E-638

For royalty payment of $1,352.20, dated March 26, 1965, see transmittal letter file.

Bldg. 20, Denver Federal Center
Denver, Colo. 80225

March 8, 1965

Mr. Vance Elton Thornburg
Thornburg Mining Company
140 West Main
Grand Junction, Colorado

COPY
RECEIVED
MAR 1 5 1965

Re: DMEA-3060 (Uranium)
Thornburg Uranium Mines, Inc.
Shinarump Claims
Grand County, Utah
Contract Idm-E638

Dear Mr. Thornburg:

Mr. Fumich's letter of February 4, 1964 advised you that the royalty repayment period would expire on November 13, 1964 on the captioned contract.

We are advised that during 1964 prior to the date of expiration you shipped ore from this property which had a value of $28,519.39 on which you owe $1,352.20 royalty to the Government.

By return mail please forward this office your check for $1,352.20.

Yours very truly,

Hugh M. Connors
Acting Field Officer, OME
Region III

H. M. Connors (3-8-65)
cc: 2 G. C. Selfridge
E638
Chron

Production of Uranium - Vanadium
Thornburg Mining Company E638

Date	Lot No.	Dry Tons		Net Value	Value Per Ton	% Roy	Royalty Due	Royalty Paid	Remarks
5-5-64	221	95.1975		2237.66	23.505	5%	111.88		
6-2-64	301	88.9030		1,718.05	19.325	5"	85.90		
6-2-64	305	194.8285		4,875.58	25.025	5"	243.78		
7-6-64	349	196.3055		4,166.54	21.225	5"	208.33		
7-6-64	361	32.4710		704.62	21.70	5"	35.23		
8-4-64	412	234.3035		2,283.05	9.744	3"	68.49		
8-5-64	402	123.9535		3,054.83	24.645	5"	152.74		
9-3-64	477	148.2665		1,713.96	11.56	5"	85.70		
9-3-64	479	64.3535		244.54	3.80	1.5"	3.67		
10-7-64	550	80.7445		651.77	8.072	2"	13.04		
10-7-64	557	175.5885		2,201.88	12.54	5"	110.09		
11-10-64	625	119.2815		2,135.14	17.90	5"	106.76		
11-10-64	626	178.9995		2,531.77	14.144	5"	126.59		
12-23-64	701	141.7095	28,159.39	1,582.04	11.164	4.5"	~~71.19~~	1,352.20	
12-23-64	706	36.2410		968.90	26.735	5"	~~4.84~~		
1-7-65	733	144.6725		593.16	4.10	1.5"	~~8.90~~		
1-7-65	734	58.6305		1,233.29	21.035	5"	~~61.66~~		~~$7448.71 Roy. due May 64 thru 65~~

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES EXPLORATION
Bldg. 20 - Denver Federal Center
Denver, Colo. 80025

February 19, 1965

Office Manager
Atlas Minerals
P.O. Box 488
Moab, Utah

Re: DMEA 3066
Contract Idm-8038
Thornburg Mining Co.
Grand County, Utah

Dear Sir:

It has come to our attention that the captioned Operator has shipped ore to your mill at Moab and one lot to your mill at Mexican Hat.

The Government has royalty rights on production from Shinarump No. 1, 1A, 3, 4, Vance Thornburg, Cara No. 1, and Cara Kristen by virtue of the captioned contract.

If the following shipments of ore containing the amounts of uranium as shown were received by your mills from any of the claims listed above, will you please forward this office two copies of each settlement sheet.

March 1964	to Moab	0.22	U	358.99	lbs
		0.30	U	7,568.66	lbs
April 1964	to Moab	0.35	U	450.04	lbs
May 1964	to Moab	0.28	U	1,289.48	lbs
June 1964	to Moab	0.26	U	1,170.00	lbs
	to Mexican Hat	1.61	U	895.96	lbs
	to Moab	0.22	U	5,989.57	lbs
July 1964	to Moab	0.20	U	1,452.44	lbs
August 1964	to Moab	0.15	U	643.11	lbs
September 1964	to Moab	0.16	U	963.56	lbs
	to Moab	0.22	U	4,950.56	lbs
October 1964	to Moab	0.21	U	1,085.21	lbs
November 1964	to Moab	0.19	U	692.29	lbs

I realize that this entails a great deal of work for you and I appreciate your efforts very much.

Very truly yours,

Hugh M. Connors
Acting Field Officer, OME
Region III

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-E638, Docket DMEA-3060 (uranium), dated November 13, 1953, with

Vance Elton Thornburg, d/b/a Thornburg Mining Company
140 West Main
Grand Junction, Colorado
and his assignee
Thornburg Uranium Mines, Inc.

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 Shinarump Group of Claims located in Grand County, Utah, during the period October 18, 1960, through November 15, 1963.

A certification of discovery or development was issued on June 22, 1956, and, in accordance with Annex II and Amendment No. 3 of the contract, royalty is payable on all minerals produced from the land described in Article 2 of the contract for a period of 11 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 June 25, 1956, indicated accepted costs under the exploration contract amounting to $32,848.40 with the Government's contribution on a 90 percent basis being $29,563.56.

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

This review found no sales subject to the Government's royalty subsequent to the period covered by a prior Report of Royalty Review which found the sales subject to the Government's royalty through October 17, 1960, to be $13,758.50. The royalty account as of October 17, 1960, was:

Total Royalty Payable	$674.32
Total Royalty Paid	687.93
Overpayment of Royalty	$ 13.61

As of November 15, 1963, the royalty account of this project was found to be:

Total Royalty Payable	$674.32
Total Royalty Paid	687.93
Overpayment of Royalty	$ 13.61

November 22, 1963

E. D. Talbert, OME Auditor

Idm-E638 Thornburg Uranium Mines, Inc., Assignee DMEA-3060

STATUS OF PROJECT, SCOPE OF REVIEW
AND REASONS THEREFOR

This contract provides that the Operator or his successor in interest shall pay to the Government a percentage royalty on all minerals produced from the land thereunder. The land consists of 6 unpatented claims (Shinarump Nos. 1, 1A, 3, and 4, Vanee Thornburg, and Gara No. 1) in T. 24 S., R. 20 E., S.L.M., Seven Mile area of the Green River Mining District. At the time the contract was executed the Operator was the owner by location. The contract contains the so-called "abandonment" clause.

By mining deed dated September 14, 1954, the property was conveyed to Thornburg Uranium Mines, Inc., and on April 28, 1955, the Government consented to assignment of the exploration contract without releasing the Operator-Assignor, who was the Operator-Assignee's president, from any of the provisions thereof. Exploration work under the contract was discontinued during June 1955, the mine was shut down in August 1955, and a Termination Agreement effective March 13, 1956, was executed May 28, 1956.

Production during the exploration period consisted of 493.702 S.D.T. of ore averaging .2064% U_3O_8. Production thereafter consisted solely of a May 1957 shipment of 3.1 S.D.T. of 8.54% U_3O_8, a June 1958 shipment of 84.1955 S.D.T. of .13% U_3O_8, and a July 1958 shipment of 73.5265 S.D.T. of .18% U_3O_8. These shipments, on which proceeds aggregated $13,758.50, are covered by Reports of Royalty Review dated October 13, 1958, and October 26, 1960. An aggregate of $13.61 was overpaid in royalty due to computations on three liquidations (A.E. & R. Nos. 6064 and 7462 and Pitkin No. 4645) at a 5% royalty rate when lesser rates were applicable.

Examinations of the property, checks of A.E.C. production records, and inquiries by regional DMEA and OME representatives disclosed no unreported production through December 31, 1959. By April 24, 1962, and September 9, 1963, replies to MME Forms 63 inquiries the Operator-Assignee's bookkeeper and accountant, J. T. Tunnell, who was the Operator-Assignor's office manager, advised that neither production nor change in property status had occurred since January 1, 1960.

By letter dated November 15, 1963, the Operator-Assignor advised that: (1) the Operator-Assignee "is a dormant corporation and is inactive"; (2) the claims reverted back to the Operator-Assignor

in 1960; (3) the Operator-Assignor "has kept the claims in good standing by doing the assessment work since that time"; and (4) "there has been no ore production".

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

(1) The files indicate that no production from the property has occurred since 1958;

(2) All production from the date of the contract through 1958 has been reported; 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.

Building 20 - Federal Center
Denver, Colorado 80225

December 4, 1963

Memorandum

To: Fiscal Section, Division of Management Operations
Office of the Secretary, U. S. Department of the Interior
Washington, D. C. 20240

From: Acting Field Officer, OME, Region III

Subject: RMMA-3060 (Uranium)
Contract Idm-E638
Thornburg Uranium Mines, Inc., Assignee
(Shinarump Group of Claims)
Grand County, Utah

Attached is the original Report of Royalty Review dated November 22, 1963, on the subject property covering the period October 18, 1960, through November 15, 1963.

Original signed by

Hugh M. Connors

Attachment

cc: Chief, Division of Field Operations, OME
E. D. Talbert, Acting Chief
Contract Administration and Audit Division
Royalty Corres. Idm-E638
Chron

HMC/lm

NOV 2 9 1963

Memorandum

To: Acting Field Officer, Region III

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

Subject: DMEA-3060 (Uranium)
Thornburg Uranium Mines, Inc., Assignee
Shinarump Group of Claims
Grand County, Utah
Contract Idm-E638

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

(a) Original to the Fiscal Section, Division of Management Operations, Office of the Secretary, U. S. Department of the Interior, Washington, D. C. 20240; and

(b) One copy for your files.

This Report of Royalty Review is made for record purposes only; therefore, no copy for the Operator is provided.

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

Enclosures

EDTalbert/ama 11-27-63

cc:
Docket
Director's Reading File
CA & A Division
Fiscal Section

THORNBURG

MINING
COMPANY

140 WEST MAIN GRAND JUNCTION, COLO.

November 15th, 1963

United States
Department of the Interior
Office of Mineral Exploration
Washington 25, D. C.

Re. DMEA-3060
Thornburg Uranium Mines, Inc.
[illegible] Claims
[illegible] County, Utah
Contract Tim-E638

Attention [illegible]

Gentlemen:

I am replying to your letter of October 22, 1963, relative to the above caption.

Thornburg Uranium Mines, Inc. is a dormant corporation and is inactive.

The subject claims listed in Annex 1 of the subject contract reverted back to Thornburg Mining Company in the year of [illegible]. There has been no ore production but Thornburg Mining Company has kept the claims in good standing by doing the assessment work since that time.

It is our understanding that the subject contract expired under date of November 14th, 1963.

Very truly yours,

Vance Thornburg

11/18 VT/[illegible]

Building 20 - Federal Center
Denver 25, Colorado

October 16, 1963

Memorandum

To: George C. Selfridge, Chief
Division of Field Operations, OME
Washington 25, D. C.

From: Acting Field Officer, OME, Region III

Subject: DMSA-3060 (Uranium)
Contract Idm-8638
Thornburg Uranium Mines, Inc.
(Shinarump Claims)
Grand County, Utah

1963
CODE
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I contacted Bud Franz, State Mine Inspector, who informed me that Garth Thornburg was killed in a hunting accident. Vance Elton Thornburg, a brother of Garth Thornburg, is believed to be in Colorado but I have been unable to find a present address.

I am sorry that my memorandum of April 19, 1963 was ambiguous. The thought I wished to convey was there are actually two Shinarump 1-A claims in Grand County, Utah. One of these claims is owned by Nicholas Murphy and the other claim is owned by the Thornburg Mining Company.

The reason I became involved in these two claims was that the AEC records showed production from the Shinarump 1-A claim. A search of the court house records showed the existence of the two Shinarump 1-A claims with different ownerships. The Shinarump 1-A claim subordinated under the subject contract has never produced any uranium ore.

Original signed by

Hugh M. Connors

FILE COPY
O. M. E
RECEIVED APR 22 1963
DATE
800

Building 20 - Federal Center
Denver 25, Colorado

April 19, 1963

Memorandum

To: George C. Selfridge, Chief
Division of Field Operations, OME
Washington 25, D. C.

From: Acting Field Officer, OME, Region III

Subject: DMEA-3060 (Uranium)
Contract No. Idm-E638
Thornburg Uranium Mines, Inc.
(Shinarump Claims)
Grand County, Utah

I checked the status of the subject claims in the Grand County Courthouse, Moab, Utah on April 17, 1963 and found that Mr. J. T. Tunnell last filed Proof of Labor on August 3, 1962 for the Thornburg Mining Company.

I then called on F. M. Wright at the Wright Trailer Court. He told me that he shipped ore from the Shinarump Claims under a lease from Nicholas Murphy and that these Murphy Shinarump Claims were adjacent to the Thornburg Mining Company Claims.

I then went back to the Courthouse and verified the fact that Nicholas Murphy had filed Proof of Labor for the past year on the Shinarump 1-A Claim and that the Murphy Claims do adjoin the Thornburg Claims.

Will you please disregard the settlement sheets I forwarded you showing F. M. Wright as shipper as I am convinced this was not our ore.

Original signed by

Hugh M. Connors

Building 20 - Federal Center
Denver 25, Colorado

March 7, 1963

Memorandum

To: George C. Selfridge, Chief
Division of Field Operations, OME
Washington 25, D. C.

From: Acting Field Officer, OME, Region III

Subject: DMRA-3060 (Uranium)
Contract No. Idm-E638
Thornburg Uranium Mines, Inc.
(Shinarump claims)
Grand County, Utah

RECEIVED MAR 11 1963 800

Attached are two copies of a letter from J. T. Tunnell, two copies of a letter from R. F. Hollis, and copies of my replies.

I am not satisfied that we have received royalty on all the production from the Shinarump No. 1 claim. I plan to call on AEC in Grand Junction and to inspect this property, and Idm-E988 in April 1963.

Original signed by

Hugh M. Connors
Acting Field Officer, OME
Region III

Attachments
~~1 set of settlement sheets~~

Building 20 - Federal Center
Denver 25, Colorado

March 7, 1963

Mr. R. F. Hollis
Vice President - Milling
Atlas Minerals
P. O. Box 488
Moab, Utah

Re: DMEA-3060 (Uranium)
Contract No. Idm-E638
Thornburg Uranium Mines, Inc.
(Shinarump claims)
Grand County, Utah

Dear Mr. Hollis

Thank you for your letter of February 25, 1963, and the copies of the settlement sheets which you enclosed.

We appreciate very much the assistance you have given us in supplying extra copies of settlement sheets.

Sincerely yours,

Original signed by

Hugh M. Connors
Acting Field Officer, OME
Region III

cc Chief, Division of Field Operations, OME
Royalty Corres. Idm-E638
Chron
HMC/lm

(2)

Atmc.

Atlas Minerals
Division of Atlas Corporation
P. O. Box 488
Moab, Utah

R. F. HOLLIS
VICE PRESIDENT - MILLING

February 25, 1963

OME
DEPARTMENT OF THE INTERIOR
FEB 28 1963
REGION III
DENVER, COLORADO

Mr. Hugh M. Connors
Acting Field Officer, OME
Region III
Department of the Interior
Building 20 - Federal Center
Denver 25, Colorado

Dear Mr. Connors:

I am enclosing copies of settlement sheets for certain shipments of ore to our mill as requested in your letter of February 19.

From your reference I presume you are under the impression that this ore was shipped from claims belonging to Thornburg Uranium Mines, Inc. You will note from copies of vouchers enclosed that royalties were paid on these shipments through our office to Nicholas Murphy, Robert H. Ruggeri and Samuel Zimmerman.

If I can be of further assistance to you, please do not hesitate to let me know.

Yours very truly,

R. F. Hollis

R. F. Hollis
Vice President - Milling

RFH:lsp
Enclosures

cc: Mr. Jay Sorensen

Building 20 - Federal Center
Denver 25, Colorado

March 7, 1963

Mr. J. T. Tunnell
140 West Main Street
Grand Junction, Colorado

Re: DMEA-3060 (Uranium)
Contract No. Idm-E638
Thornburg Uranium Mines, Inc.
(Shinarump claims)
Grand County, Utah

Dear Mr. Tunnell:

Thank you for your letter of March 6, 1963 regarding the Shinarump claims.

Sincerely yours,

Original signed by

Hugh M. Connors
Acting Field Officer, OME
Region III

cc Chief, Division of Field Operations, OME
Royalty Corres. Idm-E638
Chron
HMC/lm

4mc

OME
MAR 7 1963

140 West Main Street
Grand Junction,
Colorado.

March 6th, 1963

Mr. Hugh M. Connors
Acting Field Officer, OME, Region 111
Office of Mineral Exploration
Building 20 - Federal Center
Denver 25, Colorado.

Re: Docket No. DMEA-3060 (Uranium)
Contract No. Idm-E638
Thornburg Uranium Mines, Inc.
(Shinarump claims)
Grand County, Utah.

Dear Mr. Connors:

I am replying to your letter of February 28th, 1963, relative to the above caption.

The report of April 24, 1962, was evidently received at my office and since there was no one employed by Thornburg Uranium Mines, Inc., I filled it out to the best of my knowledge.

Since receiving your letter, I have contacted the Atomic Energy Commission here in Grand Junction and have looked at their records on the Shinarump claims. Their records show small productions of ore for various periods of 1958, 1959 and 1961 under various names of which I have no knowledge. These names are listed as: W. R. Stewart, F. M. Wright Ming., Dickerson-Wimer & Poland, Jerry Stocks and Alvin Moses. I do not know of anyone ever having a lease on the claims of Thornburg Uranium Mines, Inc.

I believe this to be an error in so far as having this production shown on the claims of Thornburg Uranium Mines and I have asked the A. E. C. to cancel these listings off of the record. Mining claim maps in the office of the A. E. C. indicate that there are other "shinarump" claims adjoining the property of Thornburg Uranium Mines and it is my thinking that ore could have been produced from these claims and recorded in error to the shinarump claims of Thornburg Uranium Mines, Inc.

I trust that the above will be of some help in clarifying the matter.

Very truly yours,

J. T. Tunnell

Building 20 - Federal Center
Denver 25, Colorado

EXTRA COPY
O. M. E
RECEIVED MAR 1 1963
DATE
800

February 28, 1963

Mr. J. T. Tunnell, Accountant
140 West Main Street
Grand Junction, Colorado

Re: Docket No. DMEA-3060 (Uranium)
Contract No. Ma-2638
Thornbury Uranium Mines, Inc.
(Shinarump claims)
Grand County, Utah

Dear Mr. Tunnell:

On April 24, 1962 you advised that there had been no production from the captioned property.

We are now advised that ore has been produced from the Shinarump claims.

Please furnish this office two copies of the Lease or other Agreement allowing for the removal and sale of ore from this property. Also, please furnish this office two copies of each settlement sheet, since Liquidation No. 4712, July 1958, for all the ore that has been sold from the land subordinated to the Government by terms of the captioned contract.

Your early reply will be appreciated.

Sincerely yours,

Hugh M. Connors
Acting Field Officer, OME
Region III

cc Chief, Division of Field Operations, OME
Royalty Corres E638
Chron
HMC/lm

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF ROYALTY REVIEW

I have reviewed the files of the Office of Minerals Exploration, Washington, D. C., pertaining to Contract No. Idm-E638, Docket No. DMEA-3060 (Uranium), dated November 13, 1953, with

Thornburg Uranium Mines, Inc.
160 West Main Street
Grand Junction, Colorado

for the purpose of determining the amount of royalty due the U. S. Government on sales of minerals from property referred to as Shinarump group of claims located in Grand County, Utah, during the period October 11, 1958, through October 17, 1960.

A certification of discovery or development was issued on June 22, 1956, and, in accordance with Annex II and Amendment No. 5 of the contract, royalty is payable on all minerals mined or produced from the land described in Article 2 of the contract for a period of 11 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 in lieu of final audit dated June 25, 1956, indicated accepted costs under the exploration contract amounting to $32,848.40 with the Government's contribution, on a 90 percent basis, being $29,565.56.

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

This review established the total sales of uranium ore for the period to be $1,254.46. Royalty due the Government at rates specified in the contract is $62.72.

A prior Report of Royalty Review found the sales subject to Government royalty through October 10, 1958, to be $12,504.04 which added to the sales for this subsequent period make a total of $13,758.50. The royalty account as of October 10, 1958, was:

Total Royalty Due	$611.60
Total Royalty Paid	602.02
Balance of Royalty Due	$ 9.58

At October 17, 1960, the royalty account of this project was found to be:

Total Royalty Due	$674.32
Total Royalty Paid	687.93
Overpayment of Royalty	$ 13.61

C. E. Fisher

October 26, 1960

C. E. Fisher, OME Auditor

STATUS OF PROJECT, SCOPE OF REVIEW
AND REASONS THEREFOR

There has been no production from this property since July 1958. The royalty received during the period covered by this review was applicable to Lucius Pitkin, Inc., liquidation No. 4712, settled July 11, 1958, plus an adjustment of royalty previously paid on liquidation No. 4645 from that company as set forth in the prior Report of Royalty Review. This adjustment was computed on basis of 5% royalty being due the Government whereas the correct royalty rate is 4%. Also, no adjustment was made in connection with overpayments of royalty on A.S.& R. Co. liquidations Nos. 6064 and 7462 set forth in the prior review.

A summary of production, sales and royalty due and paid, together with analysis of overpayments of royalty, is shown on the attached Exhibit "A".

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

(1) Inspection reports by field representatives of the Government and other documents in the Washington office files indicate that all production from the property since the date of the exploration contract has been accounted for and proper royalty has been paid, except as indicated on Exhibit "A"; and

(2) 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.

Exhibit "A"

Idm-E638 | Thornburg Uranium Mines, Inc. | DMEA-3060

Summary of Production, Sales and Royalty

Purchaser	A.S.&R. Company	Union Carbide Nuclear Co.	Lucius Pitkin, Inc.	Total
Period	11/13/55 to 6/30/55	7/1/55 to 6/4/57	6/5/57 to 10/17/60	11/13/55 to 10/17/60
Production				
Ore - Short Wet Tons	812.83	3.14	163.18	679.15
Ore - Short Dry Tons	493.70	3.10	157.72	654.52
U_3O_8 - Pounds	2,038.30	529.34	483.61	3,051.25
" - " excess 4#/SDT	195.62	516.94	-	712.56
" - " " 10#/SDT	-	498.34	-	498.34
V_2O_5 - Pounds	-	18.60	-	18.60
Sales				
U_3O_8 - Base payments	$6,731.10	$1,852.69	$1,280.26	$9,864.05
" - Excess 4#/SDT	146.71	387.71	-	534.42
" - Excess 10#/SDT	-	124.59	-	124.59
V_2O_5	-	5.77	-	5.77
Development allowance	1,019.15	264.67	241.80	1,525.62
Haulage allowance	2,147.28	47.10	655.96	2,850.34
Time penalty	(1,146.29)	-	-	(1,146.29)
Total Receiving Stations	$8,897.95	$2,682.53	$2,178.02	$13,758.50
AEC production bonus		Not eligible		
Total value subject to royalty	$8,897.95	$2,682.53	$2,178.02	$13,758.50
Royalty Due	$ 440.53	$ 134.13	$ 99.66	$ 674.32
Royalty Paid	444.90	134.13	108.90	687.93
Overpayments	4.37	-	9.24	13.61

Computation of Overpayments

Liq.No.	Purchaser	SDT	Value	Per SDT	Royalty Due %	Royalty Due Amount	Royalty Paid %	Royalty Paid Amount
6064	A.S.&R.	19.44	$195.61	$10.06	3½	$ 6.85	5	$ 9.78
7462	A.S.&R.	25.68	288.84	11.25	4½	13.00	5	14.44
4645	Pitkin	84.20	923.36	10.97	4	36.94	5	46.18
			Totals			$56.79		$70.40
			Overpayment			13.61		
						$70.40		

MME Form 22
April 59

DEPARTMENT OF THE INTERIOR
Office of Minerals Exploration

EXTRA COPY
O. M. E
RECEIVED

DATE	INITIALS	

CHECK SHEET OF EXAMINING ENGINEER

Operator's Name **Thornburg Uranium Mines Inc.**

Address **160 West Main Street**

Grand Junction, Colorado

Exploration Contract No. **E 638**

Docket No. **DMEA 3060**

			Check One Yes	Check One No
1.	(a)	Does the Operator stockpile ore subject to royalty repayment?		X
	(b)	If so, is segregation and identification procedure adequate?		
2.	(a)	Does Operator commingle production subject to DMEA or OME royalties with exempt production?		X
	(b)	If so, do you consider 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?		X
	(b)	If so, are adequate records maintained on such material to protect the Government's interest?		
4.		Do you consider the assay controls in effect are adequate?	X	
5.		Do you consider that the manner of disposing of production gives the Government its fair royalty returns?	X	
6.		Do your periodic examinations of operations indicate the Operator is properly reporting his production of ores subject to DMEA or OME royalties?	X	
7.		Does the Operator buy from or sell to other Operators?		X
8.		Comment on any item 2 (b) to 6 if answer is No.		

10-17-60
Date

Original signed by

Mining Engineer
TMR for Hugh M. Connors

Building 20 - Federal Center
Denver 25, Colorado

EXTRA COPY
O. M. E.
RECEIVED NOV 28 1960
DATE | INITIALS | CODE
800

November 25, 1960

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: Docket No. DMEA-3060 (Uranium)
Contract No. Idm-E638
Thornburg Uranium Mines, Inc.
(Shinarump claims)
Grand County, Utah

Attached is the original Report of Royalty Review on the subject property dated October 26, 1960 covering the period October 11, 1953, through October 17, 1960.

Original signed by

IM

for
Hugh M. Connors

Attachment

HMC/lm
cc Chief, Division of Field Operations (2)
Royalty Corres E638
Chron

Building 20 - Federal Center
Denver 25, Colorado

EXTRA COPY
O. M. E.
RECEIVED NOV 28 1960

DATE	INITIALS	CODE
		800

November 25, 1960

Thornburg Uranium Mines, Inc.
160 West Main Street
Grand Junction, Colorado

Re: Docket No. DMEA-3060 (Uranium)
Contract No. Idm-E638
Thornburg Uranium Mines, Inc.
(Shinarump Claims)
Grand County, Utah

Gentlemen:

Enclosed is a copy of the Report of Royalty Review on the subject contract dated October 26, 1960 covering the period October 11, 1958, through October 17, 1960.

You will note that $13.21 is the amount of overpayment of Royalty. If you will submit a claim to us for that amount the overpayment in Royalty will be refunded to you.

Yours very truly,

[illegible]

LM

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

Enclosure
HMC/lm
cc E. D. Talbert, Acting Chief
Contract Administration and Audit Division
Chief, Division of Field Operations (2)
Royalty Corres. E638
Chron

EXTRA COPY
O. M. E
RECEIVED OCT 1960

DATE	INITIALS	CODE

Building 20 - Federal Center
Denver 25, Colorado

October 19, 1960

Memorandum

To: E. D. Talbert, Acting Chief
Contract Administration and Audit Division
Washington 25, D. C.

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

Subject:

Idm E 291	DMEA 171	West Park Mining Company
Idm E 638 ✓	DMEA 3060	Thornburg, Uranium Mines, Inc.
Idm E1105	DMEA 4656	Yellow Queen Uranium Company

Attached are the original and one copy each of the check sheets on the subject projects which were requested in your memorandum of October 10, 1960.

TMR

for

Hugh M. Connors

Attachments

TRIPLICATE
Rev., Supp. 1 (Third Amendment). Promulgated Sept. 11, 1957 by Treasury Department, Fiscal Service.
Treasury Department Circular No. 945 -

CERTIFICATE OF DEPOSIT
Standard Form 219

10/14/58 (Date sent)

60 (Deposit No.)

Identification of Accountable Officer Affected

(1) Office Deposit Symbol: 9013

(2) For Consolidated Abstract of Treasury Regional Office at (city and state): Denver, Colo.

Deposited with Federal Reserve Bank of Kansas City, Mo., Denver, Colo.
(Name and location of depositary)

(3) The Sum of $2,718.92

(4) Classification of Deposit

Account Symbol	Amount	Account Symbol	Amount
14X4401	$ 2,718.92		$

(6) Department or Agency and address whose accounts are credited, IF OTHER THAN depositing agency.

(5)
14-23-040
Defense Minerals Exploration Administration
224 New Customhouse
Denver 2, Colo.

Depositor's title, Department or Agency and address. If deposit is made for another accounting entity, identify in (6).

(7) SPACE BELOW TO BE USED BY DEPOSITARY ONLY. I certify that the above amount has been received for credit in the account of the Treasurer of the United States on the date shown, subject to adjustment for uncollectible items included therein.

Bennett
(Authorized signature)

OCT 1 4 1958
(Date of credit in Treasurer's account)

Depositary will date, sign and forward to depositor for his retained copy.

1958

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E-649	Camoose Uran. Checks payable Climax Uran.	$ 660.74
E-638	Thornburg Mining	85.91
E-823	Climax Uranium	1,972.27
		2,718.92

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF ROYALTY REVIEW

I have reviewed the files of the Executive Officer, OME Field Team, Region III, Denver, Colorado, pertaining to Contract Idm-3638, Docket No. DMEA 3060 (Uranium) dated November 13, 1953, including Amendments Nos. 1 through 4, with

Thornburg Uranium Mines, Inc.
160 West Main Street
Grand Junction, Colorado

for the purpose of determining the amount of royalties due the United States Government on the sale of Uranium bearing ores produced from the Shinarump group of claims located in Grand County, Utah, during the period November 13, 1953 through October 10, 1958.

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

My review established the total sales of Uranium bearing ores for this period to be $12,504.04. (See Schedule No. 1 attached.) Royalty due the United States Government at the contract rates of 3.5 to 5 percent is $611.60. The royalty paid and the balance due are as follows:

Total Royalty Due	$611.60
Total Royalty Paid	602.02
Balance of Royalty Due (See Schedule No. 2)	$ 9.58

Donald T. Finch

Donald T. Finch, OME Auditor

October 13, 1958

RECEIVED
OCT 1958
O.M.E.

STATUS OF THE PROJECT, DESCRIPTION OF REVIEW AND REASONS THEREFOR

CONTRACT NO. I4m-R638 DOCKET NO. RMRA 3060

The exploration work under the contract has been completed. A Certificate of Discovery or Development was issued on June 22, 1956, and in accordance with the contract, royalty is payable on the net smelter returns or other net proceeds realized from production as a result of such discovery or development during a maximum period of 11 years from the date of the contract. A Report of Review in lieu of final audit dated June 25, 1956, indicated accepted costs of $32,848.40, with Government's contribution on a 90 percent basis being $29,563.56. Production since June 30, 1955 has been intermittent. The A.E.C. production bonus tonnage had all been produced prior to the date of the Exploration Contract.

My review included a tabulation and recomputation of all ore settlement sheets in the files of the Executive Officer, GMX Field Team, Region III, for the period November 13, 1953 through October 10, 1958, and correspondence with the Chief of Accounting Branch, Finance Division, Field Operations Office, Atomic Energy Commission, Grand Junction, Colorado.

The producer's reported sales were reconciled with the production records maintained by A.E.C. Royalties paid were reconciled with the GMX Finance Office, Denver, Colorado.

The review was made in lieu of an on-site audit of the producer's accounts for the following reasons:

(a) All reported production was reconciled with records of the Atomic Energy Commission.

(b) The Examining Engineer is of the opinion all sales of production are accounted for.

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

Schedule No. 1

TRIMBELLE URANIUM MINES, INC.

CONTRACT Idm-1638 | DOCKET NO. DMRA 3060

SUMMARY OF PRODUCTION, SALES AND ROYALTIES

Purchaser	A. S. & R. COMPANY	UNION CARBIDE NUCLEAR COMPANY	LUCIUS PITKIN, INC.	TOTAL
Period	11/13/53 to 6/30/55	7/1/55 to 6/4/57	6/5/57 to 10/10/58	11/13/53 to 10/10/58
Gross Weight, Pounds	1,085,650	6,880	176,320	1,268,850
Dry Weight, Pounds	987,404	6,198.36	168,391	1,161,993.36
Dry Weight, Tons	493.7020	3.1000	84.1955	580.9975
Assays: (Average)				
U_3O_8	.2064	8.5400	.1300	.2398
V_2O_5	.30	-	-	None
Pounds U_3O_8	2,038.30	529.34	218.91	2,786.55
Base Payment U_3O_8	$6,731.10	$1,852.69	$459.71	$9,043.50
Development Allowance	$1,029.15	$ 264.67	$109.45	$1,393.27
Premiums				
Excess of 4 lbs. U_3O_8 per Ton				
Excess Pounds	195.62	516.94	-	712.56
Amount @ 75¢ per lb.	$ 146.71	$ 387.71		$ 534.42
Excess of 10 lbs. U_3O_8 per Ton				
Excess Pounds	-	498.34	-	498.34
Amount @ 25¢ per lb.	-	$ 124.59	-	$ 124.59
Haulage Allowance				
Gross Weight, Tons	512.825	3.140	88.1600	604.125
Haulage Allowance per Ton	4.19	15.00	4.02	4.22
Amount of Haulage Allowance	$2,147.88	$ 47.10	$354.40	$2,548.78
Line Penalty	$1,146.29			$1,146.29
Pounds V_2O_5	-	18.60	-	18.60
V_2O_5 Payment	-	$ 5.77	-	$ 5.77
Total Value Subject to Royalty (No AEC Production Bonus Available)	$8,897.95	$2,682.53	$923.56	$12,504.04
Average Value per Dry Ton	$ 18.02	$ 865.33	$ 10.97	$ 21.52
Average Royalty Percentage	4.97%	5%	4%	4.89%
Total Royalty Due	$ 440.53	$ 134.13	$ 36.94	$ 611.60
Total Royalty Received	444.90	134.13	22.99	602.02
Balance of Royalty Due (See Schedule No. 2)	$ 4.37	$ 0.00	$ 13.95	$ 9.58

The last liquidation settlement sheet in above is Lucius Pitkin, Inc. No. 4645 dated 6/16/58

The last Certificate of Deposit in above is No. 59-4 dated 7/9/58.

