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 **Iron and Ferro-Alloys**

Report Period	DMEA No.	Operator	Contract No.
1.1-6.30.57	3098	**Sunshine Mining Company**	**Idm-E598**

ORE ESTIMATES

	Tons	Analysis
DMEA	1,425	0.560 % WO_3
Operator to date	1,500	0.560 " "
Total	2,925	0.560 " "
Production to date	429 *	0.560 " " *
Ore in ground	2,496 *	0.560 " " *

INVESTMENT

Type	Size		Feet	Cost
Shafts				
Winzes				
Drifts and Crosscuts				
Raises				
Drilling	Type			
Rehabilitation	Description			

FACILITIES

Mine Plant		
Mill	**60-ton mill built by lessee to process ore from this and several other properties**	**Cost not stated**
Roads		

REMARKS

"Mr. Gunnar Johnson, lessee, was interviewed May 31. He stated that there has been no production during the reporting period from the claims that he has leased. The mine area was visited May 29; there was no sign of activity at the peroperty."

* **Tonnage converted by computation to assumed "Official Reserve" grade**

Prepared by S. P. Holt Date 3.7.58

Approved for W. Chamberlain 3-10-58

31398

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

October 15, 1963

Re: DMEA-3098 (Tungsten)
Sunshine Mining Company
Tungstar Group (Tarlach Group)
Deer Lodge and Granite Counties, Montana
Contract Idm-E598

Mr. Earl F. Elstone, President
Mines Prospecting and Exploration Co.
2115 26th Avenue
Missoula, Montana

Dear Sir:

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

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

This is in connection with the Owner's Consent to Lien, dated June 12, 1953, covering the subject property which you executed as president of the Mines Prospecting and Exploration Company.

Sincerely yours,

F. M. Murphy

F. M. Murphy, Acting Chief
Division of Minerals

OFFICIAL FILE COPY
O. M. E
RECEIVE NOV 22 1963

DATE	INITIALS	CODE
11/26		800
9		100
11/26		110
11/27	Murphy	500
		550

MME Form 63
Revised 3-62

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. From January 4, 1960, to September 14, 1963 ~~Since~~ , has there been a change in ownership, lease, or sublease? If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before. Yes ☐ No ☒

2. From January 4, 1960, to September 14, 1963 ~~Since~~ , has there been any production from the land subject to the contract? Yes ☐ No ☒

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

	Quantity	Value

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

Type	Quantity		Estimated Grade	Location
Ore		Tons		
Concentrates		Tons		
Other		Tons		

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

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

Disposition of Material	Quantity	Value

Submitted by: Mines Prospecting & Exploration Co.

Name Earl F. Olstad Title Pres.

Address 2115 - 26th Ave Date November 9, 1963

Missoula Montana

4511

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

March 15, 1963

Re: DMEA-3098 (Tungsten)
Sunshine Mining Company
Tungstar Group (Tarloch Group)
Deer Lodge and Granite Counties, Montana
Contract Idm-E598

Mr. James H. Maguire
Box 135
Silverton, Idaho

Dear Mr. Maguire:

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

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

Sincerely yours,

W. R. Griswold, Chief
Division of Minerals

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O. M. E
RECEIVED APR 15 1963

DATE		
4/16		800
		~~120~~
		100
		~~110~~
	Griswold	500
		230

MME Form 63
Revised 3-62

DMEA-3098
Idm-E598

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since January 4, 1960, has there been a change in ownership, lease, or sublease? If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before. Yes ☐ No ☐

To the best of my knowledge there has been no production in that area. The ore body was too low grade for the lower price of tungsten.

2. Since January 4, 1960, has there been any production from the land subject to the contract? Yes ☐ No ☐

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

	Quantity	Value

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

Type	Quantity	Estimated Grade	Location
Ore	Tons		
Concentrates	Tons		
Other	Tons		

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

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

Disposition of Material	Quantity	Value

Submitted by:

Name James H Maguire Title

Address Box A 34 Date april 8, 1963
Grants, New Mexico

4511

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

March 15, 1963

Re: IMEA-3098 (Tungsten)
Sunshine Mining Company
Tungsten Group (Tarloch Group)
Deer Lodge and Granite Counties, Montana
Contract Ida-E598

Mr. William Gallagher

Missoula, Montana

Dear Mr. Gallagher:

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

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

Sincerely yours,

W. R. Griswold

W. R. Griswold, Chief
Division of Minerals

MME Form 63
Revised 3-62

EMEA-3098
Idm-E598

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since January 4, 1960, has there been a change in ownership, lease, or sublease? If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before. Yes ☐ No ☐

2. Since January 4, 1960, has there been any production from the land subject to the contract? Yes ☐ No ☐

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

	Quantity	Value
_____	_____	_____
_____	_____	_____

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

Type	Quantity	Estimated Grade	Location
Ore	_____ Tons	_____	_____
Concentrates	_____ Tons	_____	_____
Other	_____ Tons	_____	_____

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

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

Disposition of Material	Quantity	Value
_____	_____	_____

Submitted by:

Name _____ Title _____

Address _____ Date _____

4511

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

September 28, 1962

Re: DMEA-3098 (Tungsten)
Sunshine Mining Company
Tungstar Group (Tarloch Group)
Deer Lodge and Granite Counties, Montana
Contract Idm-ES98

Mineo Prospecting and Exploration Company
219 Radio Central Building
Missoula, Montana

Gentlemen:

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

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

Sincerely yours,

W. R. Griswold

W. R. Griswold, Chief
Division of Minerals

MME Form 63
Revised 3-62

Idm-E590
DMEA-3090

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since January 4, 1960, has there been a change in ownership, lease, or sublease? If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before. Yes ☐ No ☐

2. Since January 4, 1960, has there been any production from the land subject to the contract? Yes ☐ No ☐

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

	Quantity	Value
_____		
_____	_____	_____

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

Type	Quantity		Estimated Grade	Location
Ore	_____	Tons	_____	_____
Concentrates	_____	Tons	_____	_____
Other	_____	Tons	_____	_____

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

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

Disposition of Material	Quantity	Value
_____	_____	_____

Submitted by:

Name _____ Title _____

Address _____ Date _____

4511

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

September 10, 1962

Re: DMBA-3098 (Tungsten)
Sunshine Mining Company
Tungstar Group (Tarloch Group)
Deer Lodge and Granite Counties, Montana
Contract Idm-3598

Mines Prospecting and Exploration Company

Missoula, Montana

Gentlemen:

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

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

Sincerely yours,

W. R. Griswold

W. R. Griswold, Chief
Division of Minerals

MME Form 63
Revised 3-62

DMRA-3098
Idm-3598

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since **January 4, 1960**, has there been a change in ownership, lease, or sublease? If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before. Yes ☐ No ☐

2. Since **January 4, 1960**, has there been any production from the land subject to the contract? Yes ☐ No ☐

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

	Quantity	Value
_____		
_____	_____	_____

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

Type	Quantity		Estimated Grade	Location
Ore	_____	Tons	_____	_____
Concentrates	_____	Tons	_____	_____
Other	_____	Tons	_____	_____

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

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

Disposition of Material	Quantity	Value
_____	_____	_____

Submitted by:

Name _____ Title _____

Address _____ Date _____

4511

Sunshine Mining Company

W. 300 MISSION AVE. - PHONE FA 8-3661
SPOKANE 1, WASHINGTON

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O. M. E
RECEIVED AUG 15 1962

DATE	INITIALS	CODE
8/15	[illegible]	800
8/15	[illegible]	100
	[illegible]	120
8/15	[illegible]	110
8/16	[illegible]	500
8/20	[illegible]	500
		220

August 13, 1962

U. S. Department of Interior
Office of Minerals Exploration
Washington 25, D. C.

Attention: W. R. Griswold, Chief
Division of Minerals

Re: DMEA-3098 (Tungsten) Sunshine Mining Company Tungstar Group (Tarloch Group) Deer Lodge & Granite Counties, Montana - Contract Idm-E598

Gentlemen:

Sunshine Mining Company abandoned the above property in 1955 and we have no further information concerning this property since that date.

Very truly yours,

Earl Mithaug

Earl Mithaug
Accountant

EM:aa

1 copy with MME Form 63 (not completed) to Region I

Re: DMEA-3098

Contract contains "abandonment" clause. Operator is not surety. We should attempt to hold landowner liable.

I suggest sending WMC Form 63 to Mines Prospecting & Exploration Co., Missoula, Mont.

Talbot
8/13/62

Agreed. BD

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

August 9, 1962

Re: DMEA-3098 (Tungsten)
Sunshine Mining Company
Tungstar Group (Tarloch Group)
Deer Lodge and Granite Counties, Montana
Contract Idm-E598

Sunshine Mining Company
738 Peyton Building
Spokane 1, Washington

Why? See same - annual report July 1 - Dec 31, 1962

Gentlemen:

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

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

Sincerely yours,

W. R. Griswold, Chief
Division of Minerals

MME Form 63
Revised 3-62

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since January 4, 1960 , has there been a change in ownership, lease, or sublease? If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before. Yes ☐ No ☐

2. Since January 4, 1960 , has there been any production from the land subject to the contract? Yes ☐ No ☐

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

	Quantity	Value
_____	_____	_____
_____	_____	_____

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

Type	Quantity		Estimated Grade	Location
Ore	_____	Tons	_____	_____
Concentrates	_____	Tons	_____	_____
Other	_____	Tons	_____	_____

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

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

Disposition of Material	Quantity	Value
_____	_____	_____

Submitted by:

Name _____ Title _____

Address _____ Date _____

4511

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DMEA
RECEIVED JAN 27 1958

DATE	INITIALS	CODE
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1/28	Cm	100

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

SEMI-ANNUAL REPORT OF CERTIFIED PROJECT

Reporting period: July 1 to December 31, 1957

Date of report: December 21, 1957

Operator: Sunshine Mining Company, 738 Peyton Bldg., Spokane, Washington

Mine name: Tungstar or Tarlach Group

County and State: Deer Lodge and Granite Counties, Montana

Docket number and commodity: DMEA-3098 (tungsten)

Contract number: Idm-E598

The property was inaccessible because of heavy snow. The lessee, Mr. Gunnar Johnson, with the aid of his son, did some diamond drilling during this reporting period. Mr. Johnson was not available at the time of the inspection so the results of the drilling are not known.

The royalty status remains the same as reported for the period January 1 to June 30, 1957.

Signed: George T. Krempasky (Engineer)

Distribution:
DMEA (4)
USGS (2)
USBM (AD)
USBM (2)

ACTION ON INTERIM
OR FINAL FIELD TEST REPORT

Date 1/28

Referred to:

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

Note comments in report regarding:

1. Assumed inactive

2.

3.

4.

and take appropriate action.

- - - - - - - - - -

Action taken by Division:

Robert E. Adams

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

SEMI-ANNUAL REPORT OF CERTIFIED PROJECT

Reporting period: January 1 to June 30, 1957 Date of exam: May 31, 1957

Operator: Sunshine Mining Company, 738 Peyton Bldg., Spokane, Wash.

Mine name: Tungstar or Tarlach Group

County and State: Deer Lodge and Granite Counties, Montana

Docket number and commodity: DMEA-3098 (tungsten)

Contract number: Idm-E598

OFFICIAL FILE COPY
DMEA
RECEIVED JUL 11 1957

DATE	INITIALS	CODE
7/11	P	220
11	Com	100

Date of contract: September 14, 1953

Date of certification: August 26, 1955

Expiration date of royalty payments: September 14, 1963

Total amount of contract: $61,355.00

Total expenditures under contract: 44,927.80

Amount of Government participation at 75%: 33,695.87

Royalty payments this period: $257.99

Previous royalty payments: 162.93

Total royalty payments to date: 420.92

Percent Government participation repaid: 1.2%

Royalty due on production to date: none

Royalty remarks: The royalty payment this period resulted from settlement by the GSA stockpile as noted in the report for the period of July 1 to December 31, 1956.

	Tons	Analysis
Original estimate of DMEA reserves (from Field Team final report) Mines ____ Survey ___ Joint X	1,425 tons that will assay 0.5 to 0.63% WO_3	
Revised estimate of DMEA reserves (Field Team) Mines ____ Survey ___ Joint ____		
Increase of reserves by work performed subsequent to DMEA project work:	According to information from Mr. Gunnar Johnson, lessee, the reserves have increased by approximately 1500 tons of which 740 tons have been mined.	
Production of DMEA ore (this period)	none	
(previous)	740 tons mined plus few tons of development ore	
(to date)	740 tons of ore and recovered 156.10 units WO_3 and 1.112 tons Pb-Ag concentrates	
Production of Operator's ore found subsequent to DMEA work (this period)	none	
(previous)	none	
(to date)	none	
Percent of revised reserves mined:	25%	

Production remarks: Mr. Gunnar Johnson, lessee, was interviewed May 31. He stated that there has been no production during the reporting period from the claims that he has leased. The mine area was visited May 29; there was no sign of activity at the property.

Distribution:
DMEA (4)
USGS (2)
USBM (AD)
USBM (2)

Signed: George T. Krempasky (Engineer)

RECEIVED
JAN 22 1957
D.M.E.A.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

SEMI-ANNUAL REPORT OF CERTIFIED PROJECT

Reporting period: July 1 to December 31, 1956 Date of exam: Dec. 19, 1956

Operator: Sunshine Mining Company, 738 Peyton Bldg., Spokane, Wash.

Mine name: Tungstar or Tarlach Group

County and State: Deer Lodge and Granite Counties, Montana

Docket number and commodity: DMEA-3098 (tungsten)

Contract number: Idm-E598

Mr. Gunnar Johnson, lessee, was interviewed December 19, 1956. He stated that there has been no work at the mine during the reporting period but that 740 tons of ore stockpiled at the mill has been milled. The concentrates (2974 lbs. dry wt. - 60.82% WO_3) have been accepted by the GSA stockpile but payment has not been made.

The mine is inaccessible because of snow.

The status of the project is the same as reported for the period of January 1 to June 30, 1956.

Signed: Eldon C. Pattee (Engineer)

Distribution:
DMEA (4)
USGS (2)
USBM (AD)
USBM (2)

Date _____ 1958

Referred to:

1. ~~[illegible]~~
2. ~~[illegible]~~
3. ~~[illegible]~~
4. Docket Control Mails and Files Division
5.
6. ~~Docket Control Mails and Files~~

Note comments in report regarding:

1. Increased reserves

2.

3.

4.

and take appropriate action.

- - - - - -

Action taken by Division:

598

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

SEMI-ANNUAL REPORT OF CERTIFIED PROJECT

Reporting period:	January 1 to June 30, 1956 Date of exam: June 9, 1956
Operator:	Sunshine Mining Company, 738 Peyton Bldg., Spokane, Wash.
Mine name:	Tungstar or Tarlach Group
County and State:	Deer Lodge and Granite Counties, Montana
Docket number and commodity:	DMEA-3098 (tungsten)
Contract number:	Idm-E598

Date of contract:	September 14, 1953
Date of certification:	August 26, 1955
Expiration date of royalty payments:	September 14, 1963

Total amount of contract:	$61,355.00
Total expenditures under contract:	$44,927.80
Amount of Government participation at 75%:	$33,695.87

Royalty payments this period:	none
Previous royalty payments:	$162.93
Total royalty payments to date:	$162.93
Percent Government participation repaid:	Less than 1.0%

Royalty due on production to date:	none
Royalty remarks:	none

Original estimate of reserves (from final Engr.-Geol. report):	1,425 tons that will assay 0.5 to 0.63% WO_3
Increase (or decrease) of reserves by work performed subsequent to original and last Field Team estimates:	According to information obtained from Mr. Gunnar Johnson, lessee, the reserves have increased by approximately 900 tons of which 400-500 tons have been mined.
Revised estimate of reserves:	2,325 tons containing 0.5% WO_3
Production this period:	none
Amount of previous production (since date of contract):	Few tons of development ore
Total DMEA production to date:	62.29 units WO_3; 1.112 tons Pb-Ag
Percent of revised reserves mined:	21%

Production remarks:

Mr. Gunnar Johnson, lessee, was interviewed June 15. He stated that there has been no production during the reporting period from the claims that he has leased at the property.

The mine was visited June 9. There was no one at the property and no sign of recent activity.

Other remarks:

Mr. Johnson stated that he has hauled approximately 140 tons of ore from the stockpile at the mine to the mill he is constructing near Silver Lake. The mill will probably be completed this summer. He also stated that he is trying to lease four more claims at the property and will probably mine additional ore if he can obtain these four claims. Mr. R. R. Wallace was interviewed June 9 and he stated that Mr. Seymour Standish has lost interest in the property and has dropped the lease-purchase contract covering four of the claims.

Distribution:
DMEA (4) USBM (AD)
USGS (2) USBM (2)

Signed: Eldon C. Pattee (Engineer)

3098

Date MAR 1956

Referred to:

1. ~~Mr. Mittendorf~~
2. ~~Mr. Johnson~~
3. ~~Mr. Chambers~~
4. Docket Control Mails and Files
5. _____ Division
6. Docket Control Mails and Files

Note comments in report regarding:

1. One reserves & units increased
2.
3.
4.

and take appropriate action.

- - - - - -

Action taken by Division:

ROBERT E. ADAMS

Initials

ADDENDUM TO
SEMI-ANNUAL REPORT OF CERTIFIED PROJECT
March 15, 1956

Reporting period: July 1, 1955 to December 31, 1955

Operator: Sunshine Mining Company

Mine name: Tungstar or Tarlach Group

County and State: Deer Lodge and Granite Counties, Montana

Contract No.: Idm-E598

Docket No. and Commodity: DMEA-3098 (tungsten)

Royalty remarks:

Mr. Gunnar S. Johnson, Box 775, Anaconda, Montana has leased four of the claims included in the contract. He stated that he has mined 400-500 tons of ore estimated to contain 0.5% WO_3. The ore will probably be milled and marketed this summer.

Original estimate of reserves (from final Engr.-Geol. report):	1,425 tons that will assay 0.5% to 0.63% WO_3
Increase (or decrease) of reserves by work performed subsequent to original and last Field Team estimates:	According to information obtained from Mr. Johnson, work performed subsequent to the final Engr.-Geol. report has increased the reserves by approximately 900 tons of which 400-500 tons have been mined.
Revised estimate of reserves:	2,325 tons containing 0.50% WO_3
Production this period:	According to Mr. Johnson, 400-500 tons estimated to contain 0.50% WO_3 were stockpiled from the Tarlach claim.
Amount of previous production:	Few tons of development ore.
Total DMEA production to date:	62.29 units WO_3; 1.112 tons Pb-Ag.
Percent of revised reserves mined:	21%

Production remarks:

Mr. Johnson stated that he will discontinue the lease, after milling the mined ore, if he is required to pay royalties until the Government's participation ($33,695.87) is repaid. Mr. Johnson has been informed that royalties are required on any production from the claims until the Government's participation is repaid or until September 14, 1963.

Other remarks:

Mr. Johnson leased the Tarlach, South Tarlach, Scotty Tom, and Uncle Jake claims about December 1955. He is constructing a mill with a 60-ton capacity at Silver Lake near Anaconda, Montana, for processing ore from several properties he has leased.

Mr. Seymour Standish, 814 Forest Avenue, Evanston, Illinois, obtained a lease-purchase contract from Mines Prospecting and Exploration Company on September 3, 1955 covering the Echo, Scheelite, Tungstar, and September claims. He has also taken a contract on the Atlantic Cable Quartz Lode mill which he is planning to recondition and adapt to the processing of scheelite ore. The mill is approximately 10 miles from the property. The prospect is inaccessible at this time because of deep snow but apparently Mr. Standish has not started work at the prospect.

Signed: Eldon C. Pattee (Engr.)

Distribution:
DMEA (4)
USGS (2)
USBM (AD)
USBM (2)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

SEMI-ANNUAL REPORT OF CERTIFIED PROJECT

Period: July 1, 1955 to December 31, 1955

Docket No.: DMEA-3098
Contract No.: Idm-E598

Operator: Sunshine Mining Company, 738 Peyton Bldg., Spokane, Wash.

Commodity: Tungsten

Mine name: Tungstar Group or Tarlach Group

County: Deer Lodge and Granite
State: Montana

Date of contract: September 14, 1953

Date of certification: August 26, 1955

Expiration date of royalty payments: September 14, 1963

Date of examination for this report: December 24, 1955

Total amount of contract: $61,355.00

Total expenditures under contract: $44,927.80

Amount of Government participation at 75%: $33,695.87

Royalty payments this period: none

Previous royalty payments: $162.93

Total royalty payments to date: $162.93

% Loan repayment completed: less than 1%

Amount of royalty due: none

Royalty remarks:

RECEIVED
JAN 9 1956

Original estimate of reserves
(from final Engr.-Geol. Report): 1,425 tons that will assay 0.50% to 0.63% WO_3

Increase (or decrease) of reserves by work performed subsequent to expiration or termination of contract: none

Revised estimate of reserves:

Production this period (ore or concentrates): none

Amount of previous production (since date of contract): Few tons of development ore

Total DMEA production to date:

% of revised reserves mined:

Production remarks:

The mine was visited October 26, 1955. At that time Mr. Gunnar S. Johnson, Box 775, Anaconda, Montana, was moving in a compressor to start work on the Tarlach claims. Mr. Johnson was interviewed December 24. He stated that he is obtaining a lease on the Tarlach claims owned by Mr. Jim Maguire and that there has been no production from the property during the reporting period. He stated that he has mined and stockpiled 400 to 500 tons of ore from the claims owned by Mr. Maguire. He estimates the stockpiled ore will assay 0.5% WO_3. The mine will be inaccessible until spring because of deep snow.

Other remarks: (Investments, etc.)

Signed: Eldon C. Pattee (Engr.)

Distribution:
DMEA (4)
USGS (2)
USBM (AD)
USBM (2)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
1201 N. Division St.
Spokane 2, Washington
April 7, 1955

MEMORANDUM

To: DMEA Field Team, Region I, NW District

From: John D. Bardill, Bureau of Mines, Region I

Subject: Final inspection report, Docket No. DMEA 3098 (tungsten), Sunshine Mining Company, Storm Lake Tungsten Property, Deer Lodge and Granite Counties, Montana, Contract Idm-E598

John W. Cole, company superintendent, advised me at Philipsburg, Montana, the evening of March 7, 1955 that heavy snows had made it necessary to stop work at the project the middle of the previous week. He stated that when the project was accessible again the company planned to abandon the mine and remove the equipment.

The Field Team in a letter dated March 2, 1955 to the Chairman, Operating Committee, requested permission to terminate the contract by agreement with the Operator since he had expressed a willingness to sign such an agreement.

The work completed under the contract was reviewed with Mr. Cole and the following footages for sinking, diamond and long hole drilling, crosscutting and drifting, and bulldozing were mutually satisfactory:

	Authorized		Completed	
	Units	Cost	Units	Cost
Bulldozing (road and trenches) @ $16/hr.	242.4	$3,877.60	212	$3,392.00
Cleaning and retimbering shaft @ $34/ft.	95	3,230.00	95	3,230.00
Shaft sinking @ $105/ft.	115	12,075.00	115	12,075.00
Drifting @ $37/ft.	600	22,200.00	524	19,388.00
Timbering drifts @ $6/ft.	600	3,600.00	35	210.00
Long hole drilling @ $1.80/ft.	68	122.40	68	122.40
Diamond drilling @ $6.50/ft.	2500	16,250.00	1001.6	6,510.40
Totals		$61,355.00		$44,927.80

Total cost of project $44,927.80

Government participation @ 75% $33,695.85

The southwest drift was driven 200.6 feet, the northeast drift 309.3 feet, and two crosscuts measured 14.1 feet for a total of 524.0 feet of drifting and crosscutting.

The contract was on a unit cost basis; therefore, the Government did not participate in the purchase of any equipment or supplies.

John D. Bardill

Orig. & 3 cys - Wash.
USGS (2)
DMEA
AD
Turner
Apell
JDB/he

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~

1201 N. Division St.
Spokane 2, Washington
February 18, 1955

MEMORANDUM

To: DMEA Field Team, Region I

From: John D. Bardill, Bureau of Mines

Subject: Routine inspection, Docket No. DMEA 3098, Sunshine Mining Company, Storm Lake Tungsten Property, Deer Lodge and Granite Counties, Montana, Contract Idm-E598 (tungsten)

A routine inspection of this project was made on January 19, accompanied by John W. Cole, company superintendent.

A crosscut had been driven almost due south from the end of the southwest drift to the quartz-scheelite-bearing structure indicated by long hole J-10. The structure was cut at a point near Sta. 11a shown on the attached sketch map. A drift was driven along the structure for about 72 feet. Minor occurrences of scheelite-bearing quartz were exposed in the drift and finally these pinched out completely. Operator stopped the drift at this point.

Operator started work again in the raise northeast of the shaft, on company account, and reportedly has several feet of scheelite-bearing rock averaging about 0.3 percent WO_3.

