DMEA Form 18
Feb. 58

DEFENSE MINERALS EXPLORATION ADMINISTRATION

ANALYSIS OF SEMIANNUAL REPORT OF CERTIFIED PROJECT

Prepare in duplicate. File original in Official Docket. Send copy

To: Statistics Branch (Code 210)

From: Division of Rare and Miscellaneous Metals

Report Period 7/1/58-12/31/58

DMEA No.	Operator	Contract No.
3060	Thornburg Uranium Mines, Inc.	Idm-E638

ORE ESTIMATES

	Tons	Analysis
DMEA	400	0.18% U_3O_8
Operator to date	255	" "
Total	655	" "
Production to date	655	" "
Ore in ground	—	

INVESTMENT

Type	Size		Feet	Cost
Shafts				
Winzes				
Drifts and Crosscuts	8'x8'		500	$7,500
Raises				
Drilling	Type			
Rehabilitation	Description			

FACILITIES

Mine Plant		
Mill		
Roads		

REMARKS

Prepared by Michael Ching Date 4-14-59.

31398

UNITED STATES
DEPARTMENT OF THE INTERIOR
Office of Minerals Exploration
224 New Customhouse
Denver 2, Colorado
March 31, 1959

Memorandum

To: Chairman, Operating Committee, OME

From: Executive Officer, OME Field Team, Region III

Subject: Semiannual Report of Certified Project for the period July 1, 1958 through December 31, 1958

DMEA Docket 3060 (Uranium)
Contract Idm-E 638 (Shinarump claims)
Thornburg Uranium Mines, Inc. Grand County, Utah

Enclosed are the original and three copies of the subject report prepared in conformance with instructions contained in memorandum of January 6, 1956 from this office, Memorandum 29, and Special Notice in Minutes of Operating Committee Meeting No. 692.

J. W. Townsend

Enclosures
HMC/ff

cc: Semiannual Report File Idm-E 638
Harshman
Robertson
Chron.

OFFICIAL FILE COPY
O. M. E.
RECEIVED APR 3 1959

DATE	INITIALS	CODE
4/3		
4		220
4/6		110
4/13		800
		200
		225

Semiannual Report of Certified Projects

Reporting Period July 1, 1958 - December 31, 1958

Docket and Contract Number DMEA 3060, Contract Idm-E638

Operator Thornburg Uranium Mines, Inc.

Commodity Uranium

Mine Name Shinarump claims

County and State Grand County, Utah

Date of Contract November 13, 1953

Date of Certification June 22, 1956

Expiration Date of Royalty Payments November 13, 1964

Date of Examination for this Report January 13, 1959

Total Amount of Contract $ 41,910.00

Total Expenditures under Contract $ 32,848.40

Amount of Government Participation at 90 % $ 29,563.56

Royalty Payments this Period $ 108.90

Previous Royalty Payments $ 579.03

Total Royalty Payments to Date $ 687.93

% Loan Repayment Completed 2.33%

Amount of Royalty Due None

Royalty Remarks The Operator does not stockpile production subject to OME royalty.

	Tons	Analysis
Original Estimate of DMEA Reserves (Field Team Final Report) Mines [ ] Survey [ ] Joint [ ]	None	
Revised Estimate of DMEA Reserves (Field Team) Mines [ ] Survey [ ] Joint [ ]		
Increase of Reserves by work performed subsequent to DMEA project work		U_3O_8
Production DMEA {conc / ore} (This period)	73.527	
(Previous)	580.998	0.24%
(To Date)	654.525	
" Operator's {conc / ore} (This period)		
(Previous)		
(To Date)		

Percent Revised Reserves Mined —

(For Uranium Ores Only)

Initial Production Bonus:

Status Operator: Ineligible [X] Not Applied [ ] Applied [ ] Rec'ing pmt [ ] Pd up [ ]

Pounds U_3O_8 produced this period eligible for Bonus

Amount of Bonus paid to Operator this period $

Total pounds U_3O_8 produced to date eligible for Bonus

Total amount of Bonus paid to Operator to date $

Bonus Royalty Paid $

Bonus Royalty Due $

Investment Data

Shafts Size	Shafts Feet	Shafts Cost	Winzes Size	Winzes Feet	Winzes Cost	Drifts & Crosscuts Size	Drifts & Crosscuts Feet	Drifts & Crosscuts Cost
						8x8	500'	$7,500

Raises Size	Raises Feet	Raises Cost	Rehabilitation Description	Rehabilitation Cost	Type & Size	Drilling Feet	Drilling Cost
					Underground long-holing 1-5/8"	Not separated from mining operations	

Facilities

Mine Plant Description	Mine Plant Cost	Mill Description	Mill Cost	Roads Description	Roads Cost

Remarks

Reported production checks with AEC records for the period.

Signed H. J. Robertson (Engineer)

DMEA Form 18
Feb. 58

DEFENSE MINERALS EXPLORATION ADMINISTRATION

C

ANALYSIS OF SEMIANNUAL REPORT OF CERTIFIED PROJECT

Prepare in duplicate. File original in Official Docket. Send copy

To: Statistics Branch (Code 210)

From: Division of **Rare and Miscallaneous Metals**

Report Period 1/1/58 thru 6/30/58

DMEA No.	Operator	Contract No.
3060	**Thornburg Uranium Mines, Inc.**	Idm-E638

ORE ESTIMATES

	Tons	Analysis
DMEA	400	0.18% U_3O_8
Operator to date	181	" "
Total	581	" "
Production to date	581	" "
Ore in ground	—	

INVESTMENT

Type	Size		Feet	Cost
Shafts				
Winzes				
Drifts and Crosscuts	8'x8'		250	$3,000
Raises				
Drilling	Type			
Rehabilitation	Description			

FACILITIES

Mine Plant		
Mill		
Roads		

REMARKS

The Jan.-June, 1956 report showed an increase in reserves by the Operator of 3,452 tons. Subsequent reports do not show this increase. It is eliminated in this analysis.

Prepared by Michael Ching Date 11-17-58

31398

UNITED STATES
DEPARTMENT OF THE INTERIOR
~~DEFENSE MINERALS EXPLORATION ADMINISTRATION~~
OFFICE of MINERALS EXPLORATION
224 New Customhouse
Denver 2, Colorado

FILE COPY
O. M. E.
3 1958

11/6
11/7
11/17/58 Ching

220
110
800
700

November 4, 1958

Memorandum

To: Chairman, Operating Committee, OME

From: Executive Officer, OME Field Team, Region III

Subject: Semiannual Report of Certified Project for theperiod January 1, 1958 through June 30, 1958

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

Enclosed are the original and three copies of the subject report prepared in conformance with instructions contained in memorandum of January 6, 1956 from this office, Memorandum 29, and Special Notice in Minutes of Operating Committee Meeting No. 692.

J. W. Townsend

Enclosures

J. W. Townsend

Semiannual Report of Certified Projects

Reporting Period January 1, 1958 - June 30, 1958

Docket and Contract Number DMEA 3060, Contract Idm-E638

Operator Thornburg Uranium Mines, Inc.

Commodity Uranium

Mine Name Shinarump claims

County and State Grand County, Utah

Date of Contract November 13, 1953

Date of Certification June 22, 1956

Expiration Date of Royalty Payments November 13, 1964

Date of Examination for this Report August 12, 1958

Total Amount of Contract $41,910.00

Total Expenditures under Contract $32,848.40

Amount of Government Participation at 90 % $ 29,563.56

Royalty Payments this Period $ 22.99

Previous Royalty Payments $ 579.03

Total Royalty Payments to Date $ 602.02

% Loan Repayment Completed 2.03%

Amount of Royalty Due $ 13.95

Royalty Remarks

The operator does not stockpile production subject to DMEA royalty.

	Tons	Analysis
Original Estimate of DMEA Reserves (Field Team Final Report) Mines ☐ Survey ☐ Joint ☐	None	
Revised Estimate of DMEA Reserves (Field Team) Mines ☐ Survey ☐ Joint ☐		
Increase of Reserves by work performed subsequent to DMEA project work		U_3O_8
Production DMEA (~~conc~~ / ore) (This period)	84.196	0.13%
(Previous)	496.802	0.26%
(To Date)	580.998	0.24%
" Operator's (conc / ore) (This period)		
(Previous)		
(To Date)		

Percent Revised Reserves Mined _____

(For Uranium Ores Only)

Initial Production Bonus:

Status Operator: Ineligible ☒ Not Applied ☐ Applied ☐ Rec'ing pmt ☐ Pd up ☐

Pounds U_3O_8 produced this period eligible for Bonus _____

Amount of Bonus paid to Operator this period $_____

Total pounds U_3O_8 produced to date eligible for Bonus _____

Total amount of Bonus paid to Operator to date $_____

Bonus Royalty Paid $_____

Bonus Royalty Due $_____

Investment Data

Shafts Size	Shafts Feet	Shafts Cost	Winzes Size	Winzes Feet	Winzes Cost	Drifts & Crosscuts Size	Drifts & Crosscuts Feet	Drifts & Crosscuts Cost
						8'x8'	250'	$3,000

Raises Size	Raises Feet	Raises Cost	Rehabilitation Description	Rehabilitation Cost	Type & Size	Drilling Feet	Drilling Cost
					Underground long-holing 1-5/8"		?

Facilities

Mine Plant Description	Mine Plant Cost	Mill Description	Mill Cost	Roads Description	Roads Cost

Remarks

The operator has no definite plans for the mine since some development work will be necessary to indicate further reserves. The company does not intend to expend more money on the property at this time.

Signed H. F. Robertson (Engineer)

April 21, 1958

Memorandum

To: W. N. Chamberlain
Records Branch

From: Ernest Wm. Ellis, Director
Division of Rare and Miscellaneous Metals

Subject: Semi-Annual Reports on Certified Projects
6/1/57 - 12/31/57

Reports for the above period have been received for the following projects indicating no activity nor change in previous data:

Docket	Contract	Operator	Commodity
DMEA-842	Idm-E55	Zenda Gold Mining Company	Cassiterite
DMEA-2378	Idm-E299	Salina Mining and Smelting Co.	Uranium
DMEA-2564	Idm-E400	Tillicum Mining Company	Antimony
DMEA-3060	Idm-E638	Thornburg Uranium Mines	Uranium

Ernest Wm. Ellis

nactive

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
224 New Customhouse
Denver 2, Colorado

April 10, 1958

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RECEIVED APR 14 1958

DATE	INITIALS	CODE
4/15	D	220
15	Com	100
11	TEJ	110
4/18	GEJ	800
		700

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Semiannual Report of Certified Project for the period July 1, 1957 through December 31, 1957
DMEA Docket 3060
Contract Idm-E 638
Thornburg Uranium Mines, Inc. successor to Thornburg Mining Company (Shinarump claims) Grand County, Utah

Enclosed are the original and three copies of the subject report prepared in conformance with instructions contained in memorandum of January 6, 1956 from this office, Memorandum 29, and Special Notice in Minutes of Operating Committee Meeting No. 692.

E. M. Harshman

Acting Executive Officer, DMEA
Field Team, Region III

Enclosures

MHM:dp
cc: Semiannual Report File E 638
DMEA/SLC
Harshman
Chron.

Semiannual Report of Certified Projects

Reporting Period	July 1, 1957 through December 31, 1957
Docket and Contract Number	DMEA 3060, Contract Idm-E638
Operator	Thornburg Uranium Mines, Inc. successor to Thornburg Mining Company
Commodity	Uranium
Mine Name	Shinarump claims
County and State	Grand County, Utah
Date of Contract	November 13, 1953
Date of Certification	June 22, 1956
Expiration Date of Royalty Payments	November 13, 1964
Date of Examination for this Report	February 11, 1958
Total Amount of Contract	$41,910.10
Total Expenditures under Contract	$32,848.40
Amount of Government Participation at 90 %	$29,563.56
Royalty Payments this Period	$134.13
Previous Royalty Payments	$444.90
Total Royalty Payments to Date	$579.03
% Loan Repayment Completed	1.96%
Amount of Royalty Due	None
Royalty Remarks	Royalty payment of $134.13 was made November 12, 1957

PF/sl

	Tons	Analysis
Original Estimate of DMEA Reserves (Field Team Final Report) Mines ☐ Survey ☐ Joint ☐	None	
Revised Estimate of DMEA Reserves (Field Team) Mines ☐ Survey ☐ Joint ☐		
		% U_3O_8
Increase of Reserves by work performed subsequent to DMEA project work	None	
Production DMEA (conc/ore) (This period)	None	
(Previous)	496.802 1/	0.26
(To Date)	496.802	0.26
" Operator's (conc/ore) (This period)		
(Previous)		
(To Date)		

Percent Revised Reserves Mined _____

(For Uranium Ores Only)

Initial Production Bonus:

Status Operator: Ineligible ☒ Not Applied ☐ Applied ☐ Rec'ing pmt ☐ Pd up ☐

Pounds U_3O_8 produced this period eligible for Bonus None

Amount of Bonus paid to Operator this period $ None

Total pounds U_3O_8 produced to date eligible for Bonus made prior to DMEA

Total amount of Bonus paid to Operator to date $ _____

Bonus Royalty Paid $ None

Bonus Royalty Due $ None

Investment Data

Shafts Size	Shafts Feet	Shafts Cost	Winzes Size	Winzes Feet	Winzes Cost	Drifts & Crosscuts Size	Drifts & Crosscuts Feet	Drifts & Crosscuts Cost

Raises Size	Raises Feet	Raises Cost	Rehabilitation Description	Rehabilitation Cost	Type & Size	Drilling Feet	Drilling Cost

Facilities

Mine Plant Description	Mine Plant Cost	Mill Description	Mill Cost	Roads Description	Roads Cost

Remarks

The project has been inactive

1/ 170.91 tons production previously reported not attritable to DMEA land

Signed P. V. Fillo (Engineer)

DEFENSE MINERALS EXPLORATION ADMINISTRATION

Rare & Miscellaneous Metals Division — Date Sept. 23, 1957

Semi-Annual Report - Certified Project — Date 1/1/57 thru 6/30/57

DMEA No. 3060 — Operator Thornburg Uran. Mines — Contract No. Idm-E 638

Ore Reserves

Ore Estimates	Tons	Analysis
Original (DMEA)	400	0.18 % U_3O_8
Increase (Operator)	3,452	"
Total	3,852	"
Decrease (Production)	668	"
Net Available	3,184	"

Investment

None.

Shafts			Winzes			Drifts & Crosscuts		
Size	Feet	Cost	Size	Feet	Cost	Size	Feet	Cost

Raises			Drilling			Rehabilitation	
Size	Feet	Cost	Type & Size	Feet	Cost	Description	Cost

Facilities

Mine Plant		Mill		Roads	
Description	Cost	Description	Cost	Description	Cost

Remarks

Although the Jan.-June, 1956 report showed the above increase by Operator, subsequent reports show no such increase.

Michael Ching

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DMEA
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UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
224 New Customhouse
Denver 2, Colorado

9/23 C 220
" Com 100

September 20, 1957

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Semiannual Report of Certified Project for the period January 1, 1957 through June 30, 1957
DMEA Docket 3060 (Uranium)
Contract Idm-E 638, Thornburg Uranium Mines, Inc. (Shinarump Claims), Grand County, Utah

Enclosed are the original and three copies of the subject report prepared in conformance with instructions contained in memorandum of January 6, 1956 from this office, Memorandum 29, and Special Notice in Minutes of Operating Committee Meeting No. 692.

Alternate Acting Executive Officer
DMEA Field Team, Region III

Enclosures

MHM/vj

cc: Semiannual Report File E 638
DMEA/G.Jct.
Harshman
Hasler
Chron.

Semiannual Report of Certified Projects

Reporting Period	January 1, 1957 through June 30, 1957
Docket and Contract Number	DMEA 3060, Contract Idm-E638
Operator	Thornburg Uranium Mines, Inc. successor to Thornburg Mining Company
Commodity	Uranium
Mine Name	Shinarump Claims
County and State	Grand County, Utah
Date of Contract	November 13, 1953
Date of Certification	June 22, 1956
Expiration Date of Royalty Payments	November 13, 1964
Date of Examination for this Report	August 7, 1957
Total Amount of Contract	$41,910.10
Total Expenditures under Contract	$32,848.40
Amount of Government Participation at 90 %	$29,563.56
Royalty Payments this Period	None
Previous Royalty Payments	$444.90
Total Royalty Payments to Date	$444.90
% Loan Repayment Completed	1.5%
Amount of Royalty Due	Royalty due on shipment made in May 1957.
Royalty Remarks	See copy of our 9/19/57 ltr to Operator

	Tons	Analysis
Original Estimate of DMEA Reserves (Field Team Final Report) Mines [ ] Survey [ ] Joint [ ]	None	
Revised Estimate of DMEA Reserves (Field Team) Mines [ ] Survey [ ] Joint [ ]		
Increase of Reserves by work performed subsequent to DMEA project work	None	
		U_3O_8
Production DMEA ore (This period)	3.10	8.54%
(Previous)	664.61	0.21%
(To date)	667.71	0.25%
" Operator's ore (This period)		
found subsequent (Previous)		
to DMEA work (To date)		

Percent Revised Reserves mined _____

(For Uranium Ores Only)

Initial Production Bonus:

Status of Operator: Ineligible [ ] Applied for [ ] Rec'ing pmt [ ] Pd up [X]

Pounds U_3O_8 produced this period eligible for Bonus None

Amount of Bonus paid to Operator this period $ None

Total pounds U_3O_8 produced to date eligible for Bonus Made prior to DMEA

Total amount of Bonus paid to Operator to date $ ---

Bonus Royalty Paid $ None

Bonus Royalty Due $ None

Investment Data No data for this report

Shafts			Winzes			Drifts & Crosscuts		
Size	Feet	Cost	Size	Feet	Cost	Size	Feet	Cost

Raises			Drilling			Rehabilitation	
Size	Feet	Cost	Type & Size	Feet	Cost	Description	Cost

Facilities

Mine Plant		Mill		Roads	
Description	Cost	Description	Cost	Description	Cost

Remarks

Signed M. K. Lakburg (Engineer)

DEFENSE MINERALS EXPLORATION ADMINISTRATION

Rare & Misc. Metals Division

Date March 5, 1957

Semi-Annual Report - Certified Project

Date Feb. 25, 1957
July 1 to Dec. 31, 1956

DMEA No. 3060 Operator ~~Thornburg Uran. Mines,~~ Inc. Contract No. Idm-E 638

Ore Reserves

Ore Estimates	Tons	Analysis
Original (DMEA)	400	0.18 % U_3O_8
Increase (Operator)	3,452	"
Total	3,852	"
Decrease (Production)	665	"
Net Available	3,187	"

Investment

None reported

Shafts			Winzes			Drifts & Crosscuts		
Size	Feet	Cost	Size	Feet	Cost	Size	Feet	Cost

Raises			Drilling			Rehabilitation	
Size	Feet	Cost	Type & Size	Feet	Cost	Description	Cost

Facilities

Mine Plant		Mill		Roads	
Description	Cost	Description	Cost	Description	Cost

Remarks

Increase by Operator reported in Jan. 1-June 30, 1956 report.