Schedule No. 2

THORNBURG URANIUM MINES, INC.

CONTRACT NO. Idm-R638 DOCKET NO. DMEA-3060

SCHEDULE OF BALANCE OF ROYALTY DUE

Date	Purchaser	Liquidation Settlement No.		
1954 9/9	A. S. & R. Company	6064	$ 2.93	
1955 4/20	A. S. & R. Company	7462	1.44	
1958 6/16	Lucius Pitkin, Inc.	4645	13.95	
	Total Balance of Royalty Due			$9.58

CHECK SHEET OF EXAMINING ENGINEER

Operator's Name Thornburg Uranium Mines, Inc.
Formerly Thornburg Mining Company

Address 160 West Main Street

Grand Junction, Colo.

Exploration Contract No. Idm-E 638 Docket No. DMEA 3060

	Check One	
	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 Operator commingle production subject to DMEA royalties with exempt production?		✓
(b) If so, do you consider 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. Do you consider the assay controls in effect are adequate?	✓	
5. Do you consider that the manner of disposing of production gives 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 royalties?	✓	
7. Does the Operator buy from or sell to other Operators?		✓
8. Comment on any item 2(b) to 6, if answer is No.	—	—

Date 10/13/58

H. F. Robertson
Mining Engineer

224 New Customhouse
Denver 2, Colorado
October 7, 1958

EXTRA COPY O. M. E. RECEIVED OCT 10 1958		
DATE	INITIALS	CODE
		800

Thornburg Uranium Mines, Inc.
160 West Main Street
Grand Junction, Colorado

Re: Docket No. DMEA 3060 (Uranium)
Contract Idm-E638
Thornburg Uranium Mines, Inc.
(Shinarump claims)
Grand County, Utah

Gentlemen:

On August 15, 1958, we wrote you regarding liquidation No. 4645 on which you owe the Government for royalty due, $13.95.

Will you please advise by return mail when we may expect to receive the $13.95 royalty due the Government on your liquidation No. 4645.

Very truly yours,

Original signed by
E. N. HARSHMAN

E. N. Harshman
Acting Executive Officer
OME Field Team, Region III

HMC:hmh

cc: Chmn. Op. Comm. (2)
Robertson, OME/GJct
Roy. file, E638
Chron

EXTRA COPY
DMEA
RECEIVED AUG 25 1958
DATE | INITIALS | CODE
800

224 New Customhouse
Denver 2, Colorado

August 21, 1958

Thornburg Uranium Mines, Inc.
160 West Main Street
Grand Junction, Colorado

Re: Docket DMEA 3060 (Uranium)
Contract No. DMe-2638
Thornburg Uranium Mines, Inc.
(Shinarump claims)
Grand County, Utah

Gentlemen:

At the present time the Contract Administration and Audit Division of DMEA is engaged in making an audit review of royalty payments due the Government under the above Exploration Contract. In connection with this review, this Division has corresponded with the Atomic Energy Commission concerning recorded production from the Shinarump group.

The Atomic Energy Commission reports the following production in November, 1953:

Sold to Colorado Uranium Project - (AS&R)

Liq. No.	Date	Claim	Pounds U_3O_8
4594	Nov. 1953	Shinarump 1-A	291.91
4639	Nov. 1953	Shinarump 1-A	191.07
		TOTAL	482.98

It is assumed that this production was mined prior to the effective date of the DMEA contract, which is November 13, 1953. However, in order that our records may be complete, please advise when the production reported on these two liquidation settlement sheets occurred.

According to our records, we have not received as of the date of this letter production sold to Lucius Pitkin, Inc. for July and reported to AEC on Liquidation Settlement Sheet No. 4712 dated July 11, 1958.

Please advise when we may expect to receive a copy of this liquidation settlement sheet, accompanied by the appropriate amount of EMRA royalty remittance.

Your prompt reply to this letter will be appreciated, in order that completion of the audit review may be facilitated.

Very truly yours,

Original signed by
J. W. TOWNSEND

J. W. Townsend
Alternate Acting Executive Officer
EMRA Field Team, Region III

DTF:bh
cc: Chem. Op. Comm.(2)
Finch
Royalty File
Chron.

224 New Customhouse
Denver 2, Colorado

August 15, 1958

800

Thornburg Uranium Mines, Inc.
160 West Main Street
Grand Junction, Colorado

Re: Docket DMEA 3060 (Uranium)
Contract DMe-2638
Thornburg Uranium Mines, Inc.
(Shinarump claims)
Grand County, Utah

Gentlemen:

We have received check and copies of a settlement sheet covered by Liquidation No. 4645, which indicates a net underpayment of $13.95 as follows:

Liquidation No.	Tons	Royalty Due	Royalty Paid
4645	84.196	$36.94	$22.99

The underpayment is due to the ore purchaser computing royalty on only the base value of contained U_3O_8. DMEA royalties (see Annex II (b) of contract) shall be a percentage of the amounts realized from the sale of the production, which includes all bonuses, premiums, or other benefits.

Your check for $13.95, made payable to Defense Minerals Exploration Administration, should be sent at once to the Executive Officer, DMEA Field Team, Region III, 224 New Customhouse, Denver 2, Colorado.

Very truly yours,

Original signed by
J. W. TOWNSEND

J. W. Townsend
Alternate Acting Executive Officer
DMEA Field Team, Region III

MHM:jy
cc: Chm. Op. Comm. (2)
DMEA, G.Jct.
Royalty file
Chron.

TRIPLICATE
Rev., Supp. 1 (Third Amendment). Promulgated Sept. 11, 1957 by Treasury Department, Fiscal Service.
Treasury Department Circular No. 945 -

CERTIFICATE OF DEPOSIT
Standard Form 219

7/9/58 (Date sent)

4 (Deposit No.)

Identification of Accountable Officer Affected

(1) Office Deposit Symbol: 9013

(2) For Consolidated Abstract of Treasury Regional Office at (city and state): Denver, Colo.

Deposited with Federal Reserve Bank of Kansas City, Mo., Denver, Colo.
(Name and location of depositary)

(3) The Sum of $ 316.30

(4) Classification of Deposit

Account Symbol	Amount	Account Symbol	Amount
14X4401	$ 316.30		$

(6) Department or Agency and address whose accounts are credited, IF OTHER THAN depositing agency.

(5)
14-23-040
Defense Minerals Exploration Administration
224 New Customhouse
Denver 2, Colorado

Depositor's title, Department or Agency and address. If deposit is made for another accounting entity, identify in (6).

(7) SPACE BELOW TO BE USED BY DEPOSITARY ONLY. I certify that the above amount has been received for credit in the account of the Treasurer of the United States on the date shown, subject to adjustment for uncollectible items included therein.

C. Hedlin
(Authorized signature)

JUL 9 - 1958
(Date of credit in Treasurer's account)

Depositary will date, sign and forward to depositor for his retained copy.

E-915 Joseph Walsh	87.30
	67.93
	119.30
E-879 Uranium King	18.78
E-638 Thornburg Mining	22.99
	316.30

7/14

220
800

E-638

For Certificate of Deposit No. 56, dated November 13, 1957, giving royalty payment of $134.13, see E-597.

E-638

For Certificate of Deposit No. 53, dated October 16, 1956, giving royalty payment of $174,38, see E-53.

Denver, Colorado

THIS DEPOSIT IS NOT SUBJECT TO CHECK

DEPOSIT NO.
14-23-040-143

For credit of 413 Treasury Regional Office, Denver, Colo. 6/22/56
(Name, title, and disbursing or other identification symbol of accountable officer) (Date sent)

deposited with Federal Reserve Bank of Kansas City, Mo. Denver, Colo.
(Name and location of depositary)

$ 22.19

for accounts listed below. SCHEDULE NOS.

ACCOUNT SYMBOL	TITLE OF ACCOUNT TO BE CREDITED	AMOUNT
14X1401		22.19

(Depositor will insert below his name, title, Department or Agency concerned, and his address)

Defense Minerals Exploration Administration
224 New Custom House
Denver 2, Colorado

SPACE BELOW TO BE USED BY DEPOSITARY ONLY

I certify that the above amount has been received for credit in the account of the Treasurer of the United States on the date shown, subject to adjustment for uncollectible items included therein.

(Authorized signature)

6/22/56
(Date of credit in Treasurer's account)

DEPOSITARY WILL DATE, SIGN, AND RETURN THIS TO DEPOSITOR FOR HIS RETAINED COPY

16—59686b-1 GPO

TRIPLICATE

STANDARD FORM 201 (Formerly Cert. of Deposit, Form 1)
Promulgated Oct. 1949 by Treasury Dept., Fiscal Service

E-638 Thornburg Mining 22.19

DENVER
GENERAL
1956 JUN 22 PM 12 57
MAIL DEPT.

For Certificate of Deposit No. 15, dated August 2, 1955, giving royalty repayment of $51.92, see E-333.

E-638

For Certificate of Deposit No. 129, dated June 22, 1955, giving royalty repayment of $31.17, see E-4.

E-638

For Certificate of Deposit No. 114, dated May 24, 1955, giving royalty repayment of $50.03, see E-370.

For Certificate of Deposit No. 101, dated April 28, 1955, giving royalty repayment of $22.89, see E-4.

For Certificate of Deposit No. 97, dated April 20, 1955, giving royalty repayment of $37.43, see E-4.

For Certificate of Deposit No. 51, dated November 30, 1954, giving royalty repayment of $5.91, see E-4.

For Certificate of Deposit No. 47, dated November 10, 1954, giving royalty repayment of $6.34, see E-4.

For Certificate of Deposit No. 46, dated November 5, 1954, giving royalty repayment of $21.02, see E-4.

For Certificate of Deposit No. 39, dated October 19, 1954, giving royalty repayment of $21.62, see E-4.

Building 20
Denver Federal Center
Denver 2, Colorado
November 7, 1955

REGION III

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw
Supervising Mining Engineer

From: Carl Belser

Subject: DMEA 3060, Contract Idm-2638 (Uranium),
Thornburg Uranium Company, Shinarump claims,
Grand County, Utah - Progress report for October 1955

The property was visited on November 3, 1955. No work has been done at the mine during October. Ed Johnson, foreman, was still in Oregon where the company is shipping ore from their new property.

Carl Belser
Mining Engineer

CB:ph

cc 6
Idm-2638
Gharon.

See, Op. Comm.

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

RECEIVED
OCT 13 1955

224 New Customhouse
Denver 2, Colorado

October 10, 1955

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-3060 (Uranium), Contract Idm-E638, Thornburg Uranium Mines, Inc., Shinarump claims, Grand County, Utah - Progress report for September, 1955

Attached are two copies of the Inspecting Engineer's September, 1955 report for the subject exploration contract. No work was done during the period.

W. M. Traver

By J. W. Townsend

Enclosures

DMEA
Date Rec'd.

OCT 7 1955

BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Building 20
Denver Federal Center
Denver 2, Colorado
October 7, 1955

REGION III

Memorandum

RECEIVED
OCT 13 1955

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw
Supervising Mining Engineer

From: Carl Belser

Subject: DMEA 3060, Contract Idm-E638 (Uranium),
Thornburg Uranium Company, (Shinarump claims),
Grand County, Utah - Progress report for September 1955

The property was visited on October 3, 1955. The road to the mine was barred with a rope and a "no admittance" sign. Ed Johnson, foreman, was in Oregon examining a property for Thornburg. Fred Johnson said that no work had been done at the mine during September, and that no word, as yet, had been received concerning the location for the new work.

Carl Belser

Carl Belser
Mining Engineer

CB:ph

cc 6
Idm-E638
Chron

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

RECEIVED
SEP 26 1955

224 New Customhouse
Denver 2, Colorado

September 22, 1955

Memorandum

To: Secretary to the Operating Committee, Defense Minerals Exploration Administration

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA-3060, Contract Idm-E638 (Uranium), Thornburg Uranium Company, Shinarump Claims, Grand County, Utah - Progress report for August, 1955.

Attached are two copies of the examining engineer's report on the subject exploration project for August, 1955. No exploratory work was accomplished under the terms of the contract during the period.

W. M. Traver

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DMEA
Date Rec'd.
SEP 22 1955
BUREAU OF MINES
Denver, Colorado

Building 20
Denver Federal Center
Denver 2, Colorado
September 21, 1955

RECEIVED
SEP 26 1955

REGION III

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw
Supervising Mining Engineer

From: Carl Belser

Subject: DMEA 3060, Contract Idm-E638 (Uranium)
Thornburg Uranium Company, (Shinarump claims), Grand County, Utah
Progress report for August 1955

Underground progress was inspected on September 12, 1955. During August, the company uncovered the ore found by drilling in June. The ore appears to be good and is said to be from one to two feet thick, but is under water.

Mr. Johnson has asked the Geological Survey to suggest an exploration drifting program to utilize the remaining exploration left under the contract.

No work was done or reimbursement claimed under the contract for August 1955.

Carl Belser
Carl Belser
Mining Engineer

CB:ph

cc 6
Idm-E638
Chron

DMEA
Fdl. Rec'd.

AUG 8 1955

BUREAU OF MINES
Denver, Colorado

Building 20
Denver Federal Center
Denver 2, Colorado
August 8, 1955

Region III

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw
Supervising Mining Engineer

From: Carl Belser

Subject: DMEA 3060, Contract I&m-2698, (Uranium), Thornberg Mining Company, (Shimarump claims), Grand County, Utah -- Progress report for July, 1955

The subject contract was inspected on August 1, 1955. No new work on the contract had been done during July. A breakthrough to the old workings had been completed which improved the ventilation.

The probing of the holes drilled in June indicated ore in hole No. 37 and good ore (2.5 feet of 0.85 percent U_3O_8) in the last hole toward the face (No. 43). The superintendent, Ed. Johnson, said that he would like to explore this ore further before any more drifting is done.

No work was done or reimbursement claimed under the contract for July, 1955.

The Chinle-Moenkopi contact is hard to follow as the Moenkopi appears to vary from red to greyish green. Mr. Johnson said that they would like to have Hank Johnson of the Geological Survey give them pointers on following the contact. The request was forwarded to Mr. Hasler.

for John F. Shaw

Carl Belser
Mining Engineer

CB:jw

cc: 2698
Chron.

RECEIVED
AUG 11 1955

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

224 New Customhouse
Denver 2, Colorado

August 9, 1955

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-3060 (Uranium), Contract Idm-E638, Thornburg Uranium Mines, Inc., (formerly Thornburg Mining Company), Shinarump claims, Grand County, Utah - Progress Report for July, 1955

Enclosed is a memorandum from Carl Belser, DMEA engineer, concerning operations under the subject contract for the month of July, 1955.

W. M. Traver

W. M. Traver

Enclosures

RECEIVED
AUG 11 1955

[redacted]

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

RECEIVED
2 7 1956

Vance Thornburg, d/b/a Thornburg Mining Company
Assigned to
Thornburg Mining Minst, Inc.
160 West Main Street
Grand Junction, Colo.

pertaining to Exploration Project Contract No. Ion-8438, Docket No. DMEA-3060, including Amendments Nos. 1 to 4, and Termination Agreement dated May 28, 1956, for the period from January, 1954 to June, 1955, covering a project for the exploration of Uranium on property known as Shinarump Claim located in Grand County, Utah.

My review included an examination of the Monthly Reports (Form MF-104) and supporting documents attached thereto, comparison of the costs claimed with the contract and pertinent schedules, consultation with the Executive Officer, DMEA Field Team, 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		$32,848.40
Exceptions:		
By DMEA Finance Officer	$0.00	
Repurith	0.00	0.00
Total Accepted Cost		$32,848.40

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 Twenty-nine thousand, five hundred sixty-three and 56/100ths Dollars

** $29,563.56 **

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

June 25, 1956

T. H. Bending, Auditor

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

Re: Thornburg Uranium Mines, Inc.
Contract No. Idm-E618
Docket No. DMEA-3060

Dear Mr. Finch:

Your report of royalty review on the above-cited project is acceptable and normal distribution is authorized.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers
Contract Administration
and Audit Division

AMAlley/ama
October 24, 1958

Copy to: Docket
Director's Reading File
Mr. Chambers

Form [illegible] (Rev.) (April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of June, 1955 Docket No. DMEA 3060 Contract No. Idm-E-638

Operator's Name Thornburg Uranium Mines, Inc. Minerals Uranium

Address Grand Junction, Colorado

Contract Amount, $ 41,910.00 Government Participation: 90 % Amount, $ 37,720.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling J-H Holes	225.00	770.00	995.00			
Bulldozing						
Crosscutting						
Drifting	none	31568.40	31568.40			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	none	285.00	285.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	225.00	32623.40	32848.40			

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

Date 7-29-55 *Payee Thornburg Uranium Mines, Inc.

Per J. T. Tunnell Title Accountant

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—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.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 302.50

Signature Randell R. Cooper (Authorized Certifying Officer)

Date 8/11/55 Vou. No. DMA-56-14

(See other side)

AUG 17 1955

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Edm-E638 in accordance with the terms of the contract.

Signature Carl Bolen ($202.50) Title Mining Engineer Date 8/5/55

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: Berk

Signature W. M. Spencer Title Executive Officer Date AUG - 9 1955

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

-104A
(Apr. 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of June 1955 Docket No. DMEA 3060 Contract No. Idm-E-638

Operator's Name Thornburg Uranium Mines, Inc. Minerals Uranium

Address Grand Junction, Colorado.

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting	Ft	none	none	31568.40	1066.5	29.60	1345	29.60
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: ~~Core~~ Jackhammer ~~Churn~~ holes	Ft.	225.00	225	995.00	995	1.00	1500	1.00
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Samples	Ea.	none	none	285.00	57	5.00	120	5.00
TOTAL DISTRIBUTED COSTS		225.00	225	32848.40				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		225.00		32848.40				

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

REMARKS:

Date 7-29-55 Operator Thornburg Uranium Mines, Inc.

Per J. T. Tunnell Title Accountant

J. T. Tunnell

NOTE.—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.

(Instructions on reverse)

(For Government use only)

Carl Belser

RECEIVED
AUG 17 1955

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases; such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION IV XXI

Administrative Audit Difference Statement

Date: August 12, 1955
Payee's
Reference: June 1955

Thoenbury Mining Company
160 West Main Street
Grand Junction, Colorado

Gentlemen:

Upon examination of the above Payee's reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed $ 285.00

Difference $

Amount Approved $ 282.50

The reason for the difference was due to:

$ (100.00 withheld on April 1955 report to be match submitted.

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

RECEIVED
AUG 17 1955

N.E.Stokes
Audit Section

R-IV-B & F Form No. 4
4-15-52 D

224 New Customhouse
Denver 2, Colorado

August 9, 1955

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-3060 (Uranium), Contract Ida-E638, Thornburg Uranium Mines, Inc., (Formerly Thornburg Mining Company), Shinarump claims, Grand County, Utah - Operator's Monthly Progress Report for the month of June, 1955

Enclosed are the original and four copies of form MF-104 and MF-104A, Narrative Report, and Engineer's Report for the above period.

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on form MF-200A, therefore we recommend that payment be made for 90 percent of the amount reported by the Operator on form MF-104, contingent on your verification of arithmetical accuracy within the report.

The amount of $100.00 which was withheld from payment on the April, 1955 report is now to be reinstated.

Remarks:

Date of Report. . . . . July 29, 1955
Date Received in Field Office . . . . August 1, 1955
Date Received in Region Office. . . . August 8, 1955

W M Traver

W. M. Traver

Enclosures

Berk

RDB:sr

cc Subject
Sec. Op. Comm. (2)
Shaw (2)
Townsend w/copy Engineer's Report
Chron

RECEIVED
AUG 17 1955

DMEA
Date Rec'd.

AUG 8 1955

BUREAU OF MINES
Denver, Colorado

Building 20
Denver Federal Center
Denver 2, Colorado
August 8, 1955

Region III

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw
Supervising Mining Engineer

From: Carl Belser

Subject: DMEA 3060, Contract Idm-E698 (Uranium), Thornberg Mining Company, (Shinarump claims), Grand County, Utah -- Progress report for June, 1955.

Underground progress on the subject contract was inspected on July 12, 1955.

Work on the contract consisted of 9 25-foot holes drilled vertically into the bottom of the drift on approximately 25-foot centers. The holes were measured in company with Mr. Ed. Johnson. The operator's report was delayed because a new probe was needed to evaluate the holes.

The contract cost for drilling 225 feet of long holes at $1.00 a foot is $225.00. Payment of 90 percent or $202.50 is recommended.

Maps and logs were included in the operator's report.

for John F. Shaw
Carl Belser
Mining Engineer

CB:jw

cc: 6
E698
Chron.

NARRATIVE
FOR THE MONTH OF JUNE 1955
EXPLORATION PROJECT CONTRACT
THORNBURG URANIUM MINES, INC..
DOCKET NO. DMEA 3060

Mr. W. M. Traver, Jr.
Building 20, Room 137
Mineral Resources Branch
Denver 14, Colorado

Dear Mr. Traver:

Pursuant to instructions, herein is submitted a narrative report, map, and drill log covering, in detail, the progress made during the month of June, 1955, on the Exploration Contract Number DMEA 3060 between the Defense Minerals Exploration Administration and the Thornburg Uranium Mines, Inc.

Advances

There were no drift advances during the month of June, inasmuch as this phase was completed during May, 1955.

Drill Holes

The drill hole program was completed during June with the following footage drilled:

West Heading (South Mine) ~~2.25~~ 225' feet

Each hole was probed radiometrically. The results are incorporated in the following drill hole log:

DRILL HOLE LOG
SOUTH MINE (WEST HEADING) -See Map for Locations

Depth(Feet)	Formation	Radiometric Probing
Drill Station No. 19/Down Hole #35		
0-8'	gray shale w/sand streaks	0-8' = 0.09%
8-14'	red shale	
14-25'	red fine-grained sandstone	
Drill Station No. 20/Down Hole #36		
0-8'	Gray shale w/sand streaks	0-8' = 0.09%
8-14'	red shale	
14-25'	hard, red, fine-grained sandstone	
Drill Station No. 21/Down Hole #37		
0-3'	gray shale w/sand streaks	
3-12'	red shale w/gray shale	3-5' = 0.27%
12-25'	red fine-grained sandstone	
Drill Station No. 22/Down Hole #38		
0-13'	red shale	none
13-25'	hard, red-fine-grained sandstone	
Drill Station No. 23/Down Hole #39		
0-25'	red sandstone with very little shale	none
Drill Station No. 24/Down Hole #40		
0-25'	red, fine-grained sandstone w/some gray shale	none
Drill Station No. 25/Down Hole #41		
0-25'	hard, red, fine-grained sandstone	none
Drill Station No. 26/Down Hole #42		
0-5'	red shale w/some gray shale	0-5' trace
5-25'	red, fine-grained sandstone	

Drill Station No. 27/Down Hole #43

0-3'	Gray Shale	0-5' barren
3-6'	gray, conglomerate, (quartz) sandstone	5-7.5' = 0.85%
		7.5-25 = 0.03%
6-8'	reddish, black,-fine-grained sandstone	(Note: 7.5' -25' possibly contamination)

The locations of these drill holes have been plotted on the attached map and are shown as small squares and designated by station numbers.

The above constitutes the final report on the Stage Number two (2) program.

Very truly yours,

George W. Beecroft

George W. Beecroft
Geologist

GWB:bp
Enclosure:
drill hole map

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

RECEIVED
JUN 23 1955

224 New Customhouse
Denver 2, Colorado

June 20, 1955

May, 1955

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-3060 (Uranium), Contract Idm-E638, Thornburg Uranium Mines, Inc., Grand County, Utah

Enclosed are three copies of a memorandum report relative to operations under the subject contract.

W. M. Traver

Enclosures

DMEA
Date Rec'd

JUN 17 1955

BUREAU OF MINES
Denver, Colorado

Region III

Building 20, Room 137
Denver Federal Center
Denver 2, Colorado
June 16, 1955

Memorandum

RECEIVED
JUN 23 1955

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw

From: Carl Belser

Subject: DMEA 3060, Contract Idm-E638 (Uranium) Thornburg Mining Company, (Shinarump mine) Grand County, Utah - Progress report for May 1955

Underground progress was inspected on June 6, 1955. Only two miners were at the mine. Ed Johnson, foreman, was in Gunnison County, Colorado, operating a diamond drill for the Thornburg Mining Company, but was expected to return within a few days.

Long hole drilling was started near the breast of the adit but the drill broke down on the first hole. All work done underground has been in making a connection with the old workings for ventilation. This connection is expected to be completed within a few days.

No work has been done or reimbursement claimed under the contract for May 1955.

Carl Belser

Carl Belser
Mining Engineer

cc 6
E638
DMEA Chron.

CB/pah

Form MF-104 (Rev.)
(April 1952)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.5

RECEIVED
JUN 15 1955

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of April, 1955 Docket No. DMEA 3060 Contract No. Idm-E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address Grand Junction, Colorado
Contract Amount, $ 41,910.00 Government Participation: 90 % Amount, $ 37,720.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent / Short Form Contracts:						
Drilling J-H holes	none	770.00	770.00			
Bulldozing						
Crosscutting						
Drifting	1115.92	30452.48	31568.40			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	none	285.00	285.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	1115.92	31507.48	32623.40	1115.92	31507.48	32623.40

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 5-16-55 *Payee Thornburg Mining Company
Per J. T. Tunnell Title Office Mgr.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—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.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 904.33

Signature Randell R. Cooper
(Authorized Certifying Officer)

Date 5-26-55 Vou. No. DMA-55-94

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. John E638 in accordance with the terms of the contract.

Signature M. H. Salsbury #1,004.33 Title Mining Engineer Date 5-19-55

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: Berk.

Signature W. M. Ingram Title Executive Officer Date MAY 23 1955

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
JUN 15 1955

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of April 195 Docket No. DMEA 3060 Contract No. Idm-E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address Grand Junction, Colorado

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting	Ft.	1115.92	37.7	31568.40	1066.5	29.60	1345	29.60
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core								
Churn	Jackhammer holes	Ft.	none	none	770.00	770	1.00	1500	1.00
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Samples	Ea	none	none	285.00	57	5.00	120	5.00
TOTAL DISTRIBUTED COSTS		1115.92		32623.40				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		1115.92		32623.40				

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

Date 5-16-55 Operator Thornburg Mining Co.

Per J. T. Tunnell Title Office Mgr.
J. T. Tunnell

REMARKS: M. W. Salisbury

→ NOTE.—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.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

RECEIVED
JUN 15 1955

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION IV

Administrative Audit Difference Statement

Date: May 27, 1955
Payee's
Reference: _____

Thornburg Mining Company
120 West Main
Grand Junction, Colorado

Gentlemen:

Upon examination of the above Payee's Reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed $ 1115.02

Difference $ _____

Amount Approved $ 1115.02

The reason for the difference was due to:

* $100.00 withheld pending resolution of recess or continuation of work

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

N. E. Stokes
Audit Section

R-IV-B & F Form No. 4
4-15-52 D

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

RECEIVED
JUN 15 1955

224 New Customhouse
Denver 2, Colorado

May 23, 1955

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3060 (Uranium), Contract Idm-E638, Thornburg Mining Company, Shinarump mine, Grand County, Utah - Operator's Monthly Progress Report for the month of April, 1955

Enclosed are the original and four copies of form MF-104 and MF-104A, Narrative Report, and Engineer's Report for the above period.

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on form MF-200A, therefore we recommend that payment be made for 90 percent of the amount reported by the Operator on form MF-104, contingent on your verification of arithmetical accuracy within the report.

An amount of $100.00 is to be withheld from the payment due the Operator pending resolution of recess or continuation of work under the contract.

Remarks:

Date of Report.....May 16, 1955
Date Received in Field Office.....May 19, 1955
Date Received in Region Office.....May 23, 1955

Note:

By provisions in the assignment of the contract, Vance Elton Thornburg, dba Thornburg Mining Company is to be paid for all work up to June 1, 1955.

RDB:sr

W. M. TRAVER,

W. M. Traver

cc Subject
Chron
Shaw
Townsend
Sec. to Op. Comm. (2)

Enclosures

DMEA
Date Rec'd
MAY 23 1955
BUREAU OF MINES
Denver, Colorado

Region III

Building 20, Room 137
Denver Federal Center
Denver 2, Colorado
May 20, 1955

Memorandum

RECEIVED
JUN 15 1955

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw
Supervising Mining Engineer

From: M. H. Salsbury

Subject: DMEA 3060 (Uranium) Contract Idm-E638, Thornburg Mining Company, Shinarump mine, Grand County, Utah - Progress Report for April 1955.

Underground progress under the subject contract was inspected on May 2, 1955, in company with Ed Johnson, foreman for the operator.

The Operator claims payment for 37.7 feet of advance in the west heading of the south drift under Stage II of the contract. The amount claimed was for 37.7 feet at $29.60 per foot, for a total of $1,115.92. This was less than the 39.2 feet of advance since March 1, 1955, measured by the DMEA inspector on May 3, 1955. The total advance under Stage II was checked by measurement from the plug at the junction of north and south crosscuts with the west heading as follows:

From measuring plug to face - 5-3-55	-	273.0 feet
From measuring plug to face at start of Stage II	-	58.0 feet
Advance		215.0 feet
Footage allowed for advance in west heading from 41.0 feet to 58.0 (not previously paid for)		17.0 feet
Total footage eligible for payment		232.0 feet

Advance under Stage II claimed and/or paid for:

December 1954	- 37.0 feet	
January 1955	- 42.8 feet	
February 1955	- 70.0 feet	
March 1955	- 43.0 feet	
Total paid for or claimed		192.8 feet
Difference (remainder of footage eligible for payment as of 5-3-55		39.2 feet

The west drift has been continued down dip following a 4- to 6-inch bed of conglomerate which will show a count of about 0.10 MR/hr. above background. There is also a slight count above background along the back. No mineralization of ore grade was encountered during the month.

Johnson stated that they planned to stop the drift operation, which could be driven 18 feet further before exceeding the 250-foot maximum specified in Stage II. The disappointing results to date do not encourage further driving to the west. The long-hole drilling in the back of the west drift called for in Stage II was to be done in May 1955, and the Operator then intends to ask for a recess of work which can still be authorized under the contract. Exploration north and south of the west drift, opening up the ore found in previous DMEA work, is now in progress, and Johnson expressed the hope that the results might suggest a better way to expend the remaining DMEA funds. The DMEA inspector concurs in this plan.

The Operator has submitted for April 1955, in quintuplicate, forms MF-104 and MF-104-A, together with a narrative report and map showing monthly advance. All are satisfactory. Monthly and cumulative totals are correct. Claims are in accordance with contract terms and within contract maximums.

It is recommended that $1,004.33, or 90 percent of the amount claimed in April 1955, $1,115.92, be approved for payment.

M. H. Salsbury
M. H. Salsbury
Mining Engineer

cc 6
Idm-E638
Chron

MHS/cm

RECEIVED
JUN 1 5 1955

NARRATIVE FOR THE MONTH OF
APRIL 1955
EXPLORATION PROJECT CONTRACT FOR
THORNBURG MINING CO.
DOCKET NUMBER D.M.E.A. 3060

Mr. W. M. Traver, Jr.
Mineral Resources Branch
Building 20, Room 137
Denver 14, Colorado

Dear Mr. Traver:

Pursuant to instructions, herein is submitted a narrative report and map covering in detail the progress made during the month of April 1955, on Exploration Contract Number D.M.E.A. 3060, between the Defense Minerals Exploration Administration and the Thornburg Mining Company.

PROGRESS - APRIL 1955

South Drift		37.7 feet
	TOTAL PROGRESS	(Phase II of Contract)
South Drift		232.00

Reference is made to the attached map, marked Exhibit "B". On this map is shown the advance made in the South Drift during April 1955.

The West Heading of the South Drift was continued for a distance of thirty-seven point 7 (37.7) feet. This drifting was continued along a depression angle of 7 degrees following the westward dipping Chinle beds.