A Brunton and tape survey was made of the new work and the following measurements recorded.

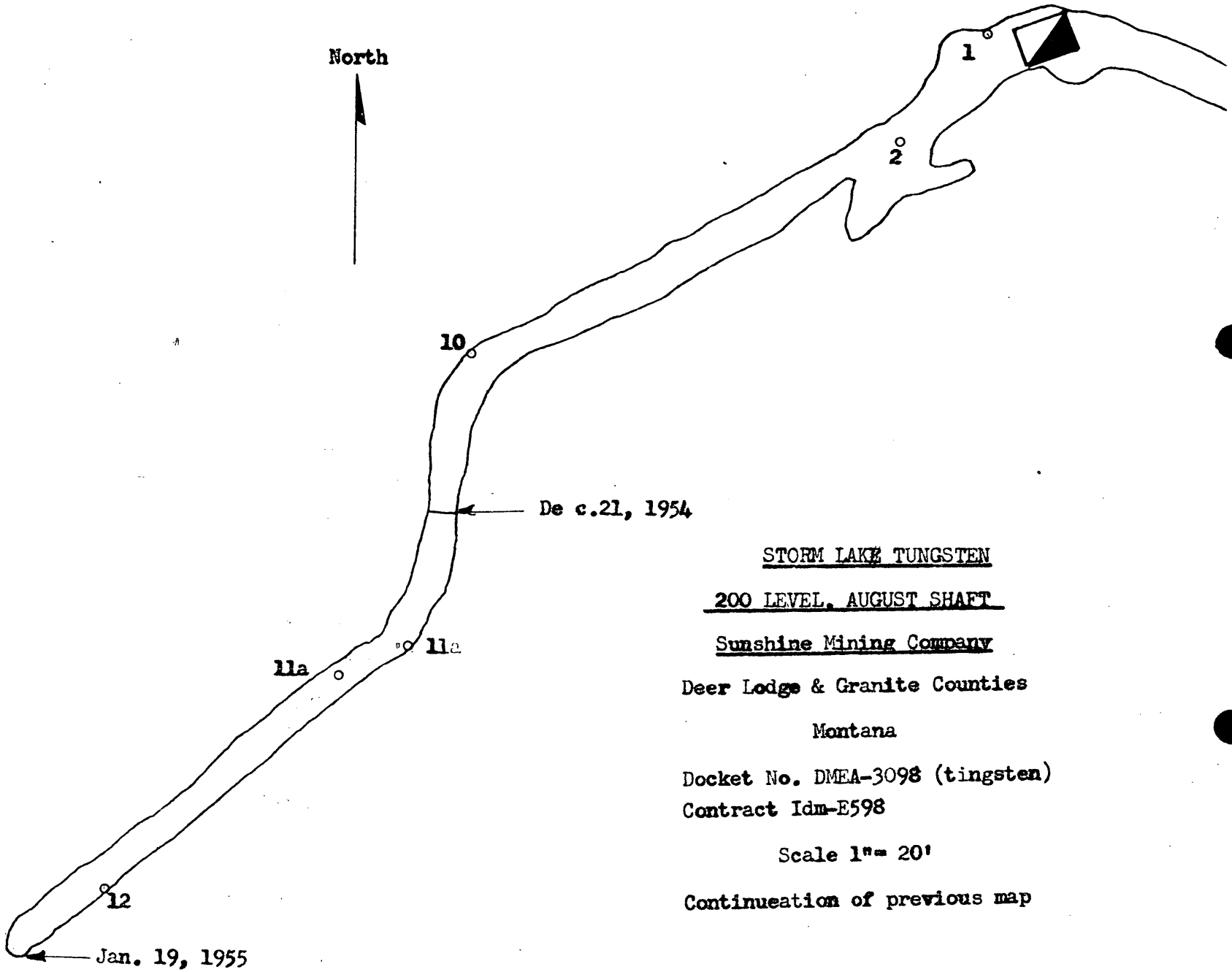
Sta. JC-2 to Sta. JC-10	S 58° W	67.9 feet
Sta. JC-10 to Sta. JC-11	S 8° W	44.0 "
Sta. JC-11 to Sta. JC-11a	S 58° W	12.9 "
Sta. JC-11a to Sta. JC-12	S 41° W	43.8 "
Sta. JC-12 to face	S 54° W	17.0 "
		185.6 feet

See attached sketch map.

The Operator has agreed to terminate the contract by mutual consent before completion of the work. The project object has been attained and the work showed one small ore lens northeast of the shaft, and both the northeast and southwest drifts while on structure did not expose other ore shoots.

Orig. & 3 cys - Wash.
USGS (2)
DMEA
M/D--AD--JDB/he

John D. Bardill



STORM LAKE TUNGSTEN

200 LEVEL, AUGUST SHAFT

Sunshine Mining Company

Deer Lodge & Granite Counties

Montana

Docket No. DMEA-3098 (tingsten)
Contract Idm-E598

Scale 1"= 20'

Continueation of previous map

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

Budget Bureau No. 42-R1036.5

RECEIVED FEB 21 1955

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of January, 1955 Docket No. DMEA 3098 Contract No. Idm-E-598
Operator's Name SUNSHINE MINING COMPANY Minerals Tungsten
Address 738 Peyton Building, Spokane, Washington
Contract Amount, $ 61,355.00 Government Participation: 75 % Amount, $ 45,016.25

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:						
Bulldozing		3392.00	3392.00		3392.00	3392.00
Cleaning		3230.00	3230.00		3230.00	3230.00
shaft						
Sinking		12075.00	12075.00		12075.00	12075.00
Long hole		122.40	122.40		122.40	122.40
drilling Supervision:						
Drifting 54.3' 37.00	2009.10	17378.90	19388.00	2009.10	17378.90	19388.00
Timbering						
drift Technical Services		210.00	210.00		210.00	210.00
Core Mat'ls. and Supplies:						
drilling		6510.40	6510.40		6510.40	6510.40
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	2009.10	42918.70	44927.80	2009.10	42918.70	44927.80

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

Date 2-4-55 *Payee SUNSHINE MINING CO. TUNGSTEN DIVISION

Per W.C. BY Title Agent

*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:

$ 1506.83

Signature [illegible] (Authorized Certifying Officer)

Date 2/16/55 Vou. No. 1438
(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. E598 in accordance with the terms of the contract.

Signature /S/ John D. Bardill Title Metallurgist Date 2/11/55

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /S/ Stephen W. Zoldok Title Mining Engr Date 2/11/55

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

RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of Jan 195 5 Docket No. DMEA 3098 Contract No. Idm-E-598
Operator's Name SUNSHINE MINING COMPANY Minerals Tungsten
Address 738 Peyton Building, Spokane, Wn.

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	2009.10	54.3	19598.00	524.0		600	
Crosscutting								
Raising								
Shafts Sinking	Ft			12075.00	115.0			
Winzes								
Drilling: Core	Ft			6510.40	1001.6			
Ch Long hole				122.40				
Auger								
Stripping								
Trenching Bulldozing	Hr			3392.00				
Test Pits								
Roads and Trails								
Rehab. SHFT.	Ft			3230.00				
TOTAL DISTRIBUTED COSTS		2009.10		44927.80				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		2009.10		44927.80				

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.

SUNSHINE MINING CO.
TUNGSTEN DIVISION

Date 2-4-55 Operator BY

Per J W C Title Agent

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 872894

SUNSHINE MINING COMPANY
Tungsten Division
Storm Lake Project
Anaconda, Montana

Bureau of the Mines
Minerals Exploration
RECEIVED
FEB 21 1955

Docket No. DMEA 3098
Contract No. Idm-E-598
February 7, 1955

Narrative Report of Operations
January, 1955

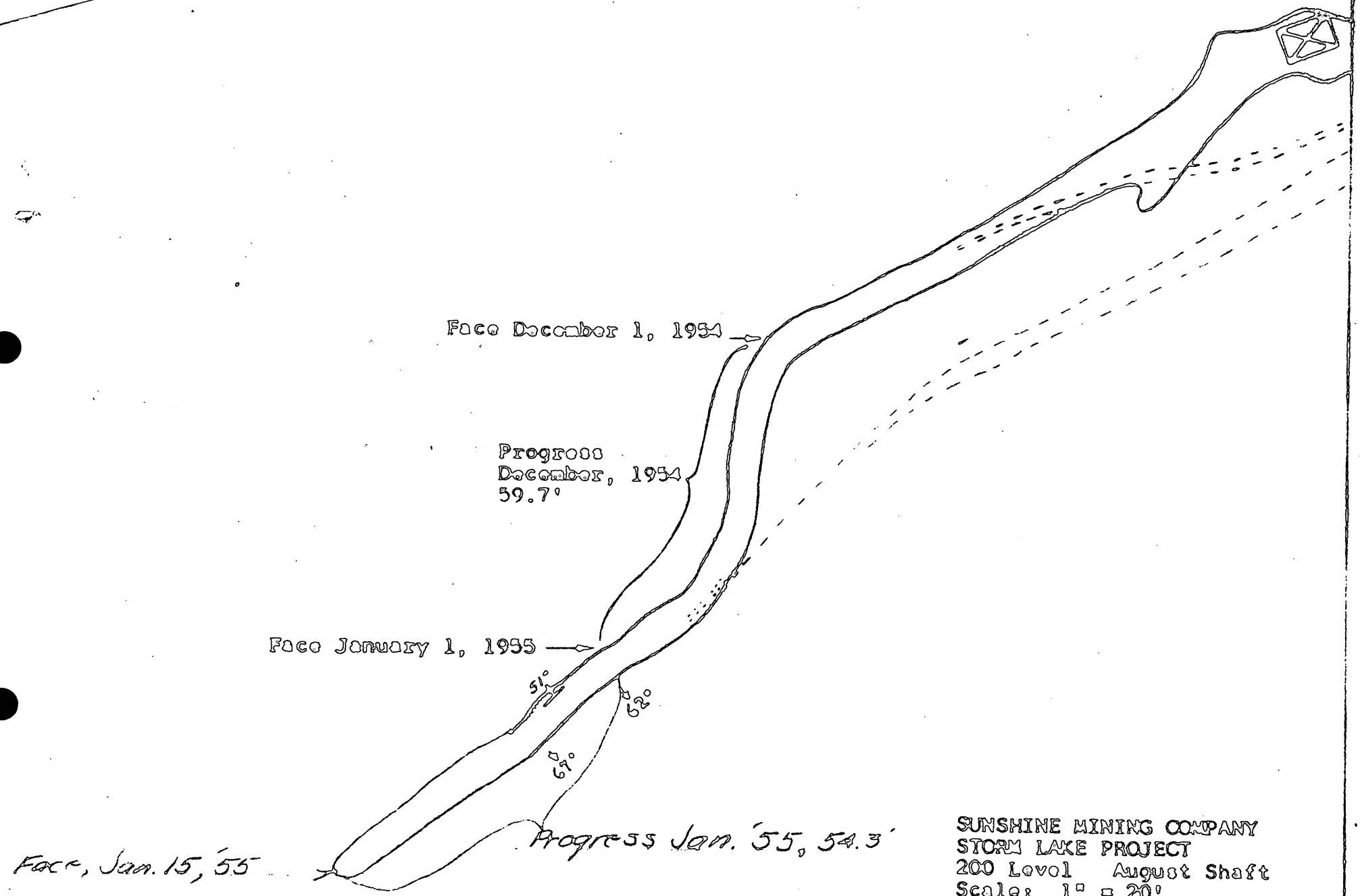
The west heading 200 level was advanced 54.3 feet on the fault-dike structure. Mineralization consists of a few scheelite bearing stringers in the dike and footwall of the dike. The heading is barren. Work in the heading was stopped on January 15.

Work was resumed on 201 raise. At the end of the period, the face of the raise was 44 feet above the drift sill. The structure is 4.5 feet wide with good walls. Mineralization is spotty; broken rock from the raise averages about 0.3 % WO3.

SUNSHINE MINING CO.
TUNGSTEN DIVISION

BY JWC

John W. Cole
Superintendant



SUNSHINE MINING COMPANY
STORM LAKE PROJECT
200 Level August Shaft
Scale: 1" = 20'
DMEA Docket No. 3098
Contract No. Ic-E-598

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~

1201 N. Division St.
Spokane 2, Washington
January 4, 1955

MEMORANDUM

To: DMEA Field Team, Region II

From: John D. Bardill, Bureau of Mines

Subject: Routine inspection, Storm Lake Tungsten Property, Sunshine Mining Company, Deer Lodge and Granite Counties, Montana, Contract No. Idm-E598, Docket No. DMEA 3098 (tungsten)

This project was inspected December 13, 1954, with Mr. John W. Cole, company superintendent.

A long hole in the southwest 200 level crosscut wall to the south indicated that the main vein had been intersected between 10 and 12.5 feet. A sample of the sludge assayed 0.39 percent WO_3. At the time of the inspection a crosscut had just been started toward the vein. When the structure is reached a drift will be driven on it.

Approximately 50 tons of ore, which assayed about 0.8 percent WO_3, was mined from a small stope. The stope is located about 16 feet northeast of survey station No. 4 and is roughly 16 feet long, and 11 feet long at the top. The back of the stope is 22 feet above the sill.

A shipment of the stope ore, approximately 150 tons of exploration ore from the drift assaying 0.6 percent WO_3, and about 40 tons mined near station No. 2 assaying 0.7 percent WO_3 were shipped to the Contract Milling Company at Butte for a mill test. The test results were not complete at the time of my inspection.

John D. Bardill

John D. Bardill

Orig. & 3 cys - Wash.
USGS (2)
DMEA
M/D
AD
JDB/he

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

December 23, 1954

Memorandum

To: DMEA Field Team, Region II

From: J. J. Quinlan, Geologist, U. S. Geological Survey

Subject: Routine inspection, Docket No. DMEA-3098 (tungsten)
Sunshine Mining Company, Storm Lake Tungsten property,
Deer Lodge and Granite Counties, Montana, Contract Idm-E598

The Storm Lake Tungsten property was inspected November 17, 1954, in company with Mr. John W. Cole, superintendent of the operation.

At the time of the inspection eight long holes had been drilled to test the walls of the 200 level northeast drift for other possible ore bearing structures. These eight holes, J-1 through J-8, are shown on the attached map. No ore was indicated in any of these holes but several holes showed minor amounts of scheelite (see attached map).

I have recently been informed by Mr. King, field engineer for the company, that three additional long holes were drilled on the 200 level after I inspected the property. These three holes, J-9, J-10, and J-11, are also shown on the attached map. Holes J-9 and J-11 did not show any appreciable amount of scheelite. Hole J-10, drilled from the southwest drift to test the main fault cut 2.5 to 3 feet of quartz and scheelite about 10 feet from the collar of the hole. The cuttings from this section of the hole assayed 0.41 percent WO_3. The position of this quartz-scheelite structure correlates very well with the projected position of the main fault (see attached map).

In order to further test the main fault in the vicinity of the encouraging scheelite showing encountered in long hole J-10, DMEA work is to be resumed in the southwest drift heading. Present plans call for turning the heading to the left near the face so as to cut the main fault and if conditions warrant, drifting to the southwest along the fault.

At the time of the inspection the company raise on the ore lens encountered in the 200 level east drift was 24 feet above the sill. The center line of this raise is 24 feet east of survey station No. 4. The raise proper is three compartments long (15 feet); however, near the top, small stopes extend 11 feet southwest and 4 feet northeast from the raise.

The ore lens exposed in the back of the raise and adjacent stopes is parallel with the main fault. It will be recalled that on the level the strike of the ore lens appears to be slightly oblique to the strike of the fault. The width and grade of that part of the lens exposed in the back of the raise and adjacent stopes appears to be comparable to that part of the lens which was exposed on the level.

DDH No. 5 has been completed on the Tarlach claim. This hole was drilled 100 feet southwest of hole No. 4 on bearing N. 20° W. and at an angle of -57 degrees. The core from this hole was logged by Mr. Cole and myself at the time of the inspection. A copy of a log of this hole prepared by Mr. Cole from the notes taken when we logged the hole is attached. Reference is made in the log to both limestones and dolomites; for the record most of the limy rocks recorded as limestones are dolomitic.

A large silicified zone with attendant quartz veins and stringers was encountered in the drill hole between 232.8 feet and 255.5 feet (see attached logs). Although some scheelite was noted in places in the core from this silicified zone, the showing as a whole was disappointing. It would be well, however, to call attention to the core taken from the hole between 241.4 feet and 243.7 feet. The core from this section of the hole consists of good quartz vein material but the length of core recovered was only 0.25 feet from this 2.3 foot section or about 10 percent. The core from this section was in one piece and its condition was excellent. It is believed that if the entire section was similar to the piece of core recovered it would have cored just as well; therefore, the 0.25 foot section of core is not considered representative of the entire 2.3 foot section. The small piece of core from this section has not as yet been split and assayed, but the operator estimates it contains about 1.0 percent WO_3.

Because of the disappointing results of drilling on the Tarlach claim under Stage III of the contract the company does not plan to undertake Stage IV of the program which would consist of additional drilling on the Tarlach claim.

Distribution:
DMEA (Orig. & 3)
USBM (2)
USBM (AD)
Docket
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Storm Lake Project

SUNSHINE MINING COMPANY--DIAMOND DRILL LOGS

D.D.H. No. 5
Depth--250.1
Start--11/2/54
Finish--11/15/54
Logged by--J. Cole

Tarlach Claim

Angle drilled-- -57
Formation--Ls and Qtz
Date: 11/17/54

N 20 W---Bearing

Footage		Core		Description
Interval	Feet	Feet	%	
0-9.0	9.0			Ax core Crys. Ls
9.0-14.3	5.3	4.8	96	Massive Crys. Ls to 13.5 13.5-14.3 Clay
14.3-27.0	12.7	4.1	32	Probable dike 14.3-14.7 Mass. Ls.
27.0-44.8	17.8	10.4	58	White Crystalline Ls
44.8-55.7	10.9	8.9	82	" " "
55.7-61.8	6.1	3.3	54	Wh. Crys. Ls to 58.0 58.0-61.8 Prob. Silicified Ls with Des. Pyrite
61.8-70.7	8.9	2.5	28	Br. to Bl. Sil. Ls with pyrite to 64.0 then Mass. Wh. Ls or Dol.
70.7-75.0	4.3	3.3	78	Mass. Wh. Dol.
75.0-91.7	16.7	5.2	31	Mass. Wh. Ls and Sil. Ls some pyrite
91.7-122.0	30.3	19.5	64	Mass. Wh. Ls
122.0-132.0	10.0	8.0	80	Mass. Wh. Ls 1/4" calcite stringers with Sch. at 126.2 and 126.6
132.0-140.8	8.8	3.3	38	Mass. Wh. Crys. Ls
140.8-151.5	10.7	10.2	95	0-2.0 Crys. Ls. Limonite stain -0.05-0.1' from 140.8 good Sch Mineral- ization 2.0-4.6 Mass. Crys. Ls 4.6-7.3 Iron stained altered Ls 0.1' good Sch. at 5.6' 7.3-10.2 Wh. Crys. Ls.
151.5-182.0	30.5	25.0	82	Mass. Wh. Crys. Ls
182.0-187.0	5.0	1.5	30	" " " "
187.0-191.4	4.4	3.3	75	0-2.0 Crys Ls 2.0-3.3 Lim. Stained Ls, Spot Sch at 3.0
191.4-196.5	5.1	4.4	86	Crys. Ls. Lim. stains in bands.
196.5-201.5	5.0	3.7	74	" " " " " "
201.5-207.0	5.5	5.3	97	" " " " " "
				Spot of Sch. at 2.9
207.0-212.0	5.0	4.0	80	Crys. Ls limonite banding Spots Sch. at 0.8 and 1.8'
212.0-217.0	5.0	3.7	74	Altered Mass. Ls, vugs at 1.3'
217.0-220.5	3.5	0.2	6	Sandy dolomite
220.5-224.9	4.4	2.6	59	Mass. Wh Ls some banding
224.9-228.9	4.0	2.5	57	Do Minor Sch at 2.0'

Footage		Core		Description
Interval	Feet	Feet	%	
228.9-232.8	3.9	2.6	67	Banded Ls looks weathered Sch specks 0.3 to 1.6'
232.[illegible]-236.2	3.4	1.5	44	Banded weathered Ls some Qtz & Calcite
236.2-241.4	5.2	2.2	43	" " " 0.05' calcite with minor sch. at 1.0
241.4-243.7	2.3	0.25	10	Qtz with Sch. Est 1.0% WO3
243.7-246.7	3.0	0.55	18	Qtz to 0.15' limonite at Ls to end
246.7-249.8	3.1	0.3	10	Vuggy siliceous limonite resembles gossan Minor specks Sch. (Best Sch 2.3-2.55 est. 0.5% WO3) this should be reduced as total core represented is only 0.3'
249.8-254.6	4.8	2.9	60	0-2.6 Quartz 2.6-2.9 siliceous vein matter
254.6-260.1	5.5	2.3	42	0-0.4 end silicification 0.4 to 2.3 greenish colored altered Ls possibly RL formation

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

DEPT. OF THE INTERIOR Defense Minerals Administration RECEIVED

Month of December, 1955 Docket No. DMEA 3098 Contract No. [illegible]-3-53B
Operator's Name [illegible] MINING COMPANY Minerals Tungsten
Address 738 Peyton Building, Spokane, Wash.
Contract Amount, $ 61,355.00 Government Participation 75 % Amount, $45,016.25

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:						WSA
Bulldozing		3392.00	3392.00			
Cleaning		3230.00	3230.00			
shaft						
Sinking		12075.00	12075.00			
Long hole		122.40	122.40			
drilling Supervision:						
Drifting 59.7 37.00	2208.90	15170.00	17378.90			
Timbering						
drift al Services		210.00	210.00			
Core Mat'ls. and Supplies:						
drilling		6510.40	6510.40			
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	2208.90	40709.80	42918.70	2208.90	40709.80	42918.70

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

Date 1-11-55 *Payee SUNSHINE MINING CO. TUNGSTEN DIVISION

Per John W. Cole BY Title Agent

*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:

$ 1656 68

Signature MJP (Authorized Certifying Officer)

Date 1/26/55 Vou. No. 1421 (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. E5-98 in accordance with the terms of the contract.

Signature /S/ John D Burdill Title Metallurgist Date 1-24-55

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /S/ Stephen W Goldoft Title Mining Eng Date 1-24-55

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 31 1955

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of Dec 1955 Docket No. DMEA 3098 Contract No. Idm-E-598
Operator's Name SUNSHINE MINING COMPANY Minerals Tungsten
Address 738 Peyton Building, Spokane, Wash

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	2208.90	59.7	17588.90	469.7		600	
Crosscutting								
Raising								
Shafts Sinking	Ft			12075.00	115.0			
Winzes								
Drilling: Core	Ft			6510.40	1001.6			
Chu long hole				122.40				
Auger								
Stripping								
Trenching Bulldozing	Hr			3392.00				
Test Pits								
Roads and Trails								
Rehab. shaft	Ft			3230.00				
TOTAL DISTRIBUTED COSTS		2208.90		42918.70				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		2208.90		42918.70				

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.

SUNSHINE MINING CO.
TUNGSTEN DIVISION

Date 1-11-56 Operator BY

Per JWC Title Agent
John W. Cole

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

SUNSHINE MINING CORP.
Tungsten Division
Storm Lake Project
Anaconda, Montana

Docket No. DMEA 3098
Contract No. Idm-E-598
January 11, 1955

Narrative Report of Operations
December, 1954

The west heading 200 level was advanced 59.7 feet. The vein-fault-dike structure was intersected and followed for 25 feet. The vein consists of a few strangers of scheelite bearing quartz on the fault and footwall of the dike. The character of the dike rock appears to be changing; it contains a few inclusions of granite.

A lot containing 240 tons of development ore was milled at a mill in Butte during the first part of the months Approximately 83 units of WO3 were recovered in products that require additional treatment.

SUNSHINE MINING CO.
TUNGSTEN DIVISION
BY J.W.C.
John W. Cole
Superintendant

$\frac{83}{240}$ = 0.35% WO3 recovered in a form requiring further treatment

Form DF-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 [illegible], 1954 Docket No. DMEA [illegible] Contract No. [illegible]
Operator's Name [illegible] Minerals [illegible]
Address [illegible]
Contract Amount, $[illegible] Government Participation: [illegible] % Amount, $[illegible]

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY WSM: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Contractors:						
Bulldozing		[illegible]	[illegible]			
Cleaning		[illegible]	[illegible]			
shaft [illegible]		[illegible]	[illegible]			
Sinking		[illegible]	[illegible]			
Long hole		[illegible]	[illegible]			
drilling [illegible] Supervision:						
Drifting		[illegible]	[illegible]			
Timbering		[illegible]	[illegible]			
drift [illegible]						
Core [illegible] Services						
drilling [illegible] Mat'ls. and Supplies:	[illegible]	[illegible]	[illegible]			
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	[illegible]	[illegible]	[illegible]	1690.65	39019.15	40709.80

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

Date [illegible] *Payee

Per J.W.C. Title

*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:

$1267.99

Signature MOP
(Authorized Certifying Officer)

Date 12/23/54 Vou. No. 1391
(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. E598 in accordance with the terms of the contract.

