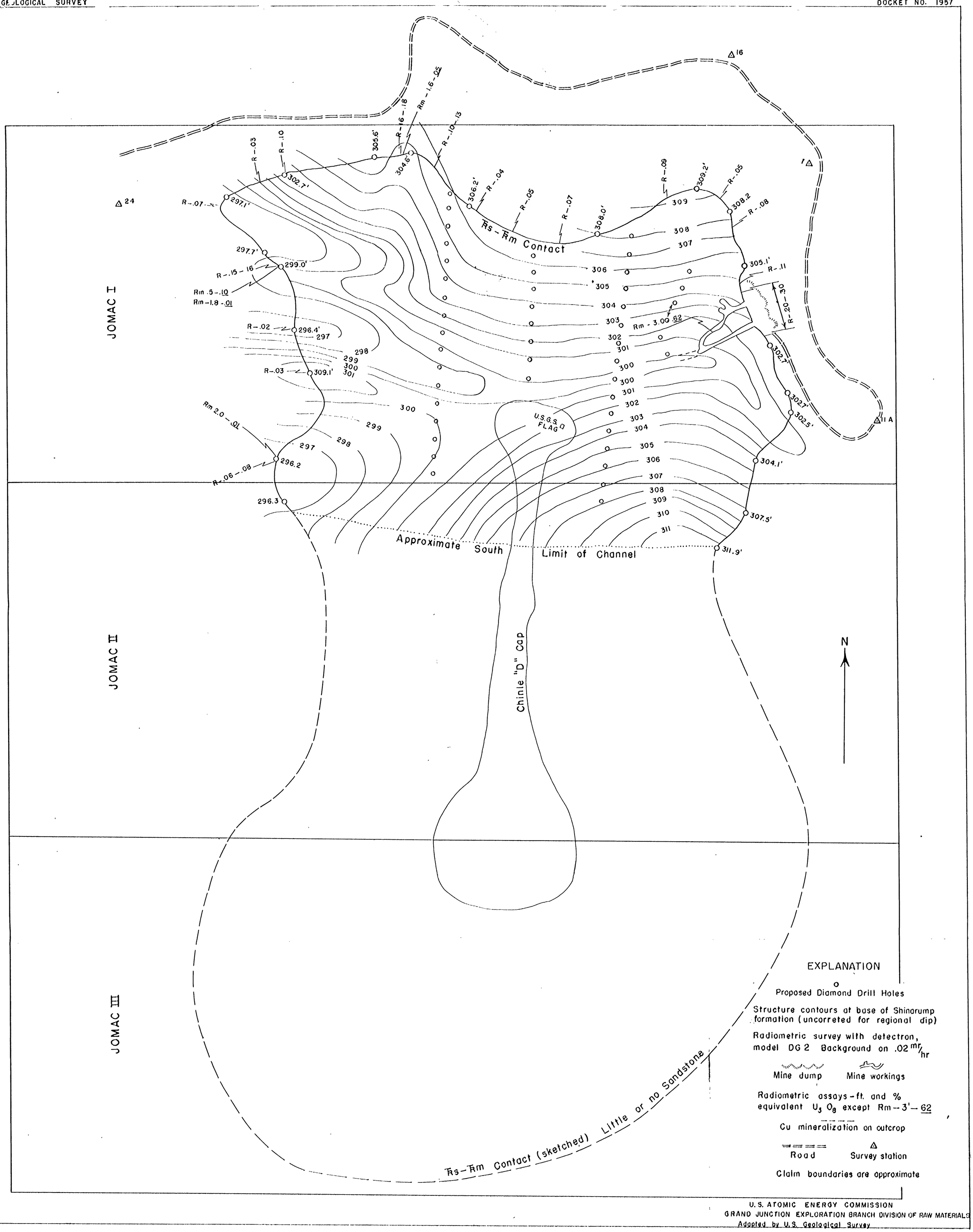
ELLIHILL MINING COMPANY
SAN JUAN COUNTY, UTAH