The rock types exposed were red and green mudstones interbedded with thin bedded calcareous clay-pebble conglomerate. At waist-heighth, six (6) inches of this conglomerate will average 0.12% U_3O_8 (Babble Counter) for the entire distance of this months advance. The roof, a calcareous, fine-grained sandstone, exhibits near its basal contact, 0.08% U_3O_8 Babble Counter reading. The thickness and overall grade of this mineralization will be determined by future test-holes into the roof.

Approximately 86 man-days were lost during this months operations due to the breakdown of the shuttle-buggies.

Sincerely,

George W. Beecroft

George W. Beecroft
Geologist

Enclosure:
Exhibit "B2

GWB:bp

Form MR-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of March, 1955 Docket No. DMEA 3060 Contract No. Idm-E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address Grand Junction, Colorado.
Contract Amount, $ 41,910.00 Government Participation: 90 % Amount, $ 37,720.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling J-H holes	none	770.00	770.00			
Bulldozing						
Crosscutting						
Drifting	1272.80	29179.68	30452.48			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	none	285.00	285.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	1272.80	30234.68	31507.48	1272.80	30234.68	31507.48

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

Date 4-14-55 *Payee Thornburg Mining Company

Per J. T. Tonnell Title Office Mgr.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—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.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 1,145.52

Signature Randell R. Cook
(Authorized Certifying Officer)

Date 5-3-55 Vou. No. DMA-55-88

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. IdM-E638 in accordance with the terms of the contract.

Signature Wm. McLean ($1,145.52) Title Mining Engineer Date April 22, 1955

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: Berk.

Signature W. M. Graves Title Executive Officer Date MAY 2 1955

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
MAY 20 1955

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of March 195 5 Docket No. DMEA 3060 Contract No. Idm-E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address Grand Junction, Colorado

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting	Ft.	1272.80	43	30452.48	1028.8	29.60	1345	29.60
Raising								
Shafts								
Winzes								
Drilling: Core								
Churn Jackhammer holes	Ft.	none	none	770.00	770	1.00	1500	1.00
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Samples	Ea.	none	none	285.00	57	5.00	120	5.00
TOTAL DISTRIBUTED COSTS		1272.00		31507.48				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		1272.00		31507.48				

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

REMARKS:

Date 4-14-55 Operator Thornburg Mining Company

Per J. T. Tunnell Title Office Mgr.

J. T. Tunnell

NOTE.—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.

(Instructions on reverse)

(For Government use only)

W. McMillan

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

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

224 New Customhouse
Denver 2, Colorado

May 2, 1955

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3060 (Uranium), Contract Idm-E638, Thornburg Mining Company, (Shinarump claims), Grand County, Utah - Operator's Monthly Progress Report for the month of March, 1955

Enclosed are the original and four copies of Form MF-104 and MF-104A, Narrative Report, and Engineer's Report for the above period.

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 90 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks:

Date of Report.....April 14, 1955
Date Received in Field Office.....April 15, 1955
Date Received in Region Office.....April 26, 1955

W. M. TRAVER,

W. M. Traver

Enclosures

RDB:sr

cc Sec. Op. Comm. (2)
Subject
Chron
Shaw

DMEA
Date Rec'd.
APR 26 1955
BUREAU OF MINES
Denver, Colorado

Region III

Building 20, Room 137
Denver Federal Center
Denver 2, Colorado
April 25, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shea
Supervising Mining Engineer

From: W. D. McMillan

Subject: DMEA 3060, Contract Idm-3636 (Uranium) Thornburg Mining Company, (Shinarump claims), Grand County, Utah - Progress Report for March 1955.

Underground progress was inspected on April 4, 1955, accompanied by Ed Johnson, foreman.

The contractor claims payment for 43 feet of advance in the west heading of the south drift at $29.60 per foot or a total of $1,272.80. This advance was verified by measurement to the face, as no work had been done since April 1, 1955, due to breakdowns of equipment.

On March 1st, the heading had been advanced to 235.3 feet from the reference plug at the intersection of west drift and the north and south drifts. The previous advance claimed for February was to 192.3 feet, a difference of 43.0 feet, which agrees with the contractor's claim. The face on March 8, 1955, was at 208.2 feet from the reference plug, so the advance from March 8, 1955, to March 31, 1955, was only 27.1 feet. This was due to the poor condition of the equipment, which the company plans to replace in the near future.

The contractor has submitted in quintuplicate forms MF-104 and MF-104A, together with a narrative report and a map showing the monthly advance. The work was satisfactory and in accordance with the contract.

All the forms are satisfactory and the monthly and accumulative totals are correct. It is recommended that $1,145.52, or 90 percent of the amount claimed in March 1955, $1,272.80, be

approved for payment. The foreman stated that work would be resumed as soon as compressor repairs were completed, so it is not deemed necessary to withhold any money due.

Sample No. 7571 of an 18-inch cut in face on March 8, 1955, assayed 0.062 percent U_3O_8 and 0.02 percent V_2O_5.

W. D. McMillan
Mining Engineer

cc 6
Idn-2638
Chron

WDM/mm

NARRATIVE FOR THE MONTH OF
MARCH 1955
EXPLORATION PROJECT CONTRACT FOR
THORNBURG MINING CO.
DOCKET NUMBER D.M.E.A. 3060

Mr. W. H. Traver, Jr.
Mineral Resources Branch
Building 20, Room 137
Denver 14, Colorado

Dear Mr. Traver:

Pursuant to instructions, herein is submitted a narrative report and map covering in detail the progress made during the month of March 1955, on Exploration Contract Number D.M.E.A. 3060 between Defense Minerals Exploration Administration and the Thornburg Mining Company.

Progress - March 1955	
South Drift	43 feet
Total Progress - (Phase II of Contract)	
South Drift	194.3 feet

Reference is made to the attached map, marked Exhibit "G". On this map is shown the advance made in the South Drift during 1955.

The West Heading of the South Drift was continued for a distance of 43 feet. This drifting was continued along a depression angle of 7 degrees. The westward dip of the Chinle Beds, after apparently beginning to level, continued to dip 7 degrees to the west. The presence of fine-grained, light-colored, cross-bedded, thin sandstone near the base of the face, indicates that the entire face is in the Chinle Formation.

The rock-types exposed are thin-bedded sandstones and red and green claystone. Mineralization is confined to the thin seams of fine-grained sandstone and is of low grade.

Very truly yours,

George W. Beecroft

George W. Beecroft
Geologist

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of February, 1955 Docket No. DMEA 3060 Contract No. Idm-E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address Grand Junction, Colorado.
Contract Amount, $ 41,910.00 Government Participation: 90 % Amount, $ 37,720.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling J-H holes	none	770.00	770.00			
Bulldozing						
Crosscutting						
Drifting	2072.00	27107.68	29179.68			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	none	285.00	285.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	2072.00	28162.68	30234.68	2072.00	28162.68	30234.68

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

Date 3-15-55 *Payee Thornburg Mining Company

Per J. T. Tunnell Title Office Mgr.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—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.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 1864.80

Signature Randell R. Cooper
(Authorized Certifying Officer)

Date 5-3-55 Vou. No. DMA 55-88

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm E-638 in accordance with the terms of the contract.

Signature W. B. McMillan $1864.80 Title Mining Engineer Date May 17, 1955

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: Berk.

Signature W. M. Snaver Title Executive Officer Date MAY 2 1955

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
MAY 2 0 195

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of February 195 5 Docket No. DMEA 3060 Contract No. Idm-E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address Grand Junction, Colorado.

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting	Ft.	2072.00	70	29179.68	985.8	29.60	1345	29.60
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: ~~Core~~ Jackhammer								
~~Churn~~ holes	Ft.	none	none	770.00	770	1.00	1500	1.00
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Samples	Ea.	none	none	285.00	57	5.00	120	5.00
TOTAL DISTRIBUTED COSTS		2072.00	70	30234.68				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		2072.00	70	30234.68				

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

Date 3-15-55 Operator Thornburg Mining Co.

Per J. T. Tunnell Title Office Mgr.
J. T. Tunnell

NOTE.—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.

REMARKS:

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

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

224 New Customhouse
Denver 2, Colorado

May 2, 1955

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3060 (Uranium), Contract Idm-E638, Thornburg Mining Company, (Shinarump claims), Grand County, Utah - Operator's Monthly Progress Report for the month of February, 1955

Enclosed are the original and four copies of Form MF-104 and MF-104A, Narrative Report, and Engineer's Report for the above period.

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 90 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks:

Date of Report.....March 15, 1955
Date Received in Field Office.....March 16, 1955
Date Received in Region Office.....March 18, 1955

W. M. TRAVER,

W. M. Traver

Enclosures

RDB:sr

cc Sec. Op. Comm. (2)
Subject
Chron
Shaw

DMEA
Date Rec'd
MAR 18 1955
BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region III

Building 20, Room 137
Denver Federal Center
Denver 2, Colorado
March 16, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw

From: W. C. McMillan

Subject: DMEA 3060, Contract Idm-E638 (Uranium) Thornburg Mining Company (Shinarump claims) Grand County, Utah - Progress report for February 1955

Underground progress was inspected on March 8, 1955, in company with A. Kotsancie, miner, as the foreman, Ed Johnson, was not present.

The contractor claims payment for 70 feet of advance in the west heading at $29.60 per foot for a total of $2,072.00. On March 8, 1955, the face of the west heading was 208.2 feet from the reference plug at the intersection of the west drift and the north and south drifts as compared with the distance to the face of 143.5 feet on February 15, 1955. The difference between the two measurements is 64.7 feet. The measurement on February 15, 1955, was 21.2 more than the advance claimed, making the advance on March 8, 1955, 85.9 feet, or 15.9 feet more than the applicant claimed for February. During the last 30 feet of advance, the westward dip of Chinle beds flattened and the lower 3 feet of the face was in reddish and green claystone presumed to be the Moenkopi formation. The last round was being raised to get above the Moenkopi. The company's Geiger counter gave a low count of about 0.05 percent uranium oxide over about 18 inches in a sandstone bed in the face of the drift.

The operator has submitted in quintuplicate forms MF-104 and MF-104A, together with a narrative report and a map showing monthly advance. The mine was not operating at the time of the inspection due to failure of the blower engine. The work was satisfactory and in accordance with the contract.

All the forms are satisfactory, and the monthly and accumulative totals are correct. It is recommended that $1,864.80, or 90 percent of the amount claimed in February 1955, $2,072.00, be approved for payment.

This contract expired March 13, 1955, but it is understood that Thornburg Mining Company requested an extension to complete the 359.2 feet of the authorized 1,345 feet.

The Grand Junction Sentinel of March 7, 1955, announced that the Thornburg Mining Company, a partnership, had transferred their holding to Thornburg Mining Corporation. The operator has not notified the DMEA of any anticipated change in ownership. If a change is made, an amendment to the contract will be required.

W. D. McMillan
Mining Engineer

cc 6
E638
DMEA Chron.

WDM/pah

NARRATIVE
OF THE MONTH OF FEBRUARY 1955
EXPLORATION CONTRACT
THORNBURG MINING COMPANY
DECKER NUMBER D. .E.A. 3060

Mr. T. N. Trevor, Jr.
Mineral Resources Branch
Building 20, Room 137
Denver 14, Colorado

Dear Mr. Trevor:

Pursuant to instructions, herein is submitted a narrative report, and map covering in detail, the progress made during the month of February 1955, on Exploration Contract Number D.... .A. 3060 between the Defense Minerals Exploration Administration and the Thornburg Mining Company.

ADVANCES	February 1955 Advance
South Drift	70 Feet
	Total Advances (Where 12' of Contract)
	151.3 Feet

South Drift

Reference is made to the attached map, marked Exhibit "B". On this map is shown the advance made in the South Drift during January 1955.

The West Heading of the South Drift was continued for a distance of 70 feet. This drifting was along a depression angle of 7 degrees. The westward dip of the Chinle beds leveled off to two degrees near the central portion of this month's work. Thus; the drift cut below the mineralized sandstone and three feet of reddish-brown and green claystone was exposed in the lower portion of the face. The contact of this claystone and sandstone is inferred to be the Chinle-Moenkopi contact. Test holes will be drilled downward to prove this supposition.

Drifting during the month of March will be along a more nearly horizontal plane thus exposing less of the barren claystone.

The mineralization encountered was confined to the thin-bedded, calcareous sandstones. At the face, it is estimated that 18 inches of this sandstone will assay 0.10% U_3O_8.

Very truly yours,

George N. Beecroft

George N. Beecroft
Geologist

Enclosures:
Exhibit "B"
G.N.Beecroft

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Department of the Interior
Defense Minerals Exploration Administration
RECEIVED
MAR 16 1955

Month of January, 1955 Docket No. DMEA 3060 Contract No. Idm-E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address Grand Junction, Colorado
Contract Amount, $ 41,910.00 Government Participation: 90% Amount, $ 37,720.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling J-H holes	none	770.00	770.00			
Bulldozing						
Crosscutting						
Drifting	1266.88	25840.80	27107.68			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	none	285.00	285.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	1266.88	26895.80	28162.68	1266.88	26895.80	28162.68

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

Date 2-21-55 *Payee Thornburg Mining Company

Per J. P. Tunnell Title Office Mgr.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—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.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 1,140.19

Signature Randell R. Cooper
(Authorized Certifying Officer)

Date 3-4-55 Vou. No. DMA-55-67

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Tam-E638 in accordance with the terms of the contract.

Signature M.R. Salsbury 1,140.19 Title Mining Engineer Date February 25, 1955

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: Clerk.

Signature W. M. Carney Title Executive Officer Date MAR 2 1955

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(*a*) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(*b*) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(*c*) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 16 1955

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of January 1955 Docket No. DMEA 3060 Contract No. Idm-E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address Grand Junction, Colorado.

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting	Ft	1266.88	42.8	27107.68	915.8	29.60	1345	29.60
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: ~~Core~~ Jackhammer ~~Churn~~ holes	Ft	none	none	770.00	770	1.00	1500	1.00
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Samples	Ea	none	none	285.00	57	5.00	120	5.00
TOTAL DISTRIBUTED COSTS		1266.88	42.8	28162.68				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		1266.88		28162.68				

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

Date 2-21-55 Operator Thornburg Mining Co.

Per J. T. Tunnell Title Office Mgr.

NOTE.—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.

REMARKS:

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

224 New Customhouse
Denver 2, Colorado

March 2, 1955

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3060 (Uranium), Contract Idm-E638, Thornburg Mining Company (Shinarupp claims) Grand County, Utah - Operator's Monthly Progress Report for January, 1955

Enclosed are the original and four copies of Form MF-104 and MF-104A, Narrative Report, and Engineer's Report for the above period.

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 90 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks:

Date of Report.....February 21, 1955
Date Received in Field Office.....February 23, 1955
Date Received in Region Office.....March 1, 1955

W. M. TRAVER

W. M. Traver

Enclosures

RDB:pw

cc: Subject
Chron
Shaw
Sec.Op.Comm. (2)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DMEA
Date Rec'd.
MAR 1 1955
BUREAU OF MINES
Denver, Colorado

Region III

Building 20, Room 137
Denver Federal Center
Denver 2, Colorado
February 28, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw

From: M. H. Salsbury

Subject: DMEA 3060, Contract Idm-E638 (Uranium) Thornburg Mining Company (Shinarump claims) Grand County, Utah - Progress report for January 1955

Underground progress under the subject contract was inspected on February 15, 1955, in company with W. D. McMillan of the Bureau of Mines and Ed Johnson, foreman for the operator.

The contractor claims payment for 42.8 feet of advance in the west heading of the south drift at $29.60 per foot or a total of $1,266.88. This advance was verified by measurement. On February 15, 1955, the face of the heading was 143.5 feet from the reference plug in the back at the intersection of the west drift and the north and south drifts. The previous measurement was 79.5 feet from the same plug, and the difference, 64.0 feet, is 21.2 feet more than the advance claimed.

The drift is being driven down dip in the formation at about 6°. Low radiometric count is present in a certain sandstone bed about 2.0 feet above the floor which is up to 1.5 feet wide but does not appear to be ore-grade material. At one point in the floor 110.7 feet west of the drift intersection, high-grade material was indicated by a Geiger counter. Specimens of this rock were obtained which contained abundant radioactive carbon. Three samples of radioactive material were taken for chemical assay, results of which are not yet available.

The presence of ore in the floor of the west drift indicates the possibility of more mineralization below the present workings. This will be further tested at a later date by exploratory drilling called for in Stage II of the contract.

The operator has submitted in quintuplicate, forms MF-104 and MF-104A, together with a narrative report and map showing monthly advance. All are satisfactory, and monthly and cumulative totals are correct. Claims are in accordance with contract terms and within contract maximums. It is recommended that $1,140.19, or 90 percent of the amount claimed in January 1955,

$1,266.88, be approved for payment.

M. H. Salsbury
Mining Engineer

enclosures

cc 6
E638
DMEA Chron.

MHS/pah

NARRATIVE
FOR THE MONTH OF JANUARY 1955
EXPLORATION PROJECT CONTRACT
THORNBURG MINING COMPANY
DOCKET NUMBER D.M.E.A. 3060

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 1 6 1955

Mr. W. M. Traver, Jr.
Mineral Resources Branch
Building 20, Room 137
Denver 14, Colorado

Dear Mr. Traver:

Pursuant to instructions, herein is submitted a narrative report, and map covering in detail, the progress made during the month of January 1955, on Exploration Contract Number D.M.E.A. 3060 between the Defense Minerals Exploration Administration and the Thornburg Mining Company.

Advances		
		January 1955 Advance
South Drift		42.8'
		Total Advance (Phase II of Contract)
South Drift		81.3'

Reference is made to the attached map, marked Exhibit "B". On this map is shown the advance made in the South Drift during January 1955.

The West Heading of the South Drift was continued for a distance of 42.8'. This drifting followed downward the mineralized beds which have a dip of 7° to the west.

The drifting exposed multiple bedded sandstones and clay. Mineralization improved in the last 18 feet of drifting. The mineralization, of ore grade, occurs in separated, discontinuous bands and was not stockpiled. Drill holes in the face of this drift indicate that this mineralization will continue.

Approximately 10 days mining was lost during the month due to the breakdowns of the shuttle buggies, compressor, and freezing water lines.

Very truly yours,

George W. Beecroft

George W. Beecroft
Geologist

Enclosure:
Exhibit "B"

GWB:bp

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 16 1955

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of December, 1954 Docket No. DMEA 3060 Contract No. Idm-E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address Grand Junction, Colorado
Contract Amount, $ 41,910.00 Government Participation: 90 % Amount, $ 37,720.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling J-H holes	none	770.00	770.00			
Bulldozing						
Crosscutting						
Drifting	1139.60	24701.20	25840.80			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	none	285.00	285.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	1139.60	25756.20	26895.80	1139.60	25,756.20	26895.80

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 1-15-55 *Payee Thornburg Mining Company
Per J. P. Tunnell Title Office Mgr.
J. P. Tunnell

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—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.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 1,125.64

Signature Randell R. Cooper
(Authorized Certifying Officer)

Date 3-4-55 Vou. No. DMA-55-67

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Tdm-E638 in accordance with the terms of the contract.

Signature N. R. Salabury #1,025,64 Title Mining Engineer Date February 25, 1955

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: Bert.

Signature W. M. Haney Title Executive Officer Date MAR 2 1955

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 16 1955

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of December 1954 Docket No. DMEA 3060 Contract No. IDM-E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address Grand Junction, Colorado

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting	Ft	1139.60	38.5	25840.80	873	29.60	1345	29.60
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: ~~Core~~ Jackhammer ~~Churn~~ holes	Ft	none	none	770.00	770	1.00	1500	1.00
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Samples	Ea	none	none	285.00	57	5.00	120	5.00
TOTAL DISTRIBUTED COSTS		1139.60	38.5	26895.80				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		1139.60		26895.80				

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

Date 1-15-55 Operator Thornburg Mining Co.

Per J. T. Tunnell Title Office Mgr.

J. T. Tunnell

NOTE.—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.

REMARKS:

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 1 6 1955

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION IV

Administrative Audit Difference Statement

Thornburg Mining Company
160 West Main
Grand Junction, Colorado

Date: March 8, 1955
Payee's
Reference: December, 1954

Upon examination of the above Payee's Reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed $ 1,139.60

Difference $

Amount Approved *$ 1,025.64
+ 100.00 $1,125.64

The reason for the difference was due to:

* $100.00 withheld on the October Progress report is being reinstated.

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

N. E. Stokes
Audit Section

R-IV-B & F Form No. 4
4-15-52 D

224 New Customhouse
Denver 2, Colorado

March 2, 1955

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3060 (Uranium), Contract Idm-2638, Thornburg Mining Company (Shinarump claims), Grand County, Utah - Operator's Monthly Progress Report for the month of December, 1954

Enclosed are the original and four copies of Form MF-104 and MF-104A, Narrative Report, and Engineer's Report for the above period.

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 90 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

The amount of $100.00 which was withheld from the September, 1954 report pending approval of Stage II work is to be reinstated.

Remarks:

Date of Report.....January 15, 1955
Date Received in Field Office.....February 28, 1955
Date Received in Region Office.....March 1, 1955

W. M. TRAVER

W. M. Traver

Enclosures

RDB:pw

cc: Subject
Chron
Sec.Op.Comm. (2)
Shaw
Townsend

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DMEA
Field Rec'd
1 1955
BUREAU OF MINES
Denver, Colorado

Region III

Building 20, Room 137
Denver Federal Center
Denver 2, Colorado
February 28, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw

From: M. H. Salsbury

Subject: DMEA 3060, Contract Idm-2638 (Uranium) Thornburg Mining Company (Shinarump claims) Grand County, Utah - Progress report for December 1954

Underground progress under the subject contract was inspected January 5, 1955, by a Bureau of Mines representative in company with Ed Johnson, foreman for the contractor. Work was in progress on the west heading of the south workings. The operator claims an advance in December 1954 of 38.5 feet at $29.60 per foot for a total of $1,139.60. This advance was verified by measurement. The face on January 5, 1955, was 79.5 feet from the reference plug in the back at the intersection of the west drift with north and south drifts. The face of the west drift at the end of Stage I exploration in September 1954, was 41.0 feet from this plug so the advance eligible for payment in December 1954 is the difference between these two measurements, or 38.5 feet.

This work was authorized under Stage II of the contract in a letter from the DMEA Field Team, Region III, dated November 16, 1954.

Before starting work under Stage II, the bottom of the drift was lowered to keep the heading on the ore horizon just above the Moenkopi formation. No claim is being made for this work. The drift is being driven down dip at about 10°. Ore-grade material has not been encountered.

A very low radiometric count was obtained along the drift, and in the face, a good count was measured. Two channel samples were taken in the face, and sent in for chemical analyses. Radiometric check analyses were made in the Denver Experiment Station laboratory. Following are sample descriptions and results:

Sample No.	Description	U_3O_8 Content Radiometric (percent)	U_3O_8 Content Chemical (percent)	CaO content (percent)
CB-102	2-foot cut near top of face at 79.5 feet west of drift intersection	0.090	0.043	15.2
CB-103	1.6-foot cut 1 foot below sample CB-102	0.0436	0.047	18.4

The operator has submitted in quintuplicate forms MF-104 and MF-104A together with a narrative report and map showing monthly advance. All are satisfactory and monthly and cumulative totals are correct. All claims are in accordance with contract terms and within contract maximums.

It is recommended that $1,025.64, or 90 percent of the amount claimed in December 1954, $1,139.60, be approved for payment.

M. H. Salsbury
Mining Engineer

enclosures

cc 6
E638
DMEA Chron.

MHS/pah

MAR 1 3 1956

NARRATIVE
FOR THE MONTH OF DECEMBER 1954
EXPLORATION PROJECT CONTRACT
THORNBURG MINING COMPANY
DOCKET NUMBER D.M.E.A. 3060

Mr. W. M. Traver, Jr.
Mineral Resources Branch
Building 20, Room 137
Denver 14, Colorado

Dear Mr. Traver:

Pursuant to instructions, herein is submitted a narrative report, and map covering, in detail, the progress made during the month of December 1954, on the Exploration Contract Number D.M.E.A. 3060 between the Defense Minerals Exploration Administration and the Thornburg Mining Company.

ADVANCES

	1954 December Advance
South Drift	38.5 feet

Lowering Floor Elevation - 37.0 feet horizontal distance.

Reference is made to the attached map, marked Exhibit "B". On this map is shown the advance made and the lowering of the floor elevation in the South Drift during December 1954.

Due to the dip of the mineralized zone below the floor level at the face of the South Drift, it was requested by Mr. M. H. Salsbury, your field representative, that the drifting authorized in Stage II of the D.M.E.A. contract be of a lower elevation. This was accomplished by beginning at Point A (shown on Exhibit "B") and excavating the floor, for a horizontal distance of 37 feet to point "B". This formed an incline dipping approximately 6° to the west. The floor elevation at Point "B" was thus lowered five (5) feet.

Drifting was then continued for a distance of 38.5 feet on this slight downward angle.

The formation exposed consists primarily of thin-bedded calcareous siltstone with local lenses of sandstone. The entire face appears to be mineralized with the highest count (dabble with short probe) being 0.09% U_3O_8 .

Very truly yours,

George W. Beecroft

George W. Beecroft
Geologist

Enclosure:
map (Exhibit "B")

GWB:bp

Form [illegible] (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of September 1954 Docket No. DMEA 3060 Contract No. Idm-E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address Grand Junction, Colorado
Contract Amount, $ 41,910.00 Government Participation: 90 % Amount, $ 37,720.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling J-H Holes	760.00	30.00	790.00			
Bulldozing						
Crosscutting	None	24701.20	24701.20			
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	130.00	155.00	285.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	890.00	24886.20	25776.20	* 870.00	24886.20	25756.20

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

Date 10-15-54 *Payee Thornburg Mining Company

Per J. T. Thurnell Title Office Mgr.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—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.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 683.00

Signature Randell R. Cooper (Authorized Certifying Officer)

Date 11-8-54 Vou. No. DMA-55-31

(See other side)

* 100.00 withheld from payment due operator

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Edm 5638 in accordance with the terms of the contract.

Signature M. H. Salsbury $183.00 Dom Title Mining Engineer Date October 19, 1954

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: R.A.B.

Signature W H King Title Executive Officer Date OCT 28 1954

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(*a*) *Form MF–104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(*b*) *Form MF–104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(*c*) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF–104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF–104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF–200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF–200; and delete word "Independent" if the contract reported is on Form MF–200 (A). Also, report work paid for on a unit basis under contract Form MF–200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF–104 when submitted for reimbursable expenses incurred under contract Form MF–200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF–200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF–104 is required to be documented. The four copies of Form MF–104 are not to be thus supported.

Form MF–104 submitted for reimbursement under fixed price contracts on Form MF–200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF–104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of September 1954 Docket No. DMEA 3060 Contract No. Idm-E-638

Operator's Name Thornburg Mining Company Minerals Uranium

Address Grand Junction, Colorado

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting	Ft	None	None	24701.20	834.5	29.60	1345	29.60
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: ###Jackhammer ### holes	Ft	760.00	760	790.00	790	1.00	1500	1.00
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Samples	Ea	130.00	26	285.00	57	5.00	120	5.00
TOTAL DISTRIBUTED COSTS		890.00		25776.20				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		890.00		25776.20				

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

REMARKS:

Date 10-15-54 Operator Thornburg Mining Company

Per J. T. Tunnell Title Office Mgr.

J. T. Tunnell

NOTE.—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.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION IV

Administrative Audit Difference Statement

Date: [illegible]
Payee's Reference: [illegible]

[illegible]

[illegible]
[illegible]
[illegible], Colorado

Upon examination of the above Payee's reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed	$[illegible]
Difference	$ [illegible]
Amount Approved	$[illegible]

The reason for the difference was due to:

[illegible] for [illegible] feet of [illegible] at $[illegible] per foot, in excess of the [illegible] feet allowed by the contract $[illegible]

$[illegible] [illegible] [illegible] [illegible], [illegible] [illegible] of [illegible] [illegible] of receipt of the final report.

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

N.E.Stokes
Audit Section

R-IV-B & F Form No. 4
4-15-52 D

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

224 New Customhouse
Denver 2, Colorado

WASHINGTON 25, D. C.

October 28, 1954

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 3060 (Uranium), Contract Idm-E638 Thornburg Mining Company (Shinarump claims) Grand County, Utah. Operator's Monthly Progress Report for the period September 1954.

Enclosed are the original and four copies of Form MF-104 and MF-104A, Narrative Report, and Engineer's Report for the above period.

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 90 per cent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

An amount of $20.00 for 20 feet of drilling at $1.00 per ft. is to be disallowed. This 20 feet of drilling is in excess of the 560 feet as allowed by Amendment No. 1.

An amount of $100.00 is to be withheld from the payment due the operator pending approval of Stage II work or receipt of operator's Final Report and release of the Report of Review by the Contract Administration and Audit Division.

Remarks:

Date of Report	October 15, 1954
Date Received in Field Office	October 18, 1954
Date Received in Region Office	October 27, 1954

W. H. King

W. H. King

Enclosures

RDB:dm

cc: Secretary of Oper. Comm. (2); WMTraver; JWTownsend; Subject; Chron

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 2, Colorado
October 25, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

From: Chief, Mineral Resources Branch, Mining Division, Region IV

Subject: DMEA 3060, Contract Idm-E638 (Uranium), Thornburg Mining Company (Shinarump claims) Grand County, Utah--Progress report for September 1954

Transmitted herewith are the original and four copies of the subject progress report, the ninth--forms MF-104 and MF-104A, with narrative, progress, and sample maps (both operator's and engineer's)--and the original and six copies of M. H. Salsbury's memorandum covering his inspection of the underground drilling and checking of the reporting forms. The contract is unit cost on short form MF-200 (A) and no documentation is required except for uranium analyses to be supported by copies of the assay invoices.

Salsbury, on routine monthly inspection made October 5, 1954, verified the jackhammer and stoper drilling progress reported in the narrative and entered on the MF-104A forms. He accepts the reported totals except 20 feet excess drilling as explained in his covering memorandum, which he recommends for disallowance in the amount of $20.00 for the 20 feet at $1.00 a foot. Otherwise, the operations were in accordance with the terms of the contract and Amendment No. 1 thereto. Claim for analyses of 26 samples at $5.00 each, totaling $130.00, is properly supported by invoice and is approved.

The operator's narrative is complete and entirely satisfactory and the entries are in order on the reporting forms. The inspecting engineer's covering memorandum explains the month's operations, which completes Stage I of the contract in detail. He has prepared a memorandum with respect to recommendations for Stage II and it will be typed and submitted when you instruct us to do so.

The $20.00 disallowance deducted from the total $890.00 claimed by the contractor leaves $870.00. Of this sum, 90 percent or $783.00 is approved for payment and certified on the MF-104 forms.

W. M. Traver

W. M. Traver

WMT/ici

Enclosures

cc: 4 E638 Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
October 22, 1954

Memorandum

To: Chief, Mineral Resources Branch, Mining Division, Region IV

From: M. H. Salsbury

Subject: DMEA 3060, Contract Idm-E638 (Uranium), Thornburg Mining Company (Shinarump claims) Grand County, Utah--Progress report for September 1954

Underground progress was inspected October 5, 1954, in company with Ed Johnson, foreman for the contractor. No work was was in progress on DMEA exploration and no drifting or crosscutting had been done in September.

The operator claims payment for 180 feet of sample drilling under Stage I (a) of Exhibit "A", and 580 feet under Amendment No. 1 to the contract, a total of 760 feet of drilling, together with analyses of 26 samples for U_3O_8. This completes all work to be done under Stage I and Amendment No. 1.

All holes have been probed, using a Geiger counter, and hole logs were furnished with the narrative report showing formations penetrated and probing results. During the inspection, the holes were reprobed in the presence of the DMEA inspector, and the results shown in the hole logs verified.