Michael Ching

100338

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
Washington 25, D. C.

224 New Customhouse
Denver 2, Colorado

Date: February 25, 1957

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Semiannual Report of Certified Project for the period July 1, 1956 through December 31, 1956
DMEA Docket 3060 (Uranium)[
Contract Idm-E 638, Thornburg Uranium Mines, Inc. (Shinarump Mine), Grand County, Utah

Enclosed are the original and three copies of the subject report prepared in conformance with instructions contained in memorandum of January 6, 1956 from this office and Memorandum 29.

Note: The Amount of Government participation at 90% is $29,563.56 as corrected herein.

E. N. Harshman

for W. M. Traver
Executive Officer, DMEA
Field Team, Region III

OFFICIAL FILE COPY
DMEA
RECEIVED FEB 28 1957

DATE	INITIALS	CODE
3/1	C	220

Enclosures
MHM/vj
cc: Semiannual Report File E 638
J. F. Shaw (2)
E. N. Harshman
J. W. Hasler
Chron.

Semi-Annual Report of Certified Projects

Reporting Period July 1, 1956 through December 31, 1956

Docket and Contract Number DMEA 3060, Contract Idm-E638

Operator Thornburg Uranium Mines, Inc.

Commodity Uranium

Mine Name Shinarump mine

County and State Grand County, Utah

DMEA
DEPARTMENT OF THE INTERIOR
FEB 19 1957
REGION III
DENVER, COLORADO

OFFICIAL FILE COPY
DMEA
RECEIVED FEB 28 1957

DATE	INITIALS	CODE

Date of Contract November 13, 1953

Date of Certification June 22, 1956

Expiration Date of Royalty Payments November 13, 1964

Date of Examination for this Report January 9, 1957

Total Amount of Contract $41,910.00

Total Expenditures under Contract $32,848.40

Amount of Government Participation at 90 % $29,563.~~26~~ .56

(Subject to DMEA audit report of review)

Royalty Payments this Period $174.38

Previous Royalty Payments $270.52

Total Royalty Payments to Date $444.90

% Loan Repayment Completed 1.5

Amount of Royalty Due None

Royalty Remarks Royalty payments during period cover amounts due on shipments made between November 13, 1953, the date of contract Idm-E638, and February 9, 1954, for which the operator had not previously remitted DMEA royalty. Royalty on shipments after February 9, 1954, has been previously paid.

	Tons	Analysis
Original Estimate of DMEA Reserves (Field Team Final Report) Mines [ ] Survey [ ] Joint [ ]	None	
Revised Estimate of DMEA Reserves (Field Team) Mines [ ] Survey [ ] Joint [ ]	No revision	
Increase of Reserves by work performed subsequent to DMEA project work	Not determined	
		Percent U_3O_8
Production DMEA ore 1/ (This period)	None	
(Previous) See Table 1 attached	2/ 664.61	0.21
(To date)	664.61	0.21
" Operator's ore (This period)	None	
found subsequent (Previous)		
to DMEA work (To date)		

Percent Revised Reserves mined _____

(For Uranium Ores Only)

Initial Production Bonus:

Status of Operator: Ineligible 3/ [X] Applied for [ ] Rec'ing pmt [ ] Pd up ____

Pounds U_3O_8 produced this period eligible for Bonus	
Amount of Bonus paid to Operator this period	$ 3/
Total pounds U_3O_8 produced to date eligible for Bonus	10,000 3/
Total amount of Bonus paid to Operator to date	$ 35,000.00 3/
Bonus Royalty Paid $	None
Bonus Royalty Due $	None

Investment Data No information for this report.

Shafts Size	Shafts Feet	Shafts Cost	Winzes Size	Winzes Feet	Winzes Cost	Drifts & Crosscuts Size	Drifts & Crosscuts Feet	Drifts & Crosscuts Cost

Raises Size	Raises Feet	Raises Cost	Drilling Type & Size	Drilling Feet	Drilling Cost	Rehabilitation Description	Rehabilitation Cost

Facilities

Mine Plant Description	Mine Plant Cost	Mill Description	Mill Cost	Roads Description	Roads Cost

Remarks

1/ Operator's ore found subsequent to DMEA work was not segregated. All was subject to DMEA royalty.

2/ This production includes production in the quarter October 1 - December 31, 1953. The ore shipped in this quarter after November 13, 1953, and subject to DMEA royalty cannot be determined from A.E.C. records available to Bureau of Mines Personnel in Grand Junction, Colo.

3/ Bonus exhausted prior to DMEA project.

Signed _____ (Engineer)

M. H. Salsbury

TABLE I.

Compilation of ore shipments from claims subordinated under Docket No. DMEA 3060, Contract No. Idm-E638 as shown in Atomic Energy Commission records from October 1, 1953, to December 31, 1956.

Liq.No.	Quarter	Year	Claim	Dry Tons	CONTENT U_3O_8 Percent	U_3O_8 Pounds	V_2O_5 Percent	V_2O_5 Pounds
-- 1/	4th	53	Shinarump 1A	129.82	0.25	655.70		
-- 1/	4th	53	Shinarump 3	81.31	0.39	631.39		
-- 1/	1st	54	Shinarump 1	36.77	0.16	119.57		
-- 1/	1st	54	Shinarump 1A	86.82	0.23	393.49		
-- 1/	1st	54	Shinarump 3	19.81	0.21	83.22		
6064	3rd	54	Shinarump 1A	19.44	0.12	46.66		
6107	3rd	54	Shinarump 3	53.38	0.16	170.81		
7365	1st	55	Shinarump 1A	72.39	0.19	72.39	0.03	43.43
7403	2nd	55	Shinarump 1A	73.26	0.20	293.03	0.03	58.61
7895	2nd	55	Shinarump 1A	12.03	0.19	45.72	0.10	24.06
7462	2nd	55	Shinarump 3	25.68	0.15	77.05	0.06	30.82
7827	2nd	55	North Mine 2	53.90	0.27	291.04	0.04	43.12
Total through December 31, 1956				664.61	0.21	2,880.07		

1/ A.E.C. file records for the last quarter of the calendar year 1953, and the first quarter of 1954 do not list individual shipments. Consequently, from these records the shipments between November 13, 1953, the date contract No. Idm-E638, and December 31, 1953, cannot be determined. On October 11, 1956, the operator remitted royalties on three liquidations, Nos. 4765, 4766, and 4900 which correspond to the A.E.C. records of shipments from the Shinarump claims Nos. 1A and 3 in the first quarter of 1954, a total of 106.63 tons. Royalties remitted at the same time on liquidation Nos. 4662 and 4663 cannot be checked against A.E.C. records for the last quarter of 1953 because individual shipments are not listed in the latter. These liquidations presumably cover shipments from the Shinarump 1A and 3 claims made between November 13, 1953, and December 31, 1953. The Grand Junction DMEA office does not have any record that the operator has ever reported a shipment to correspond to the 36.77 tons shipped from the Shinarump No. 1 claim in the first quarter of 1954.

DEFENSE MINERALS EXPLORATION ADMINISTRATION

Rare & Misc. Metals Division Date September 21, 1956

Semi-Annual Report - Certified Project Date Jan. 1, 1956 thru June 30, 1956

DMEA No. 3060 Operator Thornburg Mining Co. Contract No. Idm-E 638

Ore Reserves

Ore Estimates	Tons	Analysis
Original (DMEA)	400	0.18 % U_3O_8
Increase (Operator)	3,452	" -
Total	3,852	"
Decrease (Production)	477	"
Net Available	3,375	"

Investment

Unknown

Shafts			Winzes			Drifts & Crosscuts		
Size	Feet	Cost	Size	Feet	Cost	Size	Feet	Cost

Raises			Drilling			Rehabilitation	
Size	Feet	Cost	Type & Size	Feet	Cost	Description	Cost

Facilities

Mine Plant		Mill		Roads	
Description	Cost	Description	Cost	Description	Cost

Remarks

Operations suspended since August, 1955.
Operator planning more exploration in fall of 1956.

Michael Ching

100338

ACTION ON IN[redacted]
OR FINAL FIELD TEA[redacted] REPORT

Date 9-21

Referred to:

1. ~~Mr. Whittemore~~
2. ~~Mr. Johnson~~
3. Mr. Chambers
4. ~~Docket Control Mails and Files~~
5. ~~Rau Johnson Contracts Division~~
6. Docket Control Mails and Files

JHC

Note comments in report regarding:

1. What is the revised
2. ore reserve position?
3. 2192 + 1260 = 3452 tons?
4. Doesn't the field team make at our assumed estimate in only ~~using~~ HEC?

and take appropriate action.

- - - - - - - - -

FT - original estimate 729 T - 0.20% U

Action taken by Division:

Only about 400 T used in our EA estimate because of careful calculation of balance.

Robert E. Adams

Ore reserve estimate sheet to Mr. Dakan dated Sept. 21, 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
Washington 25, D. C.

224 New Customhouse
Denver 2, Colorado

Date: September 18, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Semiannual Report of Certified Project for the period January 1, 1956 through June 30, 1956
DMEA Docket 3060 (Uranium)
Contract Idm-E 638, Thornburg Mining Company (Shinarump Mine), Grand County, Utah

Enclosed are the original and three copies of the subject report prepared in conformance with instructions contained in memorandum of January 6, 1956 from this office, ~~and~~ Memorandum 29,

Note: With reference to amount entered after item "Amount of Royalty Due", see our memo to J. F. Shaw, dated 9/13/56

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

Enclosures

MHM/vj
cc: Semiannual Report File E 638
J. F. Shaw (2)
E. N. Harshman
J. W. Hasler
Chron.

DMEA
DEPARTMENT OF THE INTERIOR
SEP 10 1956
REGION II
DENVER, COLORADO

Semiannual Report of Certified Projects

Reporting Period January 1, 1956 through June 30, 1956

Docket and Contract Number DMEA 3060, Contract Idm-E638

Operator Thornburg Uranium Mines Inc., successor to Thornburg Mining Co.

Commodity Uranium - vanadium

Mine Name Shinarump Mine

County and State Grand County, Utah

Date of Contract November 13, 1953 ✓

Date of Certification June 22, 1956 ✓

Expiration Date of Royalty Payments November 13, 1964 ✓

Date of Examination for this Report August 7, 1956

Total Amount of Contract $41,910.00 ✓

Total Expenditures under Contract $32,848.40 ✓

Amount of Government Participation at 90 % $29,563.56 ✓ Rpt of Rev. dated 6/25/56
(Subject to DMEA audit Report of Review) ?

Royalty Payments this Period (Jan. 1 - June 30, 1956) $22.19 ✓

Previous Royalty Payments 248.33 ✓

Total Royalty Payments to Date 270.52 ✓

% Loan Repayment Completed 9.2

Amount of Royalty Due $29,293.04 ✓

Royalty Remarks

Claim	Indicated ore Tons	%U_3O_8	%V_2O_5	Inferred ore Tons	%U_3O_8	%V_2O_5
Shinarump #3	12535	0.[illegible]	-	6000	0.25	-
" 1A	15890	0.25		6000	0.25	
Total	28375	0.25		12000	0.25	

AEC figures as reported by H. K. Thurber 7/1/55

Original Estimate of Reserves (from Final Engr.-Geol. Report): _____

XXXXXXXXXXXXReserves by work performed subsequent to expiration or termination of contract:	Shinarump #3	1727	0.44	0.06	970	0.44	.06
	" 1A	465	0.23	0.04	290	0.24	.04
		2192	0.39	0.06	1260		

Revised Estimate of Reserves: _____

Production this Period (Ore or Concentrates) Nov. 13, 53 - thru June 30, 56

	Dry tons	%U_3O_8	pounds
Amount of Previous Production (since date of contract) same	477.32	0.17	1645.42

Total DMEA Production to date same

% of Revised Reserves Mined 13.8

Production Remarks:

Note: On Uranium projects check with AEC to assure that our records are in agreement with theirs.

Production is itemized in Table 1 as listed in AEC records. It can be compared lot by lot with settlement sheets for shipments on which DMEA royalty has been paid. Settlement sheets are not available in Grand Junction DMEA office.

Other Remarks:

No operations have been carried on in claims subordinated under Docket DMEA 3060 since August 1955. Operator has been working a mine formerly operated by Hunt Oil Company in an area north of the Shinarump claims. Operator's superintendent Johnson states that more exploration on the Shinarump claims both underground and drilling through the Wingate formation from surface is planned for the fall of 1956. The reserve figures used first by the AEC were not realistic either in grade or tonnage. The revised estimate is within reason as to tonnage but the grade is high, considering factors of ore dilution in mining.

then tonnage could be up —

Signed A. A. Kaschman Jr (Engineer)
~~M. H. Salsbury~~

TABLE 1

Tabulation of ore shipments from claims subordinated under Docket DMEA 3060, Contract Idm-E638, as shown in AEC production records, reporting period November 13, 1953 to June 30, 1956. All ore shipped in name of Thornburg Uranium Mines, Inc.

Liq. No.	Quarter Year	Claim	Dry Tons	U_3O_8 percent	U_3O_8 pounds	V_2O_5 percent	V_2O_5 pounds
-	4th 53	Shinarump 1A	23.84	0.11	52.44	0.11	52.44
-	1st 54	" 1	36.77	0.16	119.57	-	-
-	1st 54	" 1A	86.82	0.23	393.49		
-	1st 54	" 3	19.81	0.21	83.22		
6064	3rd 54	" 1A	19.44	0.12	46.66		
6107	3rd 54	" 3	53.38	0.16	170.81		
6257	4th 54	" 1/	19.69	0.16	63.00	0.07	27.56
7365	1st 55	" 1A	72.39	0.19	72.39	0.03	43.43
7403	2nd 55	" 1A	73.26	0.20	293.03	0.03	58.61
7895	2nd 55	" 1A	12.03	0.19	45.72	0.10	24.06
7462	2nd 55	" 3	25.68	0.15	77.05	0.06	30.82
7827	2nd 55	North mine 2 2/	53.90	0.27	291.04	0.04	43.12
Total through June 30, 56		1/	477.32	0.17	1645.42		

1/ Lot No. 6257 not included in total because Shinarump claim was not subordinated

2/ North mine 2, listed in AEC records, is on Shinarump No. 4, a subordinated claim

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

~~WASHINGTON 25, D.C.~~
Building 20 - Federal Center
Denver 25, Colorado

OFFICIAL FILE COPY
O. M. E.
RECEIVED APR 11 1960

DATE	INITIALS	CODE
4-11	gad	VVO
"	[illegible]	110
4/19	[illegible]	800
4/25	gla	500
		225

April 8, 1960

Memorandum

To: Chairman, Operating Committee, OME

From: Executive Officer, OME Field Team, Region III

Subject: Statement in Lieu of Annual Report of Certified Project.

Enclosed are the original and two copies of the following subject report for the period January 1, 1959 through December 31, 1959:

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

J. W. Townsend

J. W. Townsend

Enclosure

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

~~WASHINGTON 25, D.C.~~
Building 20 - Federal Center
Denver 25, Colorado

OFFICIAL FILE COPY
O. M. E.
RECEIVED APR 11 1960

DATE	INITIALS	CODE
4-11	gad	VVO
"	[illegible]	110
4/12	[illegible]	800
4/25	gla	500
		225

April 8, 1960

Memorandum

To: Chairman, Operating Committee, OME

From: Executive Officer, OME Field Team, Region III

Subject: Statement in Lieu of Annual Report of Certified Project.

Enclosed are the original and two copies of the following subject report for the period January 1, 1959 through December 31, 1959:

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

J. W. Townsend

J. W. Townsend

Enclosure

OFFICIAL FILE COPY
O. M. E.
RECEIVED APR 11 1960

DATE	INITIALS	CODE

OFFICE OF MINERALS EXPLORATION

REGION III

Statement in Lieu of ~~Interim~~ Annual Report of Certified Project

Reporting Period 1-1-59 through 12-31-59

Docket and Contract Number DMEA 3060, Idm-E638 (Uranium)

Operator Thornburg Uranium Mines, Inc. (Shenarump claims)
Grand County, Utah

The project has been inactive during the reporting period [X]

Pertinent data relative to the subject contract has remained unchanged since the last report [X]

Remarks:

L. Reid Johnson, Agent, reports as noted above.

Signed H. M. Connors
H. M. Connors

Date 4-4-60

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

224 New Customhouse
Denver 2, Colorado

August 15, 1955

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3060 (Uranium), Contract Idm-E638, Thornburg Uranium Mines, Inc., (Formerly 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 June 1955

W. M. Traver

Enclosures

vj

cc: FM-104 File E638
Shaw (2)
Chron.

RECEIVED
AUG 17 1955

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]

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 $

Amount Approved $ [illegible]

The reason for the difference was due to:

[illegible]

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 9, 1955

Memorandum

To: T. A. Christensen

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 - 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

RDB:sr

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

ZRME
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-8638 (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.