Signature /S/ John D. Bardill Title Metallurgist Date 12/20/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /S/ Stephen W. Zoldok Title Mining Engr Date 12/20/54

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

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of Nov 1954 Docket No. DMEA 3098 Contract No. Idm-E-598
Operator's Name SUNLIGHT MINING COMPANY Minerals Tungsten
Address 738 Peyton Building, Spokane, Wash.

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.			15380.00	410		600	
Crosscutting								
Raising								
Shafts Sinking	Ft.			18075.00	115			
Winzes								
Drilling: Core	Ft.	1690.65	200.1	6510.40	1001.6		2500	
Churn long hole				122.40				
Auger								
Stripping								
Trenching Bulldozing	hr			3392.00				
Test Pits								
Roads and Trails								
Rehab. Short	Ft.			3230.00				
TOTAL DISTRIBUTED COSTS		1690.65		40709.80				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		1690.65		40709.80				

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 12-15-54 Operator

Per JWC John W. Cole Title Agent

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

SUNSHINE MINING COMPANY
Tungsten Division
Storm Lake Project
Anaconda, Montana

Docket No. DMEA 3098
Contract No. Idm-E-598
December 15, 1954

Narrative Report of Operations
November, 1954

Drilling of the Parlach structure was completed during the period. Hole 5 was started on November 4 and completed November 15. Log and sections of the hole are attached. The structure was intersected as planned. Mineralization appeared to be about the same as at the outcrop.

Long hole drilling of the walls of the August vein on the 200 level was completed. Tungsten ore was encountered in the hanging wall of the west drift. Apparently the west drift was driven on a footwall split of the vein. The face of the drift will be extended as a crosscut to the vein and the drift extended on the vein.

JWC

John W. Cole
Superintendent

Storm Lake Project

SUNSHINE MINING COMPANY--DIAMOND DRILL LOGS

D.D.H. No. 5 | Tarlach Claim | N 20 W---Bearing

Depth--260.1

Start--11/2/54 | Angle drilled-- -57

Finish--11/15/54 | Formation--Ls and Qtz

Logged by--J. Cole | Date: 11/17/54

Footage		Core		Description
Interval	Feet	Feet	%	
0-9.0	9.0			Ax core Crys. Ls
9.0-14.3	5.3	4.8	96	Massive Crys. Ls to 13.5 13.5-14.3 Clay
14.3-27.0	12.7	4.1	32	Probable dike 14.3-14.7 Mass. Ls.
27.0-44.8	17.8	10.4	58	White Crystalline Ls
44.8-55.7	10.9	8.9	82	" " "
55.7-61.8	6.1	3.3	54	Wh. Crys. Ls to 58.0 58.0-61.8 Prob. Silicified Ls with Des. Pyrite
61.8-70.7	8.9	2.5	28	Br. to Bl. Sil. Ls with pyrite to 64.0 then Mass. Wh. ls or Dol.
70.7-75.0	4.3	3.3	78	Mass. Wh. Dol.
75.0-91.7	16.7	5.2	31	Mass. Wh. Ls and Sil. Ls some pyrite
91.7-122.0	30.3	19.5	64	Mass. Wh. Ls
122.0-132.0	10.0	8.0	80	Mass. Wh. Ls 1/4" calcite stringers with Sch. at 126.2 and 126.6
132.0-140.8	8.8	3.3	38	Mass. Wh. Crys. Ls
140.8-151.5	10.7	10.2	95	0-2.0 Crys. Ls. Limonite stain -0.05-0.1' from 140.8 good Sch Mineral- ization 2.0-4.6 Mass. Crys. Ls 4.6-7.3 Iron stained altered Ls 0.1' good Sch. at 5.6' 7.3-10.2 Wh.Crys. Ls.
151.5-182.0	30.5	25.0	82	Mass. Wh. Crys. Ls
182.0-187.0	5.0	1.5	30	" " " "
187.0-191.4	4.4	3.3	75	0-2.0 Crys Ls 2.0-3.3 Lim. Stained Ls, Spot Sch at 3.0
191.4-196.5	5.1	4.4	86	Crys. Ls. Lim. stains in bands.
196.5-201.5	5.0	3.7	74	" " " " " "
201.5-207.0	5.5	5.3	97	" " " " " " Spot of Sch. at 2.9
207.0-212.0	5.0	4.0	80	Crys. Ls limonite banding Spots Sch. at 0.8 and 1.8'
212.0-217.0	5.0	3.7	74	Altered Mass. Ls, vugs at 1.3'
217.0-220.5	3.5	0.2	6	Sandy dolomite
220.5-224.9	4.4	2.6	59	Mass. Wh Ls some banding
224.9-228.9	4.0	2.5	57	Do Minor Sch at 2.0'

Footage		Core		Description
Interval	Feet	Feet	%	
228.9-232.8	3.9	2.6	67	Banded Ls looks weathered Sch specks 0.3 to 1.6'
232.8-236.2	3.4	1.5	44	Banded weathered Ls some Qtz & Calcite
236.2-241.4	5.2	2.2	43	" " " 0.05' calcite with minor sch. at 1.0
241.4-243.7	2.3	0.25	10	Qtz with Sch. Est 1.0% WO3
243.7-246.7	3.0	0.55	18	Qtz to 0.15' limonite st ls to end
246.7-249.8	3.1	0.3	10	Vuggy siliceous limonite resembles gossan Minor specks Sch. Best Sch 2.3-2.65 est. 0.5% WO3
249.8-254.6	4.8	2.9	60	0-2.6 Quartz 2.6-2.9 siliceous vein matter
254.6-260.1	5.5	2.3	42	0-0.4 end silicification 0.4 to 2.3 greenish colored altered Ls possibly RL formation

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

November 16, 1954

Memorandum

To: DMEA Field Team, Region II

From: J. J. Quinlan, Geologist, U. S. Geological Survey

Subject: Routine inspection, Docket No. DMEA-3098 (tungsten)
Sunshine Mining Company, Storm Lake Tungsten Property,
Deer Lodge and Granite Counties, Montana, Contract Idm-E598

The Storm Lake Tungsten property was inspected September 24, 1954, in company with Mr. John W. Cole, superintendent of the operation.

The 200-level northeast drift has been extended 275 feet along the fault which appeared to cut off the vein in the southeast crosscut from the shaft (see attached Map No. 1). This work has failed to locate the possible offset segment of the vein on the hanging-wall side of the fault, but it has proved interesting in that some ore has been found along the fault.

The fault exposed in the northeast drift strikes N. 55° E. and dips 60° - 78° SE. Lamping indicated small amounts of scheelite over much of the length of this drift. For the most part, the scheelite occurs in quartz stringers and lenses, but in places it also occurs as fine disseminated grains in the limestone. Only in one section, however, does it appear to be of any commercial interest. This section, about 60 feet northeast of the southeast crosscut, is 50 feet in length. Grab samples (583 through 592 shown on Map No. 2) taken by the operator of drift rounds from this section and representing 142 tons of muck averaged 0.56 percent WO_3 and 5.8 ounces of silver.

It is of interest to note (see Map No. 1) that the strike of the ore lens is about N. 65° E., which is slightly oblique to the strike of the fault. Also the strike of the ore lens appears to be about the same as that of the vein in the southwest drift heading. It is also of interest to note that this lens may have slipped out into the hanging wall side of the drift (see Map No. 1).

Small but interesting amounts of scheelite were noted along the fault for a distance of about 80 feet northeast of the ore lens (see Maps No. 1 and No. 2). However, the last 85 feet of the drift shows only a very small amount of scheelite.

It was agreed with Mr. Cole that it would be best to stop the northeast drifting and long hole the wall of the drift to see if the ore lens may have slipped out into the wall and also to test for other possible structures in the walls before any consideration is given to additional drifting. The company will do this long hole drilling on their own account.

As long hole drill steel was not immediately available at the property for this drilling the operator plans to use the present mine crew in driving a raise on the ore lens. This raise will be driven on company account.

At the time of the September 24 inspection DDH Nos. 1 and 2 had been completed on the Tarlach claim. Also, DDH No. 3 has cut the vein. The core from these holes was inspected and brief notes on the vein cut in these holes made. At the time, however, no detailed logs were prepared, as the operator planned to do this himself. I had occasion to meet with Mr. Cole at Philipsburg on October 28, 1954. At that time he supplied me with copies of the logs of these three holes as well as the fourth hole which has been completed. Also, he brought the split section of the core from the vein encountered in the fourth hole to Philipsburg for my inspection. Copies of the logs supplied by Mr. Cole are attached to this memorandum.

The vein structure was encountered in all four holes. Although the vein structure encountered in all four holes shows some scheelite, only DDH No. 4 shows enough to be of any real interest. The vein encountered in this hole was 5.6 feet wide. The vein core from this hole was split and one-half of it assayed for WO_3. This assay showed 0.308 percent WO_3.

Because of the showing encountered in the fourth hole it was deemed advisable to drill the fifth hole under this stage of the project to test the vein about 100 feet southwest of the fourth hole. This hole will be drilled on the same bearing as the first four, i.e., N. 20° W., and at an inclination of about minus 45 degrees.

At the time of the October 24 meeting with Mr. Cole he reported that a 200-ton shipment of ore had been made to the Huckaba custom mill at Butte, Montana, for testing purposes. This shipment represents drift and raise development muck from the ore lens encountered in the 200-level northeast drift.

Enclosures

Distribution:
DMEA (Orig. & 3)
USBM (2)
Quinlan

DDH No. 1 Sunshine Mining Company Storm Lake Project

Depth 158.6

Bearing N. 20° W.
Angle Drilled: -45°
Formation: Limestone and quartz

Started 9-4-54
Finished 9-14-54

Footage	Interval	Core Ft.	Core %	Description
0.0 - 4.9	4.9	0.0	0.0	AX
4.9 - 126.8	121.9	38.0	31.0	Soft, white to gray dolomite. Some cavities or sand streaks.
126.9 - 130.2	3.4	3.4	100.0	Vein quartz 127.5 - 129.5, crystals. Scheelite at 129.5.
130.2 - 141.8	11.6	9.6		Brown to gray vuggy limestone.
141.8 - 158.6	16.8	16.8		Light brown limestone.

DDH No. 2 Sunshine Mining Company Storm Lake Project

Depth 161.9
Started 9-15-54
Finished 9-20-54

Bearing N. 20° W.
Angle Drilled: -45°
Formation: Limestone and quartz

Footage	Interval	Core Ft.	Core %	Description
0.0 - 11.0	11.0	0.0	0.0	Dolomite
11.0 - 116.7	105.7	70.0	66.3	White to gray fresh dolomite.
116.7 - 119.2	2.5	0.2	8.0	Soft altered dolomite.
119.2 - 125.9	6.7	5.7	85.0	Brown altered dolomite.
125.9 - 133.1	7.1	5.8	82.0	Brownish limestone, minute hematite crystals, scheelite crystals at 125.9.
133.1 - 136.6	3.5	2.0	57.0	Altered limestone and vein calcite, crystal scheelite at 134.8.
136.6 - 144.8	8.2	5.3	64.7	Limestone with quartz stringers. Scheelite from 144.0 - 144.8; est. 1.0 percent WO_3.(The ore is in 1/8" to 1/4" cross stringer which cuts hole at oblique angle)
144.8 - 150.3	5.5	4.6	83.8	Limestone with quartz stringers. Crystal scheelite at 149 and 150.
150.3 - 154.9	4.6	4.0	87.0	Limestone with some quartz.
154.9 - 161.9	7.0	4.8	68.6	White soft limestone. Dark streak 160 - 161 feet, probably diorite dike with calcareous inclusions.

DDH No. 3 Sunshine Mining Company Storm Lake Project

Depth 200.0
Started 9-21-54
Finished 10-19-54

Bearing N. 20° W.
Angle drilled: 30° moved 15 feet horizontal 12 feet elevation below proposed hole.
Formation: Limestone and quartz.

Footage	Interval	Core Ft.	Core %	Description
0 - 4.2	4.2	-		
4.2 - 140.0	135.8	78.0	57.5	White, pure dolomite
140.0 - 156.0	16.0	5.0	31.0	White, pure dolomite (streak iron and scheelite at 143 feet)
156.0 - 159.4	3.4	2.8	82.0	Silicified dolomite, quartz stringers.
159.4 - 164.2	4.8	4.8	100.0	Vein quartz with streaks and spots limestone. Scheelite in stringers and spots. Lamp estimate less than 0.1 percent.
164.2 - 169.3	5.1	1.8	35.0	Altered limestone
169.3 - 171.0	1.8	0.0	0.0	Sand
171.0 - 174.7	3.7	2.4	65.0	Felsite
174.7 - 177.8	3.1	0.0	0.0	Sand or cavity
177.8 - 194.0	16.2	15.0	92.4	Dolomite
194.0 - 195.0	1.0	1.0	100.0	Felsite
195.0 - 200.0	5.0	5.0	100.0	Dolomite

Drilling was delayed 9-28 to 10-5 (hole depth 177.8) while equipment was obtained for recovering stuck bit and shell. Also delayed 10-9 to 10-13 while waiting for equipment.

Cemented hole 141.0 - 169.3
Reamed hole Ex to Ax 4.0 - 25
25.0 - 96.0
96.0 - 115.0
115.0 - 158.0

Ax to Bx 0 - 58.8
58.8 - 70.2
70.2 - 90.0

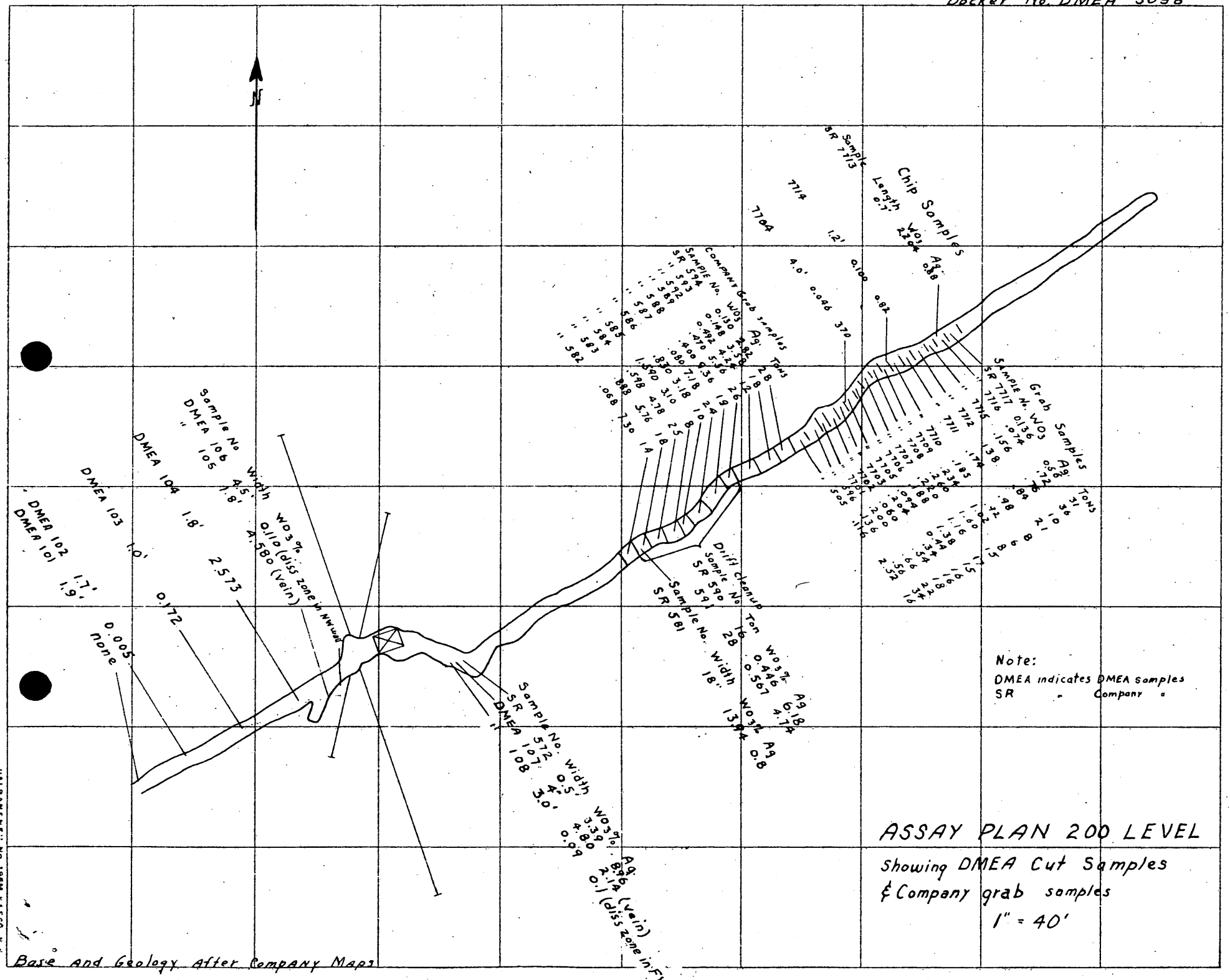
DDH No. 4 Sunshine Mining Company Storm Lake Project

Depth 221.0
Start 9-28-54
Finish 10-5-54

Bearing N. 20° W.
Angle drilled: -45°
Formation: Limestone and quartz

Footage	Interval	Core Ft.	Core %	Description
0 - 15.0	15.0	0.0	0.0	Ax
15.0 - 150.5	135.5	72.0	53.0	White dolomite
150.5 - 151.7	1.2	1.2	100.0	Quartz stringers in dolomite
151.7 - 186.0	28.3	28.3	100.0	White to gray dolomite
186.0 - 190.9	4.9	4.0	82.0	Brown vuggy limestone with some calcite, minor scheelite in the calcite.
190.9 - 196.5	5.6	3.0	53.5	Vein quartz with scheelite. Assay of split core -- 0.308 WO_3. Some minerals from 190.9 to 193.0 feet with quartz
196.5 - 202.8	6.3	0.4	6.4	Brown altered limestone and cavity or sand.
202.8 - 206.7	3.9	0.5	12.7	Altered limestone
206.7 - 214.2	7.5	2.5	33.3	Altered limestone
214.2 - 221.0	6.8	6.8	100.0	Fresh limestone or dolomite

Docket No. DMEA 3098



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 Sept-Oct., 1954 Docket No. DMEA 3098 Contract No. Idm-E-598
Operator's Name SUNSHINE MINING COMPANY Minerals Tungsten
Address 738 Peyton Building, Spokane, Wash.
Contract Amount, $61,355.00 Government Participation: 75 % Amount, $45,016.25

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:						JAR
Bulldozing		3392.00	3392.00			
Cleaning		3230.00	3230.00			
shaft						
Sinking		12075.00	12075.00			
Long hole		122.40	122.40			
drilling						
Drifting		15170.00	15170.00			
Timbering		210.00	210.00			
drift						
Core						
drilling 741.5' @ 6.50	4819.75		4819.75	4819.75		
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	4819.75	34199.40	39019.15	4819.75	34199.40	39019.15

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

Date Nov. 1, '54 *Payee SUNSHINE MINING CO. TUNGSTEN DIVISION

BY

Per [signature] Title Agent

*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:

$ 3614 81

Signature [signature]
(Authorized Certifying Officer)

Date 11/8/54 Vou. No. 1349

(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 598 in accordance with the terms of the contract.

Signature 1st John D Bardill Title Metallurgist Date 11/8/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature 1st Stephen W Zoldok Title Mining Engr Date 11/8/54

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

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of Sept-Oct 1954 Docket No. DMEA 3098 Contract No. Idm-E-598
Operator's Name SUNSHINE MINING COMPANY Minerals Tungsten
Address 738 Peyton Building, Spokane, Washington

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.			15,380.00	410		600	
Crosscutting								
Raising								
Shafts Sinking	Ft			12,075.00	115			
Winzes								
Drilling: Core	Ft	4819.75		4,819.75	741.5		2500	
Churn Long hole	Ft			122.40				
Auger								
Stripping								
Trenching Bulldozing	Hr			3,392.00				
Test Pits								
Roads and Trails								
Rehab. Shaft	Ft			3,230.00				
Total Distributed Costs		4819.75		39,019.15			Total Costs Authorized by Contract	
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		4819.75		39,019.15				

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.

SUNSHINE MINING CO.
TUNGSTEN DIVISION

Date Nov. 1, '54 Operator BY

Per J. W. C. Title Agent

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

SUNSHINE MINING COMPANY
Tungsten Division
Storm Lake Project
Anaconda, Montana

Docket No. DMEA 3098
Contract No. Idm-E-598
October 31, 1954

Narrative Report of Operations
September-October, 1954

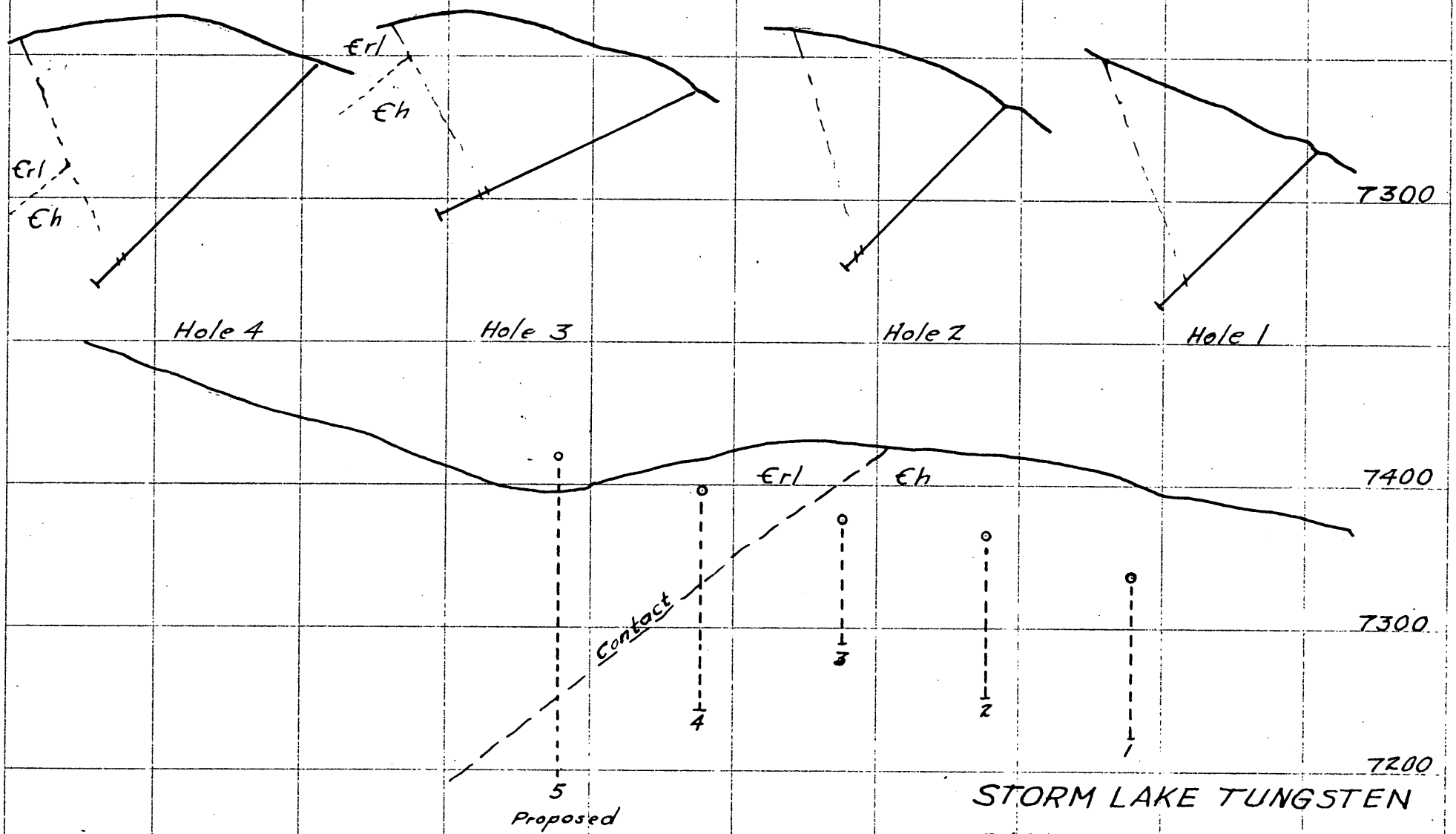
A 3-compartment raise from the 200 level on the high grade streak in the East drift was started on September 27. The face of the raise was 20 feet above the sill at the end of the period and stoping has been started west of the raise. Long hole drilling of the foot and hanging walls was started but was interrupted until different steel can be obtained. 200 tons of ore was hauled to Butte for a mill test.