Following is a tabulation of holes drilled, together with length, altitude and radiometric and claimed analyses:

NORTH WORKINGS

Drill hole No.	Direction	Depth drilled feet	Radiometric analysis (probe)	Location of Mineralization	Corresponding Chemical Analysis percent U_3O_8	Length represented by cuttings
3	down	15	nil		none	
4	down	15	nil		none	
5	down	15	nil		none	
6	down	15	nil		none	
7	down	15	nil		none	

Drill hole No.	Direction	Depth drilled feet	Radiometric analysis (probe)	Location of Mineralization	Corresponding Chemical Analysis percent U_3O_8	Length represented by cuttings
8	down	15	nil		none	
9	down	15	nil		none	
10	down	15	nil		none	
11	down	15	nil		none	
12	down	15	nil		none	
13	down	15	25 on 3rd scale	1'-3'	none	
14	down	15	25 on 3rd scale	2'-4'	none	
Total 12 holes		180				

SOUTH WORKINGS

1	up	25	trace	25'	none	
2	up	20	trace	20'	none	
3	up	20	35 on 3rd scale	16'-18'	0.068	12'-18'
34	down	15	nil		none	
4	up	15	60 on 3rd scale	12'-14'	0.076	8'-14'
33	down	15	nil		none	
5	up	10	45 on 3rd scale	4'-8'	0.074	6'-12'
32	down	15	trace	3-1/2'	none	
6	up	20	90 on 3rd scale	0'-21'	0.055	0'-6'
			trace	20'	none	
31	down	15	trace	4'	none	
7	up	10	40 on 3rd scale	0'-0.8'	0.036	0'-6'
30	down	15	trace	5'	none	
8	up	10	trace	10'	0.032	0'-6'
29	down	25	nil		none	
9	up	10	40 on 3rd scale	8'-10'	0.049	0'-10'
28	down	25	25 on 3rd scale	0'-3'	none	
10	up	10	trace	8'	none	
27	down	25	30 on 3rd scale	3'-5'	none	
11	up	10	trace	6'	none	
26	down	25	35 on 3rd scale	3'-5'	none	
12	up	10	nil		none	
25	down	25	nil		none	
13	up	10	nil		none	
24	down	25	nil		none	
14	up	10	25 on 3rd scale	0'-2'	none	
23	down	25	nil		none	
15	up	10	nil		none	
22	down	25	60 on 2nd scale	0'-2'	none	
16	up	10	nil		none	
21	down	25	35 on 3rd scale	6'-10'	none	
17	up	10	nil		none	
20	down	25	35 on 3rd scale	6'-9'	none	
18	up	10	nil		none	
19	down	25	35 on 3rd scale	6'-9'	none	
Total 34 holes		580				

The attached map shows hole locations and mineralization encountered.

All holes were drilled at approved locations and to approved depths except five holes which differ as follows:

Hole No.	Direction	Depth drilled in feet	Approved depth feet	Excess footage
2	up	20	25	-5
34	down	15	5	10
33	down	15	10	5
9	up	10	5	5
10	up	10	5	5
		Total excess footage drilled		20

The DMEA inspector considers that this is a reasonable variation.

Samples of cuttings were preserved on up holes only. It was impossible to save a sample from the down holes which were drilled under water at most points. The cutting samples through the mineralized sections as determined by probing, represent more than the ore width, and the radiometric results, which show more closely the widths of ore and the probable grade, are not well confirmed by the corresponding chemical analyses.

Included in the narrative report are returns for 19 samples cut in the workings. Certified assay returns on these samples were not included, nor was claim for payment made.

The location of all samples and drill holes is shown on the map accompanying the narrative report.

The overall picture of the South workings indicates general uranium mineralization over an area which has not yet been delineated by exploration. The individual ore lenses are irregular and occur in 2 or 3 different strata within a vertical range of 20 feet more or less. Lenses in different strata may overlap but there is no apparent relation between them. At one point in the main drift, near drill station No. 8, the ore appears to shift from one strata to another, possibly in connection with a roll, evidence of which can be seen in the back of the drift. However, no actual connection can be proven.

In the North workings no mineralization other than that in the workings was found by sample drilling, except that cut just below floor level in the vicinity of drill stations Nos. 12, 13, and 14 in the south-east crosscut. This lens, dipping southeast, appears

to take the place of the lens four feet higher, which pinched out in the crosscut.

The existence of ore channels or trends, or definite alignment of long axes of individual lenses, as suggested by the operator, is not substantiated by the work done so far. What appeared to be the boundary of a channel or trend is probably only the limit of an individual lens. As a result of the exploratory drilling and sampling by probing, as well as more channel samples taken of ore exposures in the workings, some additional ore was shown in both North and South workings. Analyses of samples taken along the southeast crosscut in the North workings verified radiometric readings. However, only 5 of 14 samples returned more than 0.20 percent U_3O_8, indicating very spotty mineralization. No mineralization was found in another stratum except in the floor of the southeast crosscut near the end. Thus, the vertical range of ore deposition in the North workings appears to be small, although there has been no drilling done above the workings to prove this.

In the South workings, there is mineralization both above and below the workings with an indicated vertical range of about 20 feet. In 11 out of 32 holes, ore-grade mineralization was found by probing. In one hole in the south crosscut, No. 22 down, the equivalent of 6.00 percent U_3O_8 was found over a width of 2.0 feet just below the floor. Two out of five samples cut along the south drift verified the occurrence of ore for the first fifty feet of the crosscut, extending the dimension of the ore lens exposed in the north and south crosscuts to about 130 feet. The other dimension is not known.

The erratic distribution of ore in all workings makes worthwhile estimates of ore reserves difficult, if not impossible.

The average grade of ore in mineable widths is low as indicated by sampling. The erratic distribution of the ore in different strata, as well as the probable highly variable content of individual lenses presents a difficult mining problem. Profitable operation under these conditions will not be easy to attain. However, the operator's superintendent is confident that, by careful mining and mixing of the higher-grade ore with low-grade, a profitable average can be maintained. Returns from ore, subject to DMEA royalties which has been shipped, but for which settlement sheets have not been furnished to the Mineral Resources Branch, DMEA office, should indicate the grade of ore to be expected.

The operator's request for authorization to proceed with Stage II is being discussed in a separate amendment.

The operator has submitted a narrative report with map, drill logs, and forms MF-104 and MF-104A in quintuplicate, and all are satisfactory. One copy of the certified assay report for the

chemical analyses, for which payment is claimed, is also included. Monthly and cumulative totals on the MP-104 and MP-104A forms are correct, except that the total of drilling in the South workings, 580 feet, is 20 feet in excess of the 560 feet allowed under Amendment No. 1 to the contract. The inspecting engineer considers this 20 feet allowable and would recommend payment for the same if requested in an amendment. However, it is hardly worthwhile to process an amendment for the amount involved. A requirement in the contract for taking samples of cuttings should be waived in the case of the down holes where it is not practical, and this is recommended.

Otherwise, all work was done in accordance with the terms of the contract and Amendment No. 1.

Payment of $783.00, or 90 percent of the amount claimed in September 1954, $890.00, less $20.00 deducted for work in excess of a contract maximum, is recommended.

M. N. Salsbury
M. N. Salsbury
Mining Engineer

MNS/ici

cc: .6
E638
Chron.

NARRATIVE

For The Month of September 1954
Exploration Project Contract

Thornburg Mining Co.
Docket No. DMEA 3060

Mr. W. M. Traver, Jr.
Mineral Resources Branch
Building 20, Room 137
Denver 14, Colorado

Dear Mr. Traver:

Pursuant to instructions, herein is submitted a narrative report, maps, and drill log covering, in detail, the progress made during the month of September 1954, on the Exploration Contract No. DMEA 3060 between the Defense Minerals Exploration Administration and the Thornburg Mining Company.

Advances

There were no drift advances during the month inasmuch as this phase was completed last month.

Drill Holes

The drill hole program was completed during the month with the following footage drilled:

South Mine	580'
North Mine	180'

Each hole was probed radiometrically and in some cases, chemical assays were obtained. The results are incorporated into a drill hole log which is attached to this report.

The location of these drill holes has been plotted on the attached map and are shown as a small square and designated by station numbers.

Samples

Sampling accomplished during the period is indicated on the map and also as follows:

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

OCT 21 1954

Month of August, 1954 Docket No. DMEA 3060 Contract No. Idm-E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address Grand Junction, Colorado
Contract Amount, $41,910.00 Government Participation: 90% Amount, $37,720.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling J-H holes	None	30.00	30.00			
Bulldozing						
Crosscutting						
Drifting	1228.40	23472.80	24701.20			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	70.00	85.00	155.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	1298.40	23587.80	24886.20	1298.40	23587.80	24,886.20

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

Date 9-15-54 *Payee Thornburg Mining Company

Per J. T. Tunnell Title Office Mgr.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—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.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ ~~1156~~ 1168.56

Signature Randell R. Cooper
(Authorized Certifying Officer)

Date 10-11-54 Vou. No. DMA-VJ-24
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E638 in accordance with the terms of the contract.

Signature M. H. Salabury $1,168.56 Title Mining Engineer Date Sept. 20, 1954

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: R.S.B.

Signature W H King Title Executive Officer Date SEP 24 1954

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of August 1954 Docket No. DMEA 3060 Contract No. Idm-E-638

Operator's Name Thornburg Mining Company Minerals Uranium

Address Grand Junction, Colorado

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting	Ft	1228.40	41.5	24701.20	834.5	29.60	1345	29.60
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: ~~Core~~ Jackhammer ~~Churn~~ holes	Ft	None	None	30.00	30	1.00	1500	1.00
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Samples	Ea	70.00	14	155.00	31	5.00	120	5.00
TOTAL DISTRIBUTED COSTS		1298.40		24886.20				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc								
TOTAL COSTS		1298.40		24886.20				

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

Date 9-15-54 Operator Thornburg Mining Co.

Per J. T. Tunnell Title Office Mgr.

J. T. Tunnell

REMARKS:

NOTE.—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.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

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

224 New Customhouse
Denver 2, Colorado

September 24, 1954

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 3060 (Uranium), Contract Idm-E638, Thornburg Mining Company (Shinarump claims), Grand County, Utah. Operator's Monthly Progress Report for the period August 1954.

Enclosed are the original and four copies of Form MF-104 and MF-104A, Narrative Report, and Engineer's Report for the above period.

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form Mf-200A, therefore we recommend that payment be made for 90 per cent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Charge claimed for assaying 14 samples at $5.00 or $70.00 is allowable as per contract.

Remarks:

Date of Report	September 15, 1954
Date Received in Field Office	September 19, 1954
Date Received in Region Office	September 24, 1954

W H King
W. H. King

Enclosures
RDB:dm
cc Subject
Secretary, Oper. Comm. (2)
WMTraver
Chron

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
September 23, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

From: Chief, Mineral Resources Branch, Mining Division, Region IV

Subject: DMEA 3060, contract Idm-2638 (Uranium) Thornburg Mining Company (Shinarump claims) Grand County, Utah - Progress report for August 1954

Transmitted herewith are the original and four copies of the subject progress report, the eighth one--forms MF-104 and MF-104A, with narrative, progress, and sample maps (both operator's and engineer's)--and the original and six copies of M. H. Salsbury's memorandum covering his inspection of the underground progress and checking of the reporting forms. The contract is unit cost on short form MF-200(A) and no documentation is required except for uranium analyses to be supported by copies of the assay invoices.

Salsbury, on an inspection September 8, 1954, confirmed the period advance reported by the operator in his narrative, shown on the progress maps and entered on the MF-104A forms. This advance comprised 20 feet for the north crosscut in the south mine workings and 21.5 feet for the southeast crosscut in the north mine workings--a total of 41.5 feet. This makes a total of 834.5 feet cumulative to date for both mine workings. In addition, the contractor claims $70.00 for assays and submits one copy of vendor's returns and charges.

The operator's material supporting his claim for reimbursement is complete and entirely acceptable and the inspecting engineer's covering memorandum adequately describes the period operations. Work was in conformance with the terms of the contract and Amendment No. 1.

Payment is approved and certified on the MF-104 forms of $1,168.56 or 90 percent of the total $1,298.40 claimed by the contractor.

W. M. Traver

enclosures

cc 4
2638
DMEA Chron.

WMT/pam

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
September 21, 1954

Memorandum

To: Chief, Mineral Resources Branch, Mining Division, Region IV

From: M. H. Salsbury

Subject: DMEA 3[illegible], contract Idm-2635 (Uranium) Thornburg Mining Company (Shinarump claims) Grand County, Utah - Progress report for August 1954

Underground progress was inspected September 3, 1954, in company with Ed Johnson, foreman for the contractor. Work was in progress drilling test holes in the floor of the main, or so-called south drift in the south workings under Amendment No. 1, paragraph C, of the contract. Test drilling in the south drift in the north workings, under Stage I (a) of the contract was started on the day of the inspection. Drift work in both workings under Stage I had been completed prior to the inspection.

The contractor claims payment for the following advance in August 1954:

South workings	August 1954 advance (feet)		Advance to date
West drift	[illegible]		41
South drift	[illegible]		268
South crosscut	[illegible]		63.5
North crosscut	2[illegible]		91.5
		Total	473.0 feet
North workings			
South drift			2[illegible]
Southeast crosscut	24.5		89.5
		Total	[illegible]4.5
Total all workings	41.5		8[illegible]4.5

The DMEA inspector remeasured the total advance to date in both workings, with Johnson assisting. The monthly and cumulative advances claimed by the contractor have been submitted in accordance with this remeasurement

and the advance of 41.5 feet claimed in August is approved for payment. With these totals, the DMEA inspector and the contractor are in agreement on the advance which is eligible for payment, 834.5 feet. The contractor has claimed at various times an additional advance, which has been disallowed, as shown below:

January 1954 - turnout drift	8 feet
February 1954 - turnout drift	5 feet
July 1954 - south drift in north workings (excess over contract maximum)	11 feet
Total disallowed	24 feet

This 24 feet is over and above the 834.5 feet approved as eligible for payment.

The contractor claims payment for 14 samples analyzed chemically for U_3O_8 during August. The samples are all shown on the map accompanying the August narrative except sample No. 46. One copy of a certified analytical report from the chemist, J. Earl Smith, Moab, Utah, covering these samples, was attached to the original MF-104 report. Returns on additional samples taken during August had not been received.

Following is a list of sample returns received:

North Workings			South Workings		
Sample No.	Width inches	U_3O_8 percent	Sample No.	Width inches	U_3O_8 percent
15	21	0.258	39	33	0.235
16	28	1.202	40	39	0.898
17	40	0.987	41	22	0.364
18	36	0.160	42	35	0.657
19	24	0.296	43	33	0.143
			44	39	0.072
			45	27	0.964
			46	25	0.570
			47	29	1.326

Fourteen samples analyzed chemically for U_3O_8 at $5.00 each, the amount allowed under the contract terms, or $70.00, are approved for payment.

Johnson expects to complete test drilling under Stage I and Amendment No. 1 of the contract during September. Consideration of Stage II, as requested by the contractor, will then be in order.

Two lots of ore which are subject to DMEA royalties have been shipped, according to Johnson.

The north and south crosscuts in the south workings have encountered ore-grade mineralization over a total length of 110 feet. The west drift also exposed ore for 40 feet. In the last 18 feet of this drift the ore has been below the floor because the heading crew did not go deep enough to keep up with an increase in the dip of the beds. An ore channel of unknown width with a long axis trending slightly west of north is indicated by this exploration. There was no ore exposed in any of the headings in the south workings at the time of the inspection.

Following are the results of sampling done in the south workings by the DMEA inspector during the inspection on August 5, 1954:

Sample No.	Description	Content U_3O_8 percent	Content $BaCO_3$ percent
MEB-71	3.5-foot cut on west wall of south crosscut in south workings at 10 feet southeast of drift junction	0.269	24.65
MEB-72	2.7-foot cut on west wall 10 feet south of sample No. 71	0.010	20.15
MEB-73	3.1-foot cut on east wall 10 feet south of sample No. 72	0.057	29.3
MEB-74	2.5-foot cut on west wall 10 feet south of sample No. 73	0.146	21.95

These returns do not check the results of samples No. 40, 41, and 42 taken by the contractor in the same crosscut, which were cut over narrower widths. (See list of samples elsewhere for which payment is claimed.)

In the north workings, ore-grade mineralization was exposed in the face of the south drift and slight mineralization in the face of the southeast crosscut. Four samples were taken of ore exposures in these workings and sent to the Metallurgical Division at Salt Lake City, Utah, for analyses. Location of samples is shown on the progress maps accompanying this report.

The narrative report, map, and forms MF-104 and MF-104A for August 1954 are correct, and monthly and cumulative totals reflect the

disallowance of July 1954 and are in agreement with the DMEA inspector's check measurements.

It is recommended that $1,168.56, or 90 percent of the amount claimed in August 1954, $1,298.40, be approved for payment.

M. E. Salsbury
Mining Engineer

cc 6
E638
DMEA Chron.

NARRATIVE

For the Month of July 1954
Exploration Project Contract
Thornburg Mining Co.
Docket No. DMEA - 3060

Mr. W. M. Traver, Jr.
Mineral Resources Branch
Building 20, Room 137
Denver 14, Colorado

Dear Mr. Traver:

Pursuant to instructions, herein is submitted a narrative report and maps covering in detail the progress made during the month of July 1954 on the Exploration Contract No. DMEA 3060, between the Defense Minerals Exploration Administration and the Thornburg Mining Company:

Advances

South Workings	August 1954 Advances	1954 Advances to date
West Drift	0	41
South Drift	0	268.0
South X cut	0	63.5
North X cut	20	97.5
		470.0
North Workings		
South Drift	0	275.0
S.E. X cut	21.5	89.5
		364.5
Total	41.5 feet	Total 834.5 feet

Reference is made to the attached map marked Exhibit "B". On this map are shown the advances made in the various headings during the month.

July samples on which analyses have been received are as follows:

	Sample No.	Width (Inch)	U_3O_8
South Workings	39	33	0.235
	40	39	0.898
	41	22	0.364
	42	35	0.657
	43	33	0.143
	44	39	0.072
	45	27	0.964
	46	25	0.570
	47	29	1.326
North Workings	15	21	0.258
	16	28	1.202
	17	40	0.987
	18	36	0.160
	19	24	0.296

Locations of the above samples are indicated on the attached map.

Additional samples were taken during the month of August on which assays are not yet available.

Stage I drifting operations are complete and by the end of this period test drilling will have been finished, the results of which will be reported as quickly as possible in order to facilitate an early determination of the Stage II operation.

Very truly yours,

B. H. Martin

B. H. Martin
Mining Engineer

Enclosures:
maps (5)

BHM:bp

Form F-4 (Rev.) April 1952)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

Defense Minerals Administration
SEP 13 1954

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of July, 1954 Docket No. DMEA 3060 Contract No. Idn-E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address Grand Junction, Colorado
Contract Amount, $ 41,910.00 Government Participation: 90 % Amount, $ 37,720.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling J-H holes	none	30.00	30.00			
Bulldozing						
Crosscutting	none	384.80	384.80			
Drifting	2486.40	21312.00	23798.40			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	none	85.00	85.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	2486.40	21611.80	24298.20	2486.40	21,811.80	24298.20
				(1) 325.60	(2) 384.80	(2) 384.80
				2160.80	21,427.00	23,587.80

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 8-10-54 *Payee Thornburg Mining Company
Per [signature] Title Office Mgr.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—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.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of: (1) 325.60
$ 1944.72
Signature Randel R. Cooper (Authorized Certifying Officer)
Date 8-27-54 Vou. No. DMA-55-15
(See other side)

1. Disallowance of excess footage of verified distance, 3 feet and 7 feet in excess of contract authorization - - 11 feet @ $29.60 per foot.
2 Previous Disallowance

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E638 in accordance with the terms of the contract.

Signature M. J. Salsbury $1944.72 Title Mining Engineer Date August 17, 1954

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. H. King Title Executive Officer Date AUG 25 1954

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
SEP 13 1954

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of July 1954 Docket No. DMEA 3060 Contract No. Idn-E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address Grand Junction, Colorado

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting	Ft	2486.40	84	23798.40	804	29.60	1345	29.60
Crosscutting	Ft	none	none	384.80	13			
Raising								
Shafts								
Winzes								
Drilling: Core Jackhammer								
Churn holes	Ft	none	none	30.00	30	1.00	1500	1.00
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Samples	Ea	none	none	85.00	17	5.00	120	5.00
TOTAL DISTRIBUTED COSTS		2486.40	84	24298.20				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		2486.40		24298.20				

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

Date 8-10-54 Operator Thornburg Mining Co.

Per J. T. Tannell Title Office Mgr.

NOTE.—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.

(Instructions on reverse)

REMARKS:

(For Government use only)

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION IV

Administrative Audit Difference Statement

Date: ~~August 27, 1954~~
Payee's Reference: _____

~~July, 1954~~

Chornbury Mining Company
300 West Main
Grand Junction, Colorado

Upon examination of the above Payee's reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed	$ ~~2,680.40~~
Difference	$ ~~525.00~~
Amount Approved	$ ~~2,150.00~~

The reason for the difference was due to:

Disallowance of 6 feet in excess of contract distance — at 150.00 per foot	150.40
Compensation of 7 feet in excess of contract authorization — at 150.00 per foot	1052.50
	1525.00

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

N.E.Stokes
Audit Section

R-IV-B & F Form No. 4
4-15-52 D

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

224 New Customhouse
Denver 2, Colorado

August 25, 1954.

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket No. 3060 (Uranium), Contract No. Idm-E638, Vance Elton Thornburg, dba Thornburg Mining Company, Grand County, Utah. Mail address "160 West Main Street, Grand Junction, Colorado." Operator's Monthly Progress Report for the month of July 1954.

Enclosed are the original and four copies of Form MF-104 and MF-104A, Narrative Report, and Engineer's Report for the above period.

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 90 per cent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report, except for the following deduction:

1. Disallowance of footage reported in excess of verified distance	
North workings - South Drift	1.0 feet
North workings - Southeast Drift	3.0 feet
2. Suspension of reported footage in excess of contract authorization for Stage I	
North workings - South Drift	1/ 7.0 feet
Total footage deducted	11.0 feet

Monetary deduction - 11 feet at $29.60 a foot =	$325.60
Total amount of Operator's claim	$2,486.40
Less deductions	325.60
Balance	$2,160.80
Government participation at 90%	$1,944.72

1/ Footage suspended pending if and when additional work is authorized under Stage II.

Please advise the Operator of the foregoing deduction.

Remarks:

Date of Operator's Report	August 10, 1954.
Date Report received in Bureau of Mines Branch Office	August 11, 1954.
Date Report received in Regional Office	August 20, 1954.

W. H. King

W. H. King

Enclosures

JWT:cwm

cc: Contract
Secretary to the Oper. Comm. (2)
WMTraver
Chron.
JWTownsend

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
August 19, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

From: Chief, Mineral Resources Branch, Mining Division, Region IV

Subject: DMEA 3060, contract Idm-E638 (Uranium) Thornburg Mining Company (Shinarump claims) Grand County, Utah - Progress report for July 1954

Transmitted herewith are the original and four copies of the subject progress report, the seventh one--forms MF-104 and MF-104A, with narrative, progress and sample maps--and the original and six copies of M. H. Salsbury's memorandum covering his inspection of the underground progress and checking of the reporting forms. The contract is unit cost on short form MF-200(A) and no documentation is required except for uranium analyses to be supported by copies of the assay invoices.

Salsbury inspected the underground progress August 5, 1954. He verified and approves the advance claimed in the South mine working and also in the North mine working except for an error of 4 feet in the contractor's measurements and of 7 feet for extension of the South Drift beyond that allowed under Stage I of the contract, a total disallowance of 11 feet at $29.60 a foot, or $325.60. Otherwise, work performance was in accordance with the terms of the contract. The operator's narrative and inspecting engineer's covering memorandum are adequate.

The $325.60 disallowed subtracted from $2,486.40 claimed by the contractor leaves $2,160.80. Of this sum, 90 percent, or $1,944.72, is approved for payment and certified on the MF-104 forms.

Your special attention is called to the fact that the contractor in his narrative states that work under Stage I is essentially completed or will be by the end of August. He asks that approval for Stage II be given prior to that time. The two engineers who have made monthly project inspections concur in the opinion that the results of jackhammer or stoper drilling authorized by Amendment No. 1, practically none of which has been done, will have a considerable bearing on a decision as to whether the remaining stage should be recommended.

It is suggested that you notify the contractor immediately that authorization will not be forthcoming for Stage II until the drill holes

are completed and that claim for further advance of the South Drift in the North mine workings, interpreted to be a part of Stage II, will be disallowed unless the completion of drilling and other considerations warrant authorization of the additional stage.

W. M. Traver

W. M. Traver

enclosures

cc 4
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DMEA Chron

WMT/pam

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
August 17, 1954

Memorandum

To: Chief, Mineral Resources Branch, Mining Division, Region IV

From: M. H. Salsbury

Subject: DMEA 3060, contract Ida-E638 (Uranium) Thornburg Mining Company (Shinarump claims), Grand County, Utah - Progress report for July 1954

Underground progress was inspected on August 5, 1954, in company with Ed Johnson, foreman for the contractor. Work was in progress in both south and southeast headings of the north workings, and west and north headings of the north workings. Progress for the month of July 1954, as reported, and comparative measurements made by the DMEA inspector are as follows:

	July advance claimed feet	Advance to date feet	Bureau of Mines Measurements July advance (feet)	Bureau of Mines Measurements advance to date (feet)
South workings				
South drift	17.0	314.0	17.0	314.0
North crosscut	18.0	73.0	18.0	73.0
South crosscut	18.0	65.0	18.0	65.0
Total south workings	53.0	453.0	53.0	453.0
North workings				
South drift	*18.0	354.0	27.0	
Southeast drift	*13.0		10.0	
Total north workings	31.0	354.0	27.0	350.0
Total both drifts	84.0	804.0	80.0	800.0

Total advance for July 1954 claimed	84.0
Total advance (Bureau of Mines measurements, August 5)	80.0
Difference (recommended for disallowance)	4.0
Advance in south drift of north workings in excess of maximum in Stage I(a) (Recommended for disallowance)	7.0
Total recommended disallowance for July 1954	11.0 feet

*Advance in these headings not segregated in contractor's narrative for July 1954, and footage shown was scaled from the map submitted with the narrative.

Reference is made to two progress maps attached to the DMEA inspector's report for June 1954.

Exploration under the contract was carried on for only part of the month. Long-hole drilling called for under Amendment No. 1 of the contract has not been initiated. The south crosscut in the south workings, called for in Amendment No. 1, was driven to an intersection with drill hole DI-203 and has been completed. No definite length for this crosscut was designated in Amendment No. 1. The north crosscut is being continued toward drill hole DI-207.

The west (main) heading or so-called south drift, in the south workings has now been driven a total of 314 feet from the starting point. Amendment No. 1 specifies approximately 290 feet for this heading to be driven to intersect the projection of drill hole DI-206. This objective had been reached by July 1, 1954, and, on the date of the amendment, this heading had already been driven 5 feet more than 290 feet. However, the DMEA inspector is of the opinion that the entire distance driven to date, 314 feet, is eligible for payment under Amendment No. 1, which supersedes Stage I (b) and (c) of the contract, because no definite footage is stated. However, any further advance in this heading appears to be work which is called for under Stage II (b), if approved.

The southeast drift in the north workings was driven 10.0 feet, according to the DMEA inspector's measurement, or 3 feet less than claimed. This work is in accordance with Stage I (a) of the contract which calls for a total of 100 feet in a southeasterly direction to the vicinity of drill holes DI-220 and DI-222. The objective has been reached in driving a total of 68.0 feet in the southeast drift.

The south drift in the north working has now been driven a total of 282 feet, or 7 feet in excess of the 275 feet to the vicinity of drill hole DI-221 as specified under Stage I (a) of the contract. Drill hole DI-221 was reached by May 1, 1954, and the DMEA inspector is of the opinion that the 7 feet is in excess of contract allowances and is actually work that comes under Stage II (a), which has not been authorized. It is therefore recommended for disallowance at this time.

Advance claimed in July 1954 is not in excess of contract requirements except as noted, and is in accordance with other contract terms.

Ore-grade mineralization was encountered in the north crosscut in the south workings for a distance of about 25 feet in the vicinity of hole DI-206. None of the other headings encountered ore during the month, and the respective heading faces were not in ore on August 5, 1954. Results of the contractor's sampling during the month are not available.

Four samples were taken by the DMEA inspector at 10-foot intervals along the south crosscut in the south workings and sent to the Metallurgical Division at Salt Lake City, Utah, for analysis.

The contractor, in his narrative report for July, requested consideration of the second stage of the contract, which requires DMEA authorization. After consultation with the previous DMEA inspector, it is recommended that such consideration await completion of the remainder of Stage I, including exploratory drilling, which may have considerable bearing on the advisability of exploration under Stage II. On the basis of results to date, Stage II hardly appears to be justified from an engineering standpoint.

A narrative report, map, and forms MF-104 and MF-104A for July 1954 submitted by the contractor are satisfactory and monthly unit totals entered on forms MF-104 and MF-104A are correct for the amounts claimed except for 11 feet at $29.60 per foot, a total of $325.60 in excess of the amount recommended for payment.

It is recommended that the contractor be notified that no consideration of Stage II work can be given until Stage I is completed and that any further advance in the south drift in the north workings where 7.0 feet claimed has already been disallowed, or in the west (main) heading or so-called south drift of the south workings, does not meet contract requirements, and will be disallowed if claim is made for same before Stage II is approved.

It is recommended that $1,944.72, or 90 percent of the amount claimed, $2,486.40, less $325.60, the amount disallowed for 11 feet of advance not approved by the inspecting engineer, be approved for payment.

M. R. Salisbury
M. R. Salisbury
Mining Engineer

cc 6
E638
DMEA Chron.

MRS/pam

[illegible]
[illegible]
[illegible]
[illegible], 1954

(c) [illegible]
[illegible] the month of July 1954
[illegible]loration Project Contract
[illegible]ornburg Mining Company
[illegible]ntract No. [illegible]-3000

Mr. [illegible] Traver, Jr.
Mineral Resources Branch
Building 20, Room 137
Denver 14, Colorado

Dear Mr. Traver:

Pursuant to instructions, herein is submitted a narrative report and maps covering in detail the progress made during the month of July 1954, on the Exploration Contract No. [illegible]-3000, between the Defense Minerals Exploration Administration and the Thornburg Mining Company.

[illegible]:

	1954 July Advances	1954 Advances to Date
South Drift:		
South [illegible] ft-	17 feet	31[illegible] feet
North [illegible]-cut-	1[illegible] feet	73 feet
South [illegible]-cut-	1[illegible] feet	[illegible] feet
Total-	[illegible] feet	450 feet
North Drift:		
North Drift-	31 feet	3[illegible]4 feet
Total (both drifts)-	[illegible] feet	[illegible] feet

Total July advance in both drifts- [illegible] feet.

Reference is made to the attached map marked Exhibit "[illegible]". On this map is shown the advances made in the various headings during the month.

A few channel samples were taken during the month on which assays are not yet available.

There was considerable loss of time due to break-down of equipment, especially the trammers.

For your information, the work comprising "Stage one" of the contract should be completed by the end of August, including test drilling, sampling, and assaying. It is our understanding that approval of the "Second Stage" work by DMEA is contingent on results obtained in the first stage. In order to eliminate delay and lost time between the two stages, an early determination of the matter would be appreciated.

Very truly yours,

Leo J. Coady

Leo J. Coady, Consultant

Form MF-104 (Rev.)
(April 1952)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of June, 1954 Docket No. DMEA 3060 Contract No. Idm-L-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address Grand Junction, Colorado
Contract Amount, $41,910.00 Government Participation: 90 % Amount, $37,720.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling J-11 holes	None	30.00	30.00			
Bulldozing						
Crosscutting	None	384.80	384.80			
Drifting	4469.60	16842.40	21312.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	20.00	65.00	85.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	4489.60	17322.20	21811.80			

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

Date July 16, 1954 *Payee Thornburg Mining Company

Per J. F. Tunnell Title Office Mgr.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—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.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$4040.64

Signature Randel R. Cooper
(Authorized Certifying Officer)

Date 7-30-54 Vou. No. DMA-55-10
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. E638 in accordance with the terms of the contract.

Signature R.R. McLellan 4,040.64 Title Mining Engineer Date 7/20/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: R.D.B.

Signature W. H. King Title Executive Officer Date JUL 28 1954

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of June 1954 Docket No. DMEA 3060 Contract No. Idm-E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address Grand Junction, Colorado

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting	Ft	4469.60	151	21312.00	720)	29.60	1345	29.60
Crosscutting	Ft	none	none	384.80	13)			
Raising								
Shafts								
Winzes								
Drilling: ~~Core~~ Jackhammer ~~Churn~~ holes	Ft	none	none	30.00	30	1.00	1500	1.00
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Samples	Ea	20.00	4	85.00	17	5.00	126	5.00
TOTAL DISTRIBUTED COSTS		4489.60	155	21811.80				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		4489.60		21811.80				

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

Date 7-16-54 Operator Thornburg Mining Co.

Per J. T. Tunnell Title Office Mgr.
J. T. Tunnell

NOTE.—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.

REMARKS:

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

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

224 New Customhouse
Denver 2, Colorado

July 28, 1954.

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 3060 (Uranium), Contract Idm-E638, Thornburg Mining Company, (Shinarump claims), Grand County, Utah. Operator's Monthly Progress Report for the month of June 1954.

Enclosed are the original and four copies of Form MF-104 and MF-104A, Narrative Report, and Engineer's Report for the above period.