Carl Belser
Mining Engineer

CB:jw

cc: 6 ✓
8638
Chron.

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 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 [illegible]
(Authorized Certifying Officer)

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

(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 Carl Nelson (P202.50) Title Mining Engineer Date 8/5/55

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: Berk

Signature W. M. Weaver 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.

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 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.

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

Per J. T. Tunnell Title Accountant

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) Carl Belan

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

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~~ 275' 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' trac
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 15 1955

224 New Customhouse
Denver 2, Colorado

June 13, 1955

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3060 (Uranium), Contract Idm-E638, Thornburg Mining Company, Shinarump mine, 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 April, 1955.

W. M. TRAVER

W. M. Traver

Enclosures

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
100 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 $115.02

Difference $

Amount Approved $115.02

The reason for the difference was due to:

* $100.00 withheld pending resolution of venue 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 1 6 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

RECEIVED
JUN 1 5 1958

Memorandum

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

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 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. Tclm-E638 in accordance with the terms of the contract.

Signature M. H. Fahlberg $1,004.33 Title Mining Engineer Date 5-19-55

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: Berk.

Signature W. M. Tamen 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
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
JUN 15 1955

OPERATOR'S UNIT COST AND PROGRESS REPORT

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

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~~ 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		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.

REMARKS: M. H. Salsbury

Date 5-16-55 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.

(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

RECEIVED
JUN 15 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 "B"

GWB:bp

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

RECEIVED
MAY 20 1955

224 New Customhouse
Denver 2, Colorado

May 17, 1955

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-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 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 March, 1955.

W. M. TRAVER,

W. M. Traver

Enclosures

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 27 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-B638 (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 5, 1955, assayed 0.082 percent U_3O_8 and 0.02 percent V_2O_5.

W. D. McMillen
Mining Engineer

cc 6
Idm-8638
Chron

WDM/cm

Form MF-104
(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. 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:

$1,145.52

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. 14-E634 in accordance with the terms of the contract.

Signature Lerme Mullen ($ 1,145.52) Title Mining Engineer Date April 22, 1955

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: Berk.

Signature W. M. Spencer 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.

GPO 872893

Form M[illegible]
(April 1[illegible])

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

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

[illegible] OF THE [illegible]
[illegible] Minerals [illegible]
RECEIVED
[illegible] 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	Unit Costs
Drifting	Ft.	1272.80	43	30452.48	1028.8	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		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)

Wm 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

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 "B". 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

MF-

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

REFERENCE SLIP

DATE 5/20

REFERRED TO:

1. Mr. Ellis
2. ~~Mr. Ellis~~ 30
3.
4. contract file

FOR:

..... Action	..... Recommendation
..... Approval	..... Record of .....
..... Comment	..... Referring to .....
..... Conference	..... Reply for signature of .....
..... Consideration	..... Rewriting
..... Filing	..... Signature
..... Instructions	..... Suggestions
..... Investigation	..... Your information
..... Initials	
..... Mailing	
..... Previous correspondence	

REMARKS: Two copies assignment signed E. T. Robinson. Made with Form [illegible]

Check (X) before the items needing attention.

Assignment completed during May. [illegible]

ROBERT E. ADAMS

Initials of sender.

GPO 16—63815-1

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

224 New Customhouse
Denver 2, Colorado

May 17, 1955

3060

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-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 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 February, 1955.

W. M. TRAVER,

W. M. Traver

Enclosures

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DMEA
Date Rec'd
MAR 13 1955
BUREAU OF MINES
Denver, Colorado

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-2638 (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. Kotzancie, 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

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.5

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.

J. T. 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:

$1,864.80

Signature Randall R. Cooper
(Authorized Certifying Officer)

Date 5-3-55 Vou. No. OMA-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. E-638 in accordance with the terms of the contract.

Signature W. D. McMullen 184480 Title Mining Engineer Date Mar. 17, 1955

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: Beck.

Signature W. M. Lemen 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 19[illegible])

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

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
MAY 20 19[illegible]

OPERATOR'S UNIT COST AND PROGRESS REPORT

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

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.	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

NARRATIVE
FOR THE MONTH OF FEBRUARY 1955
EXPLORATION PROJECT CONTRACT
THORNBURG MINING COMPANY
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 February 1955, on Exploration Contract Number D.M.E.A. 3060 between the Defense Minerals Exploration Administration and the Thornburg Mining Company.

ADVANCES	February 1955 Advance
South Drift	70 Feet
	Total Advances (Phase II 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 months 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 W. Beecroft

George W. Beecroft
Geologist

Enclosures:
Exhibit "B"
GWB:amb

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

RECEIVED
MAR 16 1955

224 New Customhouse
Denver 2, Colorado

March 11, 1955

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3060 (Uranium), Contract Idm-E638, Thornburg Mining Company (Shinarupp 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 January, 1955.

W. M. Traver

W. M. Traver

Enclosures

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
Data 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. Salisbury
Mining Engineer

enclosures

cc 6
E638
DMEA Chron.

MHS/pah

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 18 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

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 16 1955

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of January, 1955 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-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. L. Trumell 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. Idm-E638 in accordance with the terms of the contract.

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

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: Rick.

Signature W. M. Mann 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

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

RECEIVED

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 16 1955

3060

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

Administrative Audit Difference Statement

Shenandoah Mining Company
160 West Main
Grand Junction, Colorado

Date: March 8, 1955
Payee's
Reference: November, 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-E638, 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

Enclosures

W. M. Traver

RDB:pw

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DMEA
Data Rec'd
MAR 1 1955
Bureau Minerals Mgt. Bureau of Mines
Denver, Colorado
MAR 1 8

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 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	0.093	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 Chrom.

MHS/pah

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

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 18 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	25756.20	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. 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:

$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 M. Hallsbury 1,025.64 Title Mining Engineer Date February 25, 1955

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. M. Spencer 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.

Defense Minerals Adm.
RECEIVED
MAR 1 3 1955

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 (Babble 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

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

224 New Customhouse
Denver 2, Colorado

December 3, 1954

Memorandum

To: Secretary to the Operating Committee, DMEA

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 September 1954.

W. H. King

W. H. King

Enclosures

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

Administrative Audit Difference Statement

Date: Nov. 9, 1954
Payee's
Reference: September,
1954

Thornburg Mining Company
160 West Main Street
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	$890.00
Difference	$ 20.00
Amount Approved	$870.00

The reason for the difference was due to:

Disallowance for 20 feet of drilling at $1.00 per foot, in excess of the 500 feet allowed by the contract 20.00

$150.00 withheld from payment due, pending approval of Stage II work or 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
WASHINGTON 25, D. C.

224 New Customhouse
Denver 2, Colorado

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.

Wm. 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 MF-104 and MF-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.

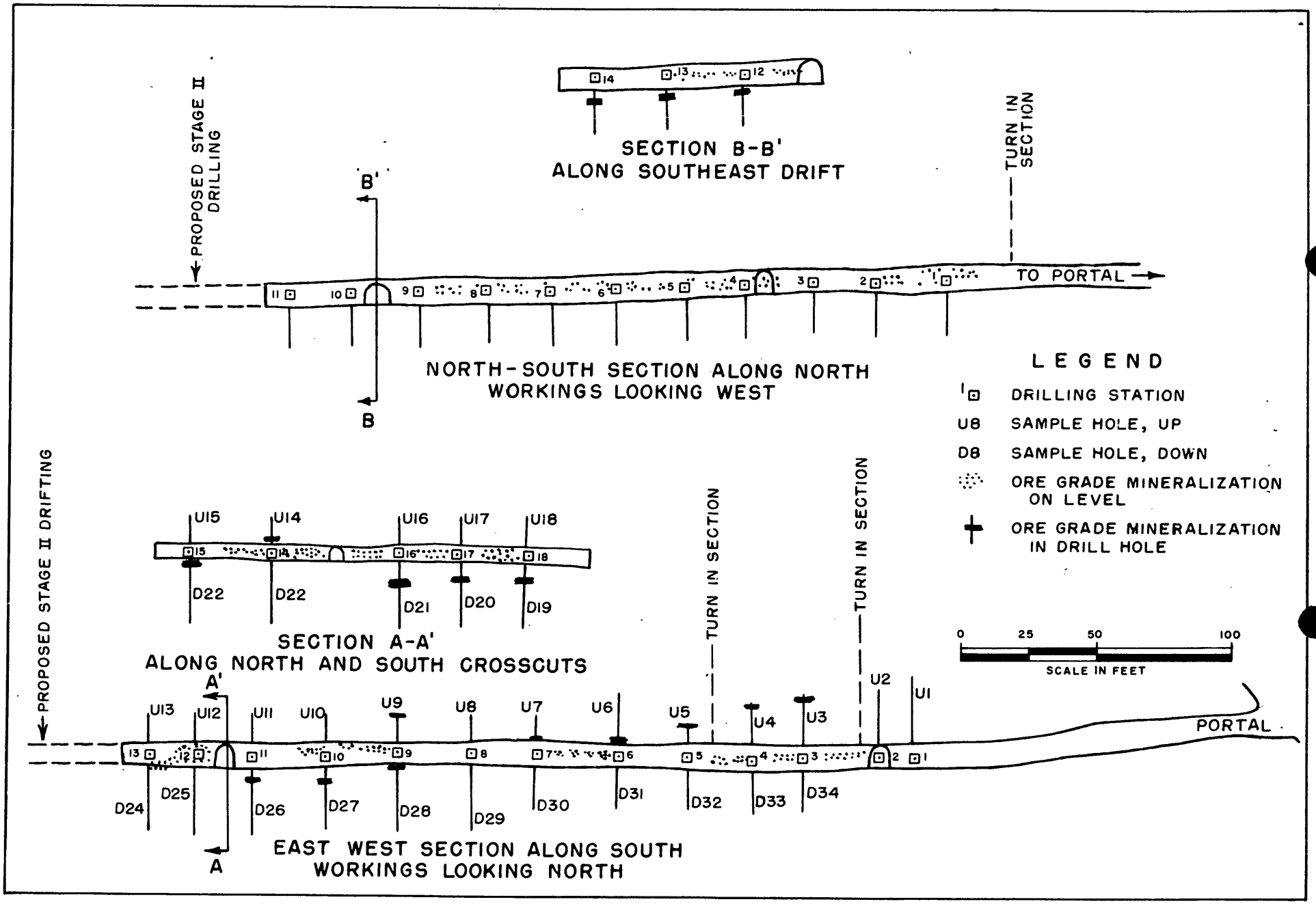
Otherwise, all work was done in accordance with the terms of the contract and Amendment No. 1.

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. H. Salsbury
Mining Engineer

MHS/ici

cc: 6
E638
Chron.



LOCATION OF SAMPLE HOLES AND MINERALIZATION, THORNBURG MINING CO.
SHINARUMP CLAIMS, GRAND COUNTY, UTAH (DMEA 3060, CONTR. IDM-E638)

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 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: 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: J-H Holes	760.00	30.00	790.00			
Drilling						
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	130.00	155.00	285.00			
Sampling and Analysis						
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. 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:

$ 683.00

Signature Randel R. Cooper (Authorized Certifying Officer)

Date 11-3-54 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. Idm-E638 in accordance with the terms of the contract.

Signature N. H. Halsbury #783 Title Mining Engineer Date October 19, 1954

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: R.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 4, 1954 Docket No. DMEA 3060 Contract No. Idm-L-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: Core Jackhammer holes	Ft	760.00	760	790.00	790	1.00	1500	1.00
Churn								
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.

Date 10-15-54 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 872894

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:

North Workings

No.	Width (Inches)	% U_3O_8 (Chemical)
1A	19	0.042
2A	14	0.201
3A	17	0.542
4A	14	0.058
5A	21	0.040
6A	23	0.576
7A	15	0.062
8A	39	0.114
9A	17	0.469
10A	10	0.094
11A	15	0.038
12A	37	0.098
13A	15	0.166
14A	14	0.047

South Workings

15A	20	0.332
16A	11	0.314
17A	29	0.085
18A	21	0.036
19A	18	0.038

Drill Hole Samples

South Workings

Number	Depth	%U_3O_8 (Chemical)
Drill Hole No. 3 - Up -	12-18'	0.068
Drill Hole No. 4 - Up -	8-14'	0.076
Drill Hole No. 5 - Up -	6-12'	0.074
Drill Hole No. 6 - Up -	0-6'	0.055
Drill Hole No. 7 - Up -	0-6'	0.036
Drill Hole No. 8 - Up -	0-6'	0.032
Drill Hole No. 9 - Up -	0-10'	0.049

The locations of these holes are indicated in the drill hole log as well as on the attached map.

The above constitutes the final report on the Stage #1 program. An early determination of the Stage #2 operation will be appreciated.

Very truly yours,

B. H. Martin

B. H. Martin
Mining Engineer

BHM:bp

DRILL HOLE LOG

SOUTH MINE See Map for Locations.
Seven Stations.

Drill Station No. 1
Up Hole No. 1

Depth (feet)	Formation	Radiometric Probing	U_3O_8 Assays
0-10	Red-gray shale		
10-12	gray sand		
12-18	red-gray shale		
18-22	gray shale		
22-25	shale & conglomerate	Trace at 25'	None

Drill Station No. 2
Up Hole No. 2

0-10	red-gray shale		
10-12	gray sand		
12-18	red to gray shale		
18-20	gray shale -coarse sand	trace at 20'	none

Drill Station No.3
Up Hole No. 3

0-8	red-gray shale		
8-10	gray sand		
10-16	red-gray shale		
16-18	gray sand and carbonaceous shale	35 On 3rd scale fm 16-18'	0.068% fm 12-18'
18-20	shale & fine grained quartzite		

Down Hole No. 34

0-15	red-gray shale w/sand streaks	Nil	none

Drill Station No. 4
Up Hole No. 4

0-6	red-gray shale		
6-12	gray shale & sand		
12-14	carbonaceous shale & sand	60 on 3rd scale	0.076% fm 8-14'
14-15	gray shale		

Down Hole No. 33

0-15	red-gray shale & sand streaks	Nil	none

Drill Station No. 5

0-4	red-gray shale		
4-8	coarse conglomerate	45 on 3rd scale fm 4-8'	0.074% fm 6-12'
8-10	gray shale		

Down Hole No. 32

0-15	red-gray shale & sand streaks	trace at $3\frac{1}{2}$'	none

Drill Station No. 6
Up Hole No. 6

Depth (feet)	Formation	Radiometric Probing	U308 Assays
0-2	coarse conglomerate, some carbonaceous shale.		
2-12	gray shale w/thin layers of quartzite	90 on 3rd scale fm 0-21'	0.055 from 0-6'
12-20	red-gray shale	trace at 20'	

Down Hole No. 31

0-15	red-gray shale, some sand streaks	trace at 4'	none

Drill Station No. 7
Up Hole No. 7

0-1	sandy conglomerate & carbonaceous shale	40 on 3rd scale fm 0-0.8'	0.036% fm 0-6'
1-10	gray shale w/thin layers of quartzite		

Down Hole No. 30

0-15	red-gray shale w/sand streaks	trace at 5'	none

Drill Station No. 8
Up Hole No. 8

0-8	gray shale w/thin layers of quartzite		
8-10	red-gray shale	trace at 10'	0.032% fm 0-6'

Down Hole No. 29

0-12	red-gray shale		
12-25	light red shale	Nil	none

Drill Station No. 9
Up hole No. 9

0-5	gray shale & thin layers of quartzite		
5-8	red-gray shale		
8-10	gray shale & coarse sandy conglomerate. Some carbonaceous material.	40 on 3rd scale fm 8-10'	0.049% fm 0-10'

Down Hole No. 28

0-5	gray shale w/sand stringers	25 on 3rd scale fm 0-3'	none
5-9	red-gray shale		
9-15	red shale		
15-25	light reddish shale		

Drill Station No. 10
Up Hole No. 10

0-2	gray shale w/quartzite streaks		
2-4	gray shale		
4-8	sandy conglomerate	trace at 8'	none
8-10	red-gray shale		

Down Hole No. 27

Depth (feet)	Formation	Radiometric Probing	U308 Assays
0-2	gray shale		
2-5	sandy conglomerate	30 on 3rd scale fm 3-5'	none
5-12	red-gray shale		
12-25	red shale and sand		

Drill Station No. 11
Up Hole No. 11

0-6	gray shale		
6-10	gray shale w/sand streaks	trace at 6'	none

Down Hole No. 26

0-2	gray shale	35 on 3rd scale fm 3-5'	none
2-5	sandy conglomerate		
5-12	red-gray shale		
12-25	red shale and sand		

Drill Station No. 12
Up Hole No. 12

0-3	gray shale		
3-10	alternate shale and quartzite layers	nil	none

Down Hole No. 25

0-10	red-gray shale		
10-25	red shale and sand	nil	none

Drill Station No. 13
Up Hole No. 13

0-4	gray shale, thin layers of quartzite		
4-10	red-gray shale	nil	none

Down Hole No. 24

0-10	red-gray shale		
10-25	red shale & sand	nil	none

Drill Station No. 14
Up Hole No. 14

0-2	sand, carbonaceous shale	25 on 3rd scale fm 0-2'	none
2-6	gray shale		
6-10	red-gray shale		

Down Hole No. 23

0-10	red-gray shale		
10-25	red sand and shale	nil	none

Drill Station No. 15
Up Hole No. 15

0-6	gray shale		
6-10	red-gray shale	nil	none

Down Hole No. 22

0-10	gray sandy conglomerate w/layers of shale & quartzite	60 on 2nd scale fm 0-2'	none
10-14	red-gray shale		
14-25	red sand		

Drill Station No. 16
Up Hole No. 16

Depth (feet)	Formation	Radiometric Probing	U_3O_8 Assays
0-10	gray shale w/sand streaks	nil	none

Down Hole No. 21

0-6	gray shale		
6-10	sandy conglomerate w/gray shale	35 on 3rd scale fm 6-10'	none
10-14	red-gray shale		
14-25	red sand		

Drill Station No. 17
Up Hole No. 17

0-10	gray shale w/sand streaks	nil	none

Down Hole No. 20

0-6	gray shale		
6-10	sandy conglomerate w/gray shale	35 on 3rd scale fm 6-9'	none
10-14	red-gray shale		
14-25	red sand		

Drill Station No. 18
Up Hole No. 18

0-10	gray shale w/sand streaks	nil	none

Down Hole No. 19

0-6	gray shale		
6-9	sandy conglomerate	35 on 3rd scale fm 6-9'	none
9-14	red-gray shale		
14-25	red sand		

DRILL HOLE LOG - NORTH MINE
See Map for Location of Stations

DRILL STATION NO. 3
Down Hole No. 3

Depth (feet)	Formation	Radiometric Probing	U_3O_8 Assays
0-3	gray shale	nil	none
3-15	red sand		

DRILL STATION NO. 4
Down Hole No. 4

0-3	gray shale	nil	none
3-15	red sand		

DRILL STATION NO. 5
Down Hole No. 5

0-3	gray shale		
3-15	red sand, streaks of white	nil	none

DRILL STATION NO. 6
Down Hole No. 6

0-3	gray shale		
3-15	red sand, streaks of white	nil	none

DRILL STATION NO. 7
Down Hole No. 7

0-3	gray shale	nil	none
3-15	red sand		

DRILL STATION NO. 8
Down Hole No. 8

0-3	gray shale		
3-15	red sand, white streaks	nil	none

DRILLSTATION NO. 9
Down Hole No. 9

03	gray shale		
3-15	red sand	nil	none

DRILL STATION NO. 10
Down Hole Number 10

0-3	gray shale		
3-15	red sand	nil	none

DRILL STATION NO. 11
Down Hole No. 11

0-4	gray shale		
4-15	red sand	nil	none

DRILL STATION NO. 12
Down Hole No. 12

0-2	gray quartzite w/layers of shale	25 on 3rd scale fm 0-2'	none
2-6	gray shale		
6-15	red sand		

DRILL STATION NO. 13
Down Hole No. 13

Depth (feet)	Formation	Radiometric Probing	U_3O_8 Assays
0-4	gray quartzite w/layers of shale	25 on 3rd scale fm 1-3'	none
4-15	red sand		

DRILL STATION NO. 14
Down Hole No. 14

0-2	gray quartzite		
2-4	gray quartzite w/layers of clay and shale	25 on 3rd scale fm 2-4'	none
4-15	red sand		

3060

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

224 New Customhouse
Denver 2, Colorado

October 18, 1954

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket 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 August 1954.