Core drilling of the Tarlach vein was started on September 4. Four holes, totaling 741.5 feet, had been drilled by October 20 when drilling was interrupted until results are evaluated. Quartz with some scheelite was intersected by all holes. One split core sample representing 5.6 feet of hole 4 assayed 0.308 percent WO3. Apparently the mineralized shoot rakes west under the Hasmark-Red Lion contact. Many cavities(probably sand filled) were encountered in the drilling. Water return was maintained with difficulty. Sludge samples were panned. Core recovery was fair through the ore zones. Logs of the holes and sketches showing locations and sections are attached.

SUNSHINE MINING CO.
TUNGSTEN DIVISION

BY J W C

John W. Cole
Superintendant



Scale: 1" = 100'

STORM LAKE TUNGSTEN

DMEA No. 3098

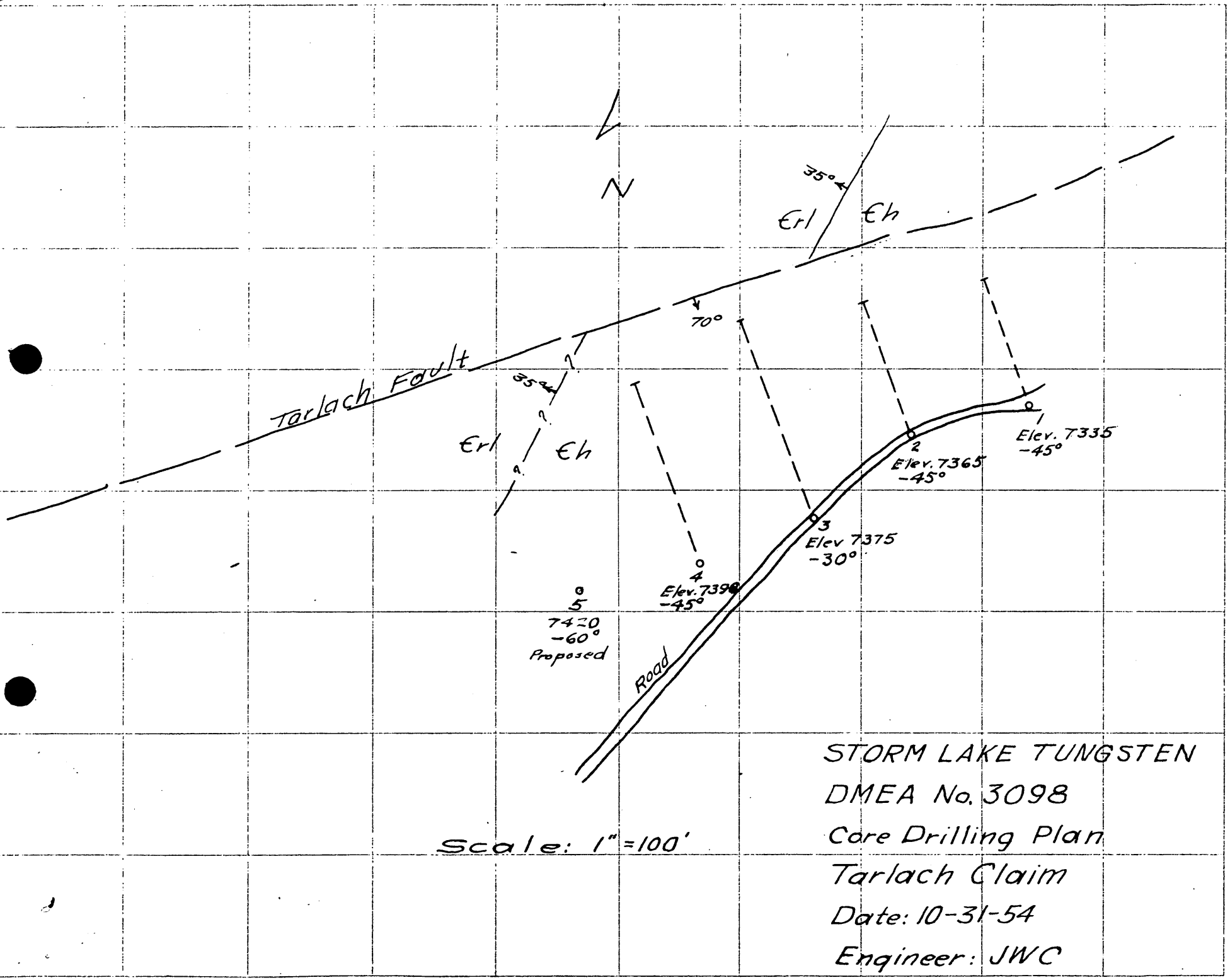
Core Drill Sections

Tarlach Claim

Date: 10-31-54

Engineer: JWC

"ALBANENE" NO. 195M K&E CO., N.Y. REG. U.S. PAT. OFF.



"ALBANENE" NO. 195M K&E CO. N.Y.
REG. U.S. PAT. OFF.

COPY

STORM LAKE PROJECT

Sunshine Mining Company - Diamond Drill Logs

D.D.H. No. 1 Tarlach N 20 W Bearing

Depth 158.6

Start 9-4-54 Angle Drilled - 45

Finish 9-14-54 Formation Ls and Qtz

Logged by J. Cole Date: 10-28-54

Footage		Core Ft	Core %	Description
0-4.9	4.9	0	0	Ax
4.9-126.8	121.9	38.0	31.0	----Soft, white to gray dolomite. Some cavities or sand streaks.
126.9-130.2	3.4	3.4	100.0	----Vein Qtz. 127.5-129.5, crystal scheelite at 129.5
130.2-141.8	11.6	9.6	82.0	----Brown to gray vuggy Ls.
141.8-158.6	16.8	16.8	100.0	----Light brown Ls.

COPY

STORM LAKE PROJECT

Sunshine Mining Company - Diamond Drill Logs

D.D.H. No. 2 Tarlach N 20 W Bearing
Depth 161.9

Start 9-15-54 Angle Drilled -45

Finish 9-20-54 Formation Ls and Qtz

Logged by J. Cole Date: 10-28-54

Footage		Core Ft	Core %	Description
0-11.0	11.0	0		Dol.
11.0-116.7	105.7	70.0	66.3	--White to gray fresh dolomite
116.7-119.2	2.5	0.2	8.0	--Soft altered dolomite
119.2-125.9	6.7	5.7	85.0	--Brown altered dol.
125.9-133.1	7.1	5.8	82.0	--Brownish ls, minute hematite crystals scheelite crystal at 125.9
133.1-136.6	3.5	2.0	57.0	--Altered ls and vein calcite, crystal scheelite at 134.8
136.6-144.8	8.2	5.3	64.7	--Ls with Qtz stringers. Scheelite from 144.0-144.8. Est. 1.0% WO3
144.8-150.3	5.5	4.6	83.8	--Ls with Qtz stringers. Crystals scheelite at 149 and 150.
150.3-154.9	4.6	4.0	87.0	--Ls with some Qtz
154.9-161.9	7.0	4.8	68.6	--White soft ls. Dark streak 160-161, prob. diorite dike with calcareous inclus.

COPY

STORM LAKE PROJECT

Sunshine Mining Company - Diamond Drill Logs

D.D.H. No. 3 Tarlach N 20 W Bearing

Depth 200.0

Start 9-21-54 Angle Drilled -30

Finish 10-19-54 Formation Ls and Qtz

Logged by J. Cole Date: 10-28-54

Footage		Core Ft	Core %	Description
0-4.2	4.2			
4.2-140.0	135.8	78.0	57.5	White, pure dolomite
140.0-156.0	16.0	5.0	31.0	Do (streak iron and scheelite at 143')
156.0-159.4	3.4	2.8	82.0	Silicified dolomite, Qtz stringers
159.4-164.2	4.8	4.8	100.0	Vein Qtz with streaks and spots ls. Scheelite in stringers and spots Lamp est. less than 0.1%
164.2-169.3	5.1	1.8	35.0	Altered ls.
169.3-171.0	1.8	0.0	0	Sand
171.0-174.7	3.7	2.4	65.0	Felsite
174.7-177.8	3.1	0.0	0	Sand or cavity
177.8-194.0	16.2	15.0	92.4	Dolomite
194.0-195.0	1.0	1.0	100.0	Felsite
195.0-200.0	5.0	5.0	100.0	Dolomite

Drilling was delayed 9-28 to 10-5 (hole depth 177.8) while equipment was obtained for recovering stuck bit and shell. Also delayed 10-9 to 13 while waiting for equipment.

Cemented hole 141.0-169.3

Reamed hole Ex to Ax 4.0-25.0
25.0-96.0
96.0-115.0
115.0-158.0

Ax to Bx 0-58.8
58.8-70.2
70.2-90.0

STORM LAKE PROJECT

Sunshine Mining Company - Diamond Drill logs

D.D.H. No. 4 Tarlach N 20 W Bearing

Depth 221.0

Start 9-28-54 Angle Drilled -45

Finish 10-5-54 Formation Ls and Qtz

Logged by J. Cole Date: 10-28-54

Footage		Core Ft	Core %	Description
0-15.0	15.0	0.0	0	Ax
15.0-150.5	135.5	72.0	53.0	White dolomite
150.5-151.7	1.2	1.2	100.0	Qtz stringers in dol.
151.7-186.0	28.3	28.3	100.0	White to gray dol.
186.0-190.9	4.9	4.0	82.0	Brown vuggy ls with some calcite minor scheelite in the calcite.
190.9-196.5	5.6	3.0	53.5	Vein Qtz with scheelite. Assay of split core 0.308 WO3
196.5-202.8	6.3	.4	6.4	Brown altered ls and cavity or sand
202.8-206.7	3.9	.5	12.7	Altered Ls
206.7-214.2	7.5	2.5	33.3	Do
214.2-221.0	6.8	6.8	100.0	Fresh ls or dol.

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.4
Approval Expires 10-30-53.

RECEIVED
OCT 18 1954

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of Sept., 1954 Docket No. DMEA 5098 Contract No. Idm-E-598
Operator's Name Sunshine Mining Company Minerals Tungsten
Address 730 Peyton Building, Spokane, Wash.
Contract Amount, $ 45,100.00 Government Participation: 75% Amount, $ 33,825.75

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY (WBM): Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Bulldozing		3392.00	3392.00			
Cleaning		3230.00	3230.00			
shaft						
Sinking		12075.00	12075.00			
Long hole		122.40	122.40			
drilling						
Drifting 73' @ 37.00	2701.00	12469.00	15170.00	2701.00		
Timbering		210.00	210.00			
drift						
(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	2701.00	31498.40	34199.40	2701.00	31498.40	34199.40

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

Date 10-4-54 *Payee SUNSHINE MINING CO. TUNGSTEN DIVISION

Per JWC BY Title Agent

*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:

$ 2025.75

Signature MGP
(Authorized Certifying Officer)

Date 10/14/54 Vou. No. 1317
(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. E598 in accordance with the terms of the contract.

Signature /S/ John D. Bardill Title Metallurgist Date 10/13/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /S/ Thomas E. Howard Title Mining Eng. Date 10/13/54

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 18 1954

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of Sept. 1954 Docket No. DMEA 3096 Contract No. Idm-E-598
Operator's Name Sunshine Mining Company Minerals Tungsten
Address 738 Peyton Building, Spokane, Wash.

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.	2701.00	73	15170.00	410		600	
Crosscutting								
Raising								
Shafts Sinking	Ft.			12075.00	115			
Winzes								
Drilling: Core Long hole	Ft			122.40				
Churn								
Auger								
Stripping								
Trenching Bulldozing				5392.00				
Test Pits								
Roads and Trails								
Rehab. shaft	Ft			3230.00				
TOTAL DISTRIBUTED COSTS		2701.00		34199.40				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		2701.00		34199.40				

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.

SUNSHINE MINING CO.
TUNGSTEN DIVISION

Date 10-4-54 Operator BY

Per John W. Cole Title Agent

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

SUNSHINE MINING COMPANY
Tungsten Division
Storm Lake Project
Anaconda, Montana

Docket No. DMEA 3098
Contract No. Idm-E-598
October 4, 1954

Narrative Report of Operations
September, 1954

The East drift, 200 level, was advanced 73 feet. Rock in the heading consists of a 2 to 3 foot diorite dike on the fault structure with occassional quartz-scheelite mineralization on the footwall of the dike. Drift round samples were checked with the gold pan. They are estimated to contain less than0.1percent WO_3. Work in the heading was redessed by mutual agreement on September 25 until long prospect holes are drilled in the walls. Sectional drill steel to drill up to 50' holes has been ordered.

In the meantime, a raise has been started on the vein approximately 80 feet east of the shaft.

SUNSHINE MINING CO.
TUNGSTEN DIVISION

BY JWC

John W. Cole
Superintendant

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~

1201 N. Division St.
Spokane 2, Washington
September 30, 1954

MEMORANDUM

To: DMEA Field Team, Region II

From: John D. Bardill, Bureau of Mines, Region II

Subject: Routine inspection report, Sunshine Mining Company, Deer Lodge and Granite Counties, Montana, Docket No. DMEA 3098 (tungsten), Contract No. Idm-E598

This project was inspected September 22, 1954, accompanied by John W. Cole, company engineer.

The 200 level northeast drift had been driven 125 feet since the last inspection on August 6, 1954. The following measurements were made:

Sta. JC 7 to JC 8	N. 72° E.	54.4 ft.
Sta. JC 8 to face	N. 74° E.	85 ft.

The vein material was sparsely mineralized with scheelite.

Diamond drill hole No. 1 on the Tarlach vein was drilled to a depth of 158.6 feet at an angle of -45° bearing about N. 20° W. as located on Map No. 3 with Amendment No. 2. A quartz-calcite vein with sparse scheelite mineralization was cored between 127 and 130 feet.

Diamond drill hole No. 2 was located as shown on the same map and was drilled to a depth of 161.9 feet bearing N. 20° W. at an angle of -45°. The vein zone cored between 126 and 150 feet showed occasional flecks of scheelite.

Hole No. 3 was being drilled about 16 feet S. 20° E. of the location shown on Map No. 3 at an angle of -30° and bearing N. 20° W.

Mr. Cole believes that holes 1 and 2 were beneath the rake of the mineralized zone exposed on the surface.

It has been suggested that several diamond drill holes be drilled into the walls of the 200 level northeast drift to determine whether the vein has been faulted or split.

Orig. & 3 cys - Wash.
USGS (2)
DMEA
M/D
AD
JDB/he

John D. Bardill

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.5

RECEIVED OCT - 4 1954

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of August, 195 Docket No. DMEA 0000 Contract No. XGI-0-500
Operator's Name [illegible]
Address 1738 Keyton Building, [illegible], Wash.
Contract Amount, $48,100.00 Government Participation: 75 % Minerals 33,025.75 Amount, $

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:						
Bulldozing		3302.00	3302.00			WSM
Cleaning		5850.00	5850.00			
shaft						
Sinking		13075.00	13075.00			
Long hole		100.00	100.00			
drilling						
Drifting	2849.00	9600.00	12409.00	2849.00		
Timbering	90.00	100.00	210.00	90.00		
drift						
(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	2939.00	28,559.40	31,498.40	2939.00	28559.40	31498.40

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

Date 9-13-54 *Payee SUNSHINE MINING CO. TUNGSTEN DIVISION

Per John E. Cole BY Title Agent

*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:

$ 2204 25

Signature MGP
(Authorized Certifying Officer)

Date 9/29/54 Vou. No. 1305
(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. E598 in accordance with the terms of the contract.

Signature /S/ John D Bardell Title Metallurgist Date 9/28/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /S/ Stephen W Zoldak Title Mining Engr Date 9/28/54

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 4 1954

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of August 1954 Docket No. DMEA 8098 Contract No. [illegible]-598
Operator's Name [illegible] Minerals Tungsten
Address 708 Peyton Building, Spokane, Washington

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.	2939.00	77	12879.00	337		600	
Crosscutting								
Raising								
Shafts Sinking	Ft.			12075.00	116		116	
Winzes								
Drilling: Core long hole	Ft.			122.40				
Churn								
Auger								
Stripping								
Trenching Cultivation				6592.00				
Test Pits								
Roads and Trails								
rehabilitation shft				3550.00				
TOTAL DISTRIBUTED COSTS		2939.00		31498.40				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		2939.00		31498.40				

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.

SUNSHINE MINING CO.
TUNGSTEN DIVISION

Date 9-13-54 Operator BY

Per [illegible] Title Agent

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 872894

SUNSHINE MINING COMPANY
Tungsten Division
Storm Lake Project
Anaconda, Montana

Minerals Administration
RECEIVED
OCT 4 1954

Docket No. DMEA 3098
Contract No. Idm-E-598
September 13, 1954

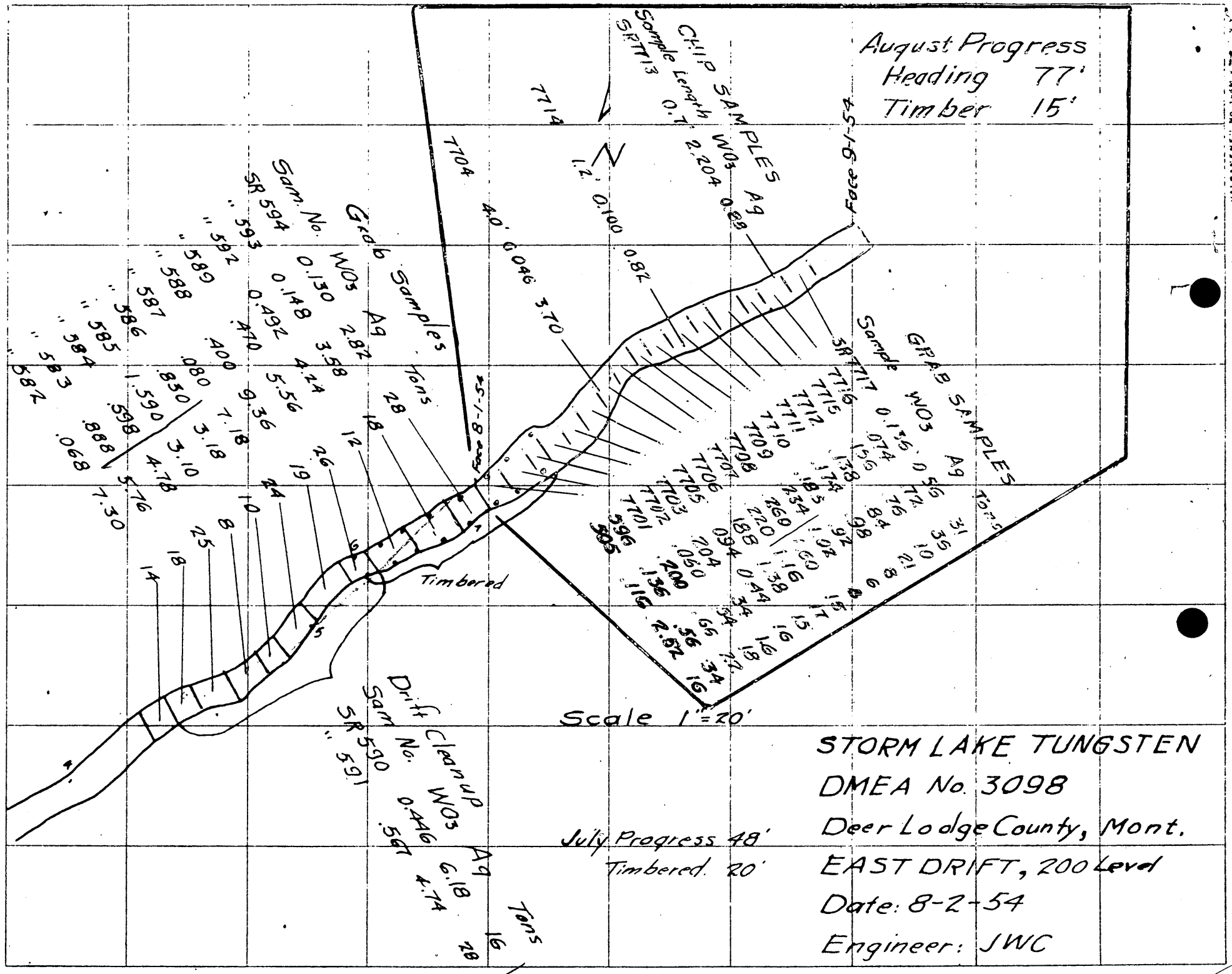
Narrative Report of Operations
August, 1954

The East drift, 200 Level, was advanced 77 feet. Track was laid and the slusher ramp moved ahead 100 feet. Timber was placed along 15 feet of drift.

The structure in the heading is strong. However, mineralization has decreased as shown by analyses of the accompanying sketch.

JWC

John W. Cole
Agent


August Progress
Heading 77'
Timber 15'
Face 8-1-54
Face 8-1-8
Chip Samples
Sample Length
SR 713
WO3
Ag
Grab Samples
Sam. No.
SR 594
WO3
Ag
Tons
Grab Samples
Sample
SR 717
WO3
Ag
Tons
Timbered
Drift Cleanup
Sam. No.
SR 590
WO3
Ag
Tons
Scale 1" = 20'
July Progress 48'
Timbered 20'
STORM LAKE TUNGSTEN
DMEA No. 3098
Deer Lodge County, Mont.
EAST DRIFT, 200 Level
Date: 8-2-54
Engineer: JWC

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

North 1201 Division Street
Spokane 2, Washington
August 20, 1954

Memorandum

To: DMEA Field Team, Region II

From: John D. Bardill, Bureau of Mines, Region II

Subject: Routine inspection report, Sunshine Mining Company, Deer Lodge and Granite Counties, Montana, Contract No. Idm-E598, Docket No. DMEA 3098 (tungsten)

A routine inspection of this project was made August 6, 1954 accompanied by Mr. John W. Cole, company superintendent.

The northeast drift had been advanced 85 feet since my last inspection on June 24, 1954.

The Brunton compass tape survey was continued to the face of the 200 level northeast drift. The following measurements were recorded:

Sta. JC3--JC4	N 57°E	48.1 ft.
Sta. JC4--JC5	N 57°E	48.2 ft.
Sta. JC5--JC6	N 30°E	14.3 ft.
Sta. JC6--JC7	N 72°E	19.3 ft.
Sta. JC7--face	N 72°E	14 ft.

See attached sketch map.

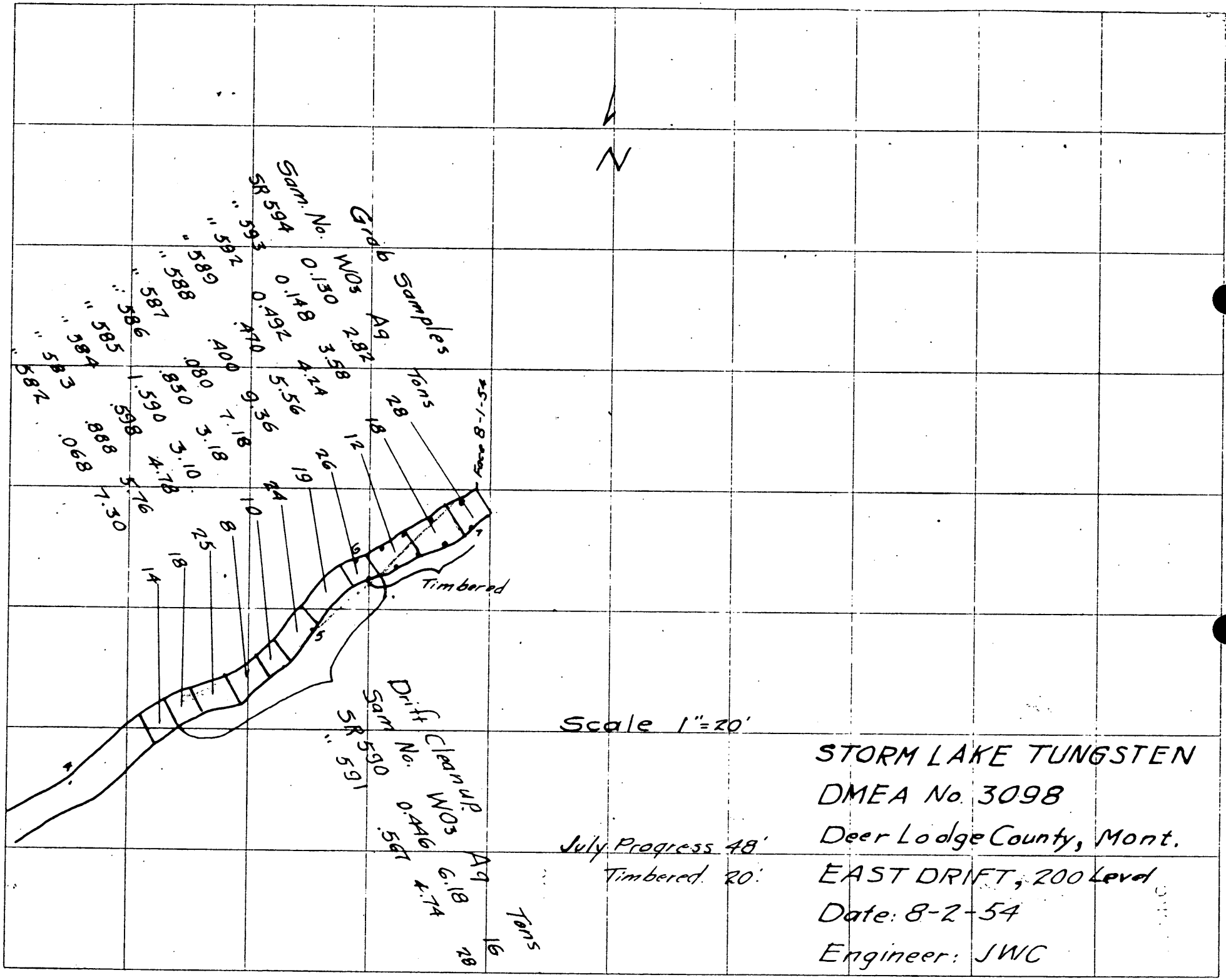
Between Sta. JC4 and JC5 a high-grade lense of scheelite-bearing vein about 15 feet long is exposed on the northwest wall varying in thickness from about 1 foot to 3 feet reported to assay as high as 13 percent WO_3.