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 90 per cent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks:

Date of Report	July 16, 1954
Date Received in Field Office	July 19, 1954.
Date Received in Region Office	July 27, 1954

W. H. King

W. H. King

Enclosures

RDB:cwm

cc: Contract
Secretary to the Oper. Comm. (2)
WMTraver
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
July 26, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

From: Chief, Mineral Resources Branch, Mining Division, Region IV

Subject: DMEA 3060, contract IDM-E638 (Uranium), Thornburg Mining Company (Shinarump claims), Grand County, Utah - Progress report for June 1954

Transmitted herewith are the original and four copies of the sixth progress report, the one for June 1954--forms MF-104 and MF-104A, with narrative, progress map, engineers' sample maps, one copy of assay return--and the original and six copies of Russell R. McLellan's memorandum covering his inspection of the underground progress and checking of the reporting forms. The contract is unit cost on short form MF-200(A) and no documentation is required except for uranium analyses to be supported by copies of the assay invoices.

McLellan confirmed the progress during an inspection made July 8, 1954, 5 feet advance of the South Drift, 46 feet of the North Drift, and 45 feet of the South Crosscut and 55 feet of the North Crosscut, a total of 151 feet. The advance of the new crosscuts is authorized by an amendment to the contract. Progress is correctly stated in the operator's narrative and entered on the MF-104A. Work, performed in conformance with the terms of the contract and amendment, is satisfactorily described in the operator's narrative and the physical conditions encountered are explained in the engineer's covering memorandum which includes a progress map showing assays of samples by him and the operator. Entries and extensions on the reporting forms are correct.

Payment is approved and certified on the MF-104 forms of $4,040.64, or 90 percent of the total $4,489.60 claimed by the contractor.

W. M. Traver

cc 4
E638
DMEA Chron.

WMT/pam

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building [illegible], Room 137
Denver Federal Center
Denver 14, Colorado
July [illegible], 1954

Memorandum

To: Chief, Mineral Resources Branch, Mining Division, Region IV

From: Russell E. McLellan

Subject: DMEA 300 - Contract IDM-2038 (Uranium) Thornburg Mining Company (Submarump claims), Grand County, Utah - Progress report for June 1954

Underground progress on the Submarump claims was inspected on July 2, 1954 and on that date work was in progress in two crosscut headings in the South Drift and in one crosscut heading in the North Drift. The company received authorization by amendment to drive a [illegible]-foot crosscut to the north and a [illegible]-foot crosscut to the south from the South Drift. At the close of June 1954, 5 feet of advance was made in the South Drift, [illegible] feet in the South Crosscut and 35 feet in the North Crosscut for a total advance of 1[illegible]5 feet for the month. A total of [illegible] feet of drifting was completed in the North Drift during the month. The total advance of [illegible] feet is correct as reported by the operator.

Spotty mineralization was encountered in both drifts and a small amount of ore was stockpiled. The drifting phase of Stage 1 is expected to be completed in both drifts during July 1954. Jackhammer exploration will commence at the completion of the drifting.

The attached progress maps show sampling completed to date by Bureau of Mines and company engineers in the North and South Drifts. The maps are prepared from the revised survey completed by the company engineer during May 1954.

All work reported during the period was completed according to the terms of the contract and the results have been submitted satisfactorily in the operator's progress report. Payment is recommended of $4,4[illegible].64, or [illegible] percent of the $4,489.0[illegible] claimed.

Russell E. McLellan
Mining Engineer

cc: G
[illegible]
DMEA Chron.

REM:[illegible]

DIST. ENG.
DIST. CLERK
PERSONNEL
FILES

P. O. Box 1125
Grand Junction
Colorado
July 15, 1954

(e) NARRATIVE
For the month of June 1954
Exploration Project Contract
Thorsburg Mining Company
Docket No. DMEA-3060

Mineral Resources Branch
Date Rec'd
JUL 1 8 1954
BUREAU OF MINES
Denver, Colorado

Mr. W. M. Traver, Jr.
Mineral Resources Branch
Building 20, Room 137
Denver Federal Center
Denver 14, Colorado

Dear Mr. Traver:

Pursuant to instructions, herein is submitted, a Narrative report and maps covering in detail the progress made during the month of June, 1954, on the Exploration Contract No. DMEA-3060, between the Defense Minerals Exploration Administration and the Thorsburg Mining Company.

ADVANCES:

	1954 June Advance	1954 Advance to Date
South Drift:		
South Drift-	5 feet	297 feet
Nor. X-cut-	55 feet	55 feet
South X-cut-	45 feet	45 feet
Total -	105 feet	397 feet
North Drift:		
North Drift-	46 feet	323 feet
Total -	151 feet	720 feet

Total June advance in both drifts - 151 feet.

Reference is made to the attached map marked Exhibit "B". On this map is shown the advances made in the various headings during the month.

In the South Drift - X-cuts, drill holes Nos. 203 and 206 have been encountered.

During the month 4 channel samples were taken in the two X-cuts driven from the south drift. The location of these samples are shown on the attached map marked Exhibit "B". Assays on the samples were:

#1SNH - 50" @ 0.061% U3O8
#2SNH - 55" @ 0.052% U3O8
#3SNH - 33" @ 0.046% U3O8
#4SNH - 27" @ 0.093% U3O8

On or about the 16th of July, it is planned to start the test drilling in the South Drift, both up and down holes. If convenient, it would be appreciated if your field Engineer could visit the mine while this work is in progress. We would welcome his advice or any suggestions he might offer.

Very truly yours,

Leo J. Coady

Leo J. Coady Consultant

Form MF-104 (Rev.)
(April 1952)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of May, 1954 Docket No. DMEA 3060 Contract No. Idm-E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address Grand Junction, Colorado
Contract Amount, $ 41,910.00 Government Participation: ____% Amount, $ 37,720.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling J-H Holes	None	30.00	30.00			
Bulldozing						
Crosscutting	None	384.80	384.80			
Drifting	2220.00	14622.40	16842.40			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	None	65.00	65.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	2220.00	15102.20	17322.20	2220.00	15102.20	17322.20
					- 384.80	- 384.80
				2220.00	14717.40	16937.40

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 6-14-54 *Payee Thornburg Mining Company
Per J. P. Tunnell Title Office Mgr.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—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.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:
$ 1998.00
Signature
(Authorized Certifying Officer)
Date 6/23/54 Vou. No. DMA 054-139
(See other side)

* Previous disallowance for turnout drifting

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. IDM-E638 in accordance with the terms of the contract.

Signature R. R. McLellan 1,998.00 WMT Title Mining Engineer Date 6/16/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: R. DB.

Signature W. H. King Title Executive Officer Date JUN 23 1954

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of May 1954 Docket No. DMEA 3060 Contract No. Idm-E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address Grand Junction, Colorado

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting	Ft	2220.00	75	16842.40	569	29.60	1345	29.60
Crosscutting	Ft	none	none	384.80	13			
Raising								
Shafts								
Winzes								
Drilling: ~~Core~~ Jackhammer ~~Churn~~ holes	Ft	none	none	30.00	30	1.00	1500	1.00
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Samples	Ea	none	none	65.00	13	5.00	120	5.00
TOTAL DISTRIBUTED COSTS		2220.00	75	17322.20				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		2220.00		17322.20				

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

Date 6-14-54 Operator Thornburg Mining Co.

Per J. T. Tunnell Title Office Mgr.

NOTE.—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.

REMARKS:

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

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

224 New Customhouse
Denver 2, Colorado

June 29, 1954

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA 3060 (Uranium), Contract Idm-E638, Thornburg Mining Company (Shinarump claims), Grand County, Utah.

Enclosed are two copies of the Operator's Monthly Progress Report, Form MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data pertaining to work under the subject contract for the month of May 1954.

W. H. King

W. H. King

Enclosures

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

224 New Customhouse
Denver 2, Colorado

June 23, 1954.

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 3060 (Uranium), Contract Idm-E638, Thornburg Mining Company (Shinarump claims), Grand County, Utah. Operator's Monthly Progress Report for the period May 1954.

Enclosed are the original and four copies of Form MF-104 and MF-104A, Narrative Report, and Engineer's Report for the above period.

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 90 per cent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks:

Date of Report	June 14, 1954.
Date Received in Field Office	June 16, 1954.
Date Received in Region Office	June 22, 1954.

W. H. King
W. H. King

Enclosures

RDB:cwm

cc: Contract
Secretary to the Oper. Comm. (2)
WMTraver
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
June 21, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

From: Chief, Mineral Resources Branch, Mining Division, Region IV

Subject: DMEA 3060, Contract IDM-E638 (Uranium), Thornburg Mining Co., (Shinarump claims), Grand County, Utah--Progress report for May 1954

Transmitted herewith are the original and four copies of the fifth progress report, the one for May 1954--forms MF-104 and MF-104A, with narrative, progress map, one copy of assay return--and the original and six copies of R. R. McLellan's memorandum covering his inspection of the underground progress and checking of the reporting forms. The contract is unit cost on short form MF-200(A) and no documentation is required except for uranium analyses to be supported by copies of the assay invoices.

McLellan inspected the project June 5, 1954, and confirms the claimed progress reported in the narrative and entered on the MF-104A forms of 21 feet in the South Drift and 54 feet in the North Drift, a total of 75 feet for the period. The operator's narrative and inspecting engineer's covering memorandum adequately describe the current operations. Samples were taken and when the jackhammer holes are completed authorized under Stage I of the contract, ore reserve estimates can be made. Entries and extensions on the reporting forms are correct and work was performed in accordance with the terms of the contract.

An amendment to the contract has been requested and field approval given.

Payment is recommended and certified on the MF-104 forms of $1,998.00, or 90 percent of the total $2,220.00 claimed by the contractor.

F. N. Everett, for
W. M. Traver

enclosures

WMT/kp

cc 4, E638, Chron

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
June 17, 1954

Memorandum

To: Chief, Mineral Resources Branch, Mining Division, Region IV

From: Russell R. McLellan

Subject: DMEA 3060, Contract IDM-E638 (Uranium), Thornburg Mining Co., (Shinarump claims), Grand County, Utah--Progress report for May 1954

The underground progress on the Shinarump claims was inspected on June 5, 1954, at which date work was being conducted in two crosscut headings from the South Drift and in one heading of the North Drift. No claim is made for crosscutting from the South Drift as an amendment to approve the crosscutting still is pending. An advance of 21 feet was made in the South Drift and 54 feet in the North Drift. Uranium mineralization was encountered in both drifts although little of it was of ore grade. Eight samples were cut from the walls, the results of which probably will be available next month. At the examination date a few tons of ore from both drifts had been stockpiled at the mine.

During the month, the company engineer completed a transit survey locating the surface drill holes with respect to the underground workings. The results of the survey are shown on the five copies of the map submitted with the operator's progress report. According to the revised map, the South Drift is about 20 feet south of the target drill hole No. 206 and the North Drift is about 15 feet east of the target drill hole No. 221. This discrepancy with the now obviously incorrect base map prepared by the Atomic Energy Commission and attached to the DMEA contract will not seriously affect the program, although as described in the writer's memorandum of May 16, 1954, the incorrect map resulted in the authorization of 59 feet in excess of the necessary amount to reach the Stage I target area in the South Drift.

Until the jackhammer exploration is completed in both drifts for Stage I, no attempt will be made to estimate ore reserves.

All work reported during the period was completed according to the terms of the contract and the results have been submitted satisfactorily in the operator's progress report. Payment is recommended of $1,998.00, or 90 percent of the $2,220.00 claimed.

for Russell R. McLellan
Mining Engineer

RRM/kp
cc 6, E638, Chron

(c) Narrative
For the month of May, 1954
Exploration Project Contract
Thornburg Mining Company
Docket No. DMM- 3060

Mr. W. H. Weaver, Jr.
Mineral Resources Branch
Building 20, Room 137
Denver Federal Center
Denver 14, Colorado

Dear Mr. Weaver:

Pursuant to instructions, herein is submitted Narrative Report and maps covering in detail the progress made during the month of May, 1954, on Exploration Contract No. DMM-3060, between the Defense Minerals Exploration Administration and the Thornburg Mining Company.

Advance:

	1954 May Advance	1954 Advance to Date
South Drift -	21 feet	292 feet
North Drift -	54 feet	277 feet
Total -	75 feet	569 feet

Total May advance in both drifts - 75 feet.

No sample drilling done during May.

Reference is made to the attached map marked Exhibit "B". On this map is shown the advance made in each drift.

During the month a grassic survey of the underground workings was made by the Thornburg Mining Company and the collars of the drill holes in accordance with the new survey.

The South Drift advanced in a nearly horizontal bed of medium grained sandstone, interbedded with clay seams. In June 1st. the sandstone was thicker with less clay than heretofore noted. The entire face is well mineralized and closely approaches commercial ore.

The North Drift advanced in a formation composed of medium grained sandstone timber-bedded with clay. In driving the drift some ore was recovered and is stock-piled at the portal.

It is felt that the face of the South Drift is in the proper ore horizon. It will, therefore, be unnecessary to drive the 25 feet raise mentioned in Stage 2, Paragraph (c) of the contract. In view of this a request to amend the contract is being prepared.

Very truly yours

Leo J. Coady

Leo J. Coady, Consultant

Form MF-104 (Rev.) (April 1952)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of April, 1954 Docket No. DMEA 3060 Contract No. Idm-E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address Grand Junction, Colorado
Contract Amount, $ 41,910.00 Government Participation: 90 % Amount, $ 37,720.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling J-H Holes	None	30.00	30.00			
Bulldozing						
Crosscutting	None	384.80	384.80			
Drifting	3640.80	10981.60	14622.40			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	20.00	45.00	65.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	3660.80	11441.40	15102.20	3660.80	11441.40	15102.20
					- 384.80	-384.80
					11056.60	14717.40

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 5-8-54 *Payee Thornburg Mining Company
Per [signature] Title Office Mgr.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—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.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:
$3294.72
Signature [signature] (Authorized Certifying Officer)
Date 5/24/54 Vou. No. DMA 54-128
(See other side)

*Previous disallowances for turnout drifting,

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E638 in accordance with the terms of the contract.

Signature R. R. McLellan ~~3,276.72~~ 3,294.72 Title Mining Engineer Date 5/17/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W H King Title Executive Officer Date MAY 21 1954

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

JUN 1 1954

Month of April 1954 Docket No. DMEA 3060 Contract No. Idm-E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address Grand Junction, Colorado.

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting	Ft	3640.80	123	14622.40	494	29.60	1345	29.60
Crosscutting	Ft.	None	None	384.80	13			
Raising								
Shafts								
Winzes								
Drilling: Core, Churn, Jackhammer holes	Ft	None	None	30.00	30	1.00	1500	1.00
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Samples	Ea	20.00	4	65.00	13	5.00	120	5.00
TOTAL DISTRIBUTED COSTS		3660.80	127	15102.20				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3660.80		15102.20				

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

Date 5-8-54 Operator Thornburg Mining Co.

Per J. T. Tunnell Title Office Mgr.

J. T. Tunnell

REMARKS:

NOTE.—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.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

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

224 New Customhouse
Denver 2, Colorado

May 21, 1954.

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 3060 (Uranium), Contract Idm-E638, Thornburg Mining Company, Grand County, Utah. Operator's Monthly Progress Report for the month of April 1954.

Enclosed are the original and four copies of Form MF-104 and MF-104A, Narrative Report, and Engineer's Report for the above period.

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 90 per cent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks:

Date of Operator's Report	May 8, 1954.
Date Report received in Field Office	May 10, 1954.
Date Report received in Region IV Office	May 20, 1954.

W H King
W. H. King

Enclosures

RDB:cwm

cc: Contract
Secretary to the Oper. Comm. (2)
WMTraver
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
May 19, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

From: Chief, Mineral Resources Branch, Mining Division, Region IV

Subject: DMEA 3060, contract IDM-E638 (Uranium) Thornburg Mining Company, (Shinarump group), Grand County, Utah--Progress report for April 1954

Transmitted herewith are the original and four copies of the fourth progress report, the one for April 1954--forms MF-104 and MF-104A, with narrative, progress map, one copy of assay return--and the original and six copies of R. R. McLellan's memorandum covering his inspection of the underground progress and checking of the reporting forms. The contract is unit cost on short form MF-200(A) and no documentation is required except for uranium analyses to be supported by copies of the assay results.

McLellan verified by inspections May 6 and 10, 123 feet total drifting completed in April, 75 feet in the South Drift and 48 feet in the North Drift, as reported in the narrative and entered on the MF-104A. This completes Stage I of the contract to reach the objective in the South Drift, although the total footage was not required by 68 feet. The operator is requesting an amendment to transfer this drifting and raising now unrequired to additional crosscutting and jackhammer drilling.

Apparently there are three worthwhile uranium horizons in the formations being explored. The conditions existent are adequately described in the operator's narrative and the engineer's memorandum report, which includes a discussion of discrepancies in the mapping. Some samples were taken by the engineer that will be reported next month.

Documentation so far as assay results are required is in order and the contract allows $5.00 for each assay including complementary costs of transportation, etc., so it would appear there should be no question about allowance.

Payment is approved and certified on the MF-104 forms of $3,294.72, or 90 percent of the total $3,660.80 claimed by the contractor.

W. M. Traver

W. M. Traver

cc: 4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
May 17, 1954

Memorandum

To: Chief, Mineral Resources Branch, Mining Division, Region IV

From: Russell R. McLellan

Subject: DMEA 3060, contract IDM-2638 (Uranium), Thornburg Mining Company, (Shinarump group), Grand County, Utah--Progress report for April 1954

The underground progress for the subject contract was inspected on May 6 and again on May 10, 1954, on which dates sampling was done in the North Drift, and sampling and mapping was done in the South Drift. During the month, R. T. Chew and R. D. Sample, of the U. S. Geological Survey, mapped the South Drift in detail and determined definitely that the last 180 feet of the drift did not follow the lower ore horizon as intended. A check survey of the geologic section in the South Drift, completed by the writer, is in agreement with the results obtained by Chew and Sample, except that subsequent to the U. S. Geological Survey mapping about 3 feet of strong uranium mineralization was encountered after blasting one round to the south at the end of the drift. This mineralization probably is in the base of the upper ore horizon, thus in the last 180 feet of drifting three uranium-bearing zones have been encountered, two of which are sufficiently close together to permit mining from a single level. A lower level may be required to develop any discovery in the deepest horizon. The drifting portion of Stage I is completed in the South Drift, as the vicinity of drill hole DI-206 has been reached. The authorized crosscutting to the north and south is in progress at present. Since raising from the South Drift no longer is necessary, the company will submit a request for an amendment to eliminate the raising in favor of additional crosscutting and jackhammer drilling.

The company maps, submitted monthly and reported by the mine superintendent to be transit surveyed, show an east - west discrepancy of 50 or more feet when compared with the base map prepared by the Atomic Energy Commission. This discrepancy also is reflected in the completed drifting of Stage I. A total of 350 feet of drifting was authorized by the contract to reach drill hole DI-206, whereas to date, a total of 282 feet of drifting, or 68 feet less than authorized, has placed the heading several feet

beyond the vertical extension of drill hole DI-206, according to the surveys conducted by the operator and by the U. S. Geological Survey. Although the hole was not encountered by the drift, the U. S. Geological Survey check survey indicates that it is probably a few feet to the north of the drift. In any event, the proper area will be explored, even though the drill holes are not encountered by the workings. Since the program originally was prepared from base maps supplied by the Atomic Energy Commission, it is now apparent that the contract authorizes 68 feet of drifting in excess of the amount required in the South Drift. This footage, plus the 25 feet allowed for raising, now unnecessary, should provide sufficient funds or footage for any additional exploration that might be advisable.

During the month of April 1954, a total of 75 feet of drifting was completed in the South Drift, and 48 feet of drifting in the North Drift, for a grand total of 123 feet. Weak uranium mineralization was encountered throughout most of the 48 feet of advance in the North Drift, however, no ore was encountered. No exploratory jackhammer holes were drilled during the period.

The operator in the narrative report requests permission to change the bearing of the South Drift, presumably in Stage II, in order to stay within the ore-bearing horizon. This is indicative of the fact that the operator did not interpret the contract correctly as applied to the South Drift. Since the operator's report was written, he has been contacted and informed of the error of driving the drift across the beds, instead of down the dip of the lower ore horizon. Since the contract is not specific, with regard to the proposed inclination of the South Drift, and since the area can be explored satisfactorily from the present drift by slightly modifying the program, it is recommended that payment be approved as usual for the work accomplished.

It should be noted that the cost of assaying as indicated on the assayer's invoice submitted with the operator's report is $3.00 per sample. The contract allows $5.00 per sample and the operator is claiming this full amount. Unless the auditors take exception, the writer will approve the operator's claim.

Payment is recommended of $3,294.72 or 90 percent of the $3,660.80 claimed.

Russell R. McLellan
Russell R. McLellan
Mining Engineer

cc: 6

RRM/ici

(c) NARRATIVE
For the month of April, 1954
Exploration Project Contract
Thornburg Mining Company
Docket No. DMEA- 3060

Mr. W. M. Traver, Jr.
Mineral Resources Branch
Building 20, Room 137
Denver Federal Center
Denver 14, Colorado

Dear Mr. Traver:

Pursuant to instructions, herein is submitted Narrative Report and maps covering in detail the progress made during the month of April, 1954, on Exploration Contract No. DMEA-3060, between Defence Minerals Exploration Administration and the Thornburg Mining Company.

ADVANCES:

	1954 April Advance	1954 Advance to Date
South Drift -	75 feet	271 feet
North Drift -	48 feet	223 feet
Total -	123 feet	494 feet

Total April advance in both drifts - 123 feet.

No jackhammer test holes during April.

Reference is made to the attached map marked Exhibit "B". On this map is shown in plan and section the advance made in each drift.

The South Drift advanced through a formation composed of two thin beds of sandstone with clay above and below. The drift is being run about level in contrast to a slight dip to the beds. Therefore, if the same direction of the drift is long continued it will be above the two apparently mineralized beds. Obviously, this should not be done. It is requested that permission be given to turn the drift, preferably to the north, in order to maintain the drift in the mineralized beds.

Since the face of the South Drift has reached the projection of drill hole DI 206, the X-cuts mentioned in Stage 1, paragraph c of the contract will be started.

	Thickness	Assays
Sample #10	4'	0.038% U308
Sample #12	4'	0.045% U308

The North Drift advanced in a formation composed mostly of medium grained sandstone with a few thin layers of clay. Two samples were taken in the drift during the month. The location of the samples is shown on the attached map.

	Thickness	Assays
Sample #11	4'	0.041% U308
Sample #13	4'	0.052% U308

On May 1st the face of the drift (approximately 6') radiometrically tested 0.12% U_3O_8 or very close to commercial ore.

During the month, by blasting separately, approximately 16 tons of ore were recovered and have been stockpiled at the portal of the tunnel.

The usual amount of mechanical break-downs occurred during the month. Broken axels on the trammer in the South Drift caused most of the trouble and were responsible for most of the lost time.

Very truly yours

Leo J. Coady, Consultant

Form MF-104 (Rev.)
(April, 1952)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of March, 1954 Docket No. DMEA 3060 Contract No. Idm-E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address Grand Junction, Colorado
Contract Amount, $ 41,910.00 Government Participation: 90 % Amount, $ 37,720.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling J-H holes	none	30.00	30.00			
Bulldozing						
Crosscutting	none	384.80	384.80			
Drifting	3670.40	7311.20	10981.60			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment	45.00	R.D.B.				
Sampling and Analysis	~~20.00~~	~~25.00~~	45.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	3690.40	7751.00	11441.40	3715.40	7341.20	11,056.60
				*	- 384.80	- 384.80

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 4-7-54 *Payee Thornburg Mining Company
Per J. T. Tunnell Title Office Mgr.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—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.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:
3715.40 7341.20 11,056.60
$ 3343.86

Signature (Authorized Certifying Officer)
Date 5/3/54 Vou. No. 54-117
(See other side)

Previous disallowances for turnout drifting.

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. E638 in accordance with the terms of the contract.

Signature R.R. McLellan 334386 WMT Title Mining Engineer Date 4/13/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: R. DB.

Signature W.H. King Title Executive Officer Date APR 28 1954

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of March 1954 Docket No. DMEA 3060 Contract No. Idm-E-638
Operator's Name Thornburg Mining Co. Minerals Uranium
Address Grand Junction, Colorado

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting	Ft	3670.40	124	10981.60	371	29.60	1345	29.60
Crosscutting	Ft	none	none	384.80	13			
Raising								
Shafts								
Winzes								
Drilling: Core Jackhammer Churn holes	Ft	none	none	30.00	30	1.00	1500	1.00
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails Samples	Ea	20.00	4	45.00	9	5.00	120	5.00
TOTAL DISTRIBUTED COSTS		3690.40	128	11441.40				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3690.40		11441.40				

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

Date April 7, 1954 Operator Thornburg Mining Company

Per J. T. Tunnell Title Office Mgr.

NOTE.—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.

REMARKS:

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

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

224 New Customhouse
Denver 2, Colorado

April 28, 1954

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 3060 (Uranium), Contract No. Idm-E638, Thornburg Mining Company, (Shinarump Group), Grand County, Utah - Operator's Monthly Progress Report for the period March 1954.

Enclosed are the original and four copies of Form MF-104 and MF-104A, Narrative Report, and Engineer's Report for the above period.

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 90 per cent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

The amount of $25.00 for assaying which was disallowed from the previous report is reclaimed and is passed for payment; however, this amount is entered in the wrong column on Forms MF-104 and MF-104A. Actual assay charges are $3.00 per assay but the contract allows $5.00. As this is a unit cost contract the $5.00 claimed is passed for payment.

Remarks:

Date of Report	April 7, 1954.
Date Received in Field Office	April 9, 1954.
Date Received in Region Office	April 27, 1954.

W H King
W. H. King

Enclosures

RDB:cwm

cc: Contract; Secretary to the Oper. Comm. (2); WMTraver; Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado

April 23, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

From: Chief, Mineral Resources Branch, Mining Division, Region IV

Subject: DMEA 3060, contract IDM-E638 (Uranium), Thornburg Mining Company, (Shinarump group), Grand County, Utah--Progress report for March 1954

Enclosed are the original and four copies of the above progress report, the third one,--forms MF-104 and MF-104A with narrative, progress map, copies of assay returns, copy of Administrative Audit Difference Statement, and the original and six copies of Russell R. McLellan's memorandum covering his inspection of the underground progress and checking of the reporting form. The contract is one of unit cost on short form MF-200(A) and documentation is not required except for uranium analyses at $5.00 each to be supported by copies of the returns.

McLellan confirms by his measurements made on April 6, 1954 the total advance of 124 feet made in March in the North and South Drifts as reported in the narrative and entered on the MF-104A forms. The reclaim for assaying disallowed from the February account while improperly entered on the forms is correctly documented and considered as legitimate, although incorrectly entered on the reporting forms. Physical conditions encountered are adequately described in the engineering memorandum. At this time an estimate of reserves is impossible.

Payment is approved and certified on the MF-104 form of $3,343.86 which is 90 percent of the total claimed, $3,690.40 plus the $25.00 reclaimed for assaying in February.

W. M. Traver

W. M. Traver

Enclosures

cc: 4
E638
Chron.

WMT/ici

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
April 14, 1954

Memorandum

To: Chief, Minerals Resources Branch, Mining Division, Reg. IV

From: Russell R. McLellan

Subject: DMEA 3060, contract IDM-E638 (Uranium), Thornburg Mining Company, (Shinarump group), Grand County, Utah—Progress report for March 1954

The subject underground progress was inspected April 6, 1954 and on that date the North Drift had been advanced a total of 175 feet of which 56 feet was driven during March, and the South Drift had been advanced a total of 196 feet of which 68 feet was driven during March. The total advance for the month is 124 feet.

Limited zones containing ore grade material were encountered in both drifts and a few tons of ore were stockpiled as drifting progressed. A lense of ore approximately 15 feet in length with a maximum thickness of 32 inches was noted in the right wall of the North Drift about 125 feet from the starting point of the contract drifting. At the maximum thickness the ore contained 1.48 percent U_3O_8. A sample cut from the left wall at the south limit of the lense contained .07 percent U_3O_8 through a thickness of 31 inches. Radioactivity was increasing towards the breast of the drift and was evident in the upper three feet across the face.

Ore grade material was encountered in the South Drift from a point about 130 feet from the starting point of the contract to approximately 145 feet from the starting point. Two samples cut from the right wall in this zone assayed 0.66 and 0.60 percent U_3O_8. Very little radioactivity was apparent throughout the remaining 50 feet of drift.

Until more detailed sampling can be done in both drifts no attempt will be made to estimate mineable reserves. Although considerable uranium mineralization has been encountered, the grade has been too low to mine except in the two small areas described above; consequently, the reserve tonnage at this date is very small.

No jackhammer holes were drilled during the period. The company submitted the assay sheet that was omitted from the February progress report and reclaimed the $25.00 previously disallowed for the assays. It should be noted on the MF-104 form that the $25.00 appears in the Totals Previously Reported column instead of being added to the amount claimed for sampling during the month of March 1954. The assay sheet for the samples out in March is included as required and the claim is approved. The plan and section maps that accompany the operators report give an excellent picture of the amount and nature of the mineralization thus far encountered.

Payment is recommended of $3,343.86 or 90 percent of the $3,690.40 claimed for March plus the $25.00 disallowed in February.

Russell R. McLellan

Russell R. McLellan

RRM/iei

cc: 6
E638
Chron.

(c) NARRATIVE
For the Month of March 1954
Exploration Project Contract
Thornburg Mining Company
Docket No. DMEA- 3060

Mr. W. M. Traver, Jr.
Mineral Resources Branch
Building 20, Room 137
Denver Federal Center
Denver 14, Colorado

Dear Mr. Traver:

Pursuant to instructions herein is submitted Narrative Report and maps covering in detail the progress made during the month of March, 1954, on Exploration Contract No. DMEA-3060, between Defense Minerals Exploration Administration and the Thornburg Mining Co.

ADVANCES:	1954 March Advance	1954 Advance to Date
South Drift -	68 Feet	196 Feet
North Drift -	56 "	175 "
Total -	124 Feet	371 Feet

Total February advance in both drifts - 124 Feet

No jackhammer test holes during the month

Reference is made to the attached map marked "Exhibit B" which shows in plan the advance made in each drift. Levels have been run and the elevation of ore horizons in the drill holes established in relation to the two drifts. Sections have been prepared and are shown on the attached map marked "Exhibit B".

The South Drift advanced through a formation composed of clay and a thin bed of medium grained sandstone. Since the drift is gradually cutting across the beds it would appear that the mineralized bed as exposed in the drill holes is above the drift.

The first twenty-five feet of advance in March showed mineralization. The mineralized section of the drift is shown in red on the map. Two samples were taken along this zone and the location of each is shown on the map with thickness sampled and assays.

	Thickness	Assays
Sample #8	18"	0.66% U3O8
" #9	18"	0.60% U3O8

The North Drift advanced in a formation composed of a thin layer of medium grained sandstone carried in the back with clay beneath. Throughout the March advance the sandstone remained uniform in thickness. The thickness averaged 32 inches. All of the advance was mineralized. The first twenty-five feet of advance indicate the sandstone to be commercial ore. The sandstone in the face on March 1, 1954, by geiger test, showed ore and was blasted separately.

The mineralized sections encountered in the drift are shown in red on the attached map marked "Exhibit B". Two samples were taken and have been assayed. The location, thickness sampled, and assay of each sample is shown on the attached map.

Throughout the March advance the sandstone remained uniform in thickness. The thickness averaged 32 inches. All of the advance was mineralized. The first twenty-five feet of advance indicate the sandstone to be commercial ore. The sandstone in the face on March 1, 1954, tested ore and was blasted separately.

The mineralized sections encountered in the drift are shown in red on the attached map marked "Exhibit B". Two samples were taken and have been assayed. The location, thickness sampled, and assay of each sample is shown on the attached map.

	Thickness	Assay
Sample #6 -	32"	1.48% U_3O_8
" #7 -	32"	0.07% U_3O_8

During the month it became necessary to dig a sump in the North Drift to catch up the water encountered in the heading.

The normal amount of mechanical break-downs occurred during the month. None were of major importance. Considerable credit is due the Superintendent and miners employed on the Project for the two excellent tunnels they have driven.

Very truly yours

Thorsburg Mining Company
By: Leo L. Coady, Consultant

Form MF-104 (Rev.)
(April 1950)

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of February, 1954 Docket No. DMEA 3060 Contract No. Idm E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address 160 West Main, Grand Junction, Colorado.
Contract Amount, $41,910.00 Government Participation: 90% Amount, $37,720.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling J-H Holes	30.00	None	30.00			
Bulldozing						
Crosscutting	148.00	236.80	384.80	00	236.80	236.80
Drifting	3700.00	3611.20	7311.20			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	25.00	None	25.00	00	00	00
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	3903.00	3848.00	7751.00	3730.00	3848.00	7578.00
					- 236.80	- 236.80
				3730.00	3611.20	7341.20

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

Date 3-13-54 *Payee Thornburg Mining Company

Per J. T. Tunnell Title Office Mgr.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—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.

(Instructions on reverse)

* Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of: $3357.00

Signature
(Authorized Certifying Officer)

Date 3/19/54 Vou. No. DMA-54-90

(See other side)

* Disallowed in January for turnout drifting not provided in Contract

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. E638 in accordance with the terms of the contract.