W. H. King

W. H. King

Enclosures

MF-500

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

REFERENCE SLIP

DATE 10-21

REFERRED TO:

1. ~~140~~ Mr. Ellis
2. 700 ~~Mr. Chu~~
3.
4. Dir. contract file

FOR:

..... Action	..... Recommendation
..... Approval	..... Record
..... Comment	of .....
..... Conference	..... Referring
..... Consideration	to .....
..... Filing	..... Reply for signa-
..... Instructions	ture of .....
..... Investigation	..... Rewriting
..... Initials	..... Signature
..... Mailing	..... Suggestions
..... Previous correspondence	..... Your information

REMARKS: .....

Check (X) before the items needing attention.

ROBERT E. ADAMS

Initials of sender.

GPO 16—63815-1

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 157
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 3063, contract Idm-2033 (Uranium) Thurburg 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]		97.5
		Total	47[illegible].[illegible] feet
North workings			
South drift	[illegible]		27[illegible].[illegible]
Southeast crosscut	21.5		8[illegible].5
		Total	[illegible]04.5
Total all workings	41.5		8[illegible]4.[illegible]

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	0.364
			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 $CaCO_3$ percent
MEE-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
MEE-72	2.7-foot cut on west wall 10 feet south of sample No. 71	0.010	20.15
MEE-73	3.1-foot cut on east wall 10 feet south of sample No. 72	0.057	29.3
MEE-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.

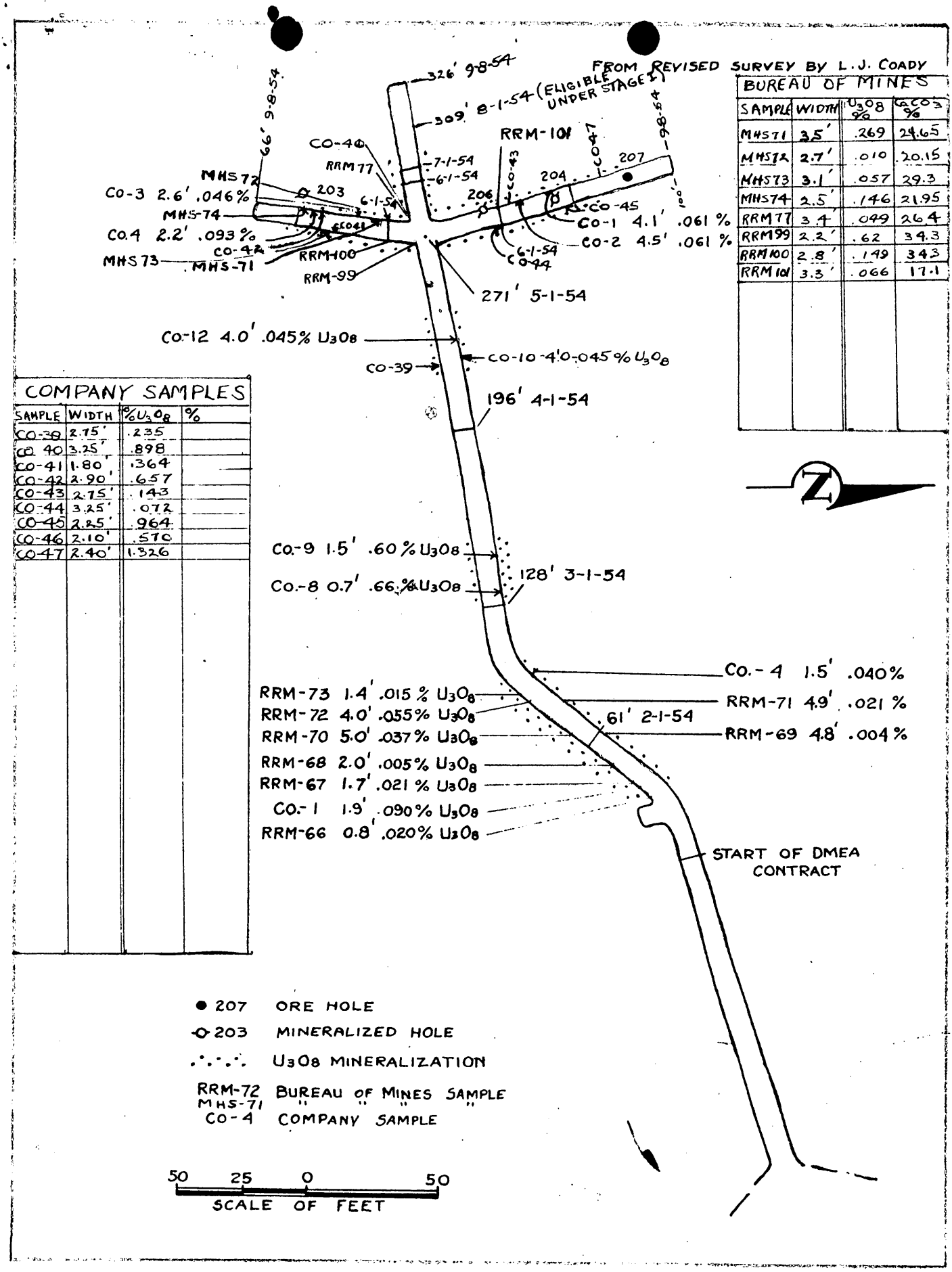
The narrative report, map, and forms MF-104 and MF-104A for August 1954 are correct, and monthly and cumulative totals reflect the

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. H. Salsbury
Mining Engineer

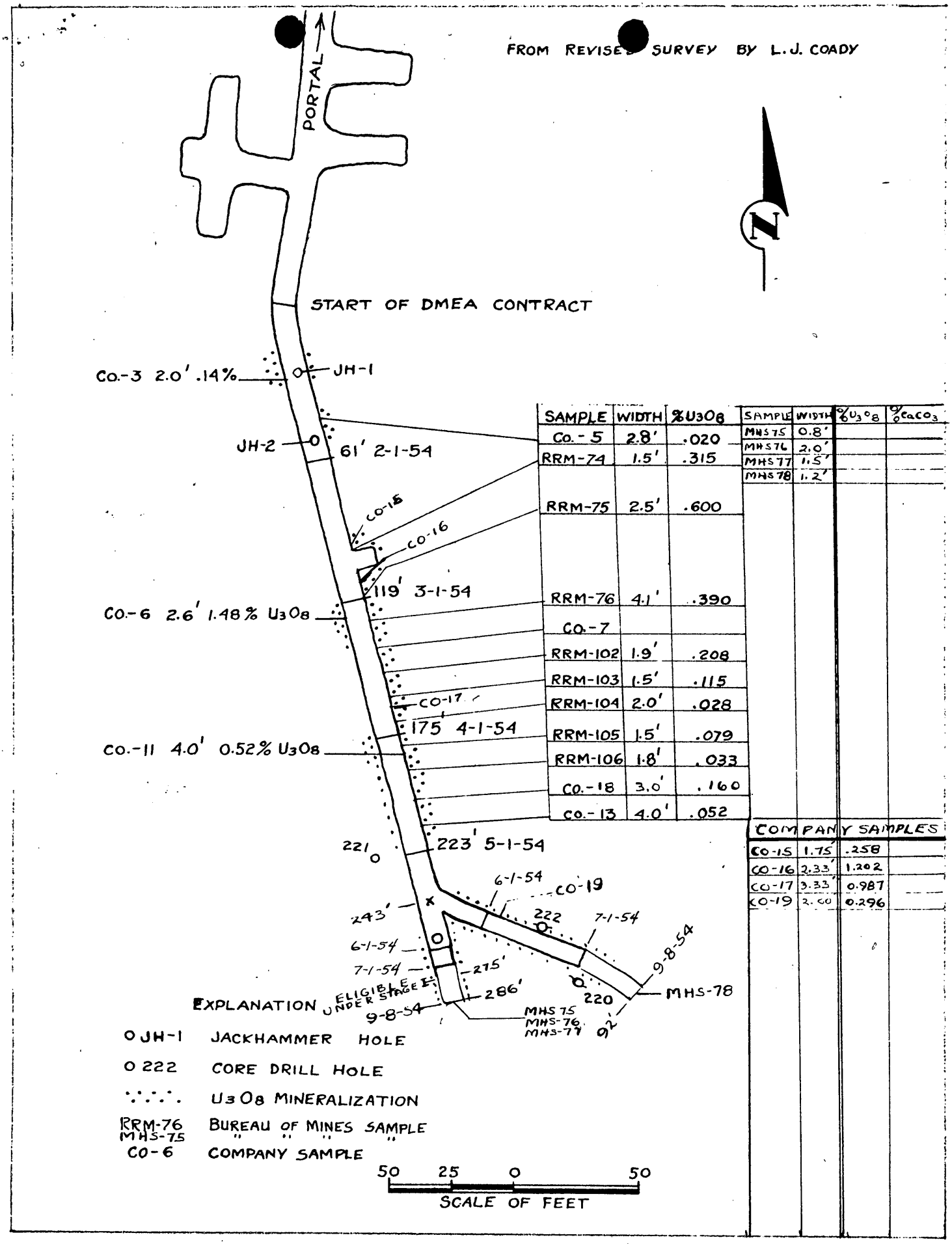
cc 6
2638
DMEA Chron.



BUREAU OF MINES			
SAMPLE	WIDTH	U_3O_8 %	$CaCO_3$ %
MHS71	3.5'	.269	24.65
MHS72	2.7'	.010	20.15
MHS73	3.1'	.057	29.3
MHS74	2.5'	.146	21.95
RRM77	3.4'	.049	26.4
RRM99	2.2'	.62	34.3
RRM100	2.8'	.149	34.3
RRM101	3.3'	.066	17.1

COMPANY SAMPLES			
SAMPLE	WIDTH	% U_3O_8	%
CO-39	2.75'	.235	
CO 40	3.25'	.898	
CO-41	1.80'	.364	
CO-42	2.90'	.657	
CO-43	2.75'	.143	
CO-44	3.25'	.072	
CO-45	2.25'	.964	
CO-46	2.10'	.570	
CO-47	2.40'	1.326	

PROGRESS MAP, THORNBURG MINING CO., SHINARUMP CLAIMS, SOUTH DRIFT SHOWING MINERALIZATION AND SAMPLE LOCATIONS, DMEA 3060, CONTRACT IDM-E638



SAMPLE	WIDTH	%U3O8
Co.-5	2.8'	.020
RRM-74	1.5'	.315
RRM-75	2.5'	.600
RRM-76	4.1'	.390
CO.-7		
RRM-102	1.9'	.208
RRM-103	1.5'	.115
RRM-104	2.0'	.028
RRM-105	1.5'	.079
RRM-106	1.8'	.033
CO.-18	3.0'	.160
CO.-13	4.0'	.052

SAMPLE	WIDTH	%U3O8	%CaCO3
MHS 75	0.8'		
MHS 76	2.0'		
MHS 77	1.5'		
MHS 78	1.2'		

COMPANY SAMPLES			
CO-15	1.75'	.258	
CO-16	2.33'	1.202	
CO-17	3.33'	0.987	
CO-19	2.00	0.296	

PROGRESS MAP, THORNBURG MINING CO., SHINARUMP CLAIMS, NORTH DRIFT SHOWING MINERALIZATION AND SAMPLE LOCATIONS, DMEA 3060, CONTRACT IDM - E638

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

Resources Branch

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
OCT 21 1954

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of August, 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						
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	24886.20

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 [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:

$1168.56

Signature Randell R. Cooper
(Authorized Certifying Officer)

Date 10-11-54 Vou. No. DMA-55-24
(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. Salsbury $1,168.56 Title Mining Engineer Date Sept. 20, 1954

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: R. D.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-L-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	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	La	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.

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

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	0.760
	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

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

224 New Customhouse
Denver 2, Colorado

September 10, 1954

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 3060 (Uranium), Contract Idm-E638, Vance Elton Thornburg dba Thornburg Mining Company, 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 July, 1954.

W. H. King

W. H. King

Enclosures

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

Administrative Audit Difference Statement

SEP 13 1954

Date: ~~August 27, 1954~~
Payee's Reference: _____

~~July, 1954~~

Thornburg Mining Company
160 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	$ ~~2,480.40~~
Difference	$ ~~325.60~~
Amount Approved	$ 2,160.80

The reason for the difference was due to:

Disallowance of 4 feet in excess of verified distance — at $29.00 per foot	$116.00
Suspension of 7 feet in excess of contract authorization — at $29.00 per foot	207.20
	$325.00

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
E638
DMEA Chron

WMT/jam

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 3160, contract Idm-2638 (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:

South workings	July advance claimed feet	Advance to date feet	Bureau of Mines Measurements July advance (feet)	Bureau of Mines Measurements advance to date (feet)
South drift	17.0	314.0	17.0	314.0
North crosscut	18.0	73.0	18.0	73.0
South crosscut	18.0	63.0	18.0	63.0
Total south workings	53.0	450.0	53.0	450.0
North workings				
South drift	*18.0	354.0	17.0	
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. Some 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.

W. R. Salsbury
W. R. Salsbury
Mining Engineer

cc 6
E638
DMEA Chron.

WRS/jmm

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

SEP 13 1954

Month of July, 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-11 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	21811.80	24298.20	2486.40	21,811.80	24,298.20
				(1) 325.60	(2) 384.80	(3) 384.80
				2,160.80	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: (3) 325.60

$ 19447.2

Signature Randell R. Cooper
(Authorized Certifying Officer)

Date 8-27-54 Vou. No. DMA-552-15
(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.H. Salabury 1944-72 Jom 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;

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(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. 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	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	La	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. Runnell Title Office Mgr.

J. T. Runnell

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

P. O. Box 1125
Grand Junction
Colorado
August 2, 1954

(e) NARRATIVE
For the month of July 1954
Exploration Project Contract
Thornburg Mining Company
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 Defence Minerals Exploration Administration and the Thornburg Mining Company.

ADVANCES:

	1954 July Advances	1954 Advances to Date
South Drift:		
South Drift-	17 feet	314 feet
North X-cut-	18 feet	73 feet
South X-cut-	18 feet	63 feet
Total-	53 feet	450 feet
North Drift:		
North Drift-	31 feet	354 feet
Total (both drifts)-	84 feet	804 feet

Total July advance in both drifts- 84 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.

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

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

224 New Customhouse
Denver 2, Colorado

August 4, 1954.

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 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 June 1954.

W. H. King

Enclosures

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,
W. M. Traver

cc 4
E638
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
July 20, 1954

Memorandum

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

From: Russell R. McLellan

Subject: DMEA 3060, contract IDM-E638 (Uranium) Thornburg Mining Company (Shinarump claims), Grand County, Utah - Progress report for June 1954

Underground progress on the Shinarump claims was inspected on July 8, 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 100-foot crosscut to the north and a 60-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, 45 feet in the South Crosscut and 55 feet in the North Crosscut for a total advance of 105 feet for the month. A total of 46 feet of drifting was completed in the North Drift during the month. The total advance of 151 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.