Near Sta. JC6 on the southeast wall the vein appears to branch off from the fault toward the north. A 27-inch channel sample across the higher grade scheelite mineralized quartz vein was cut near the face.

John D. Bardill

Enclosure

cc: Orig & 3 cys Wash., USGS (2), DMEA, M/D, AD
JDB:lb


N
Grab Samples
Sam. No.
WOs
Ag
Tons
SR 594
" 593
" 592
" 589
" 588
" 587
" 586
" 585
" 584
" 583
" 582
0.130
0.148
0.492
.470
.400
.080
.850
1.590
.598
.888
.068
7.30
2.82
3.58
4.24
5.56
9.36
7.18
3.18
3.10
4.78
5.76
28
18
12
26
19
24
10
8
25
18
14
16
4
5
Face 8-1-54
Timbered
Drift Cleanup
Sam No.
WOs
Ag
Tons
SR 590
" 591
0.446
.567
6.18
4.74
16
28
Scale 1"=20'
July Progress 48'
Timbered 20'
STORM LAKE TUNGSTEN
DMEA No. 3098
Deer Lodge County, Mont.
EAST DRIFT, 200 Level
Date: 8-2-54
Engineer: JWC

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

JWR. W

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of July 4 195[illegible] Docket No. DMEA 3098 Contract No. 10[illegible]-598
Operator's Name [illegible] Minerals [illegible]
Address 40,100.00 [illegible] 79 [illegible] 53,050.79
Contract Amount, $ Government Participation: % Amount, $

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 Contracts:						
Bulldozing		3392.00	3392.00			
Cleaning shaft		3880.00	3880.00			
Sinking		19075.00	19075.00			
Long hole drilling		180.40	180.40			
Drifting	1776.00	7846.00	9620.00			
Timbering drift	120.00	[illegible]	120.00			
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	1896.00	26663.40	28559.40	1896.00	26663.40	28559.40

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

SUNSHINE MINING CO.
TUNGSTEN DIVISION

Date *Payee

BY

Per Title Agent

*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:

$ 1422 00

Signature MOP
(Authorized Certifying Officer)

Date 8/26/54 Vou. No. 1262
(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. E598 in accordance with the terms of the contract.

Signature /s/ John D Bardill Title Metallurgist Date 8/16/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ Stephen W Zoldok Title Mining Eng Date 8/18/54

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 July 1954 Docket No. DMEA 3098 Contract No. Idm-E-598
Operator's Name SUNSHINE MINING COMPANY Minerals Tungsten
Address 738 Peyton Building, Spokane, Wash.

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.	1896.00	48	9740.00	260		600	
Crosscutting								
Raising								
Shafts Sinking	Ft.			12075.00	115		115	
Winzes								
Drilling: Core Long Hole	Ft.			122.40				
Churn								
Auger								
Stripping								
Trenching Bulldozing				3392.00				
Test Pits								
Roads and Trails								
Rehabilitating Shft	Ft			3230.00				
Total Distributed Costs		1896.00		28559.40				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		1896.00		28559.40				

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.

SUNSHINE MINING CO.
TUNGSTEN DIVISION

Date 8-7-54 Operator BY

Per J.W.C. Title Agent

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 872894

SUNSHINE MINING COMPANY
Tungsten Division
Storm Lake Project
Anaconda, Montana

Docket No. DMEA 5098
Contract No. Idm-E-[illegible]
August 7, 1954

Narrative Report of Operations
July, 1954

The East drift, 800 level, was advanced 40 feet. Track was laid and the slusher moved ahead. Caving rock was encountered along the fault and vein; 20 feet of drift was timbered.

The vein ranges from 4 inches to 3 feet wide with good mineralization. The weighted average of 15 grab samples of 245 tons of broken rock representing 70 feet of drift is 0.448 % WO_3 and 5.2# Oz. Ag per ton. Since the mineralization is confined to a narrow vein, it should be possible to mine selectively considerably higher grade ore than is shown by this average. Results of sampling are shown on the accompanying sketch.

SUNSHINE MINING CO.
TUNGSTEN DIVISION

BY

John W. Cole
Agent

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

1201 N. Division St.
Spokane 2, Washington
July 9, 1954

AUG 2 - 1954

MEMORANDUM

To: DMEA Field Team, Region II

From: John D. Bardill, Bureau of Mines, Region II

Subject: Routine inspection, Sunshine Mining Company, Deer Lodge and Granite Counties, Montana, Contract No. Idm-E598, Docket No. DMEA 3098 (tungsten)

A routine inspection of this project was made June 24, 1954 accompanied by Mr. John W. Cole, company superintendent.

The crosscut and drift southwest followed the vein about 90 feet from the shaft to the face of the drift where the vein pinched out and the drift stopped.

The crosscut from the shaft to the southeast intercepted the vein, then the drift northeast followed the vein approximately 70 feet to the face. Where the vein was first encountered a stringer of quartz on the footwall was mineralized with scheelite. The vein structure from about Survey Sta. JC 3 northeast averages about 4 feet wide with blue quartz with some pyrite mineralization but barren of scheelite.

A Brunton compass tape survey was made of the 200 level at the time. The following measurements were recorded:

Sta. JC 1 to STA. JC 2	S 39° W	19.5 feet
Sta. JC 2 to drift face	S 61° W	71.4 "
Sta. JC 2 to crosscut face	S 13° W	16.5 "
Sta. JC 1 to Sta. JC 3	S 78° E	34.5 "
Sta. JC 3 to drift face	N 67° E	58.8 "

See attached sketch map.

No assays were available.

John D. Bardill

Orig. & 3 cys - Wash.
USGS (2)
DMEA
M/D
AD
JDB/he

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, 1954 Docket No. DMEA 3098 Contract No. 10[illegible]-E-398

Operator's Name Sunshine Mining Company Minerals Tungsten

Address 730 Peyton Building, Spokane, Wash.

Contract Amount, $ 48,100.00 Government Participation: 75 % Amount, $ 33,926.75

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:						
Bulldozing		3,392.00	3392.00		3392.00	3392.00
Cleaning		3,230.00	3230.00		3230.00	3230.00
shaft sinking						
Sinking		12,075.00	12075.00		12075.00	12075.00
Long hole		122.40	122.40		122.40	122.40
drilling supervision:						
Drifting 97% 37.0	3589.00	4,255.00	7844.00	3589.00	4255.00	7844.00
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	3589.00	23,074.40	26663.40	3589.00	23074.40	26663.40

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

Date 7-9-54 *Payee SUNSHINE MINING CO. TUNGSTEN DIVISION

Per John W. Ole BY Title Agent

*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:

$ 2691 75

Signature MJP (Authorized Certifying Officer)

Date 7/20/54 Vou. No. 1226

(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 598 in accordance with the terms of the contract.

Signature /S/ John D Bardill Title Metallurgist Date 7/14/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /S/ Stephen W Zoldok Title Mining Eng Date 7/14/54

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 1954 Docket No. DMEA 3098 Contract No. Ian-2-598
Operator's Name SUNSHINE MINING COMPANY Minerals Tungsten
Address 730 Peyton Building, Spokane, Wash.

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	3569.00	97	7,844.00	312	xxx	600	
Crosscutting								
Raising								
Shafts Sinking	Ft			12,070.00	115			
Winzes								
Drilling: Core Long hole	Ft			122.40				
Churn								
Auger								
Stripping								
Trenching Bulldozing				3,392.00				
Test Pits								
Roads and Trails								
Rehabilitating Sh.				3,230.00				
Total Distributed Costs		3569.00		26,668.40				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		3569.00		26,668.40				

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.

SUNSHINE MINING CO.
TUNGSTEN DIVISION

Date 7-9-54 Operator BY

Per [signature] Title Agent

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.

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GPO 87-2894

SUNSHINE MINING COMPANY
Tungsten Division
Storm Lake Project
Anaconda, Montana

Docket No. DMEA 5098
Contract No. Idm-E-598
July 9, 1954

Narrative Report of Operations
June, 1954

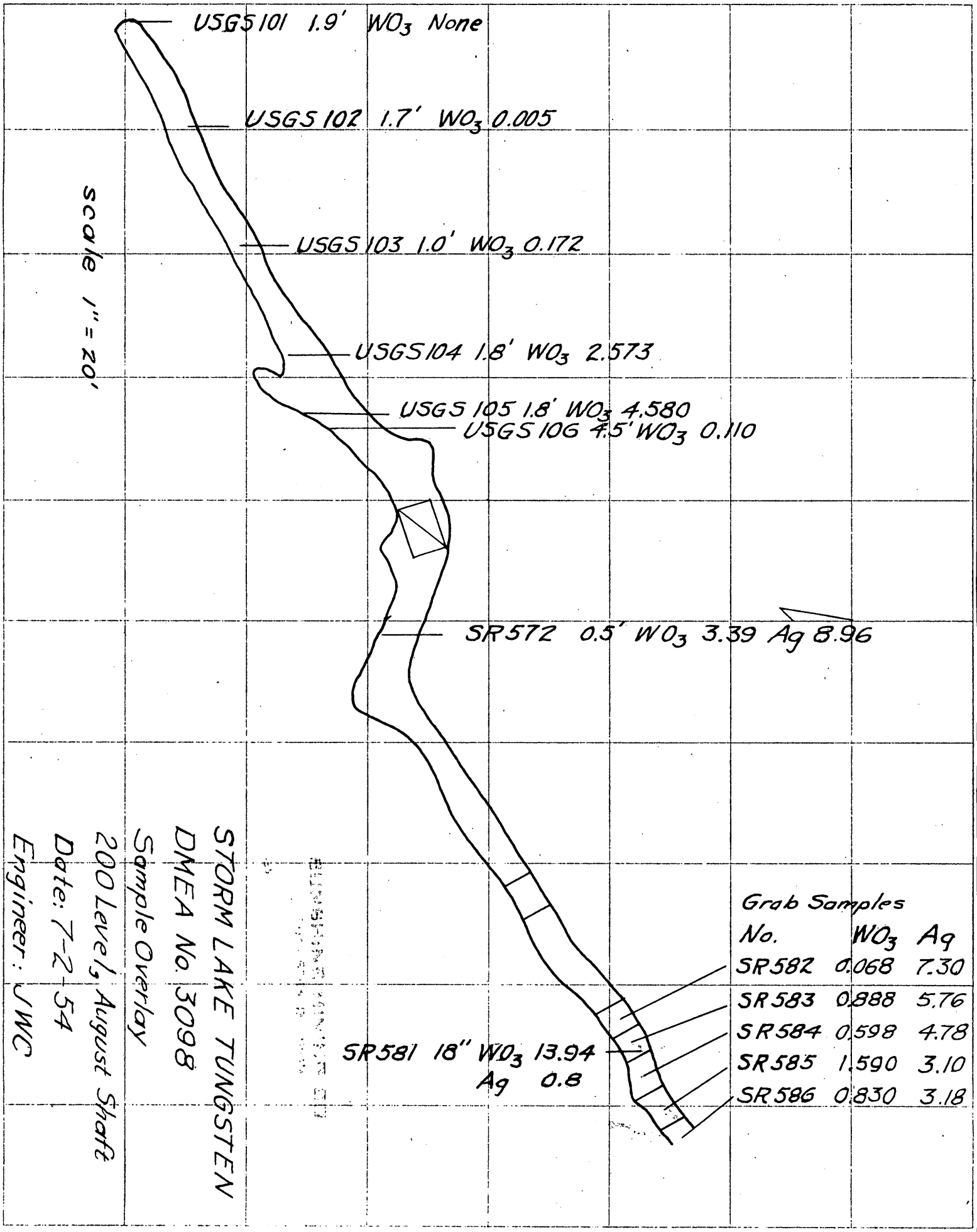
The West drift - 200 level- was advanced 21 feet. The vein pinched out although the fracture continues into the face of the drift.

The East drift -200 level- was advanced 76 feet. Measured form the point of intersection with the fault, the drift follows the fault for 60 feet. At this point, a quartz vein is intersected that probably is the hanging wall extension of the vein followed in the West drift. The vein and both walls are mineralized with scheelite. A soft iron oxide-quartz- scheelite lenz parallels the quartz vein on the footwall side for 21 feet; it is 2 feet wide at the west end and tapers out at the east end. Lamp estimate plus one assay indicate the lenz contains 10 to 15 percent WO3. Results of analyses of 5 grab samples from the drift are shown on accompanying sketch.

SUNSHINE MINING CO.
TUNGSTEN DIVISION

BY

John W. Cole
Agent



"ALBANENE" No. 195M K&E CO., N.Y.
REG. U.S. PAT. OFF.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

June 15, 1954

Memorandum

To: DMEA Field Team, Region II

From: J. J. Quinlan, Geologist, U. S. Geological Survey

Subject: Routine inspection, Docket No. DMEA-3098 (tungsten), Sunshine Mining Company, Storm Lake Tungsten Property, Granite and Deer Lodge Counties, Montana, Contract No. Idm-E598.

The Storm Lake exploration project site was inspected May 7, 1954, in company with Mr. John W. Cole, superintendent of the operation.

At the time of the inspection, shaft work had been completed and work on the 200 level commenced. The 200 level workings have been extended 25 feet southeast of the shaft and 15 feet southwest of the shaft (see plate No. 1 attached to this memorandum). In addition, 8 diamond drill holes have been drilled on company account. Four of these holes were drilled from the 200 level workings, 2 from the shaft 50 feet below the collar, and 2 from the shaft 118 feet below the collar. The locations of these holes are shown on plates 1 and 2 accompanying this memorandum; the company logs of these holes are also attached.

The vein exposed in the upper part of the August shaft was cut off by a fault 115 feet below the collar (see plate 2 attached to this memorandum). Where exposed in the shaft, this fault strikes N. 50° to 55° E. and dips 55° to 60° SW. At the time the fault was encountered in the shaft, a small amount of work was done along it in an attempt to locate the vein in the footwall of the fault. Although this work failed to locate the vein, it did expose evidence suggesting that one or more ore-bearing structures might be found in the walls of the vein. Below the fault the shaft was driven on line, because it was deemed inadvisable to stop work in the shaft and undertake an extensive program to try and locate the faulted vein segment before reaching the 200 level. When the 200 level was reached the operator undertook the diamond drilling program to locate the vein and to test its walls.

Drilling (holes No. 1 and 2) on the 200 level located the vein about 10 feet south of the shaft and the fault structure which cut off the vein in the shaft about 15 feet south of the shaft. The vein and fault are now exposed in the southeast crosscut about 20 feet

from the shaft (see plate 2). Information obtained from the diamond drill holes and the southeast crosscut indicates that in the vicinity of the shaft on the 200 level the vein strikes N. 70° E. and dips 78° SE and that the fault strikes N. 62° E. and dips 60° to 76° SE. The width of the vein exposed in the No. 1 and No. 2 drill holes is respectively 1.3 and 1.4 feet. Although the core from these holes has not been assayed, the operator estimates that the vein exposed in the No. 1 hole carries 0.3 to 0.5 percent WO_3 and that the vein exposed in the No. 2 hole carries over 0.3 percent WO_3.

The vein where exposed in the southeast crosscut is being cut off by the fault, and for this reason its true width is not exposed. The fault-vein relationship is shown on plate 1. A 4-inch sample across that portion of the vein exposed in the southwest wall of the crosscut assayed 2.14 ounces silver and 4.80 percent WO_3. A 2- to 3-foot wide zone in the footwall of the vein contains a sparse amount of disseminated scheelite and several thin quartz-calcite-scheelite stringers. A 3-foot sample across this zone assayed 0.10 ounce silver and 0.09 percent WO_3.

Present information indicates that in the vicinity of the shaft the apparent dip slip movement of the vein on the fault is about 75 feet in a reverse direction. Although present information indicates that the direction of the apparent strike slip movement is such that the vein in the hanging wall or southeast fault block has moved northeast relative to the footwall block (left hand throw), the variance in the strike and dip of the fault precludes an accurate estimate as to the amount of relative movement. It appears, however, to be of the magnitude of 80 to 140 feet. The operator plans to drift northeast along the hanging wall side of the fault to pick up the vein southeast of the fault. He also plans to extend the southwest crosscut to the vein and drift southwest along the vein.

Of the diamond drill holes to test the walls of the vein, only the No. 5 hole cut a tungsten-bearing structure of any interest. This hole was drilled from the shaft 50 feet below the collar on bearing N. 20° W., inclination -30°. Starting at a point 18.6 feet from the collar, this hole passed through 5.4 feet of quartz containing interesting amounts of scheelite. The log of the hole notes scheelite from 18.6 to 19.1 feet and from 20.9 to 23.9 feet. He estimates that the grade of the ore is over 1 percent WO_3 in that section of the core from 21.2 to 23.9 feet. Diamond drill hole No. 6, which was drilled from the same setup and on the same bearing but horizontally, failed to disclose a similar structure.

Attachments - 3
Distribution:
DMEA (orig. & 3)
USBM (2)
Docket
Quinlan

Storm Lake Tungsten
Sunshine Mining Company
Granite and Deer Lodge Counties, Montana
Docket No. DMEA 3098 (tungsten)
Contract No Idm E598
Copy of Company Diamond Drill Logs

Core logged by J W. Cole

Hole No 1

Location: 200 level August shaft (6 feet southwest of shaft)
Bearing: S. 20° E Angle Drilled: Horizontal
Depth: 78 5 feet Core size: 0-4.0 AX, 4.0-78.5 EX

Footage	Core recovered (ft.)	Description
0 - 4.0	3.8'	Ls., qtz stringers, 1/4" qtz strg. with sulfides and scheelite at 4.0'
4.0 - 8.8	4.8'	Ls., qtz stringers
8.8 - 15.9	7.3'	8.8 - 9.1 Ls, brownish, 9.1 - 10.3 white massive qtz with scheelite (est. 0.3 - 0.5% WO_3), 70° to hole, 10.3 - 15.9 Vuggy blue qtz sparce mineral, no scheelite.
15.9 - 18.2	2.3'	Hard blue qtz, sparce mineral
18.2 - 19.0	0.8'	Hard blue qtz, sparce mineral
19.0 - 37.0	18.0	Ls., massive, streaked light and dark gray, bands up to 1/2" in thickness
37.0 - 63.4	26.6	Streaked light and dark gray crystalline ls.
63.4 - 78.5	15.1	Streaked light gray and dark gray to lavender ls. Dark streaks are somewhat siliceous. Some diss. pyrite.

Hole No. 2

Location: 200 level August shaft (10 feet southwest of shaft)
Bearing: S. 10° W. Angle Drilled: Horizontal
Distance: 28.8 feet Core size: 0.- 2.0 AX, 2.0 - 28.8 EX

Footage	Core recovered (ft.)	Description
0 - 10.8	10.8	Silicified ls
10.8 - 12.2	1.4	White qtz calcite vein with scheelite (est. 0.3% WO_3)
12.2 - 22.3	10.1	Qtz vein, some calcite, bluish qtz, little mineral
22.3 - 24.4	2.1	Fine grained dark dike
24.4 - 26.5	2.1	Blue qtz
26.5 - 28.8	1.5	Light and dark banded ls.

Hole No. 3

Location: 200 level August shaft (5 feet southwest of shaft)
Bearing: N. 30° W. Angle Drilled: Horizontal
Depth: 71.3 Core size: 0 - 1.4 AX, 1.4 - 71.3 EX

Footage	Core recovered (ft.)	Description
0 - 1.4		
1.5 - 22.7	21.3	Brown to gray ls, some silicification
22.7 - 26.9	3.4	Qtz and ls, fine hematite crystals in ls
26.9 - 28.9	1.9	Qtz and ls, fine hematite crystals in ls
28.9 - 35.3	6.1	White to gray quartz and calcite copper stains last 4" (FW 30° to hole)
35.3 - 37.4	2.0	Broken ls, minor copper stain
37.4 - 40.0	2.6	Broken ls and fault gouge
40.0 - 49.7	9.7	Silicified ls
49.7 - 55.2	5.5	Banded ls, bands 47° to hole
55.2 - 60.1	4.9	Silicified ls
60.1 - 71.3	11.2	Ls, some darker bands 47° to hole.

Hole No. 4

Location: 200 level August shaft (3 feet southwest of shaft)
Bearing: N. 10° E. Angled Drilled: Horizontal
Depth: 45.2 feet Core size: 0 - 1.1 AX, 1.1 - 45.2 EX

Footage	Core recovered (ft.)	Description
0 - 1.1	1.1	
1.1 - 28.5	27.4	Ls
28.5 - 30.0	1.3	Hard gray qtz.
30.0 - 32.6	2.1	Rust vuggy qtz.
32.6 - 44.8	11.6	Ls, qtz
44.8 - 45.2	0.4	Fault gouge

Hole No. 5

Location: August shaft (50 feet below collar)
Bearing: N. 20° W. Angle Drilled - 30°
Depth: 52.6 Core size: 0 - 0.7 AX, 0.7 - 52.6 EX

Footage	Core recovered	Description
0 - 0.7		
0.7 - 16.1	15.4	Ls, at 8.5 - 0.3' calcite strg. with scheelite
16.1 - 19.1	1.8	Broken ls and qtz, 18.6 - 19.1 qtz Scheelite ore
19.1 - 21.2	2.0	Qtz, rusty, scheelite ore 20.9 - 21.2
21.2 - 24.0	1.8	Qtz - scheelite ore 21.2 to 23.9 (est + 1% WO_3)
24.0 - 50.0	26.0	Light brown ls, occasional qtz.
50.0 - 52.6	1.8	Broken brown ls, some silica.

Hole No. 6

Location: August shaft (50 feet below collar)
Bearing: N. 20° W. Angle Drilled: Horizontal
Depth: 71.2 Core size: 0 - 1.5 AX, 1.5 - 71.2 EX

Footage	Core recovered	Description
0 - 1.5		Silicified
1.5 - 12.8	11.3	Ls, at 11.5 - 0.1' calcite - scheelite strg.
12.8 - 28.3	15.5	Ls, gray with light gray to brown seams.
28.3 - 29.3	1.0	Limonitic ls
29.3 - 36.5	6.2	Ls, gray
36.5 - 42.5	4.8	Ls, limonitic soft broken
42.5 - 56.4	11.0	Ls, gray broken gouge streak at 45.6 - $\frac{1}{4}$" vein 45° to core. Scheelite and copper stain.
56.4 - 60.5	3.2	Ls, gouge at 58.5
60.5 - 61.5	1.0	Calcite cemented breccia vein 42° to 70° to core
61.5 - 63.0	1.5	Ls
63.0 - 63.6	0.6	Calcite vein with scheelite, 50° to core probably on beds
63.6 - 64.1	0.5	Gougy gray to white ls.
64.1 - 71.2	6.3	Dark gray to brown ls, soft

Hole No. 7

Location: August shaft (118 feet below collar)
Bearing: N. 20° W. Angle Drilled: Horizontal
Depth: 59.6 feet Core size: 0 - 1.0 AX, 1.0 - 59.6 EX

Footage	Core recovered	Description
0 - 1.0		
1.0 - 35.3	33.0	Ls, soft but compact, tan to green to dark gray, lighter hair-line seams, talc like
35.3 - 38.0	2.7	Ls, as above, tan color
38.0 - 40.7	2.4	Porous, limonite stained ls, qtz veinlets minute diss. crystals of hematite
40.7 - 54.8	13.8	Soft, compact white to tan ls
54.8 - 59.6	4.5	Porous, limonite stained qtz, minute diss. hematite crystals, scheelite at 54.8

Hole No. 8

Location: August shaft (118 feet below collar)
Bearing: S. 20° E. Angle Drilled: Horizontal
Distance: 34.3

Footage	Core recovered (feet)	Description
0 - 34.3		Ls.