Signature R.R. McLellan 3,379.50 Title Mining Engineer Date 3/17/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: R.D.B.

Signature W.H. King Title Executive Officer Date MAR 19 1954

MONTHLY REPORT OF OPERATOR

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(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 29 1954

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of February 1954 Docket No. DMEA 3060 Contract No. Idm E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address 160 West Main, Grand Junction, Colorado.

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting	Ft	3700.00	125	7311.20	247	29.60	1345	29.60
Crosscutting	Ft	148.00	5	384.80	13			
Raising								
Shafts								
Winzes								
Drilling: ~~Core~~ Jackhammer ~~Churn~~ holes	Ft	30.00	30	30.00	30	1.00	1500	1.00
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Samples	Ea	25.00	5	25.00	5	5.00	120	5.00
TOTAL DISTRIBUTED COSTS		3903.00	165	7751.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3903.00		7751.00				

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

Date March 13th 1954 Operator Thornburg Mining Co.

Per J. T. Tunnell Title Office Mgr.

J. T. Tunnell

REMARKS:

→ NOTE.—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.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION IV

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 29 1954

Administrative Audit Difference Statement

Date: March 23, 1954
Payee's
Reference: Progress Report

February, 1954

Thornburg Mining Co.,
160 West Main St.,
Grand Junction, Colo
Idm-E638

Upon examination of the above Payee's Reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed $ 3903.00

Difference $ 173.00

Amount Approved $ 3730.00

The reason for the difference was due to:

No provision is made in contract for turnout drift, however, five feet @ $29.60 equals $148.00 which is disallowed. $148.00

$25.00 claimed for five chemical assays for uranium is disallowed as this claim is not supported by documentary evidence but may be reclaimed when evidence is presented. 25.00

$173.00

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

N. E. Stokes
Audit Section

R-IV-B & F Form No. 4
4-15-52 D

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

224 New Customhouse
Denver 2, Colorado

March 19, 1954.

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 3060 (Uranium), Contract Idm-E638, Thornburg Mining Company (Shinarump Group), Grand County, Utah. Operator's Monthly Progress Report for the period February 1954.

Enclosed are the original and four copies of Form MF-104 and MF-104A, Narrative Report, and Engineer's Report for the above period.

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 90 per cent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

The amount of $148.00 claimed for 5 feet of turnout drift is to be disallowed as this charge is not provided for in the contract.

The claim for $25.00 for 5 chemical assays for uranium is disallowed as this claim is not supported by the required documentary evidence. It is reclaimable.

Remarks:

Date of Report	March 13, 1954.
Date Received in Field Office	March 16, 1954.
Date Received in Region Office	March 18, 1954.

W H King
W. H. King

Enclosures

RDB:cwm

cc: Contract
Secretary to the Oper. Comm. (2)
WMTraver
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
March 18, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

From: Chief, Mineral Resources Branch, Mining Division, Region IV

Subject: DMEA 3060, Contract IDM-E638 (Uranium), Thornburg Mining Company (Shinarump group), Grand County, Utah--Progress report for February 1954

Enclosed are the original and four copies of the above progress report, the second one--forms MF-104 and MF-104A with narrative, progress map--and the original and six copies of Russell R. McLellan's memorandum covering his inspection of the underground progress and checking of the reporting forms. The contract is unit cost on short form MF-200(A) and documentation is not required except for uranium analyses at $5.00 each to be supported by copies of the return.

McLellan verifies the drifting progress, 58 feet in the North Drift and 67 feet in the South Drift or a total of 125 feet, and 30 feet of jackhammer holes for the period as reported in the narrative and entered on the MF-104A forms. The report is complete and satisfactory in every way with entries and extensions correct on the reporting forms. The inspecting engineer's memorandum covers the progress and physical conditions encountered during the period stating that so far worthwhile uranium mineralization has not been encountered. He again recommends disallowance of the 5 feet of turnout drift claimed by the operator at the unit cost of $29.60, or a total of $148.00, involving a corresponding correction in the next MF-104 and MF-104A forms. The amount disallowed reduces the claim from $3,903.00 to $3,755.00.

Payment is recommended and certified on the MF-104 forms of $3,379.50, or 90 percent of the $3,755.00 approved.

W. M. Traver

W. M. Traver

enclosures

WMT/kp

cc 4
E638
Chron

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
March 18, 1954

Memorandum

To: Chief, Mineral Resources Branch, Mining Division, Region IV

From: Russell R. McLellan

Subject: DMEA 3060, Contract IDM-8638 (Uranium), Thornburg Mining Company (Shinarump group), Grand County, Utah--Progress report for February 1954

Unde ground progress for the above contract was inspected on March 7, 1954, on which date the North Drift had been driven a total distance of 124 feet and the South Drift, a total distance of 136 feet. During February the North Drift was advanced 58 feet and the South Drift, 67 feet as reported by the company. It should be noted that an additional 5 feet of turnout drift has been claimed for the North Drift. In discussing the matter of turnout drifts with the mine foreman, he indicated that the company would prefer to bear the cost of the turnout drifts rather than to amend the contract and have the equivalent footage deducted from the second stage of the program.

Weak uranium mineralization has been encountered in both drifts, but as yet, the grade and quantity are too low to be classified as ore. Fairly persistent radioactivity was noted in the walls of the South Drift commencing at a point approximately 30 feet from the starting point of the contract and extending for a distance of about 70 feet. Three samples cut at the points of highest radioactivity, 23 inches at plus 30 feet from the starting point of the contract, 23 inches at plus 35 feet, and 30 inches at plus 92 feet, assayed .09, .10, and .04 percent U_3O_8, respectively. The mineralized zone which appears to average about 15 inches in thickness probably will contain an average grade of no more than .04 percent U_3O_8 for the entire 70 feet.

Weak mineralization was encountered along the left wall of the North Drift commencing at a point 15 feet from the starting point of the contract and extending for a distance of about 30 feet along the wall. A second zone was encountered about 90 feet from the starting point and extended 29 feet to and across the face at

the close of the period. Samples were cut at two points of highest radioactivity. One sample from the right wall at plus 30 feet from the starting point of the contract contained .14 percent U_3O_8 across a zone 24 inches in thickness. The second sample cut from the left wall at plus 45 feet contained .02 percent U_3O_8 across a zone 30 inches in thickness. Sample information is not yet available for the mineralization encountered near the face of the heading.

Two jackhammer holes 15 feet in depth were drilled in the North Drift at the specified interval of 25 feet. Only slight radioactivity was noted in probing the holes. Towards the close of the period, the ore horizon being followed by the North Drift commenced to rise quite rapidly and probably will continue to do so until reaching an elevation of approximately 4,535 feet at which level mineralization was encountered in drill holes 220 and 228.

All work with the exception of the turnout drift was accomplished in accordance with the contract. The 5 feet and $148.00 claimed for the turnout drift are disallowed. The operator's progress report is complete with MF-104 and MF-104A forms, narrative report, assay information, and progress maps. Payment is recommended of $3,379.50, or 90 percent of $3,903.00 less $148.00.

Russell R. McLellan
Russell R. McLellan
Mining Engineer

RRM/kp

ec 6
E638
Chron

DIST. ENGR. 10 MT
CHAIRMAN
PERSONNEL
FILE E634
RKM

(c) NARRATIVE
For the month of February 1954
Exploration Project Contract
Thornburg Mining Company
Docket No. DMA- 3060

Mineral Resources Branch
Date Rec'd
MAR 16 1954
BUREAU OF MINES
Denver, Colorado

Mr. W. R. Traver, Jr.
Mineral Resources Branch
Building 20, Room 137
Denver Federal Center
Denver 14, Colorado

Dear Mr. Traver:

Pursuant to instructions the following narrative report is submitted with maps covering in detail the progress made during the month of February 1954 on the exploration contract No. DMA-3060, between Defense Minerals Exploration Administration and the Thornburg Mining Company.

ADVANCE:

	1954 February Advance	1954 Advance to Date
SOUTH DRIFT -	67 Feet	128 Feet
Turnout Drift -	0 "	8 "
Total -	67 Feet	136 Feet
NORTH DRIFT -	58 Feet	119 Feet
Turnout Drift -	5 "	5 "
Total -	63 Feet	124 Feet
Total February advance in both drifts -		130 Feet
Total February feet of jackhammer holes-		30 Feet

Reference is made to the attached map marked "Exhibit B" which shows in plan the advance made in each drift and the location of the two jackhammer holes in the North drift. Levels have been run and the elevation of ore horizons in the drill holes established in relation to the two drifts. Sections showing this relation have been prepared and are shown on the attached map marked "Exhibit B".

The South Drift advanced through a formation composed of medium grained sandstone and clay. The sandstone occurred as thin irregular layers in the clay. Weak mineralization was encountered for a distance of seventy feet which probably indicates a northwest trending zone of mineralization. The mineralized section of the drift is shown in red on the map. Three samples were taken along this zone. The location of each sample is shown on the attached map with thickness sampled and assays.

	Thickness	Assay
Sample #1 -	23"	0.09% U_3O_8
Sample #2 -	23"	0.10% "
Sample #4 -	30"	0.04% "

The North Drift advanced in a formation composed of a thin layer of medium grained sandstone carried in the back and with clay beneath. As the drift advanced, the sandstone thinned to only a few inches. However, the last twenty feet of advance in the drift, the sandstone has thickened and is mineralized. It is strongly radioactive and shows a high count on the Geiger counter. No samples have yet been taken for assay.

The mineralized sections encountered in the drift are shown in red on the attached map marked "Exhibit B". Mineralization encountered in the drift during January is also noted on the map in red. In this section two samples were taken. The location, thickness sampled, and assay of each sample is shown on the attached map.

	Thickness	Assay
Sample #3 -	24"	0.146 U308
Sample #5 -	34"	0.023 "

Two jackhammer holes, each 15 feet deep, were drilled in the floor of the drift. The location of these holes is shown on the attached map.

The first five feet of formation encountered in each drill hole was mixed Chinle shale, red Moenkopi shale and sandstone. Assays are not yet available on samples taken of the cuttings.

During the month, it became necessary to excavate a turnout drift in the North Drift, the same as was donein the South Drift last month. Five feet of the excavation have been done.

With the exception of two broken axels on the trammers, no undue mechanical difficulties developed during the month. Both faces of the headings have reached a point some distance from the portals and fresh air. Ventilation is therefore becoming more of a problem.

Very truly yours

Thornburg Mining Company
By:

Leo J. Coady

Leo J. Coady, Consultant

Form ME-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of January, 1954 Docket No. DMEA 3060 Contract No. Idm-E-638
Operator's Name Thornburg Mining Company Minerals Uranium
Address 160 West Main, Grand Junction, Colorado
Contract Amount, $ 41,910.00 Government Participation: ____% Amount, $ 37,720.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing						
Crosscutting	236.80	none	236.80	00	00	00
Drifting	3611.20	none	3611.20			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	3848.00	none	3848.00	3611.20	--	3611.20

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 2-9-54 *Payee Thornburg Mining Company
Per [signature] Title Office Mgr.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—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.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 3250.08

Signature [signature]
(Authorized Certifying Officer)

Date 2/26/54 Vou. No. DMA. 54-85

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. E 638 in accordance with the terms of the contract.

Signature R. R. McLellan 3250.05 Title Mining Engineer Date 2/11/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: R.A.B.

Signature W H King Title Executive Officer Date FEB 19 1954

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of January 195 4 Docket No. DMEA 3060 Contract No. Idm-E-638

Operator's Name Thornburg Mining Company Minerals Uranium

Address 160 West Main, Grand Junction, Colorado.

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting	Ft.	3611.20	122	3611.20	122	29.60	1345	29.60
Crosscutting	Ft.	236.80	8	236.80	8			
Raising								
Shafts								
Winzes								
Drilling: ###Jackhammer ### holes	Ft.	none	none	none	none	none	1500	1.00
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Samples	Ea.	none	none	none	none	none	120	5.00
TOTAL DISTRIBUTED COSTS		3848.00	130	3848.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3848.00	130	3848.00				41,910.00

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

Date 2-9-54 Operator Thornburg Mining Co.

Per [signature] Title Office Mgr.

NOTE.—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.

REMARKS:

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

U. S. GOVERNMENT PRINTING OFFICE 205676

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION IV

Administrative Audit Difference Statement

RECEIVED
FEB 8 1954

Date: [illegible] 1, 1954
Payee's Reference: Progress Report
January, 1954

Throckmorton Mining Co.,
160 West Main St.,
Grand Junction, Colo.
Idm-2638

Upon examination of the above Payee's Reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed $ 3,848.00

Difference $ 236.80

Amount Approved $ 3,611.20

The reason for the difference was due to:

$236.80 claimed for 8 feet of turnout drift at $29.60 per foot is disallowed as contract makes no provision for car passes.

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

N. E. Stokes
Audit Section

R-IV-B & F Form No. 4
4-15-52 D

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

224 New Customhouse
Denver 2, Colorado

February 19, 1954.

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 3060 (Uranium), Contract Idm-E638, Thornburg Mining Company (Shinarump Claims), Grand County, Utah. Operator's Monthly Progress Report for the period January 1954.

Enclosed are the original and four copies of Form MF-104 and MF-104A, Narrative Report, and Engineer's Report for the above period.

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 90 per cent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

The amount of $236.80 claimed for 8 feet of turnout drift at $29.60 a foot is to be disallowed as contract makes no provision for car passes.

Remarks:

Date of Report	February 9, 1954
Date Received in Field Office	February 10, 1954
Date Received in Region Office	February 16, 1954

W H King
W. H. King

Enclosures

RDB:cwm

cc: Contract
Secretary to the Oper. Comm. (2)
WMTraver
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
February 16, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

From: Chief, Mineral Resources Branch, Mining Division, Region IV

Subject: DMEA 3060, contract Idm-E638 (Uranium), Thornburg Mining Company (Shinarump claims), Grand County, Utah -- Progress report for January 1954

Transmitted herewith are the original and four copies of the above progress report, the initial one--forms MF-104 and MF-104A with narrative, progress map--and the original and six copies of R. R. McLellan's memorandum covering his inspection of the underground progress and review of the reporting forms. The contract is unit cost on short form MF-200(A) and documentation is not required except for uranium chemical assays at $5.00 each which are to be supported by copies of the returns.

McLellan inspected the property February 9 and verified the drifting progress, 61 feet in the South Drift and 61 feet in the North Drift, a total of 122 feet for the month as reported in the narrative and entered on the MF-104A forms. The turnout of 8 feet in the South Drift, while actually driven and probably necessary in this case, is not allowable under the terms of the contract and payment is not approved of the $236.80 claimed for that operation.

Work is being accomplished in a satisfactory manner and the reports are well prepared with entries and extensions on the reporting forms correct. The inspecting engineer describes the operations adequately.

The $236.80 disallowed subtracted from the total $3,848.00 claimed by the contractor leaves $3,611.20. Of this sum $3,250.08, or 90 percent, is recommended for payment.

W. M. Traver

W. M. Traver

Enclosure

WMT/le
cc-4
E638
Chron

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
February 12, 1954

Memorandum

To: Chief, Mineral Resources Branch, Mining Division, Region IV

From: Russell S. McLellan

Subject: DMEA 3060, contract Idm-8638 (Uranium), Thornburg Mining Company (Shinarump claims), Grand County, Utah -- Progress report for January 1954

The Thornburg property was inspected February 9, 1954, and on that date the North Drift had been advanced 83 feet and the South Drift 84 feet. Both drifts were advanced 61 feet during January 1954, and one turnout drift 8 feet in length was driven off the South Drift. The turnout drift is entered as crosscutting on forms MF-104 and MF-104A. Although crosscutting is not allowable by the contract, it should be noted that an occasional short turnout drift or crosscut will greatly facilitate the efficiency of the shuttle car operation by permitting them to turn around and operate in the forward gears a maximum amount of time. It is the writer's belief that the occasional turnouts could be allowed by amendment but it would be necessary to reduce the total drifting footage which is probably more valuable to the operators in the over-all program than the turnouts. The turnouts can be driven more advantageously at company expense and, therefore, the amount charged for 8 feet at $29.60 a foot, or $236.80, is not approved.

Long hole exploration (jackhammer and stoper) probably will commence during February on the specified intervals of 25 feet along both drifts.

Weak mineralization was encountered in the South Drift about 30 feet from the starting point of the contract and can be traced along the south wall for about 7 feet. Weak mineralization also was encountered in the North Drift about 20 feet from the starting point. Assay results probably will be available in February 1954.

The operation is progressing smoothly with excellent cooperation from the mine superintendent, E. G. Johnson. The monthly report is complete with maps, narrative report, and properly prepared MF-104 and MF-104A forms, except as noted above.

Payment is recommended of $3,250.08, or 90 percent of the $3,611.20 approved.

Russell R. McLellan
Russell R. McLellan
Mining Engineer

RRM/le
cc 6
E638
Chron

(c) [illegible]
For the month of January 1954
Exploration Project Contract
Thornburg Mining Company
Docket No. [illegible]-3060

Mr. [illegible] Beaver, Jr.
Mineral Resources Branch
Building 20, Room 137
Denver Federal Center
Denver 15, Colorado

Dear Mr. Beaver:

Pursuant to instruction the following narrative report, with maps covering in detail the progress made during the month of January 1954 on the exploration contract No. [illegible]-3060, between Defense Minerals Exploration Administration and the Thornburg Mining Company, is submitted.

The contract was initiated in the drifts on January 5, 1954 and continued throughout the month. The drifts have been designated as North Drift and South Drift and will be identified as such throughout the life of the contract.

Details:

		1954 January Advance	1954 Advance to Date
[illegible] -		61 Feet	61 Feet
Thornburg Drift -		8 "	8 "
	Total -	69 Feet	69 Feet
[illegible] -		61 Feet	61 Feet
	Total -	61 Feet	61 Feet

Total Advance both drifts - 130 Feet

Hauling is done with a diesel powered shuttle car. The turnout drift in the South Drift was excavated so that the shuttle car could be turned around after loading. Otherwise it became necessary to back out and too much time was lost.

Points marking the start of the DMEA contract in both the North Drift and South Drift were permanently fixed by driving wooden plugs in drill holes. The same will be done at the end of each month, thereby fixing the advance permanently underground.

In order to provide proper clearance for the timber between the ribs of the drift, it was necessary to drive the heading 8' x 7', from breakage.

During the first half of the month the difficulty was encountered with a motor on one of the trammers. This was repaired and the cycle of operations in the drifts resumed for the rest of the month without interruption.

The South drift advanced through a formation composed of medium grained sandstone and clay. The beds are rather thin and show less dip as distance from the pit is decreased.

A thin lense of mineralized sandstone was encountered thirty feet from the starting point in the South drift, (see attached map marked Exhibit "A"). It is exposed for about seven feet along the south side of the drift. Assays are not yet available on this showing.

The North drift advanced in a formation composed of a layer of coarse sandstone with clay above and below it. This is the bed in which mineralization has occurred to the north. It appears to be thinning out as distance to the south is gained. Weak mineralization was encountered in this drift twenty feet beyond the starting point. (See attached map marked Exhibit "B").

Very truly yours

Thornberg Mining Company
By: Leo J. Coady
Leo J. Coady, Consultant

Thorneburg Mining Company
P. O. Box 80
New Almaden, California 95042

Re: DMEA-3060 (Uranium)
Thorneburg Uranium Mines, Inc.
Shinarump Claims
Grand County, Utah
Contract Ida-2618

Gentlemen:

Thank you for your check in the amount of $1,352.20.

By the terms of the subject Exploration Project Contract, as amended, and the certification of discovery or development dated June 22, 1956, all minerals mined or produced from November 13, 1953, to November 13, 1964, were subject to the Government's 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 Furnich, Jr.

Acting Director

MMerritheW/mm (3/30/65)
cc: Director's Reading File
Region III
✓GS&A Division
Denver
1204

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

To: Thernburg Uranium Mines, Inc.
160 West Main
Grand Junction, Colorado

Pursuant to the provisions of Exploration Project Contract No. Idm-E638, dated November 13, 1953, (Docket No. DMEA-3060), hereinafter called the "contract," between the Thernburg Uranium Mines, Inc., a corporation, and the United States of America, hereinafter called the "Government"; to establish and fix the Government's percentage royalty on production and its lien therefor 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:

Drifting, crosscutting, and long-hole percussion drilling on the land described in Article 2 of the contract, encountered erratically-distributed uranium mineralization of ore grade in three or more lime pebble conglomerate beds in the lower 30 feet of the Triassic Chinle formation.

Dated: JUN 2 2 1956

THE UNITED STATES OF AMERICA

By C. Mittendorf
Administrator, Defense Minerals
Exploration Administration

MChing/gla/ism 6-15-56
cc to: Operator (original)
Contract Adm. & Audit Div.
DMEA Field Team, Region III (2)
Finance Office
Docket
Rare and Misc. Metals Div.
Admr.'s Reading File
Operating Committee
Robert W. Geehan, Rm. 3608
T. H. Kiilsgaard, Rm. 5224
F. E. Johnson
Mr. ~~Murphy~~ Ching

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

Mr. Vernon Elton Thornburg
Thornburg Uranium Mines, Inc.
1/0 West Main
Grand Junction, Colorado

JUN 25 1956

Re: Docket No. DMEA-3060 (Uranium)
Contract No. Ida-8638
Shingrump Claims
Grand County, Utah

Dear Mr. Thornburg:

Enclosed is a "Certification by the United States of Amerika of a Discovery or Development Under an Exploration Project Contract." This certification covers all the land described in Article 2 of the subject contract.

By the terms of the Exploration Project Contract, as amended, and of the certification, all uranium and other valuable minerals produced from the claims described in Article 2 of the contract, from November 13, 1953, the date of the contract, are subject to the Government's percentage royalty as set forth in the contract until the sum which the Government has advanced as its participating interest is repaid, or until November 13, 1961, whichever occurs first.

Payments should be made to Mr. W. F. Traver, Executive Officer, DMEA Field Team, Region III, 221 New Customhouse Building, Denver 2, Colorado. Checks should be payable to the Defense Minerals Exploration Administration. The purchaser should be advised to deduct the royalties from the amount due on each shipment and forward the check directly to the Executive Officer. Any bonus payments or allowances received by you from the sale of ore are considered to be a part of the purchase price to which the Government's royalty applies. Royalty payments to the Government should be accompanied by suitable evidence, such as copies of settlement sheets, showing quantity and grade of the products sold, the name of the purchaser, and the price and charges, certified to be correct by the purchaser.

You are requested to notify Mr. Traver of any changes in ownership or production rights that might have any effect on the Government's right to its percentage royalty. Also, if production ceases at any time for an extended period, please notify Mr. Traver at six-month intervals that no production has been made, when that is the case.

Sincerely yours,

G. O. Mittendorf

Enclosure

Administrator

Field Team, Region III (2)
Denver
Reno and Winn. Metals Division
Contract Adm. & Audit Division
F. E. Johnson
Eng

Copy for Adm. in Running File
as Adm. in Operating Committee
Robert W. Cumming, Reg. 3/GS
F. E. Kilbourne, Reg. 3/GS

Government's copy

RECEIVED
MAY 31 1956

TERMINATION AGREEMENT

It is agreed this 28th day of May, 1956, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Thornburg Uranium Mines, Inc., Assignee, hereinafter called the "Operator," parties to that certain Exploration Project Contract Idm-E638 (Docket No. DMEA-3060), dated November 13, 1953, hereinafter called the "Contract," that:

1. Effective March 13, 1956, the Contract and all obligations of the parties thereunder, except as otherwise herein expressly provided, shall be and are hereby terminated.

2. The Government shall contribute only to the fixed unit costs of work performed prior to June 30, 1955.

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

4. All rights of the Government provided for in the Contract with respect to a certification of discovery or development and a percentage royalty and lien for its payment are preserved.

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

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

THE UNITED STATES OF AMERICA

By J W Townsend
Acting Executive Officer
DMEA Field Team, Region III

THORNBURG URANIUM MINES, INC., Assignee

By Lorth W. Thornburg

Title Vice President

DMEA
Date Rec'd
SEP 30 1955
BUREAU OF MINES
Denver, Colorado

No. 4

AMENDMENT TO CONTRACT: No. Idm-E638

Contract Docket No. DMEA 3060, dated November 13, 1953, between the United States of America and Thornburg Uranium Mines, Inc., is hereby amended as follows, effective as of the date of the contract:

> Referring to "Article 3. Exploration project" of Exploration Project Contract form MF-200(A) (February, 1952), following the words "and shall bring the project to completion within a period of" delete "twenty-two (22) months," as provided by Amendment No. 3, and in lieu thereof substitute "twenty-eight (28) 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 September 30, 1955

THORNBURG URANIUM MINES, INC.

By Vance Thornburg
Vance Thornburg, President

UNITED STATES OF AMERICA

By W. M. Traver
W. M. Traver, Executive Officer,
DMEA Field Team, Region III

September 9, 1955

RECEIVED
SEP - 1955

COPY

Mr. W. F. Traver, Executive Officer
U.S.E.A. Field Team, Region III
224 New Customhouse
Denver 2, Colorado

Re: DOCKET DEA 3000 (PHASE 1)
CONTRACT IDF-C-636

Dear Mr. Traver:

Due to the fact that the above captioned contract expires under date of September 13, 1955, and since we are desirous of completing the project, we would appreciate an extension of time.

We hereby request an amendment to extend the time for another six (6) months, namely, September 13, 1955 until March 13, 1956.

Very truly yours,

J. T. Tunnell
Assistant Secretary
Thorndburg Trading Lines, Inc.

JTT:cp

DMEA
Date Rec'd
MAY 11 1955
BUREAU OF MINES
Denver, Colorado

Government's copy

Bureau of Mines
Denver Minerals Management
MAY 9 1955

ASSIGNMENT OF CONTRACT

WHEREAS, Vance Elton Thornburg, d/b/a Thornburg Mining Company (hereinafter called the "Assignor"), entered into Exploration Project Contract Idm-E638 (Docket No. DMEA-3060), dated November 13, 1953, as amended (hereinafter called the "Contract"); and

WHEREAS, Thornburg Uranium Mines, Inc., a State of Delaware corporation (hereinafter called the "Assignee"), has acquired the Assignor's interest in the land which is the subject of the Contract and the Assignee desires to complete the work under the Contract;

NOW THEREFORE, the Assignor, in consideration of the sum of One Dollar ($1.00) and other good and valuable consideration received from the Assignee does hereby assign, transfer, and convey to the Assignee all of his right, title, and interest in the Contract: Provided, That the Government shall make payment to the Assignor for all work performed prior to June 1, 1955, and upon payment thereof the Government shall be and is hereby released by the Assignor from all claims under the Contract.

The Assignor consents to all future amendments and assignments of the Contract and waives notice thereof.

This Assignment is subject to the execution by the Assignee of the acceptance form set forth below and to the written consent of the Government.

Dated this 9th day of May, 1955.

THORNBURG MINING COMPANY

By Vance Thornburg /Seal/
(owner)

ASSIGNEE'S ACCEPTANCE

The Assignee, Thornburg Uranium Mines, Inc., hereby accepts the above Assignment and agrees to be

bound by the terms, provisions, and conditions of the Contract.

Dated this 9th day of May, 1955.

THORNBURG URANIUM MINES, INC.

By Vance Thornburg
(President)

I, J. T. Tunnell J. T. Tunnell, certify that I am the Assistant secretary of the corporation named herein; that Vance Thornburg who signed this instrument on behalf of the corporation, was then President of said corporation; that said instrument 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.

GOVERNMENT'S CONSENT

The Government, this 28th day of April, 1955, hereby consents to the above assignment without releasing the Assignor, Vance Elton Thornburg, from any of the terms, provisions, and conditions of the Contract.

THE UNITED STATES OF AMERICA

By C. M. Theodore
Administrator, Defense
Minerals Exploration
Administration

No. 3

AMENDMENT OF CONTRACT: No. Idm-E638

Contract Docket No. DMEA 3060, dated November 13, 1953, between the United States of America and Vance Elton Thornburg, dba Thornburg Mining Company, is hereby amended as follows, effective as of the date of the contract:

> Referring to "Article 3, Exploration project" of Exploration Project Contract form MF-200(A) (February, 1952), following the words "and shall bring the project to completion within a period of" delete "sixteen (16) months", as provided by Amendment No. 2, and in lieu thereof substitute "twenty-two (22) months".
>
> Referring to Annex II which is in lieu of Article 6 of contract form MF-200(A) (February, 1952), item "b(2)", the words "for a period of ten years" is changed to read "for a period of eleven years".

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 APR 5 1955

THORNBURG MINING COMPANY

By Vance Elton Thornburg
Vance Elton Thornburg

UNITED STATES OF AMERICA

By W. M. Traver
W. M. Traver, Executive Officer, DMEA Field Team, Region III

DMEA
Date Rec'd
MAR 30 1955
BUREAU OF MINES
Denver, Colorado

DMEA
Date Rec'd
FEB 24 1955
BUREAU OF MINES
Denver, Colorado

February 23, 1955

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

Re: Docket DMEA 3060 (Uranium)
Contract Ida-E-638

Dear Mr. King:

Due to the fact that the extended time period under our Exploration Project Contract will expire on March 13, 1955, we believe it will be necessary to request an additional time period in order to complete the work as outlined in the above stated Docket-Contract.

We would like at this time to request an extended time period of six (6) months which we believe will give us ample time to finish Stage II of theproject.

Very truly yours,

J. T. Tunnell
Office Manager

JTT:bp

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 Exploration Administration
NOV 22 1954

November 16, 1954

Mr. J. T. Tunnell, Office Manager
Thornburg Mining Company
160 West Main
Grand Junction, Colorado

Re: Docket No. DMEA 3060 (Uranium)
Contract Idm-E638
Thornburg Mining Company
Grand County, Utah

Dear Mr. Tunnell:

With reference to your letter of October 15, 1954, to Mr. W. M. Traver, you are hereby authorized to perform the following work under Stage II of Contract Idm-E638:

(1) Extend the westerly drift in the south workings an additional 250 feet westerly on the upper ore horizon.

(2) Drill 10 sample drill holes downward to a depth of 25 feet at 25 foot intervals in the drift under item (1) to explore lower ore horizons. The sample drill holes will be logged and probed with radiometric sampling equipment as outlined for the sample drilling under Stage I.

The Government's approval for the performance of the remaining footage of drifting and sample drilling is deferred pending analysis of the results of the above approved work.

Very truly yours,

for W. H. King

JWT:dm
cc: Amendment file
TAChristensen
JWTownsend
AHKoschmann (w/encl.)
WMTraver " "
ALBrokaw " "
Subject " "
Chm.,Oper.Comm " (3)
Chron

for A. H. Koschmann

DMEA Field Team, Region IV

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Department of the Interior
Defense Minerals Administration
Received
NOV 22 1954

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
November 8, 1954

Memorandum

To: Chief, Mineral Resources Branch, Mining Division, Region IV

From: M. H. Salsbury

Subject: DMEA 3060, contract Idm-E638 (Uranium) Thornburg Mining Company (Shinarump claims) Grand County, Utah - Recommendations for Stage II exploration

The operator under the subject contract has completed work called for under Stage I and has requested authorization to proceed with Stage II.

As set up in the contract, Stage II would consist of drifting 225 feet in a southerly direction from the present south face in the north workings and 250 feet in a westerly direction from the present west face in the south workings, to be followed by sample drill holes at intervals along these openings.

The operator, through his superintendent, has proposed essentially this same program verbally to the DMEA inspector.

Exploration to date has shown that ore deposition has taken place throughout the general area opened up so far, although no definite trends have been established. The individual lenses are erratic in size, grade, and placement. They occur in different strata within a range of about 20 feet vertically.

Sampling has indicated that the average ore grade as mined will be low. The erratic distribution of ore both horizontally and vertically will make mining costs high and profitable operation will be difficult to achieve.

Further exploration of the area between the north and south workings does not appear to be necessary as it will be opened up by the operator's mining operations. This also rules out consideration of work at Prospect No. 4, an alternate Stage II proposal mentioned in exhibit "A" of the contract.

There is a distinct possibility that mineralization may extend west of present workings in an unexplored area under the Wingate formation which is too deep for practical exploration by drilling from surface.

To examine this area, the operator has proposed driving west in the south workings, as provided for in Stage II of the contract, to follow mineralization in the present face which has dipped steeply (about 10°) below the floor. He believes that this steep dip may represent a thickening of the potential ore horizon and that a point of maximum thickness may be found westward with better mineralization present. It is proposed to drive north and south from this west drift at a favorable point if mineralization is cut.

In the north workings, the operator proposes to turn the proposed south drift to a southwest direction to achieve the same purpose. There is no mineralization showing in the present south face.

Experience has shown that it is not possible to explore the potential ore horizon adequately by drifting or crosscutting above. Therefore, it is proposed to drill the formations from drill stations at 25-foot intervals with holes 25 feet down and 25 feet up from each station, in a manner similar to the procedure followed in Stage I.