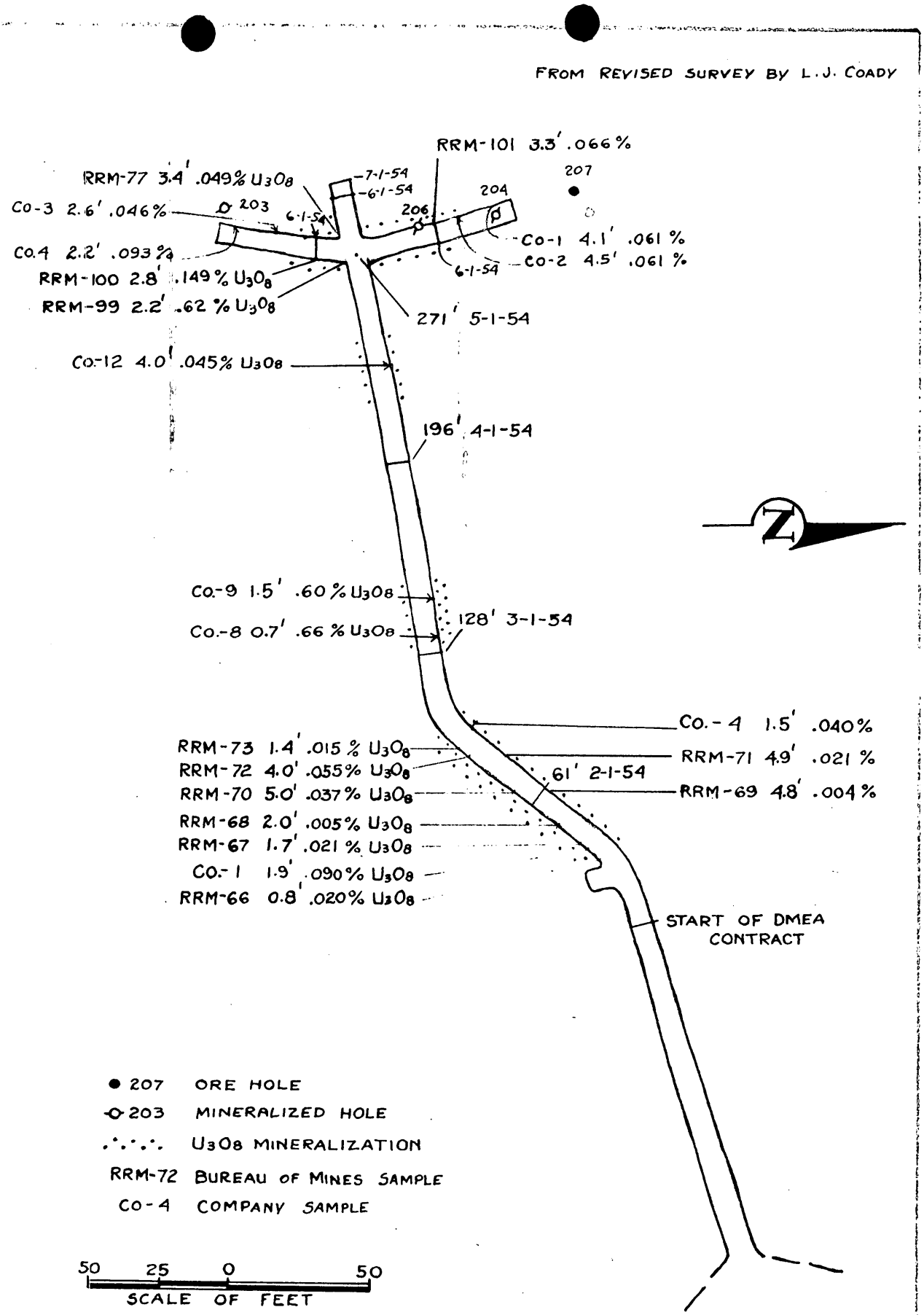
The attached progress maps show sampling completed to date by Bureau of Mines and company engineers in the North and South Drifts. The maps are prepared from the revised survey completed by the company engineer during May 1954.

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 $4,040.64, or 90 percent of the $4,489.60 claimed.

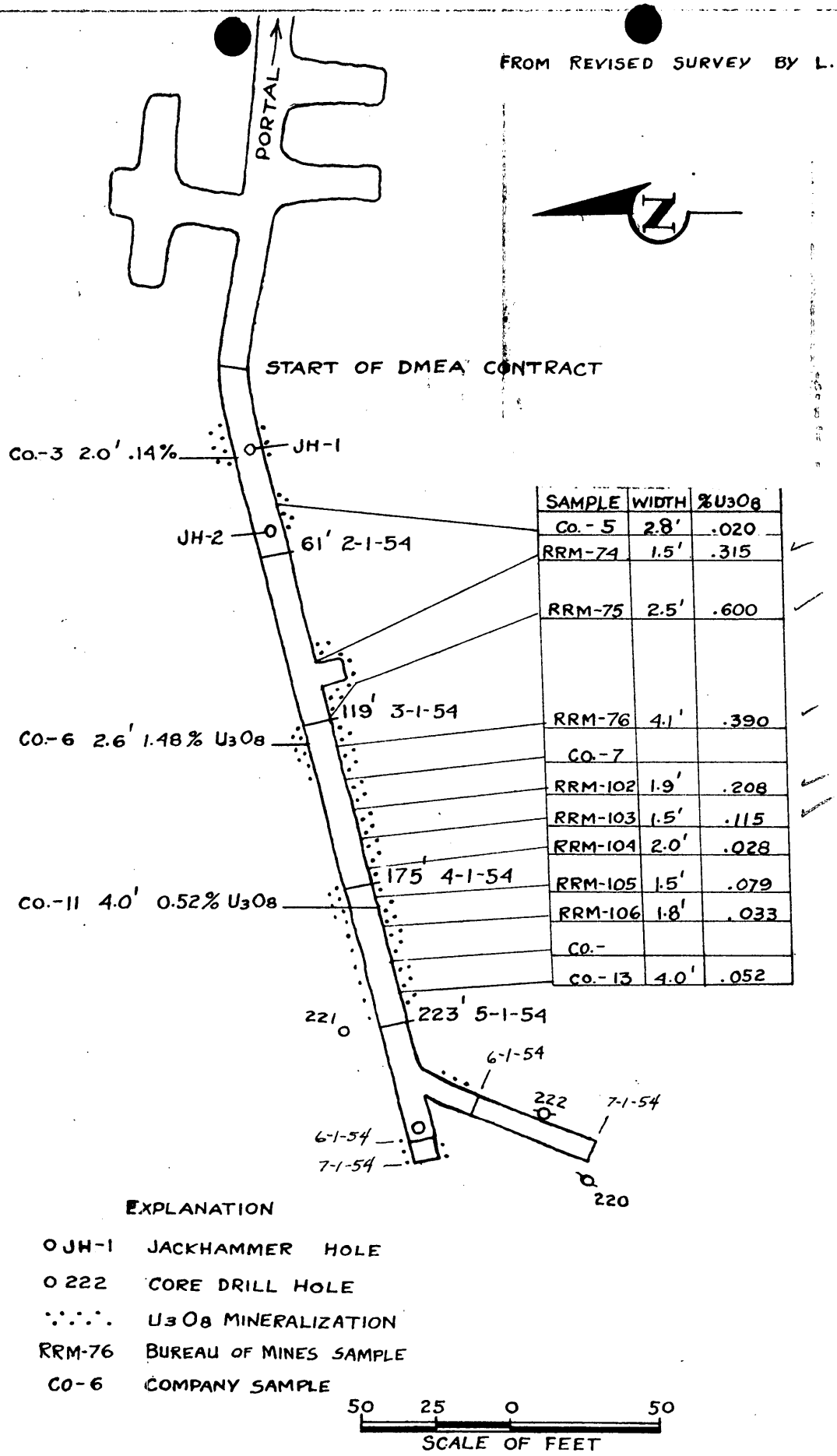
M. R. Salsbury
For Russell R. McLellan
Mining Engineer

cc 6
E638
DMEA Chron.

RRM/pam



PROGRESS MAP, THORNBURG MINING CO., SHINARUMP CLAIMS, SOUTH DRIFT SHOWING MINERALIZATION AND SAMPLE LOCATIONS, DMEA 3060, CONTRACT DM-E638



SAMPLE	WIDTH	%U3O8
Co.-5	2.8'	.020
RRM-74	1.5'	.315
RRM-75	2.5'	.600
RRM-76	4.1'	.390
CO.-7		
RRM-102	1.9'	.208
RRM-103	1.5'	.115
RRM-104	2.0'	.028
RRM-105	1.5'	.079
RRM-106	1.8'	.033
CO.-		
CO.-13	4.0'	.052

PROGRESS MAP, THORNBURG MINING CO., SHINARUMP CLAIMS, NORTH DRIFT SHOWING MINERALIZATION AND SAMPLE LOCATIONS, DMEA 3060, CONTRACT IDM - E638

Form MF-10[illegible] (Rev.)
(April [illegible]952)

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-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	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. T. Tunnell Title Office Mgr.

*When a voucher is signed or receipt taken 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)

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. 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	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	120	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. F. Tunnell Title Office Mgr.

J. F. 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

P. O. Box 1125
Grand Junction
Colorado
July 15, 1954

(e) NARRATIVE
For the month of June 1954
Exploration Project Contract
Thornburg Mining Company
Docket No. DMRA-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, a Narrative report and maps covering in detail the progress made during the month of June, 1954, on the Exploration Contract No. DMRA-3060, between the Defense Minerals Exploration Administration and the Thornburg 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:

#1SXH - 50" @ 0.061% U308
#2SXH - 55" @ 0.052% U308
#3SXH - 33" @ 0.046% U308
#4SXH - 27" @ 0.093% U308

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,

Lee J. Coady

Lee J. Coady Consultant

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. E. 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.

J. W. 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., (Shimarump claims), Grand County, Utah--Progress report for May 1954

The underground progress on the Shimarump 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

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

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. 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:
2220.00 14717.40 16937.40
$1998.00

Signature [illegible]
(Authorized Certifying Officer)
Date 6/23/54 Vou. No. DMA 54-139
(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 Title Mining Engineer Date 6/16/54

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

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	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.

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

(c) NARRATIVE
For the month of May, 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 May, 1954, on Exploration Contract No. DMEA-3060, between the Defence Minerals Exploration Administration and the Thornburg Mining Company.

ADVANCES:

	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 transit 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. On 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 inter-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 foot raise mentioned in Stage 1, Paragraph (c) of the contract. To take care of this a request to amend the contract is being prepared.

Very truly yours

Leo J. Coady

Leo J. Coady, Consultant

MF-500

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

REFERENCE SLIP

DATE 6/13

REFERRED TO:

1. Mr. Ellis
2. ~~Mr. Ot~~ 110
3. 700
4. Res. contract file

FOR:

..... Action	..... Recommendation
..... Approval	..... Record of .....
..... Comment	..... Referring to .....
..... Conference	..... Reply for signature of .....
..... Consideration	..... Rewriting
..... Filing	..... Signature
..... Instructions	..... Suggestions
..... Investigation	..... Your information
..... Initials	
..... Mailing	
..... Previous correspondence	

REMARKS: Check on assay changes
We allowed 5% for wheat?
Operator wants #3 for chromite
[illegible] for U.S.P. [illegible]

Check (X) before the items needing attention.

Talbert says O.K. ROBERT E. ADAMS
MC.

Initials of sender.

GPO 16—63815-1

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

224 New Customhouse
Denver 2, Colorado

May 26, 1954.

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 3060 (Uranium), Contract Idm-E638, Thornburg Mining Company, 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 April 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

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

RDH: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
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-8638 (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

Region IV

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-8638 (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 surveyedshow 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

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			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	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 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)

*Previous disallowances for turnout drifting

* Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:
$3294.72
Signature (Authorized Certifying Officer)
Date 5/24/54 Vou. No. DMA 54-128
(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 R. P. McLellan 3294.72 3276.72 Title Mining Engineer Date 5/17/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W H Kung 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.

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 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: 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

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)

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

(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'	0.030% U3O8
Sample #12	4'	0.045% U3O8

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 are shown on the attached map.

	Thickness	Assays
Sample #11	4'	0.041% U3O8
Sample #13	4'	0.052% U3O8

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

Leo J. Coady, Consultant

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

224 New Customhouse
Denver 2, Colorado

May 3, 1954.

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 3060 (Uranium), Contract Idm-E638, Thornburg Mining Company, (Shinarump Group), 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 March 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

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
IDE38
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 cut 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/ici

cc: 6
E638
Chron.

Form MF-104 (Rev.)
April 1952)

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

RECEIVED
MAY 6 - 1954

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of March, 1954 Docket No. DMEA 3060 Contract No. Idm-E-630
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-M 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.DB					
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	7726.00	11,441.40
					- 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. F. Turnell 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. IDMA 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.P. McLellan 3343.86 WMT Title Mining Engineer Date 4/13/54

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

Signature W.S. 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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 7 - 1954

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	304.00	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.

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)

REMARKS:

(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

(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 Defence 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% U308
" #9	18"	0.60% U308

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% U308
" #7 -	32"	0.07% U308

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

Thornburg Mining Company
By: Leo J. Coady. Consultant

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

224 New Customhouse
Denver 2, Colorado

March 26, 1954.

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 3060 (Uranium), Contract Idm-E636, Thornburg Mining Company (Shinarump Group), 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 February 1954.

John F. Shaw
For W. H. King

Enclosures

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

DEPARTMENT OF THE INTERIOR
Bureau of Mines 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-2638

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

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-B638 (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 H. 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 disalloved 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
B638
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-M638 (Uranium), Thornburg Mining Company (Shimarump group), Grand County, Utah--Progress report for February 1954

Underground 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 222.

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

cc - 6
E638
Chron

FORM [illegible] Rev.)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 20 1954

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of February 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.
Contract Amount, $ 41,910.00 Government Participation: ____% 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: HJ-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	25.00	None	25.00	00	00	00
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	~~3903.00~~	~~3848.00~~	~~7751.00~~	3730.00	3848.00	7578.00
				*	- 236.80	- 236.80

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:
3730.00 3611.20 7341.20
$ 3357.00

Signature [illegible]
(Authorized Certifying Officer)
Date 3/24/54 Vou. No. 54-96
(See other side)

*Disallowed in January for turnout drifting not provided for 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 WMT 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

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

[redacted]04A
[redacted]52)

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 29 1954

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

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: Jackhammer 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

(c) NARRATIVE
For the month of February 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 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. DMEA-3060, between Defence 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% U308
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"	0.14% U308
Sample #5 -	34"	0.02% "

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

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

224 New Customhouse
Denver 2, Colorado

March 4, 1954.

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 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 January 1954.

W H King
W. H. King

Enclosures

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

Administrative Audit Difference Statement

Date: [illegible]
Payee's Reference: Progress Report
January, 1954

Thorsburg Mining Co.,
160 West Main St.,
Grand Junction, Colo.
Ide-[illegible]

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:

$296.80 claimed for 8 feet of turnout drift at $29.60 per foot is disallowed as contract makes no provision for our payment.

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

HDB: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 R. McLellan

Subject: DMEA 3060, contract Idm-2638 (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

Form MF-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: 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						
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 3,250.08 WMT 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 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	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.

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.

U. S. GOVERNMENT PRINTING OFFICE 205676

(c) NARRATIVE
For the month of January 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 the following narrative report, with maps covering in detail the progress made during the month of January 1954 on the exploration contract No. DMEA-3060, between Defence Minerals Exploration Administration and the Thornburg Mining Company, is submitted.

The contract was initiated in two drifts on January 5, 1954 and continued throughout the month. The drifts have been designated as South Drift and North Drift and will be identified as such throughout the life of the contract.

ADVANCE:

		1954 January Advance	1954 Advance to date
SOUTH DRIFT -		61 Feet	61 Feet
Turnout Drift -		8 "	8 "
	Total -	69 Feet	69 Feet
NORTH DRIFT -		61 Feet	61 Feet
	Total -	61 Feet	61 Feet

Total Advance both drifts - 130 Feet

Tramming 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 trammer between the walls of the drift, it was necessary to drive the headings 5½' x 7', rock breakage.

During the first half of the month some difficulty was encountered with a motor on one of the trammers. This was repaired and the cycle of operations in the drifts maintained 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 rim is attained.