ENGINEER: H. K. Thurber	DATE: FEB 11, 1954
TRACED: FEB. 1954; BY: A.P.T.S.	1900-279-D
CHECKED	



100 0 100 200 FEET
SCALE

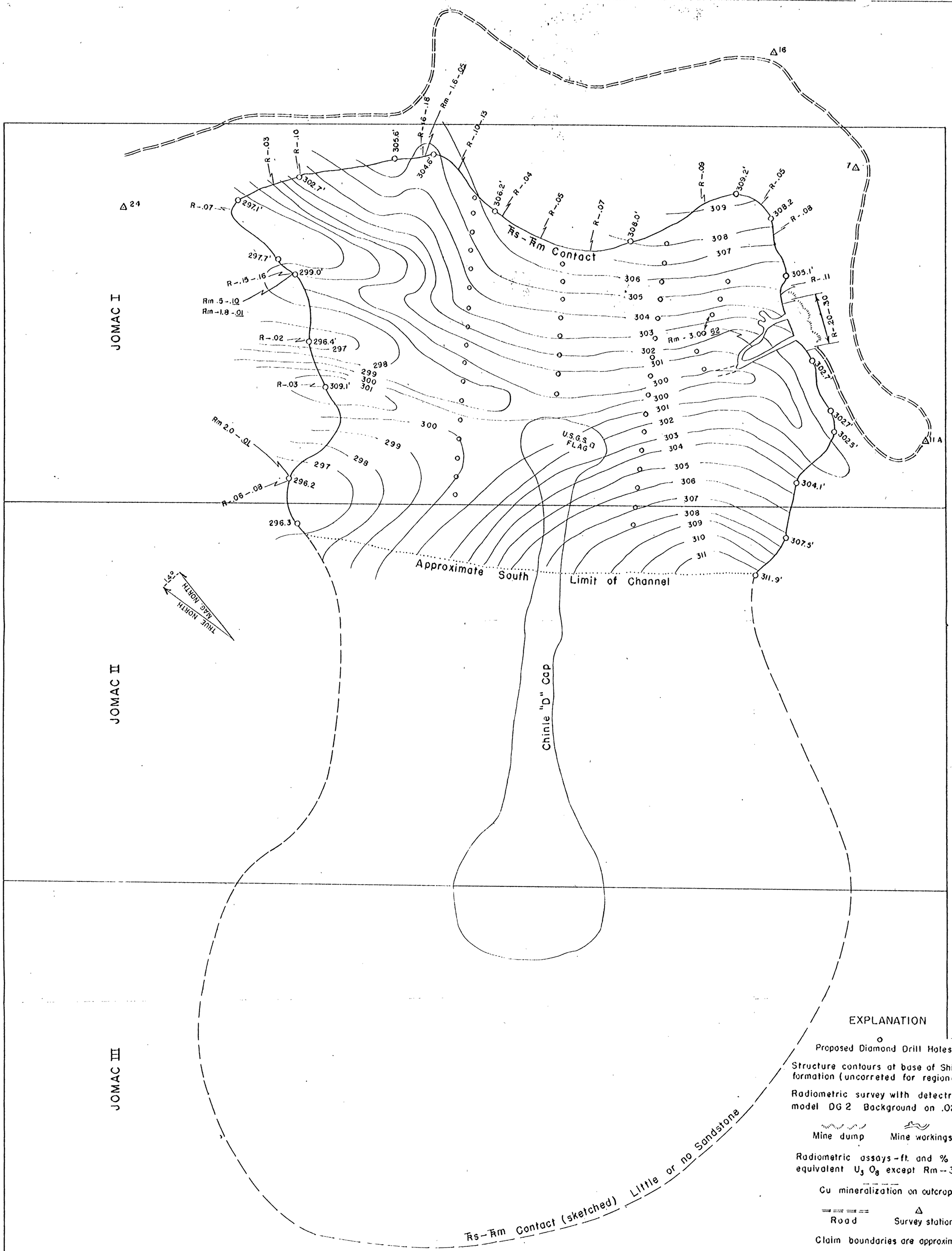
FIGURE 3. - MAP SHOWING THE URANIUM DEPOSIT, JOMAC MINE, SAN JUAN COUNTY, UTAH



U.S. ATOMIC ENERGY COMMISSION
GRAND JUNCTION EXPLORATION BRANCH DIVISION OF RAW MATERIALS
Adopted by U.S. Geological Survey