In the opinion of the BMRA inspector, driving from both north and south workings to the west is an unnecessary duplication at this time. It is possible that mineralization extends west of the present workings and there is a distinct possibility that the ground explored so far may be a "fringe" area with better mineralization occurring ahead. However, it is not necessary to explore this area from two headings, in the absence of any evidence to indicate that it is advisable to do so.

Because the heading in the south workings shows mineralization in the floor, this appears to be the best of the two proposals. The 225 feet of Stage II drifting in the north workings, which require approval by the Region IV Field Team, should be deferred until later. After the results of Stage II drifting in the south workings have been evaluated, the best location to employ the additional footage can be determined to better advantage.

Examination of the workings by Geological Survey personnel indicates that the upper potential ore-bearing horizon is now just below the floor of the west heading in the south workings. The heading should be driven on this horizon which will necessitate taking up bottom for some distance back of the face. Under no circumstances should the drift be driven above the horizon. The estimated maximum 10° dip of the beds is close to the steepest grade on which the operator's haulage equipment will operate satisfactorily.

Sample drilling above the drift is not necessary because it has already been determined that there are no probable ore horizons above.

Drilling of 25-foot sample holes downward at 25-foot intervals along the drift should be ample to test potential horizons occurring below.

It is not practical to take sludge samples in down holes. Efforts to do so in holes previously drilled at this property were unsuccessful. The sludge obtained did not check radioactivity indicated by probing. Probing appears to be the only way to evaluate such drill holes.

It is recommended that 250 feet of drifting in a westerly direction from the present west face in the south workings, to be driven on but not above the upper ore horizon be approved, with the additional 225 feet of drifting under Stage II in the north workings to be deferred. A total of 250 feet of sample drilling downward in 10 holes 25 feet deep at 25-foot intervals along the new west drift is also recommended for Stage II. This is considerably less than the maximum of sample drilling called for in Stage II. Additional drilling may be required later, if more drifting is done.

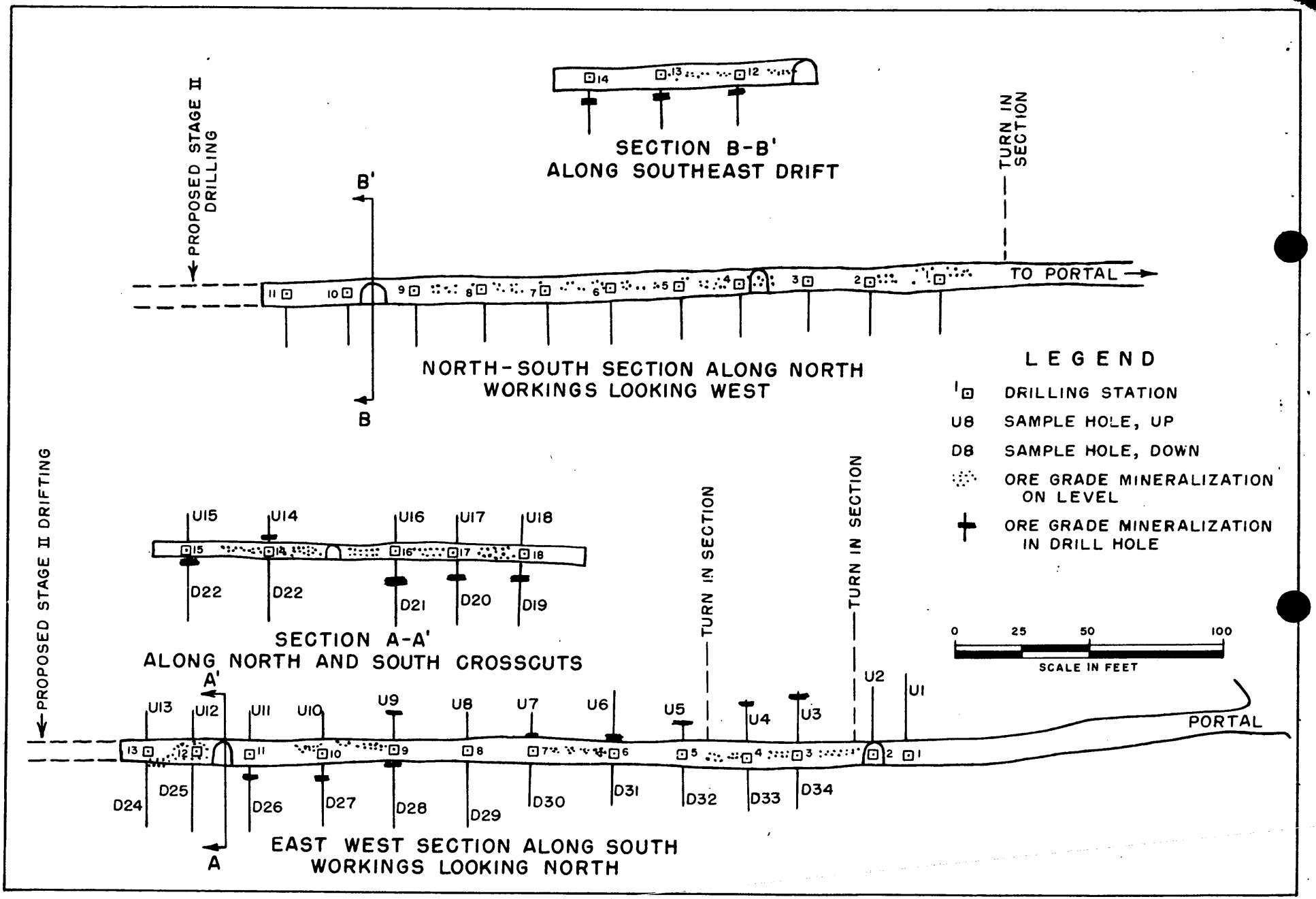
Sampling of the down holes should be confined to radiometric probing. Taking of sludge samples should not be required and chemical analyses should be made only of suspected uranium-bearing material found in the workings.

The operator's superintendent has indicated they will accept this program.

M. K. Salsbury
M. K. Salsbury
Mining Engineer

cc 8
2638
DMRA Charon.

MKS/pah



LOCATION OF SAMPLE HOLES AND MINERALIZATION, THORNBURG MINING CO.
SHINARUMP CLAIMS, GRAND COUNTY, UTAH (DMEA 3060, CONTR. IDM-E638)

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 22 1954

October 29, 1954

Memorandum

To: A. H. Koschmann, Supervising Geologist, DMEA Field Team Region IV E.H.H. for A.H.K.

From: Arnold L. Brokaw, District Supervisor

Subject: DMEA 3060 (Uranium), Contract Idm-E 638, Thornburg Mining Company, Grand County, Utah

Transmitted herewith are eleven copies of a memorandum interim report by H. S. Johnson, covering the above-referenced DMEA project.

Since stage I work under the terms of the contract has been successful in finding ore-grade material, Johnson recommends that the project work be carried on under stage II of the contract. Johnson lists three alternative methods of pursuing stage II, but is in favor of transferring drift footage from the north workings to the south drift.

W P Williams
For Arnold L. Brokaw

WPW/mlr

Enclosures 11

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 22 1954

October 29, 1954

Memorandum

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

From: Arnold L. Brokaw, District Supervisor

Subject: DMEA 3060 (Uranium), contract Idm-E 638, Thornburg Mining Company, Grand County, Utah

On being informed that all stage I exploration (see subject contract) had been completed, the writer visited the Thornburg property on October 25, 1954, to observe the results of the work to that date and to form an opinion as to whether or not the operator should be authorized to proceed with stage II of the project.

Ed Johnson, superintendent of operations on the Thornburg property, was present during the examination and expressed an opinion as to how he thought stage II work should proceed. The possible stage II procedures given in the following paragraphs are essentially in agreement with what Ed himself would like to do.

The writer is of the opinion that some form of stage II work should be allowed on the subject project. The following list gives three possible choices for this stage II work:

1st choice.-- Transfer the 225 feet of stage II drift from the north workings to the south workings so as to allow a total of 475 feet of stage II drifting in a westerly direction from the south workings. This would, in effect, cancel all stage II work in the north workings.

2nd choice.-- Proceed with the 250 feet of stage II drifting in the south workings as specified by the contract. Proceed with the 225 feet of stage II drifting in the north workings, but turn the drift in a southwesterly direction rather than continue in the southerly direction specified by the contract. This change in direction is suggested so that the drift will advance in unexplored ground rather than toward the two barren AEC drill holes (hole numbers 213 and 211).

3rd choice.-- Cancel all stage II work in the north workings. Proceed with the 250 feet of stage II drifting in the south workings as specified by the contract.

Any one of the three choices for stage II work listed above is agreeable to the writer, although they are listed in what he considers to be the order of desirability. Any further drifting from either the north or south workings should follow the dip of the beds and not be allowed to rise up through them. The westernmost extension of the drift in the south workings had already proceeded (at company expense) approximately 48 feet beyond the stage I crosscut as of October 25, 1954, and, having been driven on the level, had passed up through and out of the uppermost mineralized bed at a point about 20 feet west of the stage I crosscut. Stage II work should begin at this point where the mineralized bed disappears into the floor of the drift and should proceed westward on the 8-10 degree dip necessary to stay within the mineralized horizon. Because both the north and south workings are now in the uppermost of the three known ore horizons in this area, long jackhammer, or stoper, holes should be drilled down at regular intervals to depths of 25 feet or so below the floor of any stage II drift which parallels the dip of the beds from the present workings. Under no circumstances would the writer approve any drifting from Prospect No. 4 (see under stage II part of exhibit "A" attached to the contract) in lieu of stage II work in the north or south workings.

H. S. Johnson
For Arnold L. Brokaw WEJ

HSJ/mlr

COPY

COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Department of the Interior
Bureau of Mines Administration
RECEIVED
NOV 22 1954

Building 20, Room 137
Denver Federal Center
Denver 2, Colorado
October 22, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

From: Chief, Mineral Resources Branch, Mining Division, Region IV

Subject: DMEA 3060, Contract Idm-E638 (Uranium) Thornburg Mining Company (Shinarump claims) Grand County, Utah

Enclosed are 6 copies of the operator's September 1954 progress transmittal, on the above docket, in which he reports completion of Stage I of the contract and requests authority to proceed with State II.

/s/ W.M. Traver

Enclosures

cc 1
E638
DMEA Chron.

WMT:dj

C
O
P
Y

THORNBURG
MINING
COMPANY

160 West Main

Grand Junction, Colorado
October 15th, 1954

Mr. W. M. Traver, Jr., Chief
Mineral Resources Branch
Mining Division, Region IV
Denver, Colorado

Re: Docket No. DMEA 3060
Contract Idm-E638

Dear Mr. Traver:

We submit herewith our report for the month of September together with a certified statement from Smith's Laboratory, Moab, Utah, covering the assays reported therein.

This report should conclude the operations under Stage I of the project and we will await government determinations for procedure under State 2.

Very truly yours,

/s/ J. T. Tunnell, Office Mgr.

JTT/g

No. 2

OCT 18 1954

AMENDMENT OF CONTRACT: No. Idm-E638

Contract Docket No. DMEA 3060, dated November 13, 1953, between the United States of America and Vance Elton Thornburg doing business as Thornburg Mining Company is hereby amended as follows, effective as of the date of the contract:

> Referring to "Article 3. Exploration project" of Exploration Project Contract Form MF 200 (A) (February 1952), following the words "and shall bring the project to completion within a period of" delete "10 months" and in lieu thereof substitute "sixteen (16) 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 12 1954

THORNBURG MINING COMPANY

By Vance Elton Thornburg
Vance Elton Thornburg

UNITED STATES OF AMERICA

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

OCT 18 195

October 1, 1954

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

RE: Docket DMEA 3060 (Uranium)
Contract IDM-E638

Dear Mr. King:

Due to the fact that our Exploration Project Contract Form MF-200(A) on which Contract IDM-E638 is prepared, expired under date of September 13, 1954, we hereby make a request for an extension of time in order to complete the project work.

The work involved in State I should be completed within the next few days and our report will be submitted as soon as possible.

Since the work involved in Stage II is dependent on results obtained in the first stage and is subject to prior Government approval, we are unable to determine an accurate estimate of the additional time required to complete the project. However, at this time, we would like to request an extended time period of six (6) months and will endeavor to complete the final stage as speedily as possible.

Very truly yours,

J. T. Tunnell
Office Manager

JTT:bp

No. 1

AMENDMENT OF CONTRACT: No. IDM-E638

Contract Docket No. DMEA 3060, dated November 13, 1953, between the United States of America and Vance Elton Thornburg, doing business as Thornburg Mining Company, is hereby amended as follows, effective as of the date of the contract:

Referring to EXHIBIT "A" attached to Exploration Project Contract Form MF-200(A) (February 1952), heading "Description of the Work", subheading "Stage I", items (b) and (c), delete both items in their entirety and in lieu thereof substitute the following:

(b) Starting from a point in the short adit just north of the main south workings, drift approximately 90 feet in a southwesterly direction, then turn the drift and continue further in a westerly direction for an approximate distance of 200 feet to intersect the projection of drill hole D1-206. After the projected position of drill hole D1-206 is reached -- (1) drive a crosscut in a direction approximately N 10° W along the ore horizon for a maximum distance of 100 feet to explore the area cut by drill holes D1-204 and D1-207; (2) drive a crosscut in a direction of approximately due south along the ore horizon to explore the area cut by drill hole D1-203.

(c) After the drifting described under item (b) and the crosscuts described under item (b) (1) and (2) are completed, or concurrently therewith, drill 560 feet of vertical stoper and/or jackhammer holes to sample ore horizons above and below the drift and crosscuts. The drift in a westerly direction, the crosscuts, and the location of drill hole stations are shown on the map titled "Recommended crosscutting and Jackhammer Exploration, South Drift, Shinarump claims, Thornburg Mining Co., Grand County, Utah, DMEA 3060, Contract IDM-E638" which is attached hereto and made a part of this amendment.

The sample drilling is to be accomplished according to the following schedule:

Drill Station No.	Number of Holes and Direction	Length	Total Footage
1	1 - up	25 feet	25 feet
2	1 - up	25 "	25 "
3	1 - up	20 "	20 "
3	1 - down	5 "	5 "
4	1 - up	15 "	15 "
4	1 - down	10 "	10 "
5	1 - up	10 "	10 "
5	1 - down	15 "	15 "
6	1 - up	20 "	20 "
6	1 - down	15 "	15 "
7	1 - up	10 "	10 "
7	1 - down	15 "	15 "
8	1 - up	10 "	10 "
8	1 - down	25 "	25 "
9	1 - up	5 "	5 "
9	1 - down	25 "	25 "
10	1 - up	5 "	5 "
10	1 - down	25 "	25 "
11 to 18 incl.	8 - up	10 "	80 "
11 to 18 incl.	8 - down	25 "	200 "
		Total	560 feet

Each drill hole shall be logged radiometrically by use of a rubber hose to push the probe to the bottom of up holes. Cuttings from all sample holes drilled under this contract shall be saved for radiometric or chemical testing.

Further referring to first said EXHIBIT "A", same heading, subheading Stage II, first paragraph, third line from the end, delete the words "from the raise" and in lieu thereof substitute "or raising".

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".

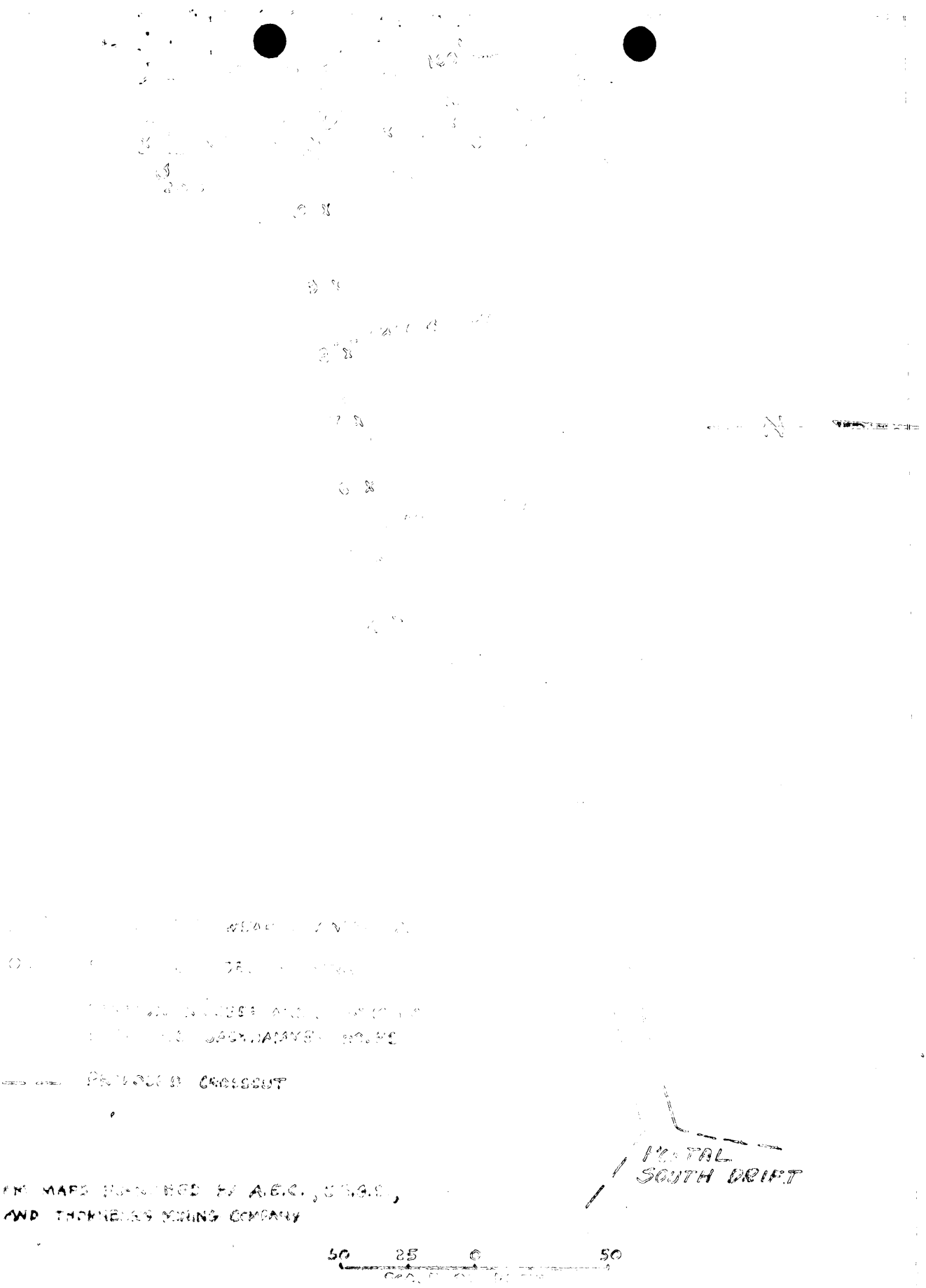
Dated JUL 12 1954

THORNBURG MINING COMPANY

By Vance Elton Thornburg
Vance Elton Thornburg

UNITED STATES OF AMERICA

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



RECOMMENDED ... ID JACK ... ON SHIN ...
...IMS, THOMPSON MINING CO., GRAND COUNTY, UTAH, DMRA 3000, CONTRACT IDM--...

224 New Customhouse
Denver 2, Colorado

July 12, 1954

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 3060 (Uranium), Contract DMA-3638, Thermburg Mining Co., Shinarump Group, Grand County, Utah

Enclosed are the original and two copies of Amendment No. 1 to Contract DMA-3638 which has been executed to modify the description of work to be performed under the contract. Also enclosed are three sets of data relevant to the amendment.

Copies of the 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

Encls.

JWT:jp
cc Contract
Chron
TAChristensen
WMEbaver
WPWilliams
AEBoschmann
JWTownsend
GSHittenderf
) with copy of amendment

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
June 21, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

From: Chief, Mineral Resources Branch, Mining Division, Region IV

Subject: DMEA 3060, Contract IDM-E638 (Uranium) Thornburg Mining Co., (Shinarump claims), Grand County, Utah--Amendment request

Enclosed are the original and seven copies of a memorandum from R. R. McLellan on the above amendment request. This is prepared in confirmation with your memorandum of June 16, 1954.

The recommendation has my approval.

J. A. Everett, for
W. M. Traver

Enclosures

cc: 7
USGS
IDM-E638
DMEA Chron.

WMT/ici

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
July 18, 1954

Memorandum

To: Chief, Mineral Resources Branch, Mining Division, Region IV

From: Russell R. McLellan

Subject: DMEA 3060, Contract IDM-E638 (Uranium) Thornburg Mining Co., (Shinarump claims), Grand County, Utah--Amendment request

The Thornburg Mining Company, by an undated letter, has requested an amendment to the subject contract to eliminate the proposed raise in the South Drift and to revise the crosscutting and jackhammer drilling. The contract in Stage I authorizes 350 feet of drifting on a lower ore horizon, 25 feet of raising to an upper ore horizon, 120 feet of drifting on the upper horizon, and a total of 400 feet of exploratory jackhammer holes, all in the South Drift. Two unexpected occurrences provide the basis for an amendment to the contract. First, the main South Drift was unintentionally driven in such a manner that instead of following the lower ore horizon, it gradually left the strata, crossed the intermediate beds and entered the upper ore horizon at the target area, thus eliminating any need for a raise to connect the two ore horizons. However, in order to test the unexplored portions of the two horizons along the tunnel line it will be necessary to drill exploratory jackhammer holes upward in the east portion of the drift and downward in the west portion of the drift. A second point to be considered is the fact that check surveys conducted by the company and by the U. S. Geological Survey indicate that the base map provided by the Atomic Energy Commission and used in the contract is erroneous. Stage I for the South Drift authorizes 350 feet of drifting to reach the target area in the vicinity of drill hole 206 (mislabled as 200 on the contract copy). Actually only 291 feet of drifting was required to reach the target area, leaving an excess of 59 feet of drifting. This footage, plus the 25 feet of raising now unnecessary, gives the company an excess footage in the South Drift of 84 feet at a price of $29.60 per foot.

In considering an amendment to revise the exploration in the South Drift, the writer with minor exceptions is in agreement with the proposals submitted by Chew, Finch, and Johnson of the U. S. Geological Survey in their memorandum of May 7, 1954. These proposals follows:

"1. No further Stage I drifting in the South Drift.

2. No raise be driven at drill hole DI-206. This raise is now unnecessary because the drift face as of May 1, 1954 is at the elevation originally proposed for the top of the raise.

3. A crosscut be driven in a direction approximately N. 10° W., level, for a maximum distance of 100 feet beginning at the face as of May 1, 1954."

The writer believes that the word "level" should be deleted from the sentence in favor of "along the bedding" or "along the ore horizon" to prevent the drift from leaving the ore horizon as happened previously. The beds dip approximately 5 degrees in the direction of the proposed crosscut.

"4. A crosscut be driven in a direction approximately due south, level, for a maximum distance of 60 feet beginning at the face as of May 1, 1954. It is not expected that either the north or south crosscut will actually intersect any of the drill holes. The recommended directions and distances are compromises based on several maps available. Where the occurrence or ore minerals is spotty as it is in the upper ore horizon, it is felt that a test in the vicinity of a drill hole containing ore is just as adequate as the actual intersection of the hole itself."

The writer believes that "level" also should be deleted from the first sentence as in item 3. The ore horizon will rise approximately 5 degrees in the direction of the proposed crosscut and it will be desirable to follow the ore horizon rather than to drive a level crosscut.

"5. The jackhammer drilling should be done according to the following schedule.

Location of drilling stations is shown on the accompanying map, and all holes are vertically up or down.

Station No.	Direction	Length	Total Footage
1-2	up	25 feet	50 feet
3	up	20	20
	down	5	5
4	up	15	15
	down	10	10
5	up	10	10
	down	15	15

Station No.	Direction	Length	Total Footage
6	up	20 feet	20 feet
	down	15	15
7	up	10	10
	down	15	15
8	up	10	10
	down	25	25
9	up	5	5
	down	25	25
10	up	5	5
	down	25	25
11-18	up	10	80
	down	25	200
	Total footage recommended		560 feet

This drilling will test all three known ore horizons. In addition, the extra footage at stations 6, 8, and 11 through 18 is designed to test the Chinle for 10 feet above the highest ore zone now known. Testing of this higher horizon is in the nature of insurance against missing possible additional mineralized rock. The total drilling recommended in the proposed amendment is 160 feet more than allowed in the original contract. However, approximately $1,776.00 is made available by the elimination of the raise and the unused drift footage under Stage I. It is recommended that a part of the saving be used for additional drilling".

The writer wishes to point out that approximately $2,486.40 is made available by the excess drift footage and by the elimination of the raise rather than $1,776.00 as indicated in the above paragraph quoted from the U. S. Geological Survey memorandum. Item 6 of the U. S. Geological Survey memorandum suggests that a transit survey be made of the area and that the cost of such survey be included under the amendment. The mine superintendent informed the writer that the base map that is submitted each month with the Company progress report is a transit survey by L. J. Geady. If the superintendent is mistaken, the company should prepare a map from a transit survey as soon as possible, however, it is doubtful that the cost of the survey could be included in the contract.

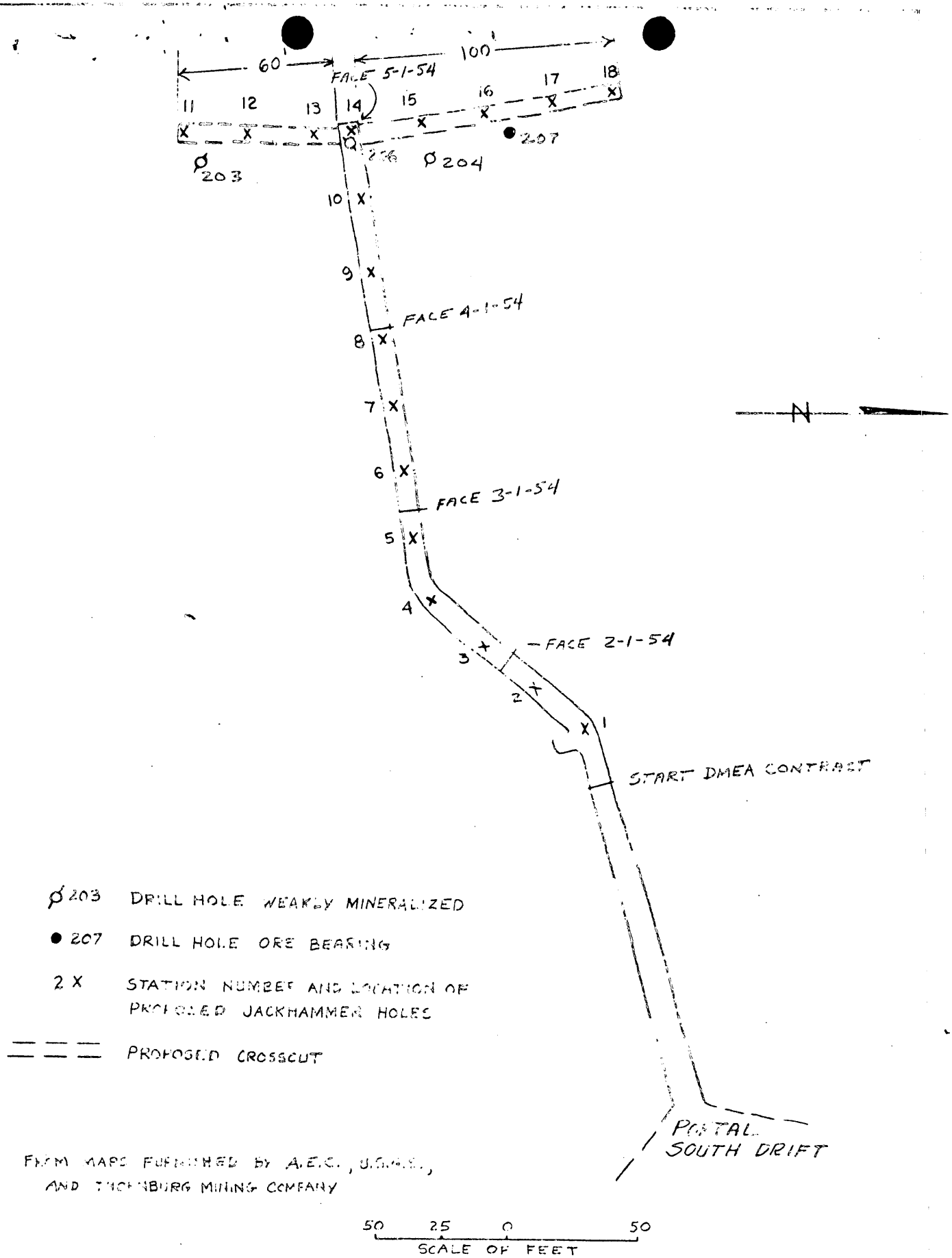
It is recommended that the contract be amended to include the first 5 items listed in this memorandum with consideration given to the suggested minor changes of items 3 and 4.

W. Dave

for Russell R. McLellan

RRM/iei

cc: 7
USGS



RECOMMENDED CROSSCUTTING AND JACKHAMMER EXPLORATION, SOUTH DRIFT, SHINARUMP CLAIMS, THORNBURG MINING CO., GRAND COUNTY, UTAH, DMEA 3060, CONTRACT IDM-E638

THORNBURG MINING COMPANY
160 South Main Street
Grand Junction
Colorado

AIR MAIL

Mr. W. H. King
Executive Officer
Defence Minerals Exploration Administration
224 New Custom House
Denver, Colorado

Dear Mr. King:

Reference is made to Docket No. DMEA-3060, the Exploration Project Contract between DMEA and the THORNBURG MINING COMPANY. Please consider this an official request to amend the Contract as follows:-

The amendments requested apply to the South Drift. Reference is made to "Stage 1, paragraph (b)" of the Contract where drill

"(c)

AT A POINT NEAR THE PROJECTED POSITION OF DRILL HOLE DI206 OR 21 FEET BACK FROM THE PRESENT FACE OF THE SOUTH DRIFT, DRIVE HORIZONTAL OR SLIGHTLY INCLINED CROSS CUTS, NORTHERLY AND SOUTHERLY, A DISTANCE NOT TO EXCEED AN AGGREGATE OF 120 FEET. TO INTERSECT THE AREA CUT BY DRILL HOLES DI 204, DI 207 AND DI 203. THE UNEXPLORED PORTION OF THE 400 FEET OF DRILL DRILLING AUTHORIZED UNDER "STAGE 1, PARAGRAPH (b)" OF THE CONTRACT MAY BE EXTENDED IN EXPLORATORY DRILLING UPWARD AND DOWNWARD FROM THE CROSS-CUTS AT LOCATIONS AND TO THE EXTENT ACCEPTABLE TO THE GOVERNMENT".

It is further requested that the effective date of these amendments be made retroactive to May 1, 1954.

Very truly yours

Vance Thornburg

Thornburg Mining Company

IN REPLY REFER TO:

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

May 10, 1954

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 3060 (uranium), Contract Idm-E638, Thornburg Mining Company, Grand County, Utah

Enclosed are 11 copies of a memorandum report by R. T. Chew, III, W. I. Finch, and H. S. Johnson covering the above docket.

E. V. Hackman
for A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (11)

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. BOX 360
GRAND JUNCTION, COLO.

May 7, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

From: R. T. Chew, III, W. I. Finch, and H. S. Johnson, Colorado Plateau District Office

Subject: Docket DMEA 3060 (Uranium), Contract Idm-E638, Thornburg Mining Company, Grand County, Utah

Reference is made to a memorandum by Finch and Johnson, dated April 13, 1954, memoranda by the Executive Officer, dated April 15 and April 28, 1954, and memorandum by R. R. McLellan, U. S. Bureau of Mines, dated April 22, 1954, all relative to work being performed in the south drift under the subject contract.

The drift in question was mapped by Chew and R. D. Sample on April 21, 1954. A map of the wall of the inner part of the drift was made at the same time.

The ore in the Seven Mile area can be divided, vertically into three different zones. The lowest zone occurs in the basal siltstone of the Triassic Chinle formation; the middle zone overlies a limestone conglomerate marker bed about 15 feet above the basal siltstone; the highest ore zone occurs in a siltstone about 25 feet above the basal siltstone. The middle ore zone is the weakest. The beds strike N 15° E. and dip 8° NW.

The portal of the drift is in the lowest ore zone and the first portion of the drift follows this lowest horizon northwest down dip for 125 feet. This portion was not driven under this contract though the remainder of the drift was driven under this contract. The drift then becomes level or nearly so and the remainder of the first section and the southwesterly trending second section tests the lowest horizon. The average dip for the first section of the drift is five degrees. The section with the southwesterly trend is level. The inner section dips about one degree northwest and thus crosses the bedding. The wall map accompanying this memorandum shows where the middle ore zone is crossed. The upper zone had not been reached by the drifting at the time this map was made and there was no anomalous radioactivity at the face.