A thin lenze 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

Thornburg Mining Company
By: Leo J. Coady
Leo J. Coady, Consultant

"EXHIBIT B"

CHANNEL SAMPLES

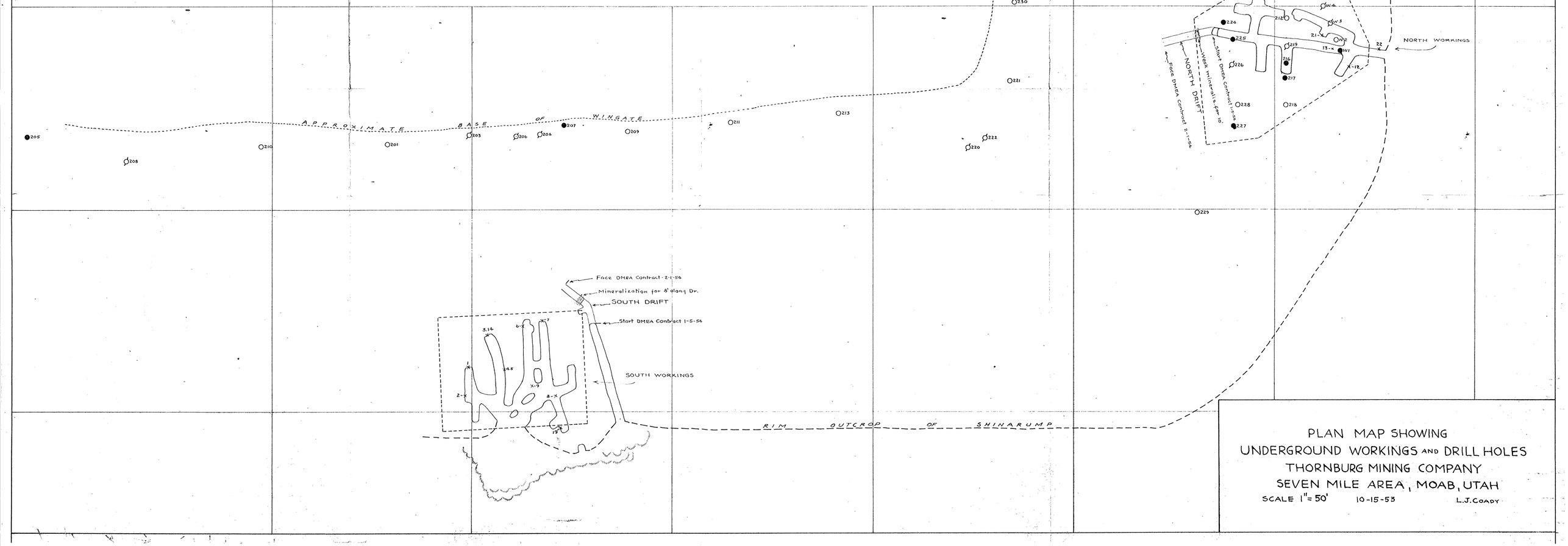
SAMPLE	WIDTH	U_3O_8	V_2O_5	$CaCO_3$
1	7.5'	NIL	.07	50% +
2	0.8'	.34	.12	50 +
3	1.1'	.27	.07	50 +
4	2.1'	.37	.15	50 +
5	2.8'	NIL	.10	50 +
6	1.4'	.16	.30	50 +
7	2.0'	.01	.10	50 +
8	0.5'	4.45	.70	2.46
9	Specimen	5.63	.70	50 +
10	1.5'	.32	.15	50 +
11	3.0'	.10	.05	50 +
12	0.7'	.19	.05	6.3
13	0.5'	4.07	.30	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	1.8' - 7.65%
	66.0	66.2	0.2	31.00	
	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	8.6' - .04%
	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	0.5' - .64%
	126.5	126.8	0.3	0.96	
22.5	122.6	122.8	0.2	1.79	
22.6	116.0	116.3	0.3	0.28	4.7' - .02%
	120.6	120.7	0.1	0.30	
22.7	110.9	111.2	0.3	2.58	0.8' - 1.03%
	115.5	111.7	0.2	0.25	

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

CHANNEL SAMPLES

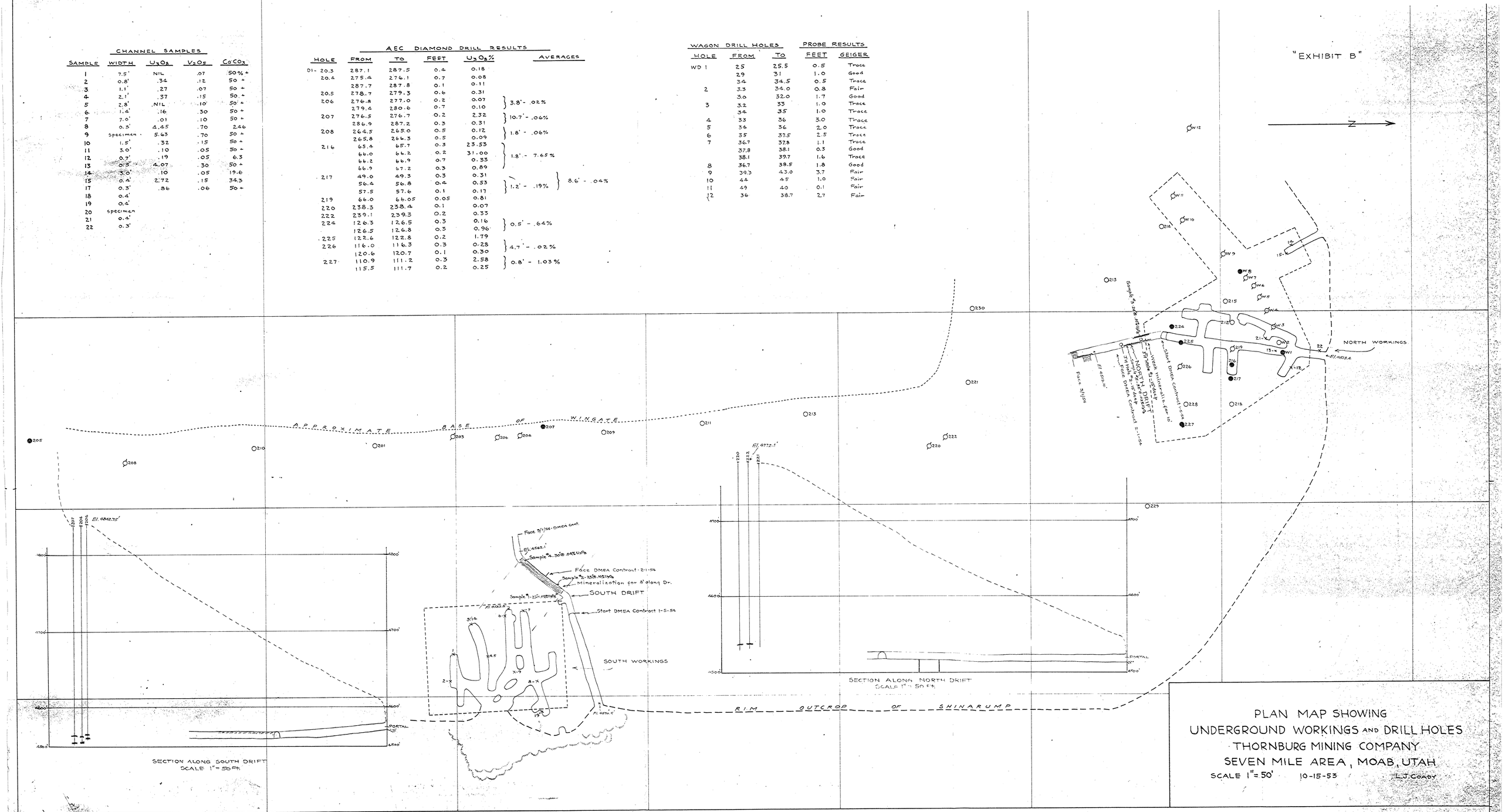
SAMPLE	WIDTH	U_3O_8	V_2O_5	$CaCO_3$
1	7.5'	NIL	.07	50% +
2	0.8'	.34	.12	50 +
3	1.1'	.27	.07	50 +
4	2.1'	.37	.15	50 +
5	2.8'	NIL	.10	50 +
6	1.4'	.16	.30	50 +
7	7.0'	.01	.10	50 +
8	0.3'	4.45	.70	2.46
9	Specimen	5.63	.70	50 +
10	1.5'	.32	.15	50 +
11	3.0'	.10	.05	50 +
12	0.7'	.19	.05	6.3
13	0.5'	4.07	.30	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	
206	276.8	277.0	0.2	0.07	3.8' - .02%
	279.4	280.6	0.7	0.10	
207	276.5	276.7	0.2	2.32	10.7' - .06%
	286.9	287.2	0.3	0.31	
208	264.5	265.0	0.5	0.12	1.8' - .06%
	265.8	266.3	0.5	0.09	
216	65.4	65.7	0.3	23.53	1.8' - 7.65%
	66.0	66.2	0.2	31.00	
	66.2	66.9	0.7	0.33	
	66.9	67.2	0.3	0.89	
217	49.0	49.3	0.3	0.31	
	56.4	56.8	0.4	0.53	1.2' - .19% } 8.6' - .04%
	57.5	57.6	0.1	0.17	
219	66.0	66.05	0.05	0.81	
220	238.3	238.4	0.1	0.07	
222	239.1	239.3	0.2	0.33	
224	126.3	126.5	0.3	0.16	0.5' - .64%
	126.5	126.8	0.3	0.96	
225	122.6	122.8	0.2	1.79	
226	116.0	116.3	0.3	0.28	4.7' - .02%
	120.6	120.7	0.1	0.30	
227	110.9	111.2	0.3	2.58	0.8' - 1.03%
	115.5	111.7	0.2	0.25	

WAGON DRILL HOLES / PROBE RESULTS

HOLE	FROM	TO	FEET	GEIGER
WD 1	25	25.5	0.5	Trace
	29	31	1.0	Good
	34	34.5	0.5	Trace
2	33	34.0	0.8	Fair
	30	32.0	1.7	Good
3	32	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

"EXHIBIT B"

CHANNEL SAMPLES

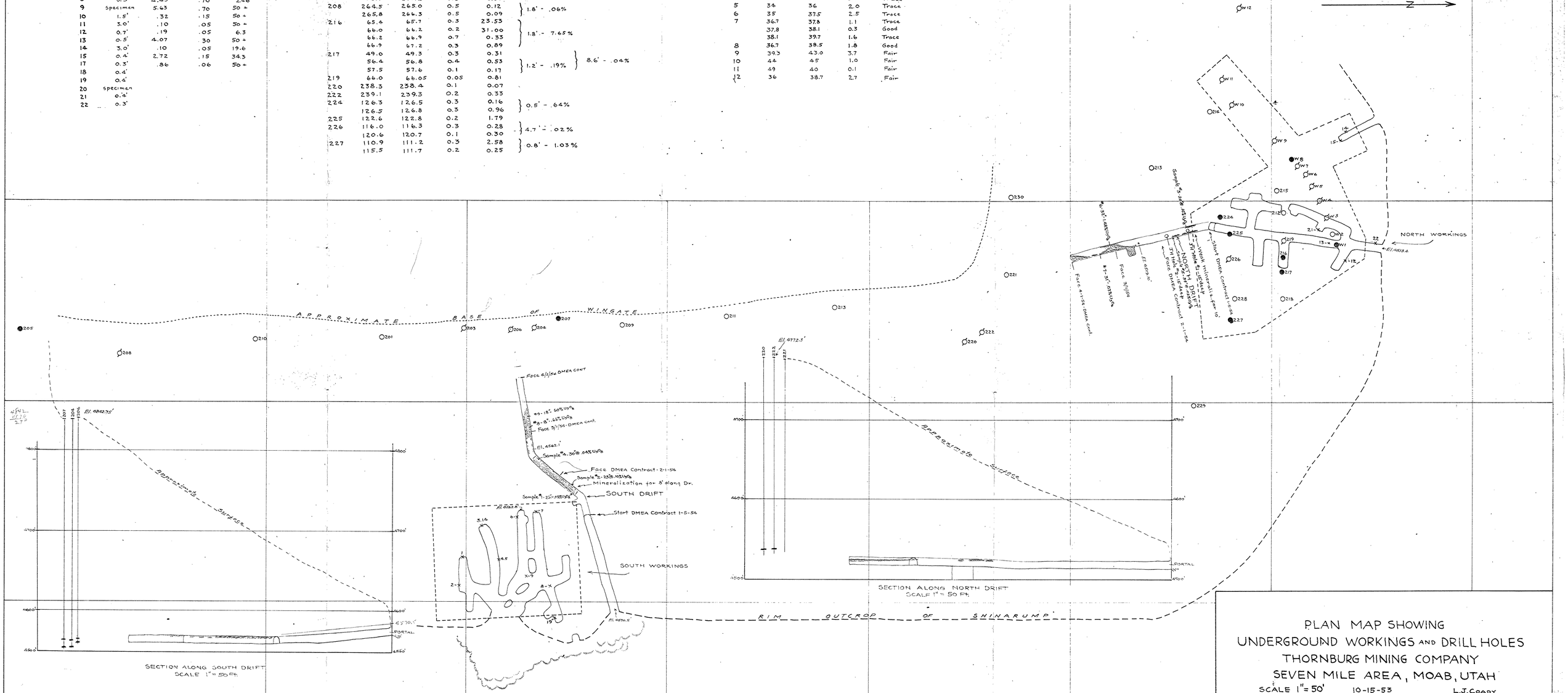
SAMPLE	WIDTH	U_3O_8	V_2O_5	$CaCO_3$
1	7.5'	NIL	.07	50% +
2	0.8'	.34	.12	50 +
3	1.1'	.27	.07	50 +
4	2.1'	.37	.15	50 +
5	2.8'	NIL	.10	50 +
6	1.4'	.16	.30	50 +
7	7.0'	.01	.10	50 +
8	0.5'	4.45	.70	2.46
9	Specimen	5.43	.70	50 +
10	1.5'	.32	.15	50 +
11	3.0'	.10	.05	50 +
12	0.7'	.19	.05	6.3
13	0.5'	4.07	.30	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
01-20.3	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	
206	276.8	277.0	0.2	0.07	3.8' - .02%
	279.4	280.6	0.7	0.10	
207	276.5	276.7	0.2	2.32	10.7' - .06%
	286.9	287.2	0.3	0.31	
208	264.5	265.0	0.5	0.12	1.8' - .06%
	265.8	266.3	0.5	0.09	
216	65.4	65.7	0.3	23.53	1.8' - 7.65%
	66.0	66.2	0.2	31.00	
	66.2	66.9	0.7	0.53	
	66.9	67.2	0.3	0.89	
217	49.0	49.3	0.3	0.31	8.6' - .04%
	56.4	56.8	0.4	0.53	1.2' - .19%
	57.5	57.6	0.1	0.17	
219	66.0	66.05	0.05	0.81	
220	238.3	238.4	0.1	0.07	
222	239.1	239.3	0.2	0.33	
224	126.3	126.5	0.3	0.16	0.5' - .64%
	126.5	126.8	0.3	0.96	
225	122.6	122.8	0.2	1.79	
226	116.0	116.3	0.3	0.28	4.7' - .02%
	120.6	120.7	0.1	0.30	
227	110.9	111.2	0.3	2.58	0.8' - 1.03%
	115.5	111.7	0.2	0.25	

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

CHANNEL SAMPLES

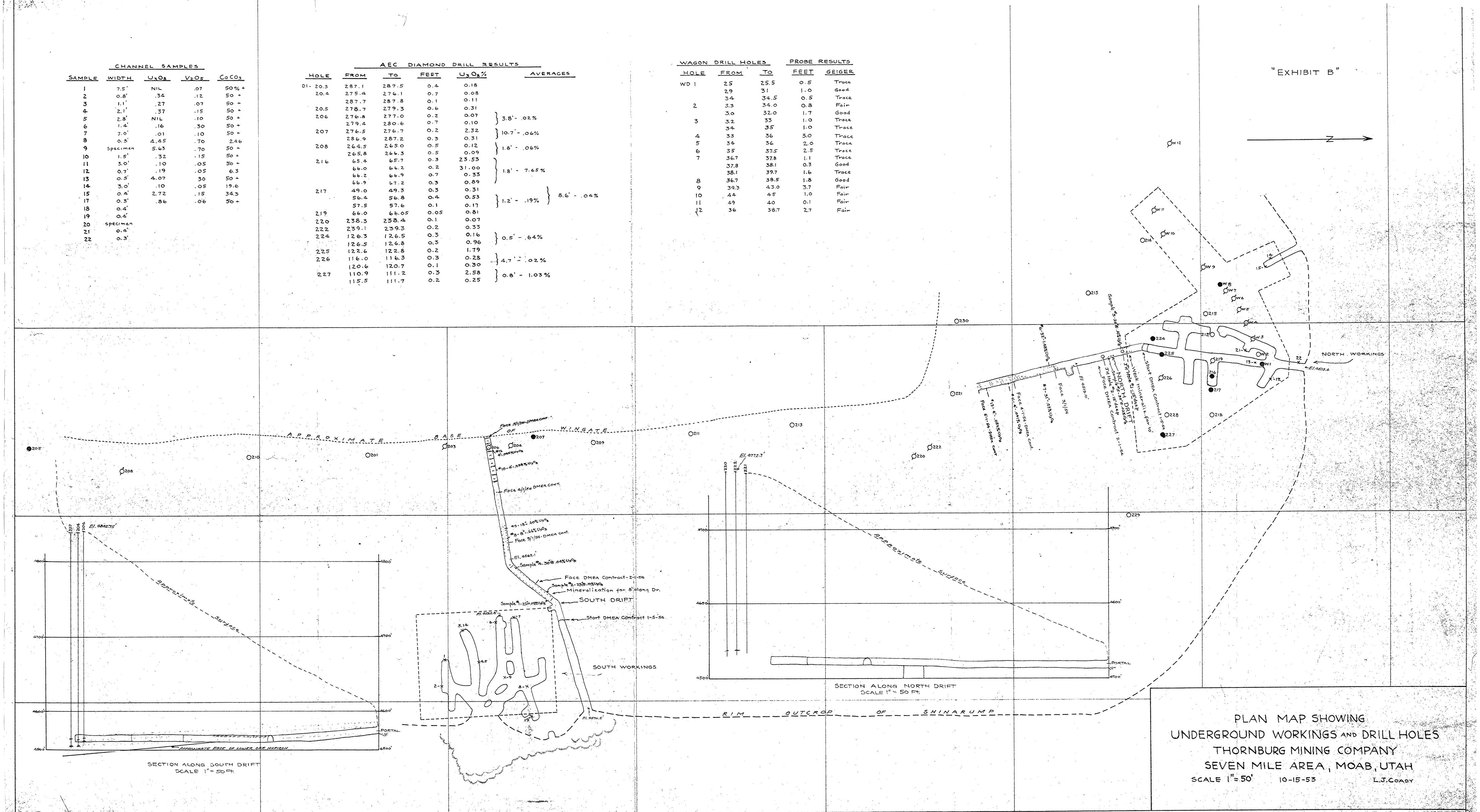
SAMPLE	WIDTH	U_3O_8	V_2O_5	$CaCO_3$
1	7.5'	NIL	.07	50% +
2	0.8'	.34	.12	50 +
3	1.1'	.27	.07	50 +
4	2.1'	.37	.15	50 +
5	2.8'	NIL	.10	50 +
6	1.4'	.16	.30	50 +
7	7.0'	.01	.10	50 +
8	0.3'	4.45	.70	2.46
9	Specimen	5.63	.70	50 +
10	1.5'	.32	.15	50 +
11	3.0'	.10	.05	50 +
12	0.7'	.19	.05	6.3
13	0.5'	4.07	.30	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	
206	276.8	277.0	0.2	0.07	3.8' - .02%
	279.4	280.6	0.7	0.10	
207	276.5	276.7	0.2	2.32	10.7' - .06%
	286.9	287.2	0.3	0.31	
208	264.5	265.0	0.5	0.12	1.8' - .06%
	265.8	266.3	0.5	0.09	
216	65.4	65.7	0.3	23.53	1.8' - 7.65%
	66.0	66.2	0.2	31.00	
	66.2	66.9	0.7	0.33	
	66.9	67.2	0.3	0.89	
217	49.0	49.3	0.3	0.31	8.6' - .04%
	56.4	56.8	0.4	0.53	1.2' - .19%
	57.5	57.6	0.1	0.17	
219	66.0	66.05	0.05	0.81	
220	238.3	238.4	0.1	0.07	
222	239.1	239.3	0.2	0.33	
224	126.3	126.5	0.3	0.16	0.5' - .64%
	126.5	126.8	0.3	0.96	
225	122.6	122.8	0.2	1.79	
226	116.0	116.3	0.3	0.28	4.7' - .02%
	120.6	120.7	0.1	0.30	
227	110.9	111.2	0.3	2.58	0.8' - 1.03%
	115.5	111.7	0.2	0.25	