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 3098 Contract No. Idm-2-598
Operator's Name SUNSHINE MINING COMPANY Minerals
Address 738 Peyton Building, Spokane, Wash. Tungsten
Contract Amount, $ 45,100.00 Government Participation: 75 % Amount, $ 33,828.75

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:						
Bulldozing		3,392.00	3,392.00			WSM
Cleaning		3,230.00	3,230.00			
shaft						
Sinking		12,075.00	12,075.00			
Long hole		122.40	122.40			
drilling						
Drifting 55' @ 37.00	3145.00	1,110.00	4,255.00			
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	3145.00	19,929.40	23,074.40			

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

Date 6-11-54 *Payee SUNSHINE MINING COMPANY TUNGSTEN DIVISION

Per DWC BY Agent Title

*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:

$ 2358 75

Signature MDP
(Authorized Certifying Officer)

Date 6/23/54 Vou. No. 1201
(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 598 in accordance with the terms of the contract.

Signature /S/ Stephen W Zoldok Title Mining Eng Date 6/21/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /S/ Stephen W Zoldok Title Mining Eng Date 6/21/54

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 _____ 195____ Docket No. DMEA _____ Contract No. _____
Operator's Name _____ Minerals _____
Address _____

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								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
								TOTAL COSTS AUTHORIZED BY CONTRACT
TOTAL DISTRIBUTED COSTS								
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS								

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.

SUNSHINE MINING CO.
TUNGSTEN DIVISION

Date _____ Operator BY _____

Per J. W. C. _____ Title _____

REMARKS: _____

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(Instructions on reverse)

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GPO 83-38475

SUNSHINE MINING COMPANY
Tungsten Division
Storm Lake Project
Anaconda, Montana

June 11, 1954

Docket No. DMEA 3098
Contract No. Idm-E-598

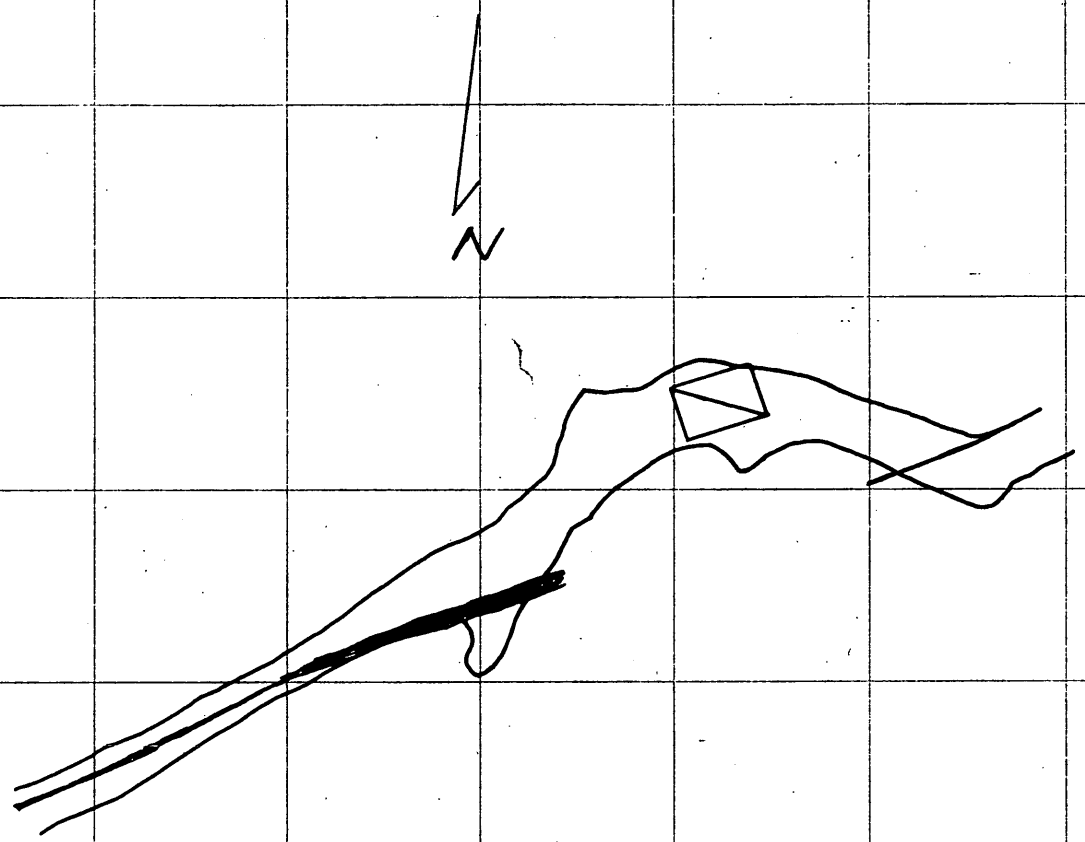
Narrative report of operations
May, 1954

The East drift on the 200 level was advanced 15 feet. The West drift was advanced 70 feet. The East drift intersected a quartz-calcite-scheelite vein where it is faulted off. The vein in the West drift starts about 30" wide. It gradually narrows to 3 " in the face.

SUNSHINE MINING CO
TUNGSTEN DIV

BY JWC

John W. Cole
Agent



SUNSHINE MINING CO.
TUNGSTEN DIVISION

STORM LAKE PROJECT
DMEA 3098
May 1954
200 Level
Scale 20' = 1"
J.W.C.

BARRETT NO. 198M K&E CO., N.Y.
REG. U.S. PAT. OFF.

MF-201
(June 1951)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the holder of a mortgage, claim, lien, or encumbrance identified and described as follows*:

.....

.....

upon that certain parcel of ground described in a certain Exploration Project Contract dated

....., 195...., between .....

.....,

and the United States of America;

NOW, THEREFORE, the undersigned does by these presents subordinate all of his right, title, and interest in said mortgage, claim, lien, or encumbrance to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights under the provisions of said mortgage, claim, lien, or encumbrance; and

The undersigned agrees to commit no act nor assert any right, title, or interest under said mortgage, claim, lien, or encumbrance that might contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract.

This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this ..... day of ....., 195....

.....

*Include date of the instrument, and if recorded, book, page, and county of record.

U. S. GOVERNMENT PRINTING OFFICE 16—64581-2

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

1201N. Division St.
Spokane 2, Washington
May 11, 1954

MEMORANDUM

To: DMEA Field Team, Region II

From: John D. Bardill, Bureau of Mines, Region II

Subject: Routine inspection report, Sunshine Mining Company, Deer Lodge and Granite Counties, Montana, Contract No. Idm-E598, Docket No. DMEA 3098 (tungsten)

A routine inspection of this project was made May 4, 1954 accompanied by John W. Cole, company supervising engineer.

Since the last inspection by V. Z. Johnson on March 14, 1954 the shaft sinking to the 200 level had been completed with a 10-foot sump. A drift had been driven easterly 24 feet from the center of the shaft and southwesterly 17 feet. The easterly drift had just encountered the fault and contained some scheelite mineralization.

Four drill holes had been completed and are shown on the attached sketch map. The depths of the holes are:

Hole No. 1	78 feet
" No. 2	27 "
" No. 3	71 "
" No. 4	45 "
Total	221 feet

Hole No. 1 cut 1.2 feet of scheelite-bearing vein at 9 feet and Hole No. 2 cut 1.4 feet at 10 feet. Analyses of the core had not been completed at the time.

The total contract units allowed under the contract and units completed are as follows:

	Completed	Total Contract Units
Shaft rehabilitation	95 feet	95 feet
Shaft sinking	115 "	115 "
Long hole drilling	221 "	250 "
Trenching & road building	212 hours	250 hours
Timbering drifts	0	600 feet

Orig. & 3 cys - Wash.
USGS (2)
DMEA
M/D — AD — JDB/he

John D. Bardill

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

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of April, 1954 Docket No. DMEA 3000 Contract No. [illegible]
Operator's Name [illegible] Minerals [illegible]
Address 730 Boyton Building, [illegible]
Contract Amount, $ 69,100.00 Government Participation: 75% Amount, $ 53,000.75

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:						WSM
Bulldozing		3,392.00	3,392.00			
Cleaning		3,250.00	3,250.00			
shaft						
Sinking		12,075.00	12,075.00			
Long hole		112.40	112.40			
drilling						
(2) Supervision:						
Drifting	740.00	370.00	1,110.00			
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	740.00	19189.40	19,929.40	740.00	19189.40	19929.40

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

Date 5-7-54 *Payee [illegible] MINING CO. [illegible] DIVISION

By [illegible]

Per _____ Title _____

*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:

$ 555.00

Signature _____
(Authorized Certifying Officer)

Date 5/20/54 Vou. No. 1173
(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. E598 in accordance with the terms of the contract.

Signature /S/ John D. Darsell Title Metallurgist Date 5/17/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /S/ Stephen W. Zoldok Title Mining Engr Date 5/19/54

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 April 1954 Docket No. DMEA 3098 Contract No. Idm-E598
Operator's Name Sunshine Mining Company Minerals Tungsten
Address 738 Peyton Building, Spokane, Wash.

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		740.00	20 ft.	1,110.00			600	
Crosscutting								
Raising								
Shafts -sinking				12,075.00			115	
Winzes								
Drilling: ~~Core~~ Long hole				122.40				
Churn								
Auger								
Stripping								
Trenching Bulldozing				3,392.00				
Test Pits								
Roads and Trails								
Rehabilitating Shaft				3,230.00			95	
TOTAL DISTRIBUTED COSTS		740.00		19,929.40				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		740.00		19,929.40				

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 May 18, 54 Operator Sunshine Mining Co. Tungsten Division

Per Rufford Krug Title Agent

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)

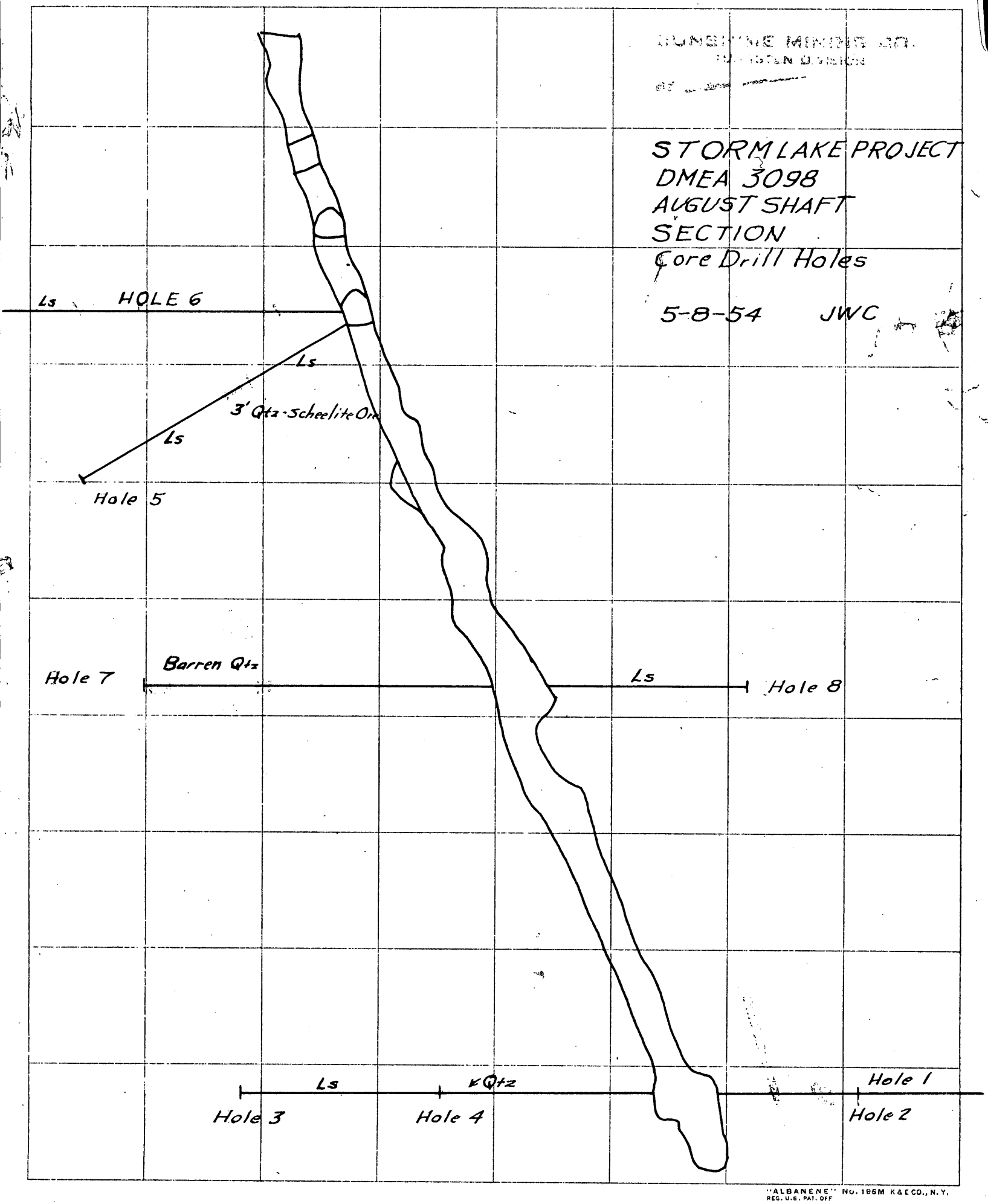
INSTRUCTIONS

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.

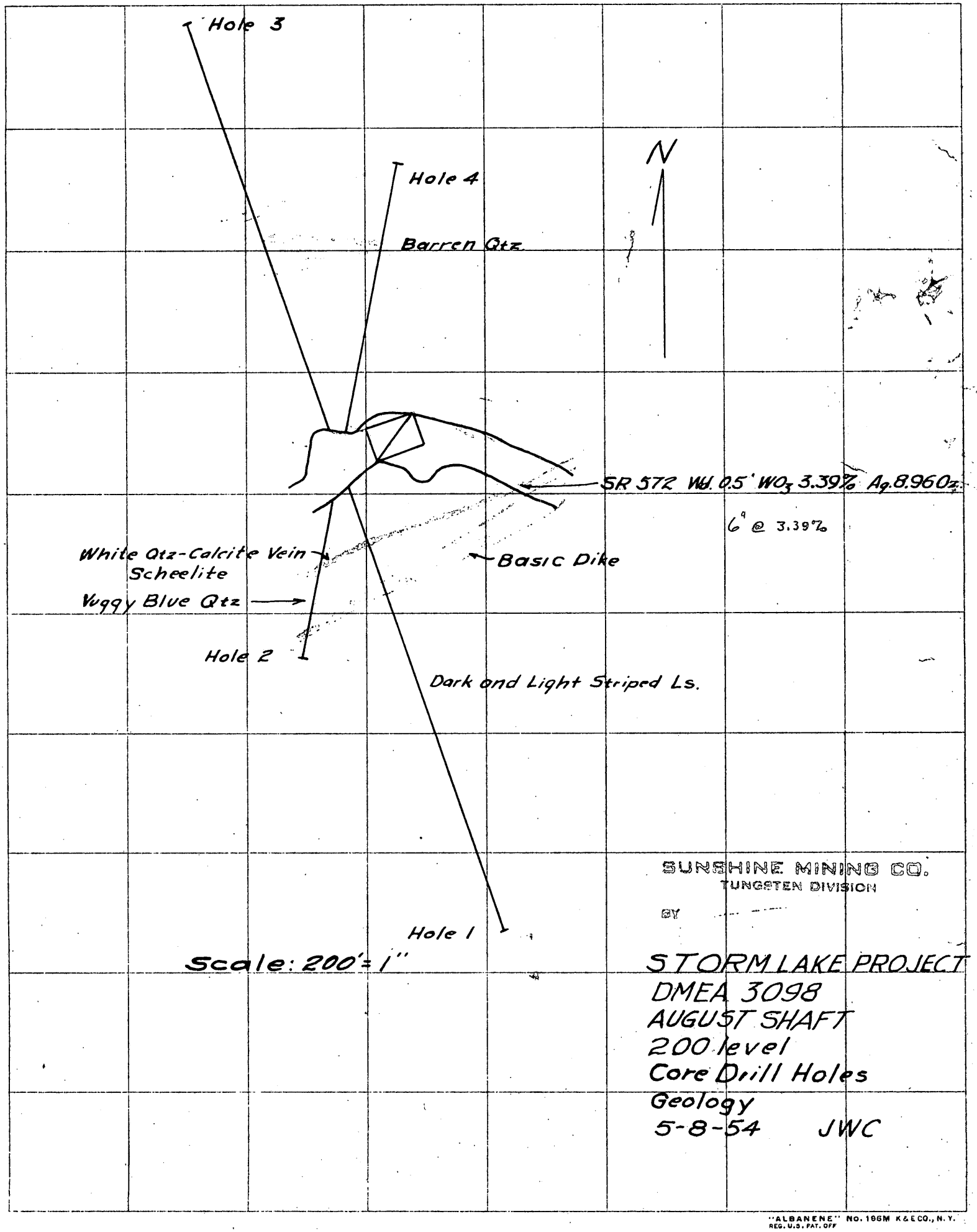
Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

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



"ALBANENE" No. 185M K&E CO., N.Y.
REG. U.S. PAT. OFF



"ALBANENE" No. 196M K&E CO., N.Y.
REG. U.S. PAT. OFF

SUNSHINE MINING COMPANY
Tungsten Division
Storm Lake Project
Anaconda, Montana

May 10, 1954

Docket No. DMEA 3098
Contranct No. Idm-E-598

Narrative report of operations
April, 1954

The east drift from the 200 level was advanced 20 feet. Several days delay was caused by collapse of the 200 level bulkhead. The shaft was cleaned and bulkhead replaced. Shaft bucket skids were replaced and realined.

Core drilling was started on May 1 and continued until May 26. Eight holes were drilled from stations in the shaft. Depth of holes ranged from 28.8 to 78.5 feet. Total footage drilled was 425.4 feet. Core recovery approached 100 percent. Loss of water in the holes prevented collection of satisfactory sludge samples. Location of holes and graphic logs are shown on accompanying sketches.

SUNSHINE MINING CO.
TUNGSTEN DIVISION

BY JWC

John W. Cole
Superintendant

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.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 29 1954

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of 4, 195 Docket No. DMEA 3098 Contract No. Idm-2-598
Operator's Name Porch Minerals Minerals Tungsten
Address 738 Peyton Building, Spokane, Wash.
Contract Amount, $ 45,100.00 Government Participation: 75 % Amount, $ 33,825.75

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:						
Bulldozing		3392.00	3392.00			
Cleaning		3230.00	3230.00			
shaft						
Sinking 26.8' @ 105	2793.00	9282.00	12075.00			
Long hole		122.40	122.40			
drilling Supervision:						
Drifting 10.0' @ 37	370.00	0.00	370.00			
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	3163.00	16026.40	19189.40	3163.00	16026.40	19189.40

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

Date 4-9-54 *Payee SUNSHINE MINING CO. TUNGSTEN DIVISION

Per John V. Cole Title Sup't.

*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:

$ 2372.25

Signature R. J. B.
(Authorized Certifying Officer)

Date 4/23/54 Vou. No. 1146
(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. E598 in accordance with the terms of the contract.

Signature 15/ John D Bardell Title Metallurgist Date 4/4/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature 15/ Stephen W Zoldok Title Mining Eng. Date 4/20/54

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 29 1954

Month of April 1954 Docket No. DMEA 3630 Contract No. [illegible]
Operator's Name [illegible]
Minerals Tungsten
Address 738 Peyton Building, Spokane, Wash.

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.	952.20	10.0	952.20	10.0	95.22	600	37.00
Crosscutting								
Raising								
Shafts Sinking	Ft.			2109.46	95.0	22.20	99	24.00
Winzes Sinking	Ft.	2016.00	20.0	16122.23	110.0	142.28	115	105.00
Drilling: Core								
long hole	Ft.			151.82	00.0	0.00	200	1.60
Auger								
Stripping								
Trenching	Yd			2000.00	140.0	14.09	106	10.00
Test Pits								
Roads and Trails	Ft.			1190.00	68.0	17.70	64	10.00
Total Distributed Costs		3069.10		22650.00				Total Costs Authorized by Contract
Operating Equipment Purchased				11009.40				
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.				7200.23				
Total Costs		3069.10		41183.25				

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.

SUNSHINE MINING CO.
TUNGSTEN DIVISION

Date 6-9-54 Operator BY

Per John A. Cole Title Sup't.

Remarks: Sinking and operation costs include $1,500.00 depreciation. Amortization of buildings and improvements not included.

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

SUNSHINE MINING COMPANY
Tungsten Division
Storm Lake Project
Anaconda, Montana

DEPT. OF THE INTERIOR
Minerals Administration
RECEIVED
29 1954

Docket No. DMEA 3098
Contract No. Idm-E-598
Tungsten

Narrative report of operations
March 1954

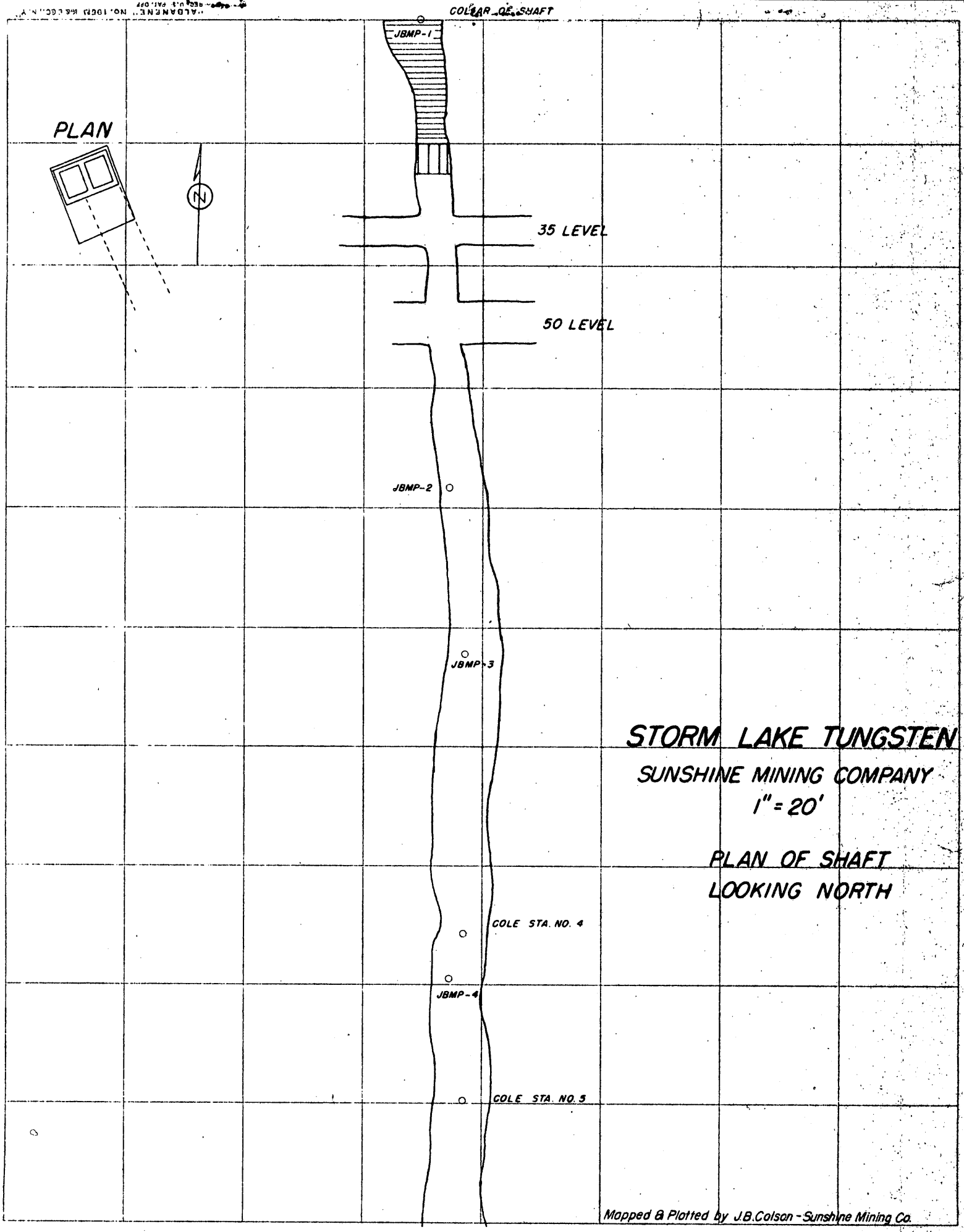
The bottom of the August shaft was advanced 26.6 feet, from 183.4 to 210.0 feet. A bulkhead was placed at 200 feet. A drift was started on ore stringers and advanced 10 feet southwest of the 200 level. The drift was widened to 10 feet for a core drill station. Core driller and equipment arrived from Kellogg preparatory to core drilling. Drilling had not started at the end of the period.