The limestone conglomerate shown on the wall map underlies the middle ore zone. A scintillometer traverse of the wall was made as part of the mapping and the readings are shown in mr/hr on the map. The readings divided by two give a very rough approximation of the equivalent uranium where the readings were made. Using this approximation, ore-grade material (more than 0.102 U_3O_8) occurs along the upper contact of the limestone conglomerate for about 25 feet in the central portion of the wall. A small pod of ore-grade material also occurs at the bottom of the limestone conglomerate about 30 feet west of the east end of the map. Very little, if any, of the ore-grade material is one foot or more thick. The rest of the rock exposed in the wall is not ore grade, though it is abnormally radioactive. The scintillometer readings verify that an ore zone has been crossed.

It was our original intent that the drift be driven following the lowest ore horizon down dip. Jack-hammer holes were recommended to test the overlying ore horizons. However, Exhibit "A" of the contract does not specifically state that the drift shall follow the lower horizon though it is specifically stated that the jack-hammer holes shall be driven upwards to test the upper ore horizons. The operator has driven his drift to penetrate all three of the ore horizons and to reach drill hole DI-206 at the elevation of the ore as shown in the drill log. This ore is in the upper ore zone. With the drift driven in this manner, the raise at the drill hole is unnecessary and the drill holes to test the other horizons must be revised as some of these horizons are underfoot for part of the length of this drift. Ore discovery by drilling below the drift will be underfoot and some additional drifting will be necessary to recover it.

No adequate map of the Seven Mile area with the drill holes accurately located exists. No map accompanying this memorandum was supplied by the operator, though the wall map thereon was made by Chew and Sample. Base for the plan map was provided the operator by the Atomic Energy Commission. This map does not agree with that made by Finch in his report on the Seven Mile area for the Geological Survey. Chew's map of the drift agrees with that of the operator, but location of the drill holes from data contained in the official AEC report of the drilling does not coincide with the drill holes shown on the operator's map. The operator states that drill hole DI-206 shown on the map has not been found, though his drift is shown as intersecting it.

The operator believes he has complied with the terms of the contract as written and feels that the level drift explores the three possible ore horizons as well if not better than an inclined drift with raise would have done. Although we were originally in favor of the inclined drift, we agree that the level drift, with up-and-down jack-hammer holes as needed, will adequately test the three possible ore horizons. An amendment is in order, however, to eliminate the proposed raise and to revise the specifications for the jack-hammer holes.

We recommend that Exhibit "A" Stage I, paragraphs (b) and (c) of the contract be amended to meet the following requirements:

1. No further Stage I drifting in the south drift.

2. No raise be driven at drill hole DI-206. This raise is now unnecessary because the drift face as of May 1, 1954 (see accompanying map), is at the elevation originally proposed for the top of the raise.

3. A crosscut be driven in a direction approximately N. 10° W., level, for a maximum distance of 100 feet, beginning at the face as of May 1, 1954.

4. A crosscut be driven in a direction approximately due south, level, for a maximum distance of 60 feet beginning at the face as of May 1, 1954. It is not expected that either of these crosscuts will actually intersect any of the drill holes. The recommended directions and distances are compromises based on the several maps available. Where the occurrence of ore minerals is spotty, as it is in the upper ore horizon, it is felt that a test in the vicinity of a drill hole containing ore is just as adequate as the actual intersection of the hole itself.

5. The jack-hammer drilling should be done according to the following schedule. Location of drilling stations is shown on the accompanying map, and all holes are vertically up or down.

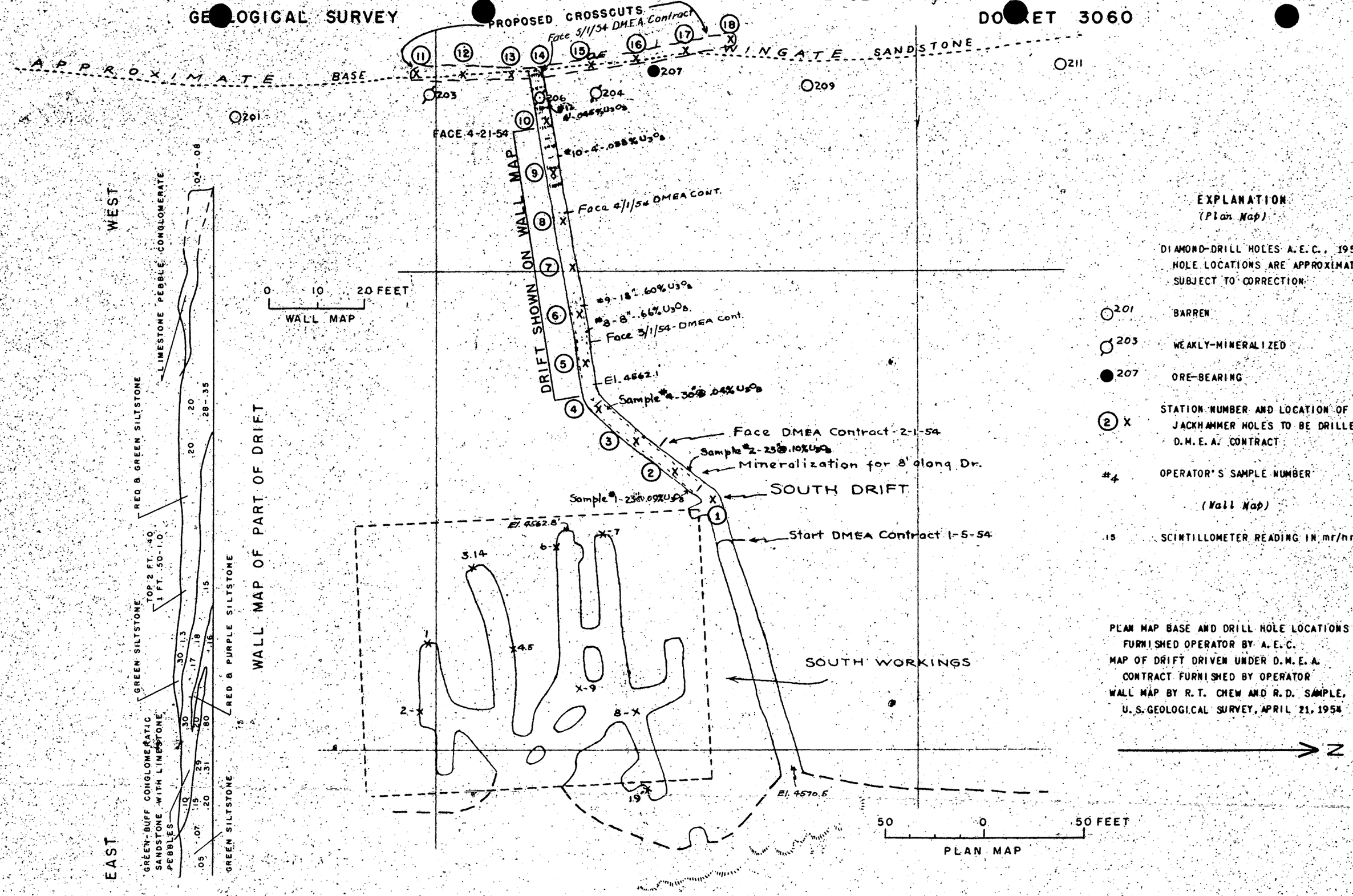
Station No.	Direction	Length	Total Footage
1-2	up	25 feet	50 feet
3	up	20	20
	down	5	5
4	up	15	15
	down	10	10
5	up	10	10
	down	15	15
6	up	20	20
	down	15	15
7	up	10	10
	down	15	15
8	up	10	10
	down	25	25
9	up	5	5
	down	25	25
10	up	5	5
	down	25	25
11-18	up	10	80
	down	25	200
	Total footage recommended		560 feet

This drilling will test all three known ore horizons. In addition, the extra footage at stations 6, 8, and 11 through 18 is designed to test the Chinle for 10 feet above the highest ore zone now known. Testing of this higher horizon is in the nature of insurance against missing possible additional mineralized rock. The total drilling recommended in the proposed amendment is 160 feet more than allowed in the original contract. However, approximately $1,776.00 is made available by the elimination of the raise and the unused drift footage under Stage I. It is recommended that a part of the saving be used for the additional drilling.

6. A transit survey be made of the area covered by this contract so that an accurate map can be made. The survey should include mapping of drill holes, all mine workings, roads and a suitable series of elevations. These data are not now available from a single source and cannot be composed from the several sources because of discrepancies that cannot be resolved. Some of the funds made available from the elimination of the raise and additional drifting can be used for this survey.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET 3060



PLAN MAP AND PARTIAL WALL MAP OF DRIFT AT SHINARUMP NO.1 MINE (South drift), GRAND COUNTY, UTAH
DRIVEN UNDER D.M.E.A. CONTRACT Idm-E638 (Uranium)

Contract No. Idm-E 638

Docket No. 3060

DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

TO: Chief, Finance Section, Budget and Finance Branch, Bureau of Mines

Please make the following entry on the records of the Defense Minerals Exploration Administration under the Strategic and Critical Minerals Exploration Program.

Date of Contract	Region	State	Commodity
November 23, 1953	IV	Utah	Uranium

Name and Address of Operator:

Vance Elton Thornburg d/b/a
Thornburg Mining Co.
Grand Junction, Colorado

	Reserve	Obligation
Prior Amount		$37,720.00
Increase		
Decrease		8,156.44
Revised Amount		29,563.56

Remarks:

Robert E. Adams, Chief
(Name)
Operations Control and Statistics Division
(Title)

Date Delivered to Bureau of Mines, Washington 7/18/56

98963

Doc[illegible] No. [illegible] 3060

Commodity ~~Uranium~~

DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

STRATEGIC AND CRITICAL MINERALS EXPLORATION PROGRAM

TO: Chief, Finance Section, Budget and Finance Branch, Bureau of Mines

Please enter on the records of the Defense Minerals Exploration Administration, under the Strategic and Critical Minerals Exploration Program, the following contract, or amendment to contract.

Contract No. Idm-E 690

Date of Contract ~~or Amendment~~: November 13, 1953

Name and Address of Operator:

Vance Milton Thornburg d/b/a
Thornburg Mining Co.
Grand Junction, Colorado

Amount of Government participation ____ $ 37,720.00

Percent of Government participation 90 %

Region: IV State: Utah

E. R. Talbot
(Name)

for J. L. Chambers,
Chief, Contract Administration and Audit Division
(Title)

Date Delivered to Bureau of Mines, Washington. 12/13/53

13908

Please note our change of address:---

NOW --

Thornburg Mining Company
160 West Main
Grand Junction,
Colorado.

MF-200 (A)
(February 1952)

DEPT. OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN - 4 1954

DOCKET NO. DMEA 3060

COMMODITY Uranium

Government's Copy

IDM-E 638

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

EXPLORATION PROJECT CONTRACT[1]
(Short Form)

IT IS AGREED this 13th day of November, 1953, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] Vance Elton Thornburg, doing business as Thornburg Mining Company, U. S. Bank Building Grand Junction, Colorado

hereinafter called the "Operator," as follows: and as set forth in Annexes I and II attached hereto and made a part hereof

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, Seven Mile Area, County of Grand, described as ~~follows:~~[3] set forth in Annex I,

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 and the Owner's Consent to Lien is 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 90 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 10 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 $37,720.00 which is 90 percent of $41,910.00 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.

See Annex II, substituted for Article 6.

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* .....

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

THORNBURG MINING COMPANY
(Operator)

By Dance Thornburg

By O P Mitchell
Administrator, Defense Minerals Exploration Administration

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

[CORPORATE SEAL]

U. S. GOVERNMENT PRINTING OFFICE 16—66329-1

EXPLORATION PROJECT CONTRACT
THORNBURG MINING COMPANY
DOCKET NO. DMEA-3060

ANNEX I

The land referred to in Article 2 of the contract form consists of six (6) unpatented mining claims which are recorded in the office of the County Recorder, Grand County, Utah:

Claim		Book No.	Page No.
Shinarump No. 1	(Amended Location)	9J	140
Shinarump No. 1 A	" "	9J	140
Shinarump No. 3	" "	9J	235
Shinarump No. 4	" "	9J	310
Vance Thornburg	" "	9K	171
Gara No. 1 (Gara Kristen)	" "	9K	272

The above claims are shown on the map entitled "Claim Map Showing Proposed Exploration X-Cuts, Seven Mile Area Claims, Thornburg Mining Co.," which is attached hereto and made a part hereof.

EXPLORATION PROJECT CONTRACT
THORNBURG MINING COMPANY
DOCKET NO. DMEA-3060

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN - 4 1954

ANNEX II

The following provisions are in lieu of Article 6 :

Repayment by Operator.--a. Certification.--If at any time the Government considers that a discovery or development from which production may be made has resulted from the exploration work, the Government, at any time not later than six months after the Operator has rendered the final report and final account, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

b. Percentage royalty.--The Operator, or his successor in interest, shall pay to the Government a royalty on all minerals mined or produced from the land described in Article 2,--(1) regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification of discovery or development, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first, unless the Government waives its right to a royalty; or (2) if the Government makes a certification of discovery or development, for a period of ten years (or other period fixed by this contract) from the date of the contract, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first. Said royalty shall be a percentage of the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production (including any bonuses), in whatever form disposed of, including ore, concentrates, or metal, as follows:

(a) One and one-half ($1\frac{1}{2}$) per cent of any such net amounts not in excess of eight dollars ($8.00) per ton.

(b) One and one-half ($1\frac{1}{2}$) per cent of any such net amounts, plus one-half ($\frac{1}{2}$) per cent 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) per cent 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 ($1\frac{1}{2}$) per cent; on a net amount of ten dollars ($10.00) per ton, three and one-half ($3\frac{1}{2}$) per cent.)

c. Definitions.--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 gross income from mining operations for percentage depletion purposes in income tax determination.

d. Lien for Payment.--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.

e. Notice to Purchasers.--The Operator shall notify any purchaser of the production of the Government's royalty interest, and shall authorize and direct the purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets; but failure or refusal by the purchaser to comply shall not relieve the Operator of liability to pay any royalty falling due.

f. No Obligation to Produce.--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.

EXPLORATION PROJECT CONTRACT
THORNBURG MINING COMPANY
DOCKET NO. DMEA-3060

EXHIBIT "A"

Description of the Work

The object of this project is the discovery of uranium ore on two horizons in the Chinle member of the Morrison formation.

The work shall be performed in two stages, the second, dependent on results obtained in the first stage, shall be subject to prior Government approval. The work to be done during each stage is indicated on the attached plan map, "Figure 2" and described as follows:

Stage I

(a) From a given point in the present north mine workings, drift 275 feet southward to the vicinity of drill hole DI 221 and then continue 100 feet in a southeasterly direction to the vicinity of drill holes DI 220 and DI 222. Along the 375 feet of drift at intervals of 25 feet, sample holes 15 feet in length shall be drilled downward. These holes shall be probed with radiometric sampling equipment. Logs shall be kept noting each hole location, the thickness of pertinent strata, color of cuttings, and amount of radioactivity of the various strata encountered.

(b) Starting from a point in the short adit just north of the main south mine workings, drift approximately 90 feet in a southwesterly direction, then turn the drift and continue for a further 260 feet to intersect the projection of drill hole DI 200. On completion of this driftwork, a total of approximately 400 feet of sample drilling shall be done. The holes shall be spaced at 25-foot intervals along the drift and driven upward either vertical or inclined and to such a depth that they will prospect strata for 25 feet vertically above the back of the drift.

Each hole shall be logged radiometrically by use of a rubber hose to push the probe up the hole. Cuttings from all sample holes drilled during Stages I and II shall be saved for radiometric or chemical testing.

(c) At the point where drift, referred to in paragraph (b) above, intersects the projection of drill hole DI 200, a vertical or slightly inclined raise shall be driven a distance of approximately 25 feet. From this raise, crosscuts shall be driven approximately a combined total of 120 feet, northward to intersect drill holes DI 204 and DI 207, and southward to drill hole DI 203.

Stage II

This stage shall consist of extending drift, referred to in paragraph (a) of Stage I, a further 225 feet in a southerly direction, and drift, referred to in paragraph (b) of Stage I, a further 250 feet in a westerly direction. In the event that either the south or west drift work, or both, as outlined for this stage is not approved, then with Government approval 100 feet of drifting in a westerly direction from Prospect No. 4 (shown on maps) and/or further crosscutting or drifting, from the raise, may be done in lieu of this work. In Stage II, sample drill holes from the extended drifts shall be drilled and logged in the same manner as outlined in Stage I.

All drifts and crosscuts mentioned in this contract shall be 5 feet by 7 feet in cross section, in clear of timber, and the raise a minimum of 3 feet by 6 feet in cross section clear of timber.

To direct the work outlined under this contract, there shall be employed one full-time Superintendent and a Consulting Engineer who shall devote a minimum of four (4) days per month to this project.

The Superintendent, the Consulting Engineer, the extent and method of sampling, the radiometric testing, the laboratory making the assays, and the starting point and the direction of drifts, crosscuts, and raises, are all subject to prior Government approval.

Estimated Cost of Project

1345 feet of drifting, crosscutting, and raising @ $29.60/ft. 1/	$39,810.00	
1500 feet of jackhammer or stoper test holes @ $1.00/ft. 2/	1,500.00	
120 Uranium chemical assays @ $5.00/ea. 3/	600.00	
Total Cost of Project		$41,910.00
Government Participation at 90% (rounded to)		$37,720.00

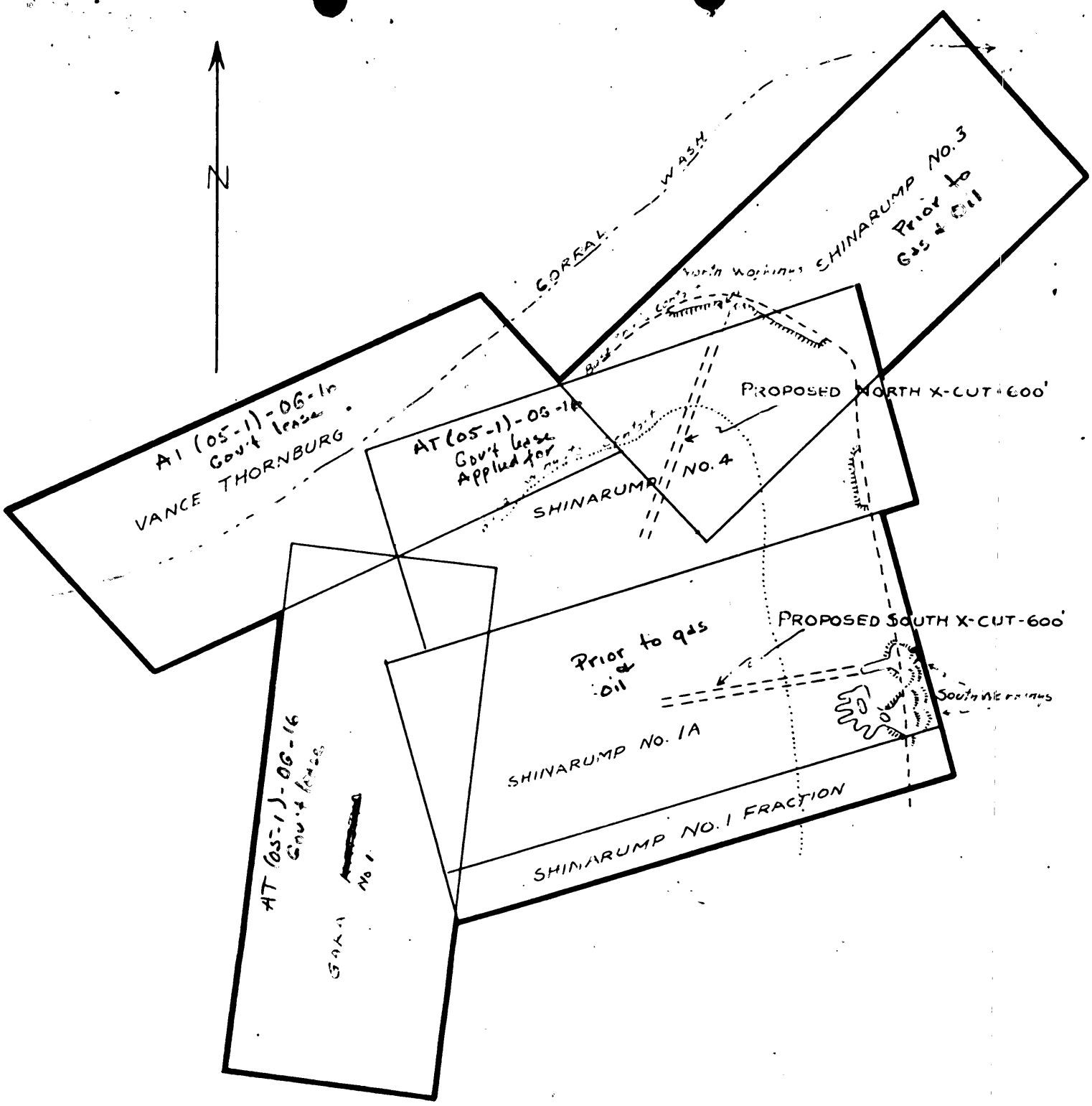
1/ Includes cost of sampling and roof bolting or timbering where necessary.

2/ Includes cost of radiometric probing, collecting samples, and logging holes.

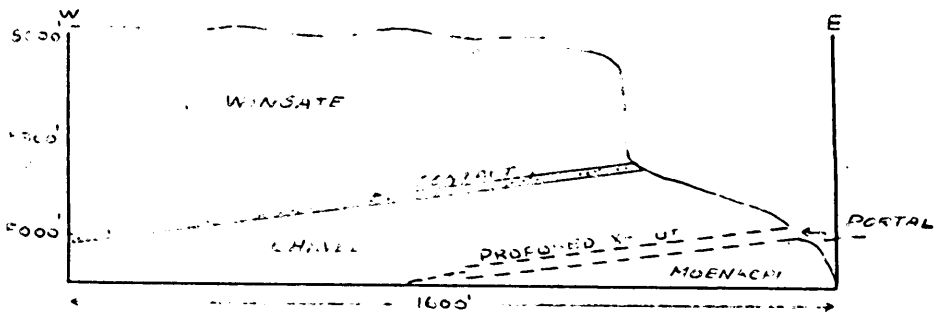
3/ Includes cost of transportation to and from laboratory. Claim for reimbursement to be supported by a copy of the assay return.

NORTH

EXHIBIT "A"



SECTION ALONG SOUTH PROPOSED X-CUT



CLAIM MAP

SHOWING

PROPOSED EXPLORATION X-CUTS

SEVEN MILE AREA CLAIMS

~~EXCALIBUR URANIUM CORPORATION~~

Thornburg Mining Co.

SCALE 1" = 400' 5-17-52 L. J. COADY

DMF 4-[illegible]

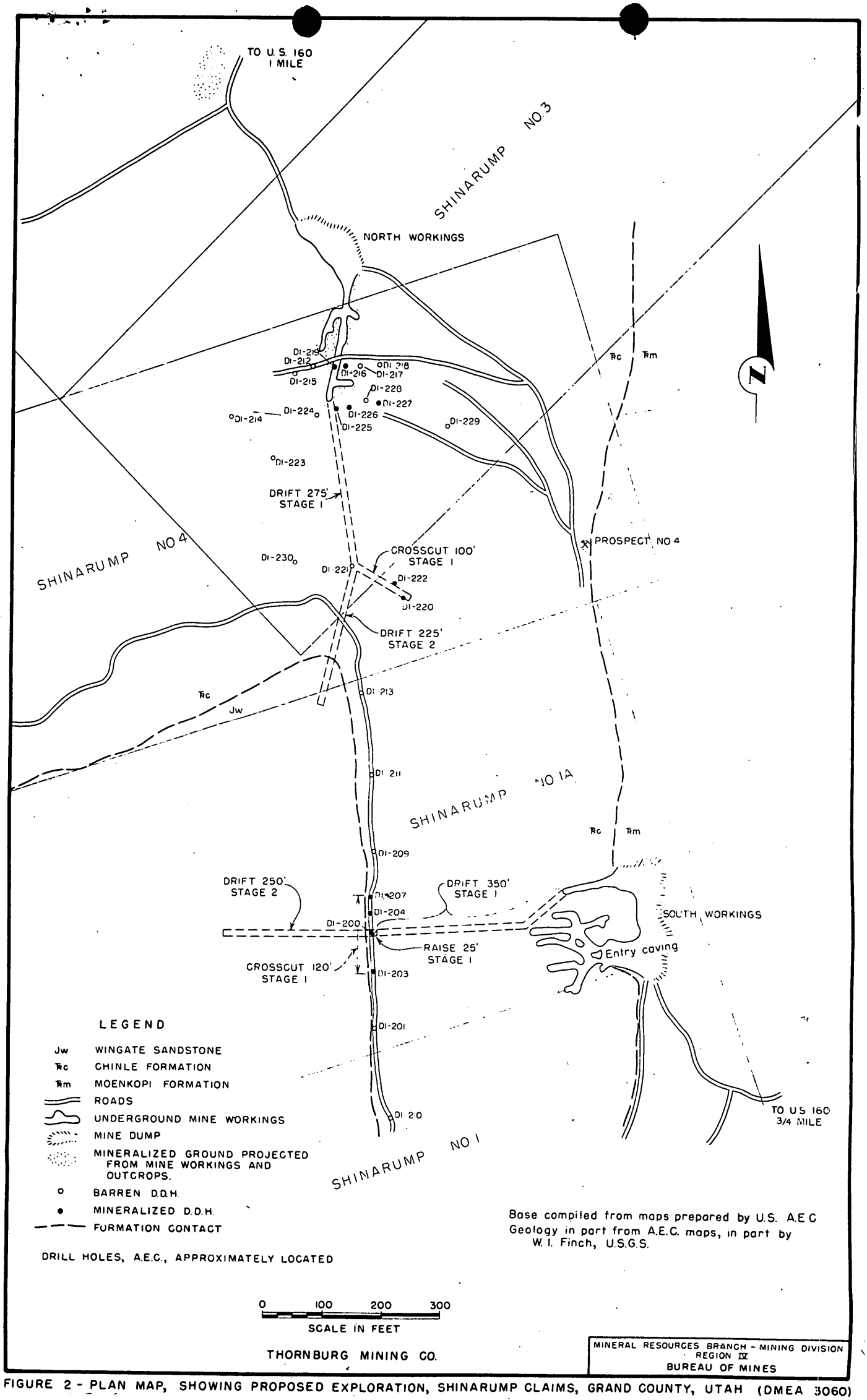


FIGURE 2 - PLAN MAP, SHOWING PROPOSED EXPLORATION, SHINARUMP CLAIMS, GRAND COUNTY, UTAH (DMEA 3060)

"EXHIBIT B"

CHANNEL SAMPLES

SAMPLE	WIDTH	U_3O_8	V_2O_5	$CaCO_3$
1	7.5'	NIL	.07	50% +
2	0.8'	.34	.12	50 +
3	1.1'	.27	.07	50 +
4	2.1'	.37	.15	50 +
5	2.8'	NIL	.10	50 +
6	1.4'	.16	.30	50 +
7	7.0'	.01	.10	50 +
8	0.3'	4.45	.70	2.46
9	Specimen	5.63	.70	50 +
10	1.5'	.32	.15	50 +
11	3.0'	.10	.05	50 +
12	0.7'	.19	.05	6.3
13	0.5'	4.07	.30	50 +
14	3.0'	.10	.05	19.6
15	0.4'	2.72	.15	34.3
17	0.3'	.86	.06	50 +
18	0.4'			
19	0.4'			
20	Specimen			
21	0.4'			
22	0.3'			

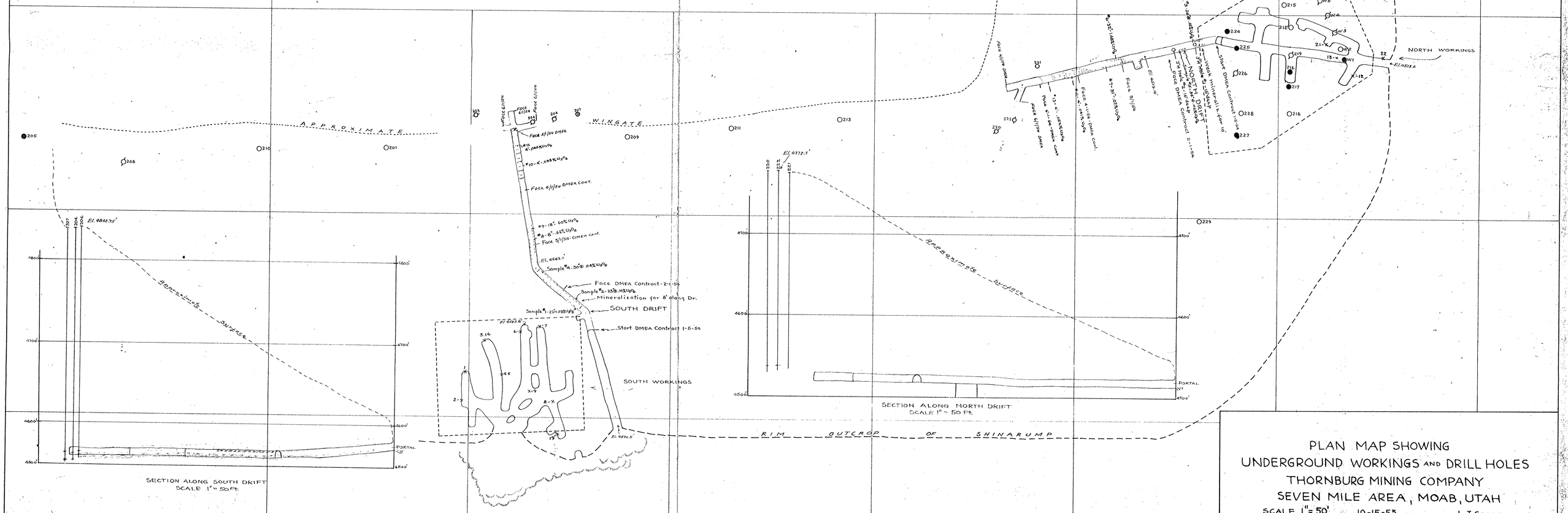
AEC DIAMOND DRILL RESULTS

HOLE	FROM	TO	FEET	U_3O_8%	AVERAGES
D1- 20.3	287.1	287.5	0.4	0.18	
20.4	275.4	276.1	0.7	0.08	
	287.7	287.8	0.1	0.11	
20.5	278.7	279.3	0.6	0.31	
20.6	276.8	277.0	0.2	0.07	3.8' - .02%
	279.4	280.6	0.7	0.10	
20.7	276.5	276.7	0.2	2.32	10.7' - .06%
	286.9	287.2	0.3	0.31	
20.8	264.5	265.0	0.5	0.12	1.8' - .06%
	265.8	266.3	0.5	0.09	
21.6	65.4	65.7	0.3	23.53	
	66.0	66.2	0.2	31.00	1.8' - 7.65%
	66.2	66.9	0.7	0.33	
	66.9	67.2	0.3	0.89	
21.7	49.0	49.3	0.3	0.31	
	56.4	56.8	0.4	0.53	1.2' - .19%
	57.5	57.6	0.1	0.17	
21.9	66.0	66.05	0.05	0.81	
22.0	238.3	238.4	0.1	0.07	
22.2	239.1	239.3	0.2	0.33	
22.4	126.3	126.5	0.3	0.16	
	126.5	126.8	0.3	0.96	0.5' - .64%
22.5	122.6	122.8	0.2	1.79	
22.6	116.0	116.3	0.3	0.28	
	120.6	120.7	0.1	0.30	4.7' - .02%
22.7	110.9	111.2	0.3	2.58	
	115.5	111.7	0.2	0.25	0.8' - 1.03%

8.6' - .04%

WAGON DRILL HOLES / PROBE RESULTS

HOLE	FROM	TO	FEET	GEIGER
WD 1	2.5	25.5	0.5	Trace
	2.9	31	1.0	Good
	34	34.5	0.5	Trace
2	3.3	34.0	0.8	Fair
	3.0	32.0	1.7	Good
3	3.2	33	1.0	Trace
	34	35	1.0	Trace
4	33	36	3.0	Trace
5	34	36	2.0	Trace
6	35	37.5	2.5	Trace
7	36.7	37.8	1.1	Trace
	37.8	38.1	0.3	Good
	38.1	39.7	1.6	Trace
8	36.7	38.5	1.8	Good
9	39.3	43.0	3.7	Fair
10	44	45	1.0	Fair
11	49	40	0.1	Fair
12	36	38.7	2.7	Fair



PLAN MAP SHOWING UNDERGROUND WORKINGS AND DRILL HOLES

THORNBURG MINING COMPANY

SEVEN MILE AREA, MOAB, UTAH

SCALE 1" = 50' 10-15-53 L.J. COADY