WAGON DRILL HOLES / PROBE RESULTS

HOLE	FROM	TO	FEET	GEIGER
WD 1	2.5	25.5	0.5	Trace
	29	31	1.0	Good
	34	34.5	0.5	Trace
2	3.3	34.0	0.8	Fair
	30	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

CHANNEL SAMPLES

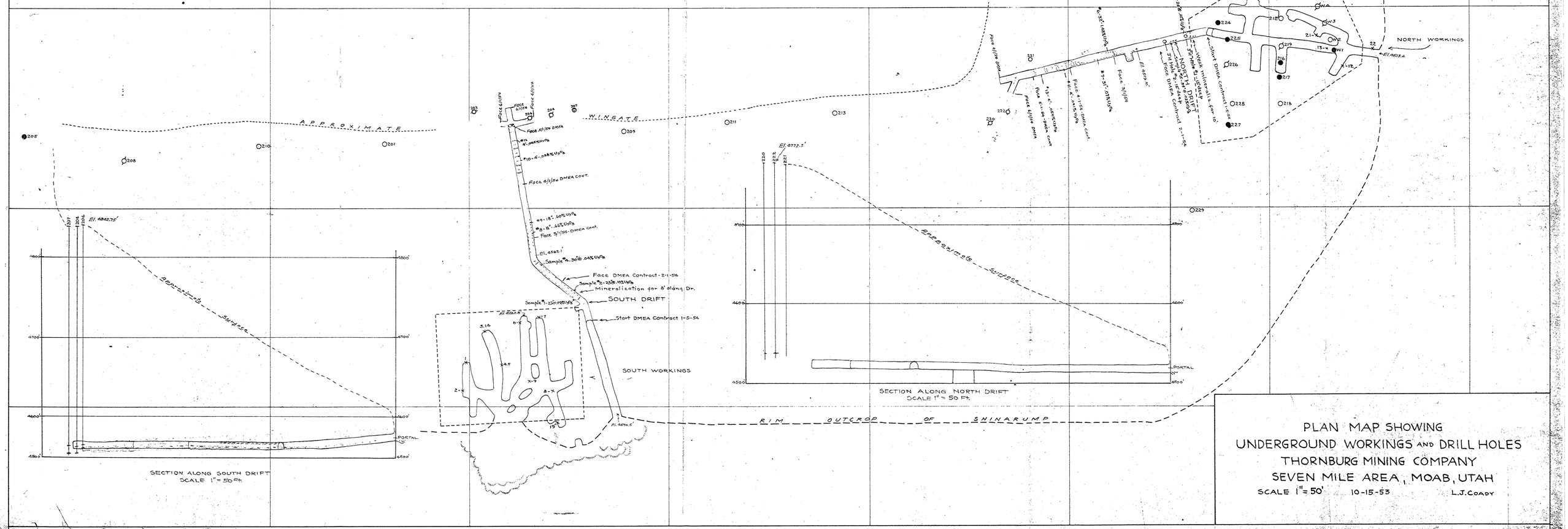
SAMPLE	WIDTH	U_3O_8	V_2O_5	$CaCO_3$
1	7.5'	NIL	.07	50% +
2	0.8'	.34	.12	50 +
3	1.1'	.27	.07	50 +
4	2.1'	.37	.15	50 +
5	2.8'	NIL	.10	50 +
6	1.4'	.16	.30	50 +
7	7.0'	.01	.10	50 +
8	0.3'	4.45	.70	2.46
9	Specimen	5.43	.70	50 +
10	1.5'	.32	.15	50 +
11	3.0'	.10	.05	50 +
12	0.7'	.19	.05	6.3
13	0.5'	4.07	.30	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	
206	276.8	277.0	0.2	0.07	3.8' - .02%
	279.4	280.6	0.7	0.10	
207	276.5	276.7	0.2	2.32	10.7' - .06%
	286.9	287.2	0.3	0.31	
208	264.5	265.0	0.5	0.12	1.8' - .06%
	265.8	266.3	0.5	0.09	
216	65.4	65.7	0.3	23.53	1.8' - 7.65%
	66.0	66.2	0.2	31.00	
	66.2	66.9	0.7	0.33	
	66.9	67.2	0.3	0.89	
217	49.0	49.3	0.3	0.31	8.6' - .04%
	56.4	56.8	0.4	0.53	1.2' - .19%
	57.5	57.6	0.1	0.17	
219	66.0	66.05	0.05	0.81	
220	238.3	238.4	0.1	0.07	
222	239.1	239.3	0.2	0.33	
224	126.3	126.5	0.3	0.16	0.5' - .64%
	126.5	126.8	0.3	0.96	
225	122.6	122.8	0.2	1.79	
226	116.0	116.3	0.3	0.28	4.7' - .02%
	120.6	120.7	0.1	0.30	
227	110.9	111.2	0.3	2.58	0.8' - 1.03%
	115.5	111.7	0.2	0.25	

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



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	0.8'	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

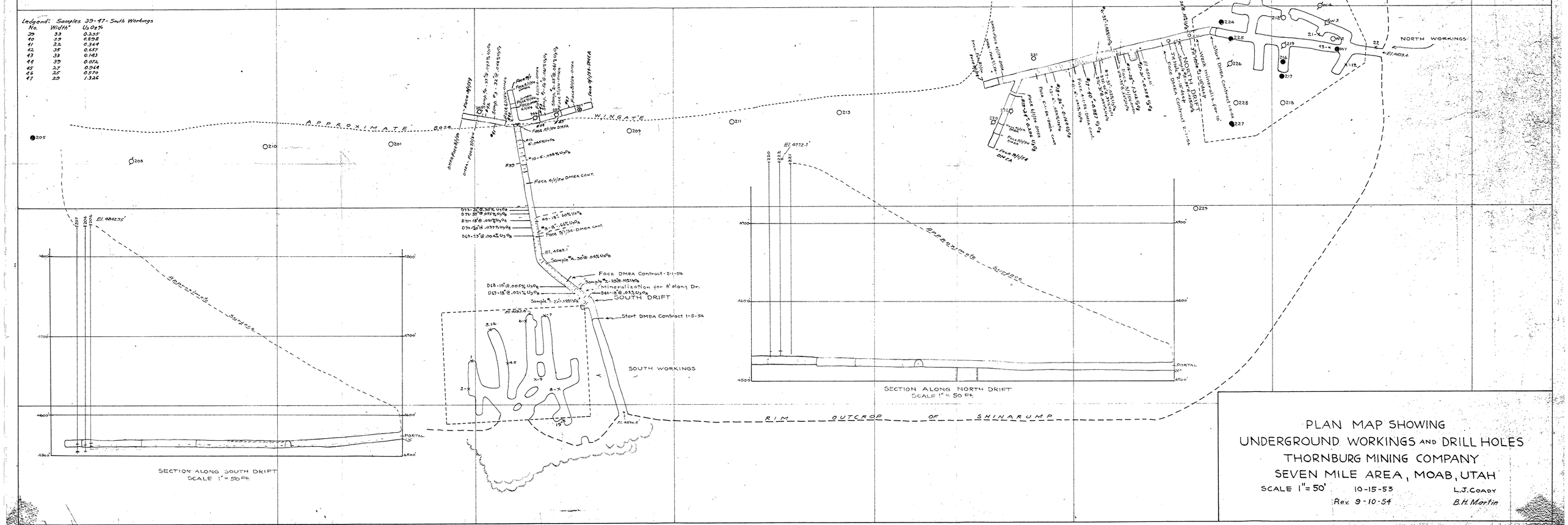
HOLE	FROM	TO	FEET	U_3O_8%	AVERAGES
D1-20.3	287.1	287.5	0.4	0.18	
20.4	275.4	276.1	0.7	0.08	
	287.7	287.8	0.1	0.11	
20.5	278.7	279.3	0.6	0.31	
20.6	276.8	277.0	0.2	0.07	3.8' - .02%
	279.4	280.6	0.7	0.10	
20.7	276.5	276.7	0.2	2.32	10.7' - .06%
	286.9	287.2	0.3	0.31	
20.8	264.5	265.0	0.5	0.12	1.8' - .06%
	265.8	266.3	0.5	0.09	
21.6	65.4	65.7	0.3	23.53	1.8' - 7.65%
	66.0	66.2	0.2	31.00	
	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	8.6' - .04%
	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	0.5' - .64%
	126.5	126.8	0.3	0.96	
22.5	122.6	122.8	0.2	1.79	
22.6	116.0	116.3	0.3	0.28	4.7' - .02%
	120.6	120.7	0.1	0.30	
22.7	110.9	111.2	0.3	2.58	0.8' - 1.03%
	115.5	111.7	0.2	0.25	

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
	3.4	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
	3.4	3.5	1.0	Trace
4	3.3	36	3.0	Trace
5	3.4	36	2.0	Trace
6	3.5	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

Ledgend: Samples 39-47 - South Workings

No.	Width'	U_3O_8%
39	33	0.235
40	1.3	0.898
41	2.5	0.364
42	3.5	0.657
43	3.3	0.143
44	3.3	0.072
45	2.7	0.344
46	2.5	0.570
47	2.3	1.326



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
Rev. 9-10-54 B.H. Martin

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	
206	276.8	277.0	0.2	0.07	3.8' - .02%
	279.4	280.6	0.7	0.10	
207	276.5	276.7	0.2	2.32	10.7' - .06%
	286.9	287.2	0.3	0.31	
208	264.5	265.0	0.5	0.12	1.8' - .06%
	265.8	266.3	0.5	0.09	
216	65.4	65.7	0.3	23.53	1.8' - 7.65%
	66.0	66.2	0.2	31.00	
	66.2	66.9	0.7	0.33	
	66.9	67.2	0.3	0.89	
217	49.0	49.3	0.3	0.31	8.6' - .04%
	56.4	56.8	0.4	0.53	1.2' - .19%
	57.5	57.6	0.1	0.17	
219	66.0	66.05	0.05	0.81	
220	238.3	238.4	0.1	0.07	
222	239.1	239.3	0.2	0.33	
224	126.3	126.5	0.3	0.16	0.5' - .64%
	126.5	126.8	0.3	0.96	
225	122.6	122.8	0.2	1.79	
226	116.0	116.3	0.3	0.28	4.7' - .02%
	120.6	120.7	0.1	0.30	
227	110.9	111.2	0.3	2.58	0.8' - 1.03%
	115.5	111.7	0.2	0.25	

WAGON DRILL HOLES — PROBE RESULTS

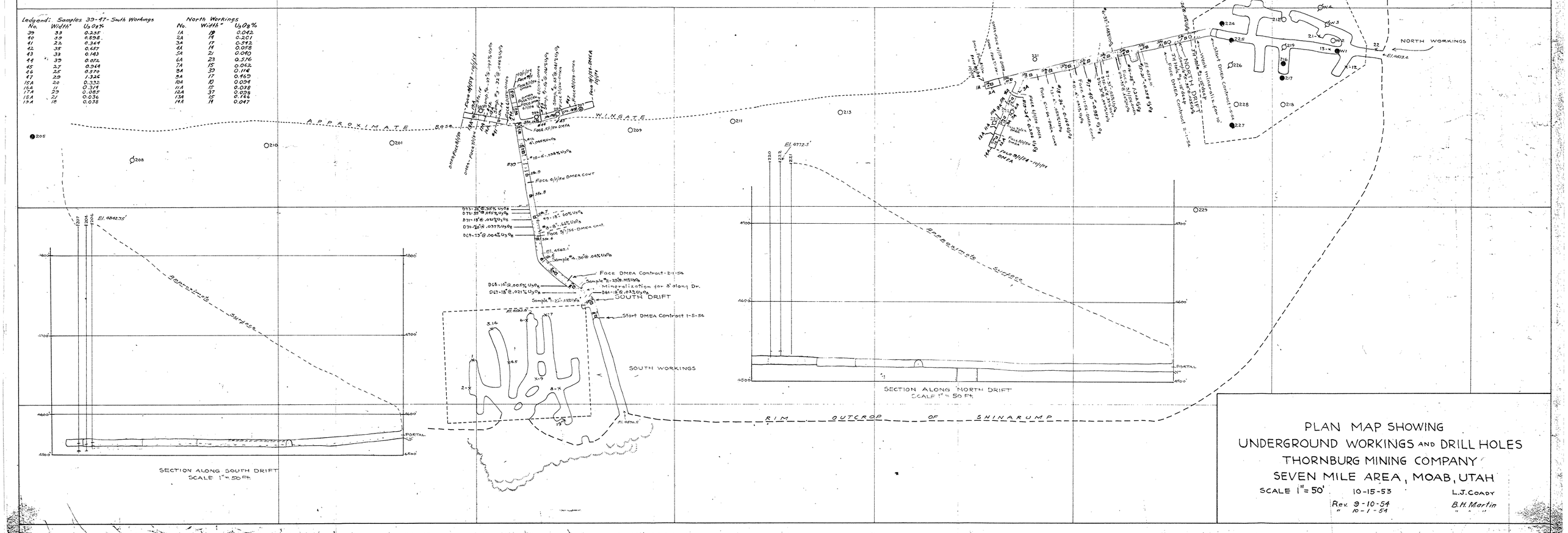
HOLE	FROM	TO	FEET	GEIGER
WD 1	25	25.5	0.5	Trace
	29	31	1.0	Good
	34	34.5	0.5	Trace
2	3.3	34.0	0.8	Fair
	30	32.0	1.7	Good
3	3.2	33	1.0	Trace
	34	35	1.0	Trace
4	33	36	3.0	Trace
5	34	36	2.0	Trace
6	35	37.5	2.5	Trace
7	36.7	37.8	1.1	Trace
	37.8	38.1	0.3	Good
	38.1	39.7	1.6	Trace
8	36.7	38.5	1.8	Good
9	39.3	43.0	3.7	Fair
10	44	45	1.0	Fair
11	49	40	0.1	Fair
12	36	38.7	2.7	Fair

Ledgend: Samples 39-47- South Workings

No.	Width'	U_3O_8%
39	33	0.235
40	33	0.898
41	22	0.364
42	35	0.657
43	33	0.143
44	33	0.072
45	27	0.344
46	25	0.570
47	28	1.326
15A	20	0.332
16A	15	0.314
17A	23	0.085
18A	21	0.036
19A	18	0.038

North Workings

No.	Width'	U_3O_8%
1A	18	0.042
2A	19	0.201
3A	17	0.592
4A	14	0.058
5A	21	0.040
6A	23	0.576
7A	15	0.062
8A	33	0.114
9A	17	0.160
10A	10	0.094
11A	15	0.038
12A	37	0.039
13A	15	0.166
14A	11	0.047



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

Rev. 9-10-54 B.H. Martin

" 10-1-54 " " "

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	0.5'	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	264.3	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	0.5' - .64%
	126.5	126.8	0.3	0.96	
22.5	122.6	122.8	0.2	1.79	
22.6	116.0	116.3	0.3	0.28	4.7' - .02%
	120.6	120.7	0.1	0.30	
22.7	110.9	111.2	0.3	2.58	0.8' - 1.03%
	115.5	111.7	0.2	0.25	

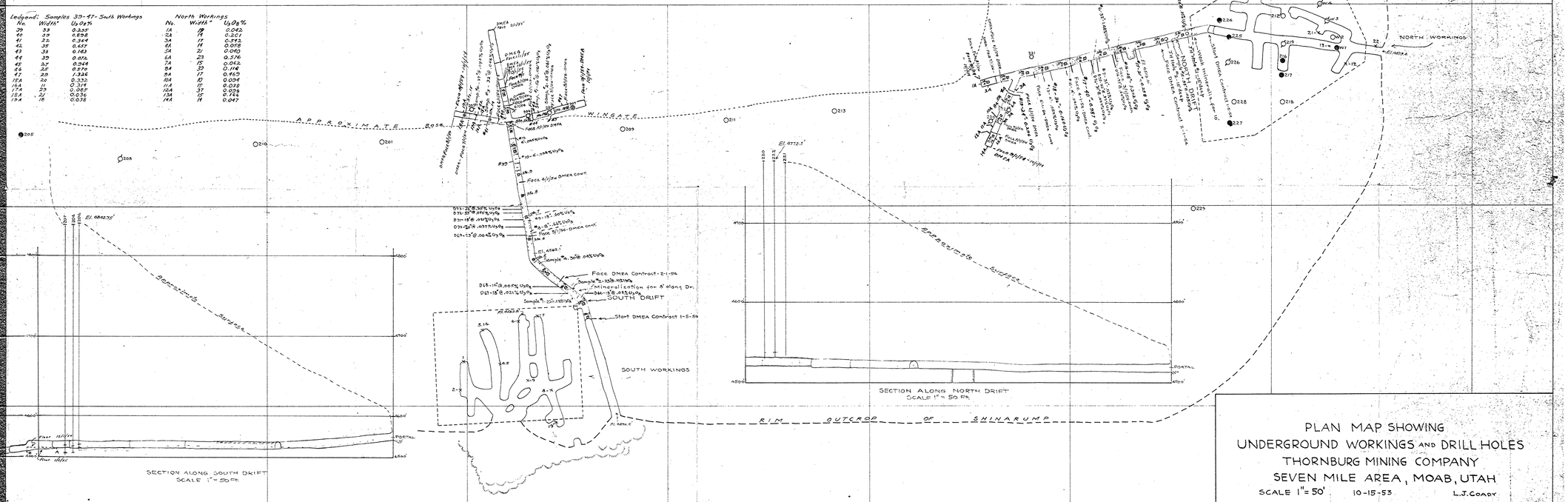
AVERAGES: 8.6' - .04%

WAGON DRILL HOLES / PROBE RESULTS

HOLE	FROM	TO	FEET	GEIGER
WD 1	2.5	25.5	0.5	Trace
	2.9	3.1	1.0	Good
	3.4	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
	3.4	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