FIG. 4A

JO MAC MESA
WHITE CANYON, UTAH



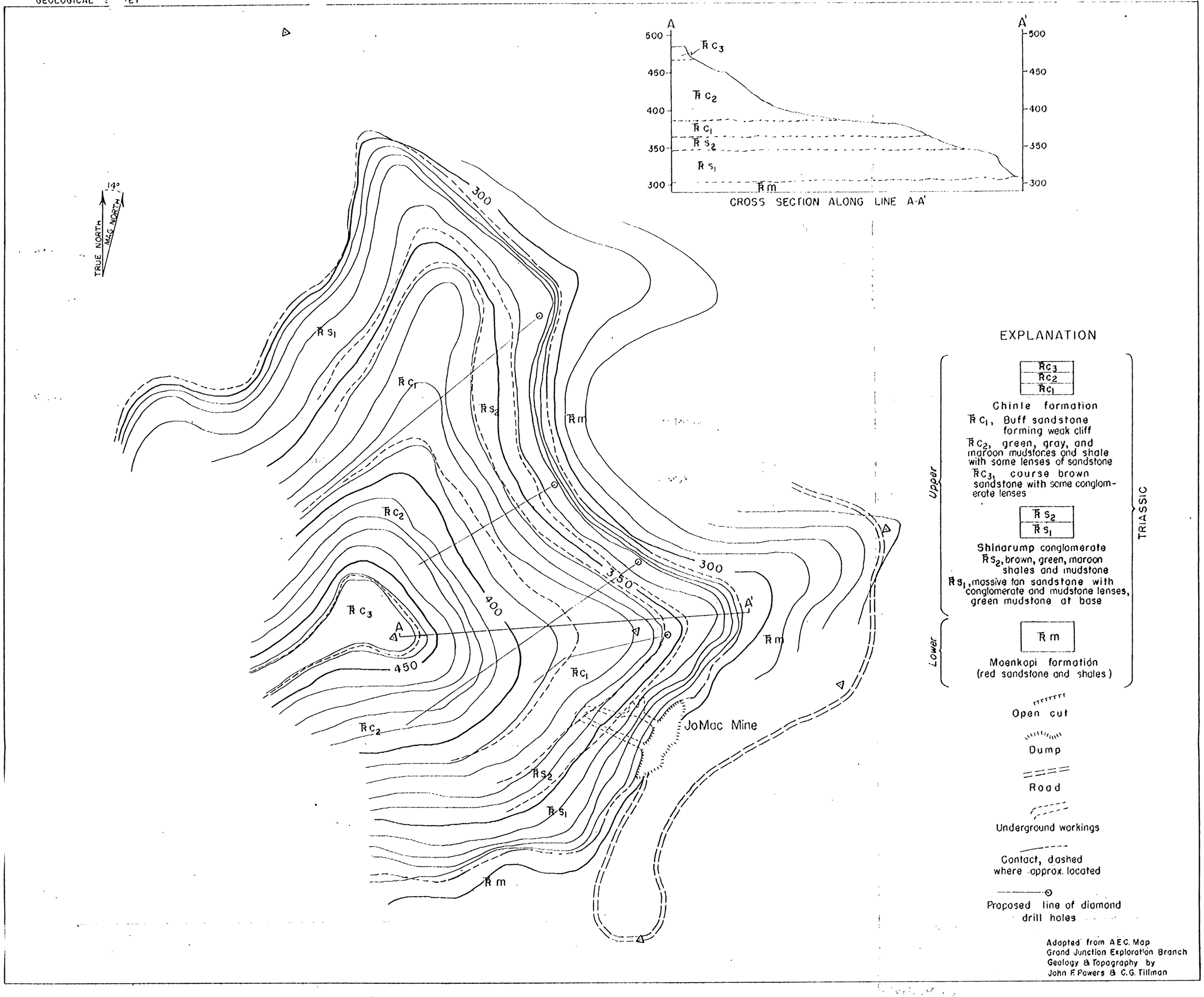
U. S. ATOMIC ENERGY COMMISSION
GRAND JUNCTION EXPLORATION BRANCH DIVISION OF RAW MATERIALS
Adapted by U.S. Geological Survey

FIG. 4A

JO MAC MESA

WHITE CANYON, UTAH

0 100 200 FT.
SCALE



GEOLOGIC MAP OF JOMAC MESA

WHITE CANYON, UTAH

Datum Assumed

0 100 200 300 FEET

Scale