A private tractor was employed two days in clearing the road of snow.

SUNSHINE MINING CO.
TUNGSTEN DIVISION

By

John W. Cole
Superintendant


COLLAR OF SHAFT
JBMP-1
PLAN
N
35 LEVEL
50 LEVEL
JBMP-2
JBMP-3
COLE STA. NO. 4
JBMP-4
COLE STA. NO. 5
STORM LAKE TUNGSTEN
SUNSHINE MINING COMPANY
1" = 20'
PLAN OF SHAFT
LOOKING NORTH
Mapped & Plotted by J.B.Colson - Sunshine Mining Co.

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

1201 N. Division St.
Spokane 2, Washington
March 19, 1954

MEMORANDUM

To: DMEA Field Team, Region II

From: V. Z. Johnson, Mining Engineer, Bureau of Mines

Subject: Routine inspection, August Shaft, Tarlach Claims, Sunshine Mining Company, Deer Lodge and Granite Counties, Montana, Contract Idm-E598, Docket No. DMEA 3098 (tungsten)

The inspection was made on March 14, 1954 with Mr. John W. Cole, supervising engineer. The snow was packed so that the mine could be reached by pickup with chains.

On the date of the inspection the muck pile from the last round was at a point 203 feet below the collar. An advance of 69 feet is indicated since Mr. Zoldok's inspection on January 9, 1954.

The cross section is 6x9 feet, and during the period an inclination of about 68 degrees was maintained. Floor plates to anchor the bucket skids were the only timbers required. An occasional roof bolt has been placed in the hanging wall of the vein which has been followed for most of the sinking.

The Operator intends to immediately start cutting the 200 level station. A slusher will be used for scraping drift muck into the shaft bucket during the initial drifting on the 200 level. The services of a diamond drill has been arranged to drill into the footwall so that the structure which crossed the shaft at about 80 feet depth may be examined.

The last round in the shaft exposed stringers of quartz, calcite, scheelite, and copper minerals along both footwall and hanging wall that will be accessible to sampling and further examination as the station is being cut.

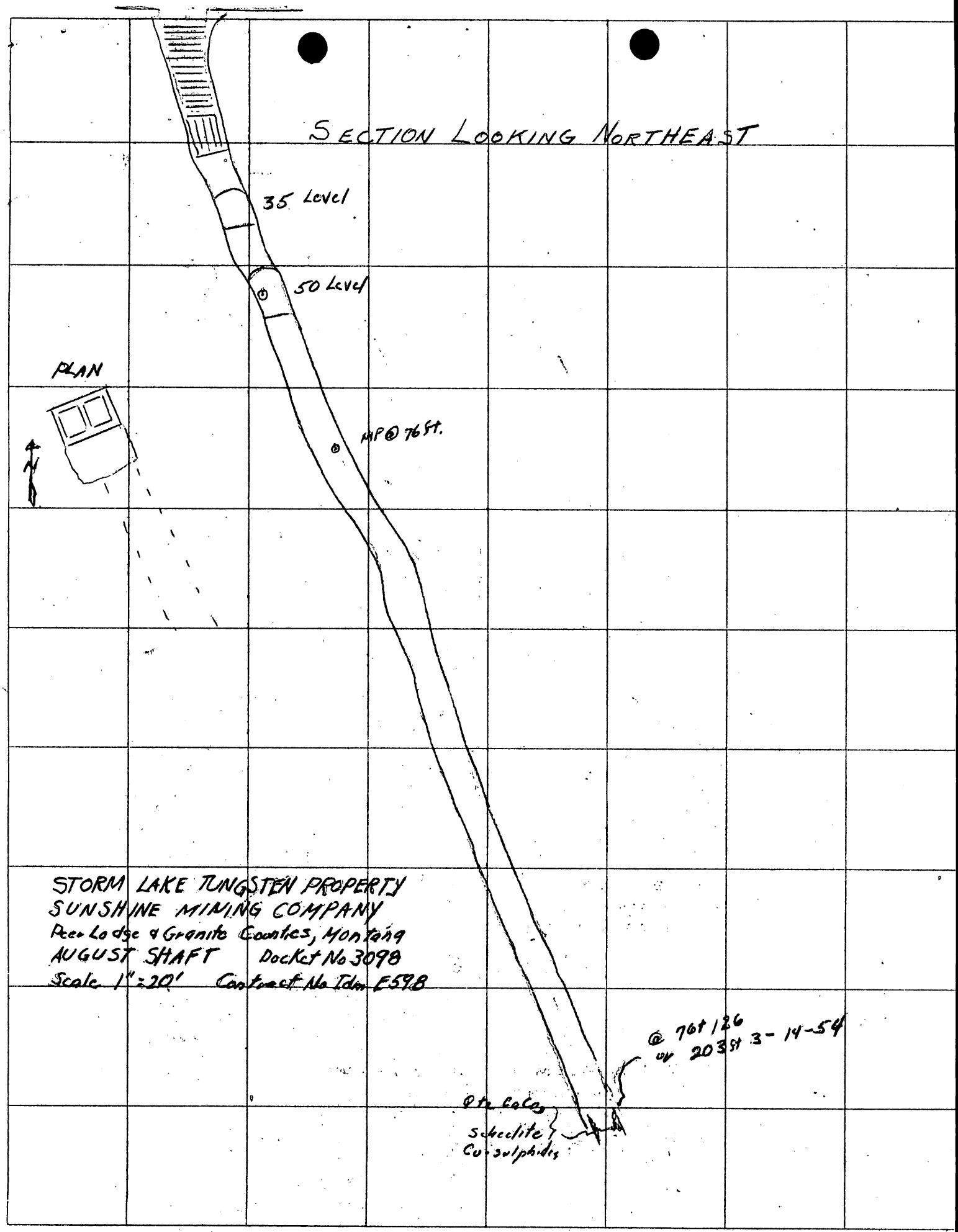
The total contract units completed to date are as follows:

Shaft rehabilitation	95 feet
Shaft sinking	203 feet
Long hole drilling	68 feet
Trenching	148 hours
Building road	64 hours

The present bucket skids are not straight and have not been placed at a uniform inclination because of twists in the structure that was being followed. Mr. Cole intends to improve this condition before starting to hoist drift rounds.

V. Z. Johnson

Orig. & 3 cys - Wash.
USGS (2)
DMEA
M/D
AD
VZJ/he



"ALBANENE" No. 186M K&E CO., N.Y.
REG. U.S. PAT. OFF

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.

RECEIVED

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of February, 1954 Docket No. DMEA 3098 Contract No. Idm-E-598
Operator's Name Sunshine Mining Company Minerals Tungsten
Address 738 Peyton Building, Spokane, Wash.
Contract Amount, $ 45,100.00 Government Participation: 75 % Amount, $ 33,828.75

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:						
Bulldozing		339200	3392.00			
Cleaning		3230.00	3230.00			
shaft sinking 32.2' @105.	3381.00	5901.00	9282.00			
Long hole drilling		122.40	122.40			
(2) 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	3381.00	12645.40	16026.40	3381.00	12645.40	16026.40

I certify that the above bill is correct and proper for payment and that it has not been received.

SUNSHINE MINING CO.
TUNGSTEN DIVISION

Date 3-6-54 *Payee

BY

Per John W. Cole Title Sup't.

*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:

$ 2535.75

Signature (Authorized Certifying Officer)

Date 3/17/54 Vou. No. 1111

(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-598, in accordance with the terms of the contract.

Signature 1st Verdo Z Johnson Title Mining Engr Date 3/16/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature 1st Stephen W Zoldok Title Mining Engr Date 3/16/54

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 DMF-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 February 1954 Docket No. DMEA 3098 Contract No. Idm-E-598
Operator's Name Sunshine Mining Company Minerals Tungsten
Address 738 Peyton Building, Spokane, Wash.

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts Repairing	Ft			2165.46	95	22.79	95	34.00
Water Sinking	Ft	3388.50	32.2	13245.32	88.4	149.83	115	105.00
Drilling: Long hole	Ft			151.52	68	2.22	250	1.80
Churn								
Auger								
Stripping								
Trenching	Hr			2085.00	148	14.09	186	16.00
Test Pits								
Roads and Trails	Hr			1134.20	64	17.72	64	16.00
TOTAL DISTRIBUTED COSTS		3382.50		18781.50				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased		9.85		11252.42				
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc				7280.23				
TOTAL COSTS		3392.35		37314.15				

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.

SUNSHINE MINING CO.
TUNGSTEN DIVISION

Date 3-6-54 Operator By

Per John W. Cole Title Sup't.

REMARKS: Supplies charged as purchased - no inventory credit. Sinking cost includes $ 500.00 depreciation. Does not include amortization of buildings and improvements.

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

SUNSHINE MINING COMPANY
Tungsten Division
Storm Lake Project
Anaconda, Montana

Docket No. DMEA 3098
Contract No. Idm-E-598
Tungsten

Narrative report of operations
February 1954

The August shaft was advanced 32.2 feet during the period to 183.4 feet depth. The average advance for each bottom shift was 1.62 feet for 20 shifts. 3 shifts were spent in shaft repairs. The road to the mine was cleared of snow by Deer Lodge county equipment. A Caterpillar D6 bulldozer was used 3 days for the job.

Quartz and calcite stringers mineralized with scheelite and silver minerals continue in the shaft bottom. The veinlets have the same attitude as the ore vein above the 100 level fault.

SUNSHINE MINING CO.
TUNGSTEN DIVISION

BY

J W C.

John W. Cole
Superintendant

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.

Defense Minerals Administration
RECEIVED
FEB 23 1954

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of January, 1954 Docket No. DMEA 3000 Contract No. 13-0-900
Operator's Name Sunshine Mining Company Minerals Tungsten
Address 730 Peyton Building, Spokane, Wash.
Contract Amount, $ 45,100.00 Government Participation: 75 % Amount, $ 33,000.75

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:						WSM
Bulldozing		3392.00	3392.00			
Cleaning		3530.00	3530.00			
shaft						
Sinking 25.7'@ 105	3118.50	2782.50	5901.00			
Long hole		198.40	198.40			
drilling 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	3118.50	9520.90	12645.40	3118.50	9520.90	12645.40

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

Date 2-10-54 *Payee SUNSHINE MINING CO. TUNGSTEN DIVISION

Per JWC BY Title Superintendent

*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:

$ 2338.88

Signature (Authorized Certifying Officer)

Date 2/16/54 Vou. No. 1080
(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 598 in accordance with the terms of the contract.

Signature /S/ Verdo Z Johnson Title Mining Engr Date 2/15/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /S/ Stephen W Zoldok Title Mining Engr Date 2/15/54

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 January 195[illegible] Docket No. DMEA [illegible] Contract No. [illegible]
Operator's Name [illegible] Minerals [illegible]
Address [illegible]

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts repairing	Ft.			2165.46	99	28.79	99	24.00
[illegible] sinking	Ft.	4610.07	29.7	9662.53	50.0	193.08	110	108.00
Drilling: Coring hole	Ft			161.00	00	0.00	980	1.60
Churn								
Auger								
Stripping								
Trenching	Cu			2085.00	148	14.09	150	10.00
Test Pits								
Roads and Trails	Lr			1131.20	06	12.78	04	10.00
								Total Costs Authorized by Contract
Total Distributed Costs		4610.07		10999.00				
Operating Equipment Purchased				12860.07				
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.				7200.20				
Total Costs				33921.80				

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.

SUNSHINE MINING CO.
TUNGSTEN DIVISION

Date 2-10-54 Operator BY

Per J. W. C. Title Supt.

Remarks: Supplies charged on purchased-no inventory credit. Mining costs includes $ [illegible] depreciation. does not include construction of buildings and improvements.

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

SUNSHINE MINING COMPANY
Tungsten Division
Storm Lake Project

Docket No. DMEA 3098
Contract No. Idm-E-598
Tungsten

Narrative report of operations
January 1954

The August shaft was sunk 29.7 feet during the period to 151.2 feet depth. Silicified limestone with scheelite bearing quartz and calcite stringers has been penetrated.

Work was interrupted during the week of January 17-24 by heavy snowfall and subzero temperatures. The road was plowed at a cost of $ 273.50. Work was resumed January 25 on a one shift basis. Provisions are being made for the employees to stay at the mine in case of further bad weather.

Final assay returns on surface samples from the Marlach vein indicate that a section 110 feet by average 4.65 feet wide contains plus 0.5 percent WO3.

SUNSHINE MINING CO.
TUNGSTEN DIVISION

BY JWC

John W. Cole
Superintendant

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

1201 N. Division St.
Spokane 2, Washington
January 13, 1954

MEMORANDUM

To: DMEA Field Team, Region II

From: S. W. Zoldok, Mining Engineer, Bureau of Mines

Subject: Interim inspection, Docket No. DMEA 3098 (tungsten), Sunshine Mining Company, Tarlach Group, Deer Lodge and Granite Counties, Montana, Contract Idm-E598

An inspection of the subject property was made on January 9, 1954, accompanied by Mr. John W. Cole, supervising engineer. Snow conditions made the mine access road almost impassable to a jeep, and it was necessary to walk the last mile to the mine.

On the date of inspection, the August shaft had reached a point 134 feet below the collar. Of the total advance, 95 feet is shaft rehabilitation and 39 feet is shaft sinking. It was necessary to place new cribbing for the first 25 feet of shaft. USBM tag No. 228 was placed on the wall (floor) plate at a point 113.3 feet below the collar. The average cross section of the shaft exceeds the 6x9 feet specified in the contract due to overbreak. No timbering is necessary with the exception of floor plates to support the bucket skids.

Six men are employed in sinking, on a two-shift per day basis; also a mechanic on the day shift. Average advance is about 1.7 feet per shift.

The vein petered out at about the 100-foot point in the shaft, and at the 134-foot point there are a few calcite stringers (both normal and parallel to the strike of the structure) carrying minor specks of scheelite. What appears to be a bedding plane breccia zone cemented with quartz and calcite crosses the shaft at about the 80-foot point. This zone shows excellent scheelite mineralization over an apparent width of about 9 feet.

Surface Plant

Surface buildings include a 16'x16' dry room and a 18'x40' shop and attached 20'x14' hoist room and compressor house. Buildings are of heavy frame construction to withstand heavy snow loads.

Compressed air is supplied by an I.R. 315 Gyroflow compressor. The hoist is a converted logging hoist powered by a 78 h.p. Continental gas engine.

A simple type "A" headframe 22 feet high was constructed from 10"x10" timber. Cost of the headframe is tabulated below:

Item	Cost	Cost, bd. ft.
Lumber - 3839 bd. ft.	$284.89	$0.074
Ironwork	131.12	0.034
Labor (22½ man-shifts)	562.50	0.146
Total	$978.51	$0.254

Standards of work are satisfactory.

S. W. Zoldok

S. W. Zoldok

Orig. & 3 cys - Wash.
USGS (2)
DMEA
M/D
AD
SWZ/he

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
So. 157 Howard St.
Spokane 4, Washington

January 5, 1954

Memorandum

To: DMEA Field Team, Region II

From: J. J. Quinlan, Geologist, U. S. Geological Survey

Subject: Routine inspection, Docket No. DMEA 3098 (tungsten)
Sunshine Mining Company, Storm Lake Tungsten Property,
Deer Lodge and Granite Counties, Montana, Contract No. Idm-E598

The Storm Lake exploration project site was inspected December 16, 1953 in company with Mr. John W. Cole, superintendent of the operation.

Mr. Cole reported that the company has completed the trenching and surface sampling program outlined in the contract. As the ground was covered with 12 to 18 inches of snow it was not possible to inspect work completed under this phase of the program since the last inspection.

Construction and installation of surface facilities at the August shaft has been virtually completed. This includes construction of a headframe, combination compressor and shop building, hoist house, change building, and installation of portable compressor and hoist.

Shaft rehabilitation has been completed and sinking operations have commenced. At the time of the inspection the shaft measured 103 feet in depth. This represents an advance of approximately 8 feet since sinking operations began.

The quartz vein exposed in the shaft varies in width from about 6 inches to 2.5 feet. In places the walls of the vein are well silicified and contain numerous quartz stringers. This condition is best developed in the hanging wall of the vein (see attached sketch). The vein flattens approximately 80 feet below the shaft collar. Where it does so the vein narrows, and it is within this section that it is only 6 inches wide. The exact nature of this flattening could not be determined, because the footwall of the vein was not well exposed and the shaft walls were extremely dirty. This flattening may be

just a local roll in the vein or it may be an expression of a faulted condition (see attached sketch). Another round or two should tell much more about this flattening. It may be necessary to test the walls of the shaft if this flattening is an expression of a faulted condition.

Lamping of the shaft with an ultraviolet lamp indicates that most of the scheelite is confined to the principal vein. Except for a narrow quartz stringer which diverges from the vein near the 50 level, the hanging wall silicified zone and associated quartz stringers contain only a few specks of scheelite.

In a letter dated December 3, 1953, Mr. Rowland King, field engineer for the company, requested that unused bulldozing funds amounting to approximately $625 (thirty-nine hours) be made available for snow removal this winter on 6 miles of road between the property and U. S. Highway 10A. At the time that this request was made the company believed that they could arrange with the dozer owners to use it for snow removal this winter. Discussion of the snow removal problem with Mr. Cole indicated that the company may not be able to make such arrangements for the use of the dozer; therefore, Mr. Cole has been giving consideration to several alternative plans for snow removal. One includes help from the county, another purchase of a snow blade for a Dodge power wagon which the company is now using on the project. Also, Mr. Cole is not sure just how often it will be necessary to plow the road. As there are so many uncertainties regarding snow removal it is believed that it would be prudent to wait until spring when we have all facts at hand before preparing an amendment allowing snow removal. Such an amendment would of necessity have to be made retroactive to cover the entire winter period. This matter has been discussed with Mr. Weissenborn, Executive Officer of the Field Team, and he is in agreement. Mr. King has been advised of this decision and is agreeable to it. Also, he understands that such an amendment will not allow more for snow removal than actual costs, the maximum amount of which may not exceed the unexpended dozer funds.

Enclosure - 1
Distribution:
DMEA (Orig. & 3)
USBM (2)
Docket
Quinlan

104 (Rev.)
1952)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.4
Expires 6-30-53.

DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
RECEIVED
JAN 29 1954

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of December, 1953 Docket No. DMEA 3098 Contract No. Idm-E-598
Operator's Name Sunshine Mining Company Minerals Tungsten
Address 738 Peyton Building, Spokane, Wash.
Contract Amount, $45,105.00 Government Participation: 75 % Amount, $33,828.75

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) [redacted] Contracts:						
Short Form						
Bulldozing [redacted]		3392.00	3392.00			WSM
[redacted]						
shaft 19' @ 34.00	646.00	2584.00	3230.00			
[redacted] 26.5 @ 105.	2782.50		2782.50			
[redacted] hole 68' @ 1.80	122.40		122.40			
[redacted] pervision:						
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	3550.90	5976.00	9526.90	3550.90	5976.00	9526.90

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

Date 1-8-54 *Payee SUNSHINE MINING CO. TUNGSTEN DIVISION

Per [signature] BY Title Sup't.

*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:

$2663 18

Signature [signature] (Authorized Certifying Officer)

Date 1/14/54 Vou. No. 1058

(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. E598 in accordance with the terms of the contract.

Signature 1st Stephen W. Zoldok Title Mining Engr. Date Jan 13-1954

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature 1st Stephen W Zoldok Title Mining Engr Date Jan 13-1954

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

[illegible]F-104A
([illegible]pril 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

[illegible] (MEXICO)
Defense Minerals Administration
RECEIVED
[illegible] 20 1954

Month of Dec 195 3 Docket No. DMEA 3098 Contract No. Idm-E-598
Operator's Name Sunshine Mining Company Minerals Tungsten
Address 738 Peyton Building, Spokane, Wash.

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts Repairing	Ft.	629.36	19	2165.46	95	22.79	95	34.00
Shafts Sinking	Ft.	5252.75	26.5	5252.75	26.5	198.21	115	105.00
Drilling Long hole	Ft.	151.52	68	151.52	68	2.22	250	1.80
Churn								
Auger								
Stripping								
Trenching	Hr			2085.00	148	14.09	186	16.00
Test Pits								
Roads and Trails	Hr			1134.20	64	17.72	64	16.00
TOTAL DISTRIBUTED COSTS		6033.63		10788.93				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased		10000.00		11242.57				
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.				7280225				
TOTAL COSTS		16033.63		29311.73				

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 1-8-54 Operator SUNSHINE MINING CO. TUNGSTEN DIVISION BY

Per JWC Title Sup't.

REMARKS: Supplies charged as purchased. No inventory credit. Sinking cost includes $ 500.00 depreciation. Does not include amortization of buildings and improvements.

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

SUNSHINE MINING COMPANY
Tungsten Division
Storm Lake Project

Docket No. DMEA 3098
Contract No. Idm-E-598
Tungsten

rrative report of operations
ecember, 1953

Rehabilitation of the August shaft was completed December 5. The bottom 10 feet of the shaft was filled with broken rock. Solid rock was encountered at depth 95-96 feet. The shaft bottom was at depth 121.5 at the end of the period.

The vein pinched at depth 100 feet. Below this point, the shaft has penetrated impure limestone with occasional stringers and blebs of scheelite bearing calcite. A round was blasted in the footwall of the shaft at depth 80 feet. Nine feet(normal to vein) of good ore(lamp estimate) is exposed at this point with neither the footwall or hanging wall exposed. Some indication that an intersecting vein crosses at this point or it may be a mineralized bed in the limestone. It should be investigated by core drilling or cross-cutting from the shaft.

Shaking operations are conducted on a 2 shift a day basis. The shaft should be completed to depth 210 feet in approximately 30 days.

SUNSHINE MINING COMPANY

John W. Cole
Superintendent

DMEA-1-1 (Rev.)
(April 1952)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of November 195 3 Docket No. DMEA [illegible] Contract No. [illegible]
Operator's Name [illegible] Minerals [illegible]
Address [illegible]
Contract Amount, $ [illegible] Government Participation: 75% Amount, $ [illegible]

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 [illegible]	[illegible]	[illegible]	3300.00			
Bulldozing [illegible]						
Crosscutting [illegible]						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify): [illegible]	[illegible]	[illegible]	[illegible]			
Totals	[illegible]	[illegible]	[illegible]	2892.00	3084.00	5976.00

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

SUNSHINE MINING CO.
TUNGSTEN DIVISION

Date [illegible] *Payee [illegible]

BY [illegible]

Per J W C Title [illegible]

*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:

$ 2169.00

Signature [illegible]
(Authorized Certifying Officer)

Date 12/18/53 Vou. No. 1024

(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. IE 598 in accordance with the terms of the contract.

Signature /S/ Stephen W Zoldok Title Mining Eng Date 12/18/53

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /S/ Stephen W Zoldok Title Mining Eng Date 12/18/53

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 M-104
(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 Nov. 1953 Docket No. DMEA 3098 Contract No. 1dm-2-598
Operator's Name Sunshine Mining Company Minerals Sunsoton
Address 756 Peyton Building, Spokane, Wash.

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts Repairing	Ft.	1144.46	70	1536.10	76	20.21	95	34.00
Winzes								
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching	Lr	174.00	16	2065.00	148	14.00	186	16.00
Test Pits								
Roads and Trails	Lr	200.10	16	1134.20	64	17.72	64	16.00
Total Distributed Costs		1518.56		4755.71				Total Costs Authorized by Contract
Operating Equipment Purchased		88.82		1242.57				
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.		4645.00		7280.23				
Total Costs		6252.38		13278.51				

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

Date 12-13-53 Operator SUNSHINE MINING CO. TUNGSTEN DIVISION

BY

Per J.W.C. Title Sup't.

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

SUNSHINE MINING COMPANY
Tungsten Division
Storm Lake Project

Docket No. DMEA 3098
Contract No. Idm-E-598
Tungsten

Narrative report of operations
November, 1953

Construction of the road was completed. Two additional trenches were excavated on the August structure. Eight jackhammer drill holes were completed in the scheelite bearing dolomite zone near the Uncle Jake discovery cut. 67.8 feet of hole was drilled. 14 samples were collected. 4 samples were discarded after lamping. Ten samples were assayed. Assays ranged from 0.05 to 0.288 percent WO_3.