Legend: Samples 39-47- South Workings

No.	Width"	U_3O_8%	No.	Width"	U_3O_8%
39	33	0.235	14	18	0.042
40	39	0.896	24	19	0.201
41	25	0.244	34	17	0.272
42	35	0.457	44	14	0.058
43	33	0.163	54	21	0.040
44	35	0.072	64	23	0.376
45	25	0.344	74	15	0.062
46	25	0.270	84	33	0.114
47	29	1.326	94	17	0.169
15A	21	0.335	104	10	0.094
16A	11	0.314	114	15	0.038
17A	23	0.065	124	37	0.038
18A	21	0.036	134	15	0.146
19A	18	0.038	144	14	0.047



"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	0.5'	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	
206	276.8	277.0	0.2	0.07	3.8' - .02%
	279.4	280.6	0.7	0.10	
207	276.5	276.7	0.2	2.32	10.7' - .06%
	286.9	287.2	0.3	0.31	
208	264.5	265.0	0.5	0.12	1.8' - .06%
	265.8	266.3	0.5	0.09	
216	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	
217	49.0	49.3	0.3	0.31	
	56.4	56.8	0.4	0.53	1.2' - .19% } 8.6' - .04%
	57.5	57.6	0.1	0.17	
219	66.0	66.05	0.05	0.81	
220	238.3	238.4	0.1	0.07	
222	239.1	239.3	0.2	0.33	
224	126.3	126.5	0.3	0.16	0.5' - .64%
	126.5	126.8	0.3	0.96	
225	122.6	122.8	0.2	1.79	
226	116.0	116.3	0.3	0.28	4.7' - .02%
	120.6	120.7	0.1	0.30	
227	110.9	111.2	0.3	2.58	0.8' - 1.03%
	115.3	111.7	0.2	0.25	

WAGON DRILL HOLES / PROBE RESULTS

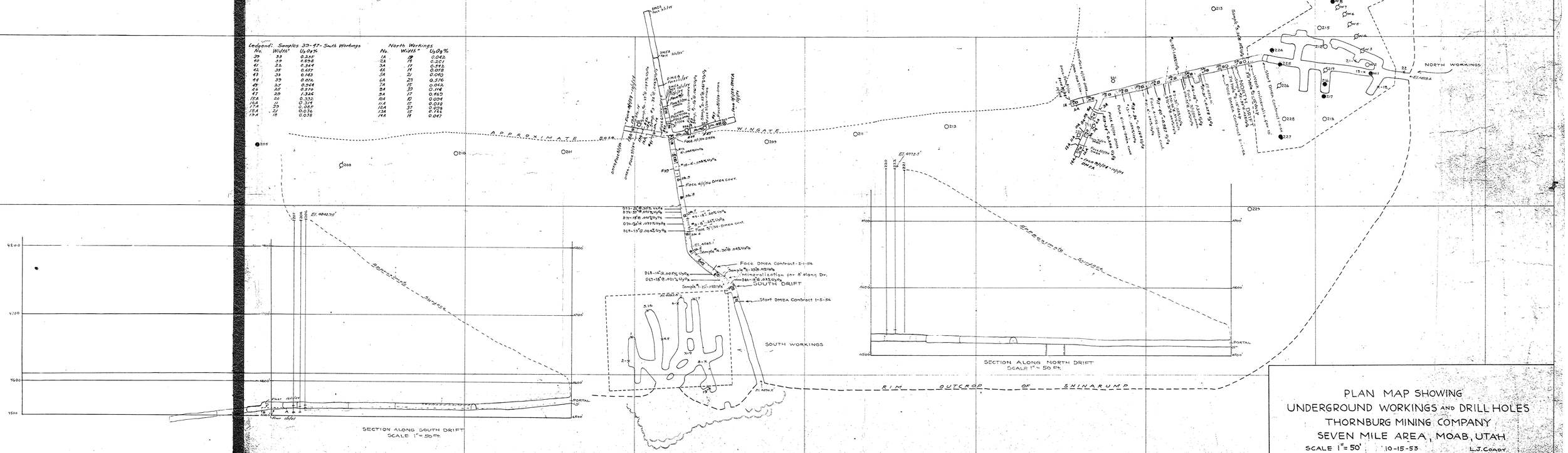
HOLE	FROM	TO	FEET	GEIGER
WD 1	2.5	25.5	0.5	Trace
	2.9	31	1.0	Good
	34	34.5	0.5	Trace
2	3.5	34.0	0.8	Fair
	36	32.0	1.7	Good
3	32	33	1.0	Trace
	34	35	1.0	Trace
4	33	36	3.0	Trace
5	34	36	2.0	Trace
6	35	37.5	2.5	Trace
7	36.7	37.8	1.1	Trace
	37.8	38.1	0.3	Good
	38.1	39.7	1.6	Trace
8	36.7	38.5	1.8	Good
9	39.3	43.0	3.7	Fair
10	44	45	1.0	Fair
11	49	40	0.1	Fair
12	36	38.7	2.7	Fair

Legend: Samples 33-47 - South Workings

No.	Width"	U_3O_8%
39	33	0.325
40	33	0.698
41	25	0.349
42	35	0.657
43	33	0.143
44	35	0.072
45	27	0.044
46	25	0.570
47	20	1.326
15A	20	0.332
16A	11	0.374
17A	25	0.082
18A	21	0.036
19A	16	0.038

North Workings

No.	Width"	U_3O_8%
1A	18	0.042
2A	19	0.201
3A	17	0.572
4A	14	0.078
5A	21	0.040
6A	23	0.376
7A	15	0.042
8A	30	0.118
9A	17	0.163
10A	10	0.034
11A	15	0.032
12A	37	0.029
13A	15	0.126
14A	11	0.047



PLAN MAP SHOWING UNDERGROUND WORKINGS AND DRILL HOLES THORNBURG MINING COMPANY SEVEN MILE AREA, MOAB, UTAH

SCALE 1" = 50' 10-15-53

Rev. 9-10-54
" 10-1-55
3-1-56

L.J. Condy
B.H. Martin
G.W. Beecroft

"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	0.5'	4.45	.70	2.46
9	Specimen	5.43	.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%
	268.8	269.3	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	0.5' - .64%
	126.5	126.8	0.3	0.96	
22.5	122.6	122.8	0.2	1.79	
22.6	116.0	116.3	0.3	0.28	4.7' - .02%
	120.6	120.7	0.1	0.55	
22.7	110.9	111.2	0.3	2.58	0.8' - 1.03%
	115.5	115.7	0.2	0.25	

WAGON DRILL HOLES / PROBE RESULTS

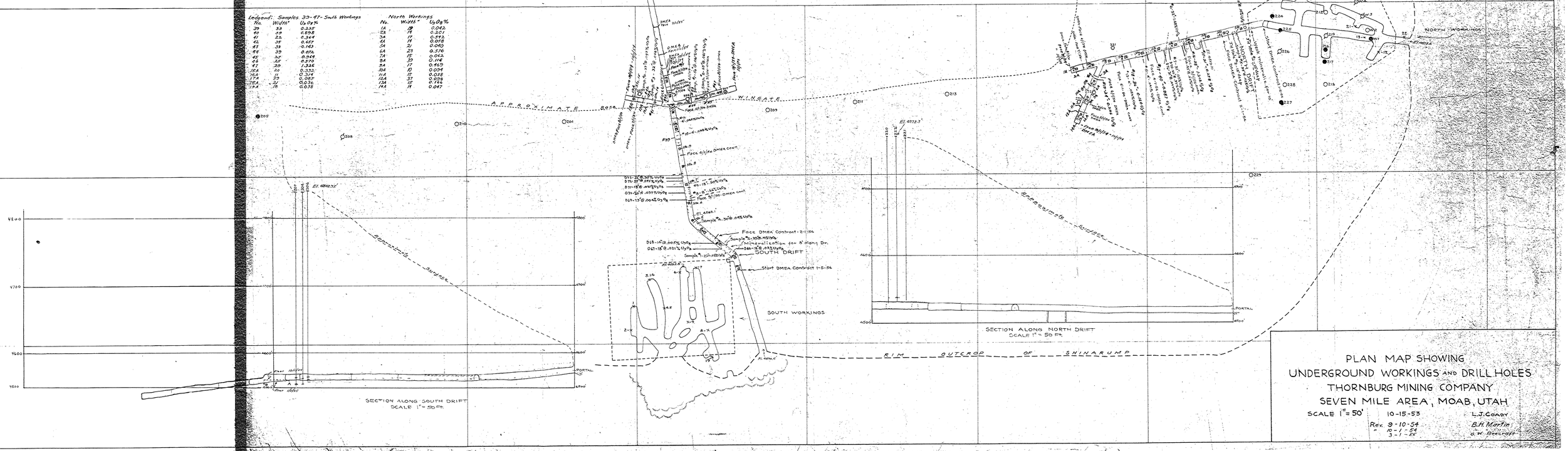
HOLE	FROM	TO	PROBE RESULTS FEET	PROBE RESULTS GEIGER
WD 1	2.5	25.5	0.5	Trace
	29	31	1.0	Good
	34	34.5	0.5	Trace
2	33	34.0	0.8	Fair
	30	32.0	1.7	Good
3	32	33	1.0	Trace
	34	35	1.0	Trace
4	33	36	3.0	Trace
5	34	36	2.0	Trace
6	35	37.5	2.5	Trace
7	36.7	37.8	1.1	Trace
	37.8	38.1	0.3	Good
	38.1	39.7	1.6	Trace
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

Legend: Samples 39-47- South Workings

No.	Width'	U_3O_8%
39	33	0.235
40	29	0.698
41	22	0.369
42	38	0.657
43	33	0.163
44	33	0.076
45	35	0.369
46	35	0.576
47	33	1.336
10A	21	0.332
16A	11	0.374
17A	29	0.065
18A	21	0.036
19A	18	0.038

North Workings

No.	Width'	U_3O_8%
1A	18	0.042
2A	14	0.201
3A	17	0.592
4A	14	0.058
5A	21	0.090
6A	23	0.576
7A	15	0.062
8A	30	0.114
9A	17	0.460
10A	10	0.004
11A	15	0.038
12A	37	0.028
13A	18	0.762
14A	11	0.047



PLAN MAP SHOWING UNDERGROUND WORKINGS AND DRILL HOLES THORNBURG MINING COMPANY SEVEN MILE AREA, MOAB, UTAH

SCALE 1" = 50'

10-15-53

Rev. 9-10-54
" 10-1-55
" 3-1-56

L.J. Condy
B.H. Martin
G.W. Beecroft

"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	0.5'	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	0.51	
20.8	264.3	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	25.33	
	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	0.5' - .64%
	126.5	126.8	0.3	0.96	
22.5	122.6	122.8	0.2	1.79	
22.6	116.0	116.3	0.3	0.08	4.7' - .02%
	120.6	120.7	0.1	0.12	
22.7	110.9	111.2	0.3	2.58	0.8' - 1.03%
	115.5	111.7	0.2	0.25	

8.6' - .04%

WAGON DRILL HOLES / PROBE RESULTS

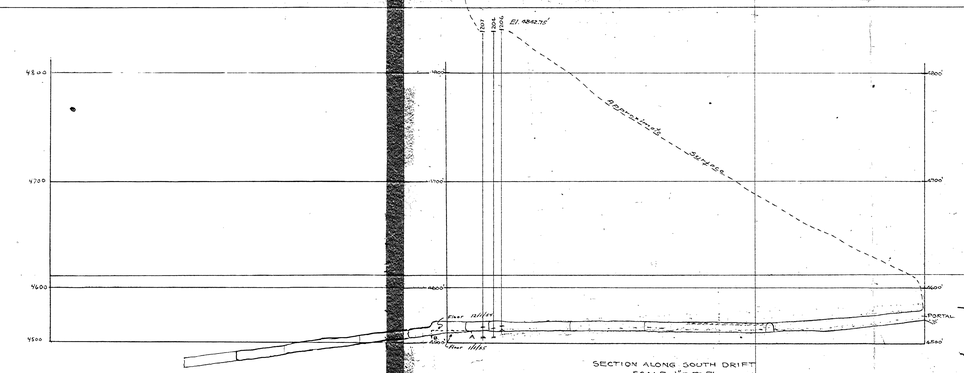
HOLE	FROM	TO	FEET	GEIGER
WD 1	25	25.5	0.5	Trace
	29	31	1.0	Good
	34	34.5	0.5	Trace
2	33	34.0	0.8	Fair
	30	32.0	1.7	Good
3	32	33	1.0	Trace
	34	35	1.0	Trace
4	33	36	3.0	Trace
5	34	36	2.0	Trace
6	35	37.5	2.5	Trace
7	36.7	37.8	1.1	Trace
	37.8	38.1	0.3	Good
	38.1	39.7	1.6	Trace
8	36.7	38.5	1.8	Good
9	39.3	43.0	3.7	Fair
10	44	45	1.0	Fair
11	49	40	0.1	Fair
12	36	38.7	2.7	Fair

Ledgend: Samples 39-47- South Workings

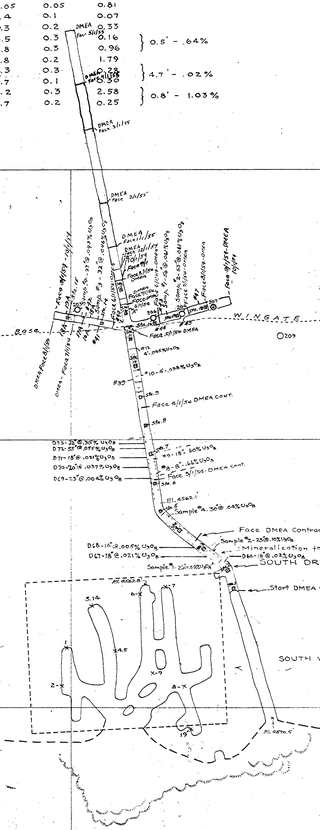
No.	Width'	U_3O_8%
39	33	0.285
40	29	0.698
41	22	0.364
42	35	0.557
43	31	0.183
44	39	0.076
45	37	0.144
46	25	0.370
47	29	1.336
16A	26	0.332
16A	11	0.316
17A	25	0.065
17A	21	0.036
19A	16	0.038

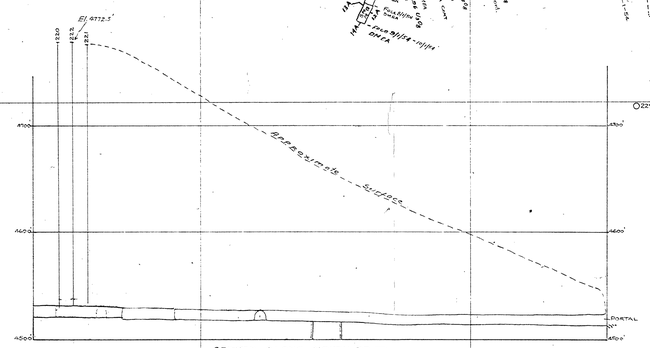
North Workings

No.	Width'	U_3O_8%
1A	18	0.042
2A	19	0.201
3A	17	0.272
4A	19	0.058
5A	21	0.040
6A	23	0.576
7A	15	0.062
8A	33	0.114
9A	17	0.163
10A	10	0.034
11A	15	0.042
12A	37	0.029
13A	15	0.126
14A	11	0.047

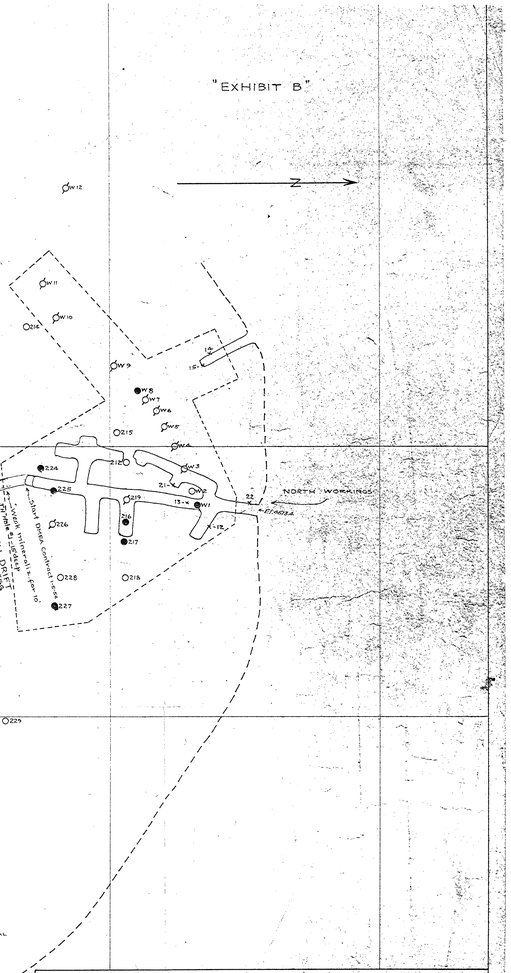


SECTION ALONG SOUTH DRIFT
SCALE 1" = 50 Ft.





SECTION ALONG NORTH DRIFT
SCALE 1" = 50 Ft.



PLAN MAP SHOWING
UNDERGROUND WORKINGS AND DRILL HOLES
THORNBURG MINING COMPANY
SEVEN MILE AREA, MOAB, UTAH

SCALE 1" = 50' 10-15-53 L.J. Condy

Rev. 9-10-54 B.H. Martin
3-1-55 G.W. Beecroft