Compressor and shop building, change building, hoist building, powder magazine and headframe were completed. Hoist and compressor were installed.

Seventy feet of shaft was cleaned and timber installed where needed.

Assays of 19 samples from the Tarlach outcrop range from trace to 0.72 percent WO_3. Pulps of these samples are being assayed by other assayers as a check.

SUNSHINE MINING COMPANY

JWC

John W. Cole
Superintendent

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 16 1953

1201 N. Division St.
Spokane 2, Washington
November 10, 1953

MEMORANDUM

To: DMEA Field Team, Region II

From: S. W. Zoldok, Mining Engineer, Bureau of Mines

Subject: Interim inspection, Docket No. DMEA 3098 (tungsten), Sunshine Mining Co., Tarlach Group, Deer Lodge and Granite Counties, Montana, Contract No. Idm-E598

An inspection of the subject property was made on November 2, 1953, accompanied by Mr. John W. Cole, supervising engineer.

There were three miners employed at the property, constructing a headframe over the August shaft. About 8 feet of the August shaft had been enlarged and timbered solid with log cribbing. From the progress being made it appears that shaft rehabilitation should get underway in about a week.

Up to October 24 a total of 48 bulldozer hours had been spent on the road aggregating 4300 feet in length. Six trenches aggregating 1200 lineal feet and 85 bulldozer hours had been completed. Trenches Nos. 1, 2 and 4 are on the August structure and trenches 3, 5 and 6 on the Tarlach structure. Additional dozer work on the completed trenches might be necessary, pending the results of the Operator's samples.

Some of the best tungsten showings on the property are in areas where the structures cross the Jefferson and Hasmark limestone members and tungsten mineralization has selectively replaced the lime along bedding planes. These areas, consisting mostly of scab rock, are difficult to trench and the Operator has verbally requested that the contract be amended to permit long hole testing of these areas. The request is a meritorious one, and the Operator will formally request the amendment in the near future.

Invoicing procedure and progress reports were discussed with the Operator's engineer. A sketch map of the trenches and assays will accompany the Operator's progress report.

S. W. Zoldok
S. W. Zoldok

Orig. & 3 cys - Wash.
USGS (2)
DMEA
M/D
AD
SWZ/he

Form MF-194 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

W

400

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of Sept-Oct, 1953 Docket No. DMEA 3098 Contract No. Idm-E-596
Operator's Name Sunshine Mining Company Minerals Tungsten
Address 738 Peyton Building, Spokane, Wash.
Contract Amount, $45,105.00 Government Participation: 75 % Amount, $33,828.75

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:						WSM
Drilling						
Bulldozing 180hrs @16	2880.00	0	2880.00			
Crosscutting						
Drifting Road 48 hrs						
Trenching 132 "						
180						
(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): (5) Cleaning and retimbering shft. 6 ft. @ $34	204.00	0	204.00			
TOTALS	$3084.00		3084.00	3084.00		3084.00

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

Date Nov. 11, '53 *Payee SUNSHINE MINING CO. TUNGSTEN DIVISION

Per John W. Ale BY Rowland Lang with Agent Title Supt

*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:

$ 2313.00

Signature [signature] (Authorized Certifying Officer)

Date 11/20/53 Vou. No. 989 (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-598 in accordance with the terms of the contract.

Signature /S/ Stephen W Zaldok Title Mining Engr Date Nov 18-1953

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /S/ A. E. Weissenborn Title Exec. Officer Date Nov 18-1953

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 ~~Oct.~~ Sept 1953 Docket No. DMEA 3028 Contract No. Idm-E-598
Operator's Name SUNSHINE MINING COMPANY Minerals Tungsten
Address 738 Peyton Building, Spokane, Wash.

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts Repairing	Ft.	391.64	6	391.64	6	65.27	95	34.00
Winzes								
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching	Hr	1911.41	132	1911.41	132	14.48	186	16.00
Test Pits								
Roads and Trails	Hr	934.10	48	934.10	48	19.45	64	16.00
TOTAL DISTRIBUTED COSTS		3237.15		3237.15				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased		1153.75		1153.75				
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.		2635.23		2635.23				
TOTAL COSTS		7026.13		7026.13				

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.

SUNSHINE MINING CO.
TUNGSTEN DIVISION

Date 11-11-53 Operator BY

Per Rowland Ring. Title Supt. Mill. Agent.

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.

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GPO 83-38475

SUNSHINE MINING COMPANY
Tungsten Division
Storm Lake Project

Docket No. DMEA 3098
Contract No. Idm-E-598
Tungsten

Narrative Report of Operations
September-October, 1953

An engineer-superintendent started work on September 16. The road was surveyed and plans for the work were made. A bulldozer was hired and road construction begun on September 29. A preliminary road to the August shaft was completed on October 3. Trenching was started and 5 trenches were completed by the end of the period. A survey was made and geologic map prepared on a 200 scale showing trenches 1 to 4.

Compressors and drills were employed in rock excavation at the August shaft collar to level the ground for buildings. The collar of the shaft was cribbed with timber to provide a foundation for the headframe. Construction of headframe and buildings was started on October 26. A maximum of 5 men were employed in the work in addition to 4 carpenters who are building the headframe and buildings under contract.

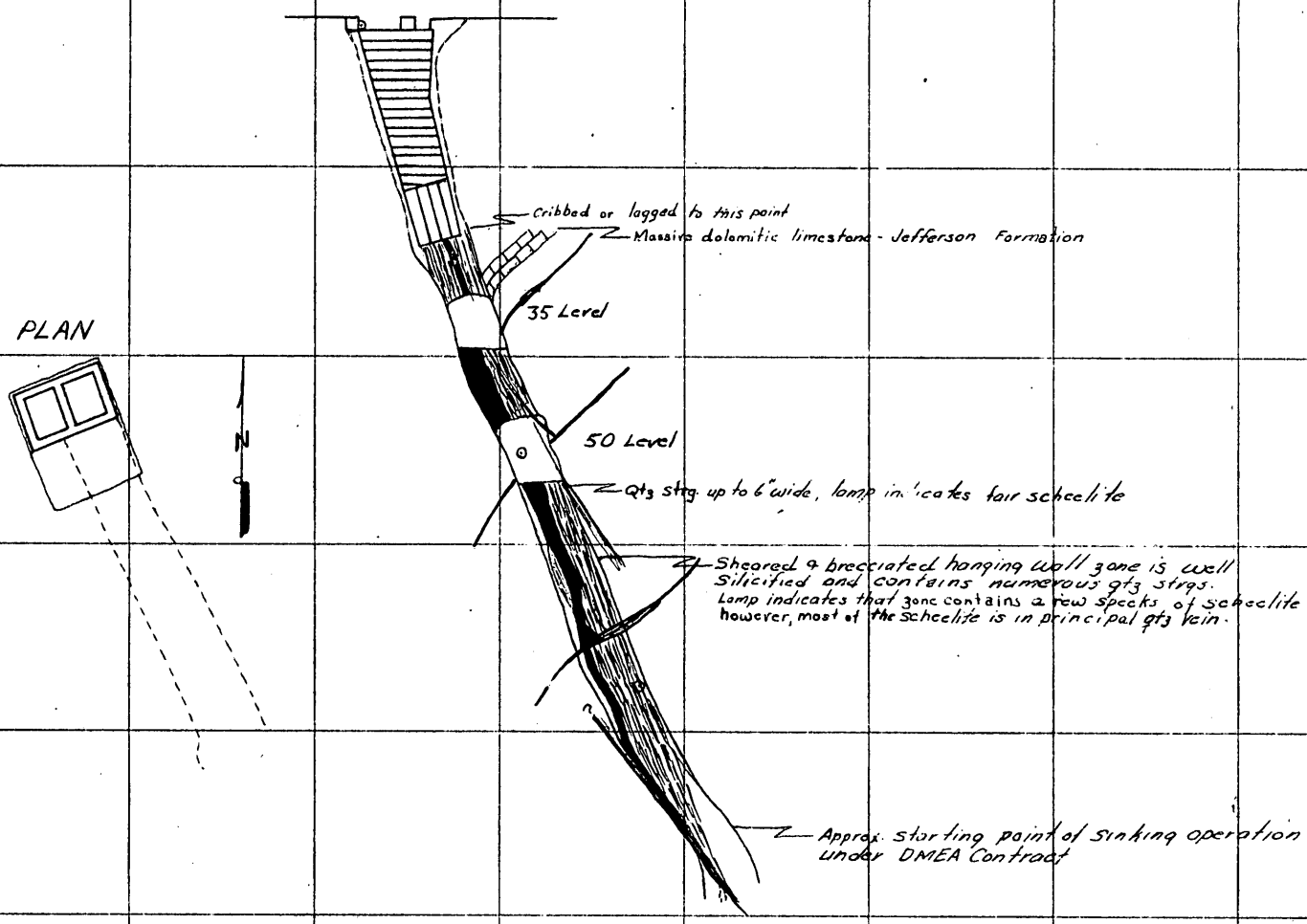
The Tarlach vein was sampled during the period. Assays have not been received.

SUNSHINE MINING COMPANY

John W. Cole

John W. Cole
Superintendent

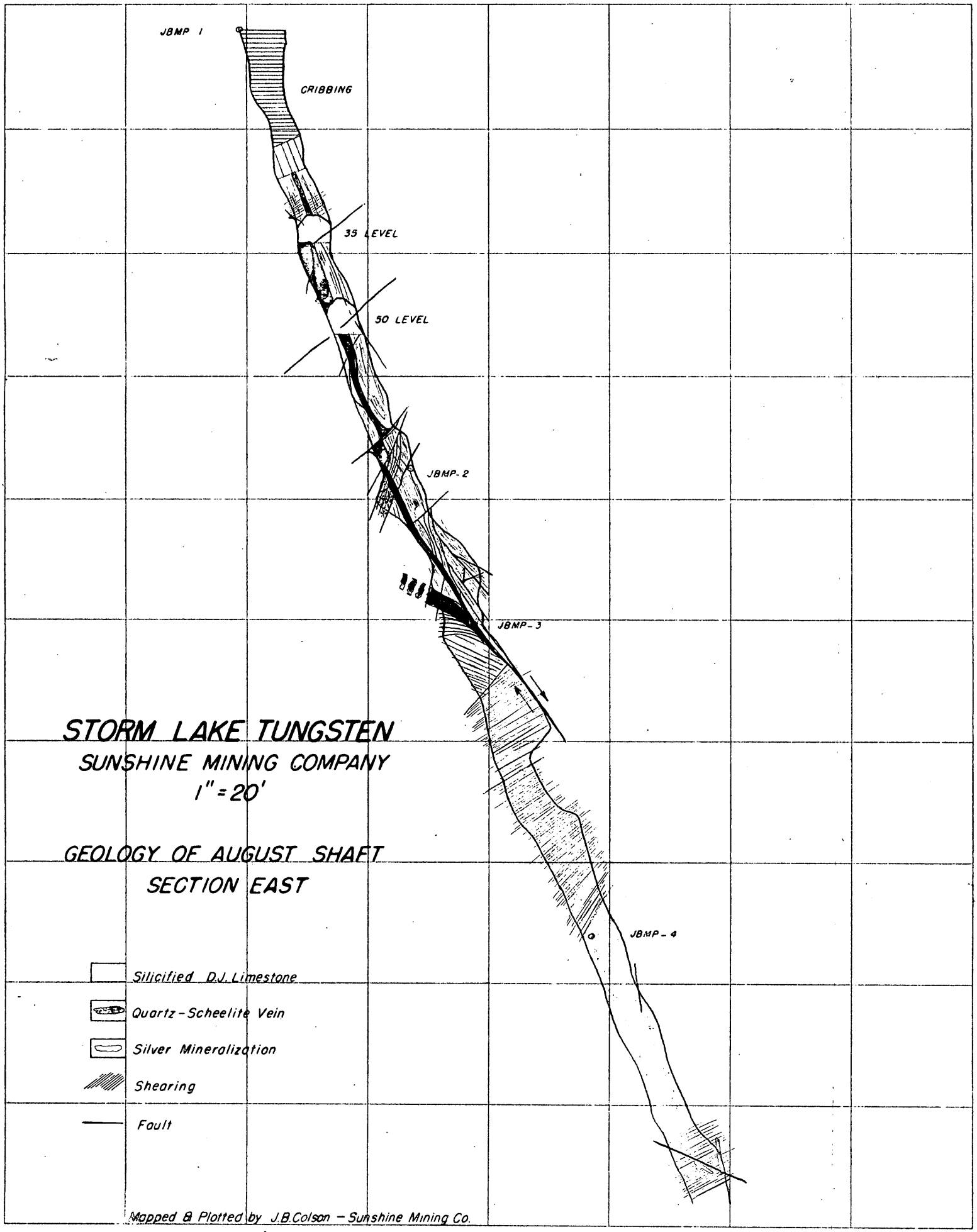
SECTION LOOKING NORTHEAST



PLAN

STORM LAKE TUNGSTEN PROPERTY
SUNSHINE MINING COMPANY
Deer Lodge & Granite Counties, Montana
AUGUST SHAFT Docket No. 3098
Scale 1" = 20' Contract No. Idm-E598

"ALBANENE" No. 190M K&E CO., N.Y.
REG. U.S. PAT. OFF



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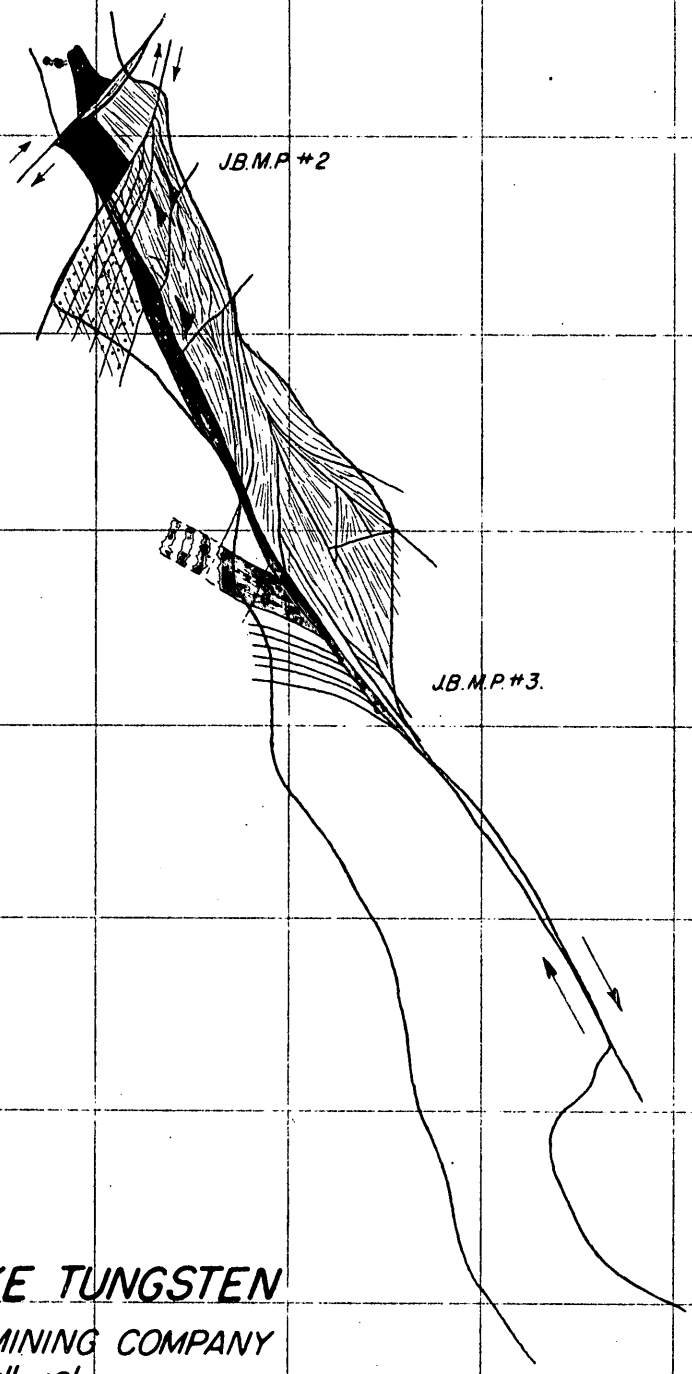
REG. U.S. PAT. OFF



STORM LAKE TUNGSTEN

SUNSHINE MINING COMPANY
1" = 10'

GEOLOGY OF PART OF THE AUGUST SHAFT "CRITICAL AREA"

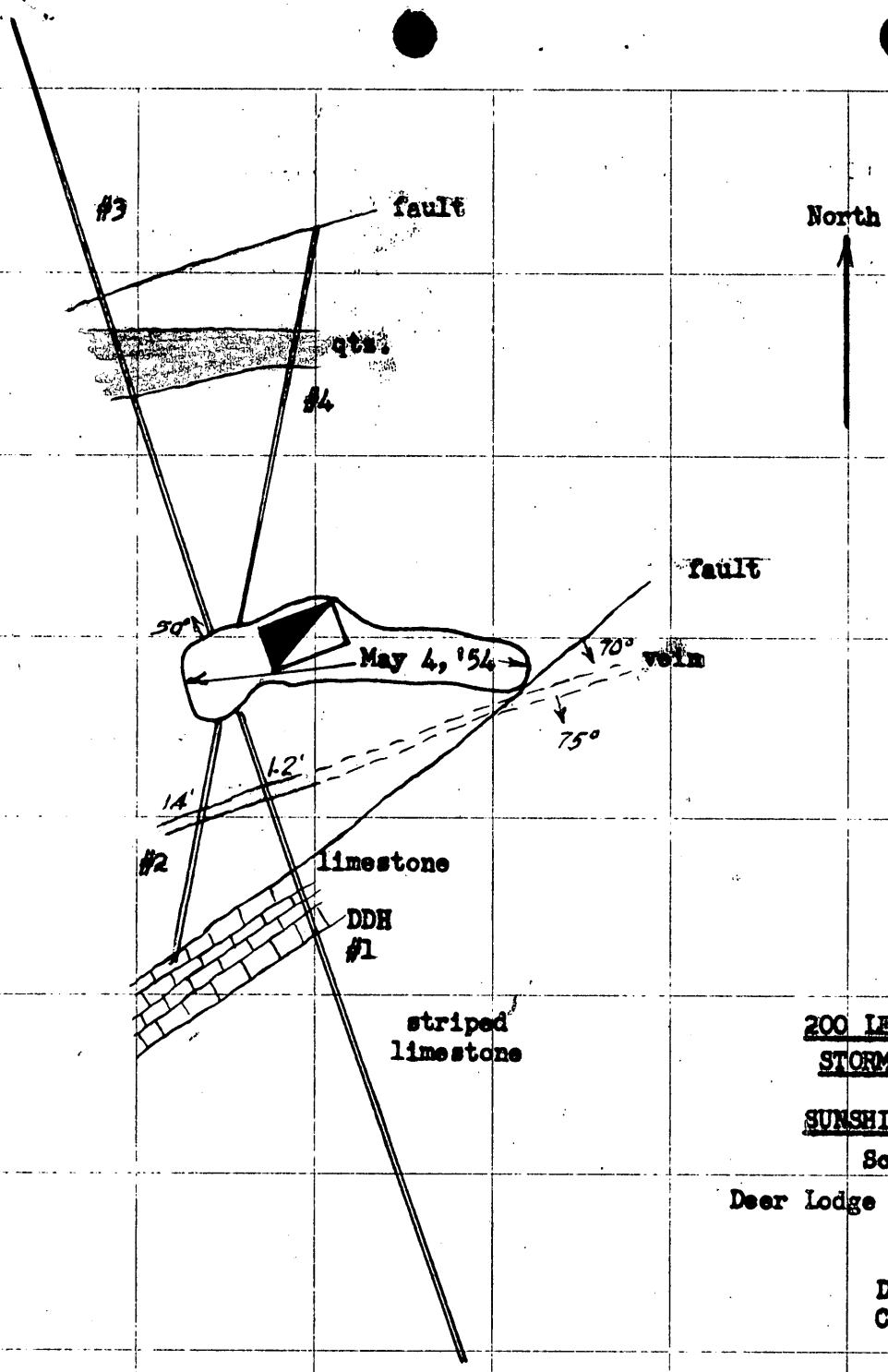
Silified D.J. Limestone

Quartz-Scheelite Vein

Fault.

Geology by J.B. Colson 3/23/54

"ALBANENE" NO. 195M K&E CO., N.Y.
REG. U.S. PAT. OFF



North

200 LEVEL, AUGUST SHAFT
STORM LAKE TUNGSTEN

SUNSHINE MINING COMPANY

Scale 1"=20'

Deer Lodge & Granite Counties
Montana

DMEA Docket No.3098
Contract Idm-E598

J.D.B.

"ALBANENE" No. 195M K&E CO., N.Y.
REG. U.S. PAT. OFF.

Docket No. DMEA 3098

STORM LAKE TUNGSTEN
SUNSHINE MINING COMPANY
Granite & Deer Lodge Counties, Mont.
Scale 1" = 20'

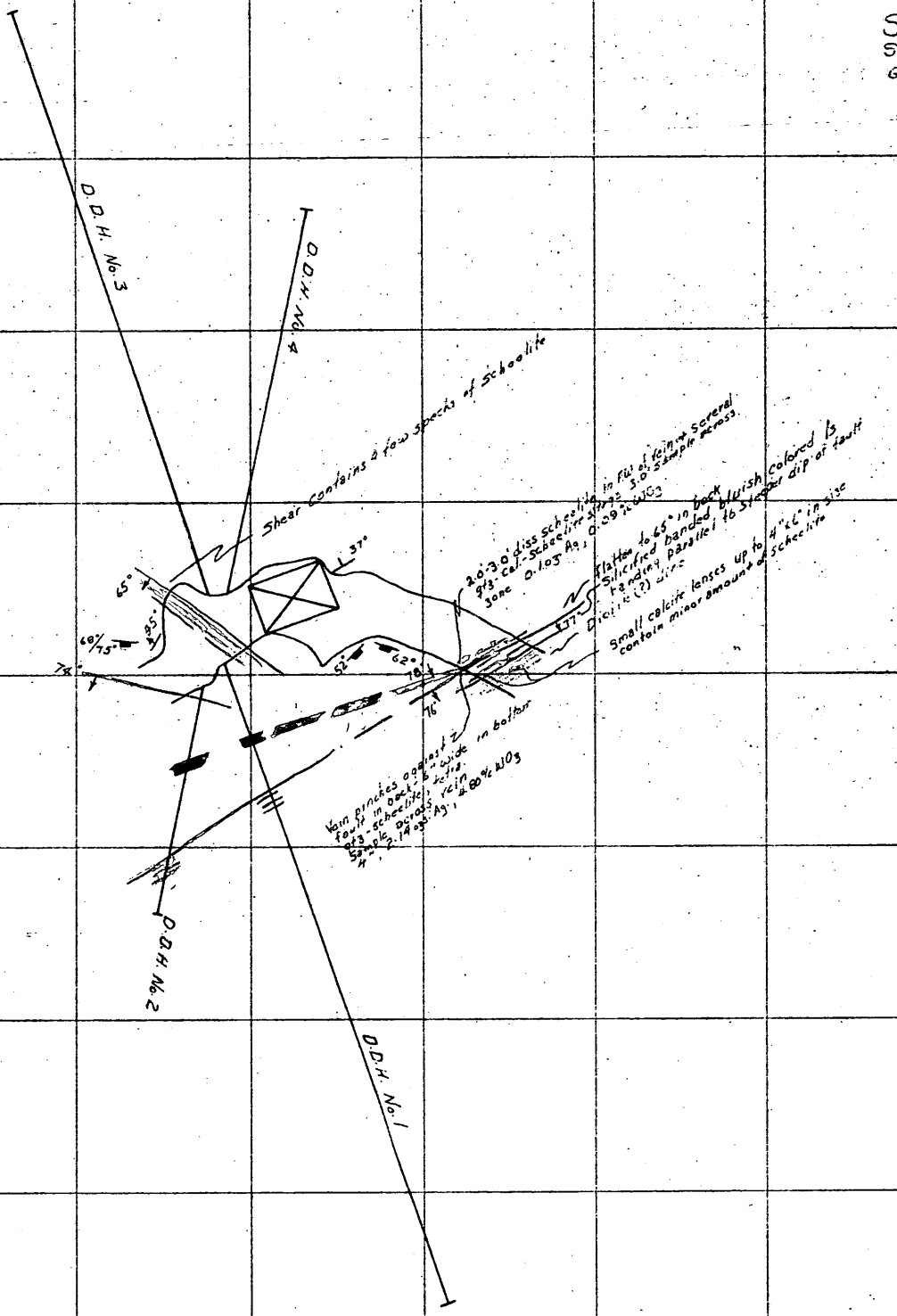
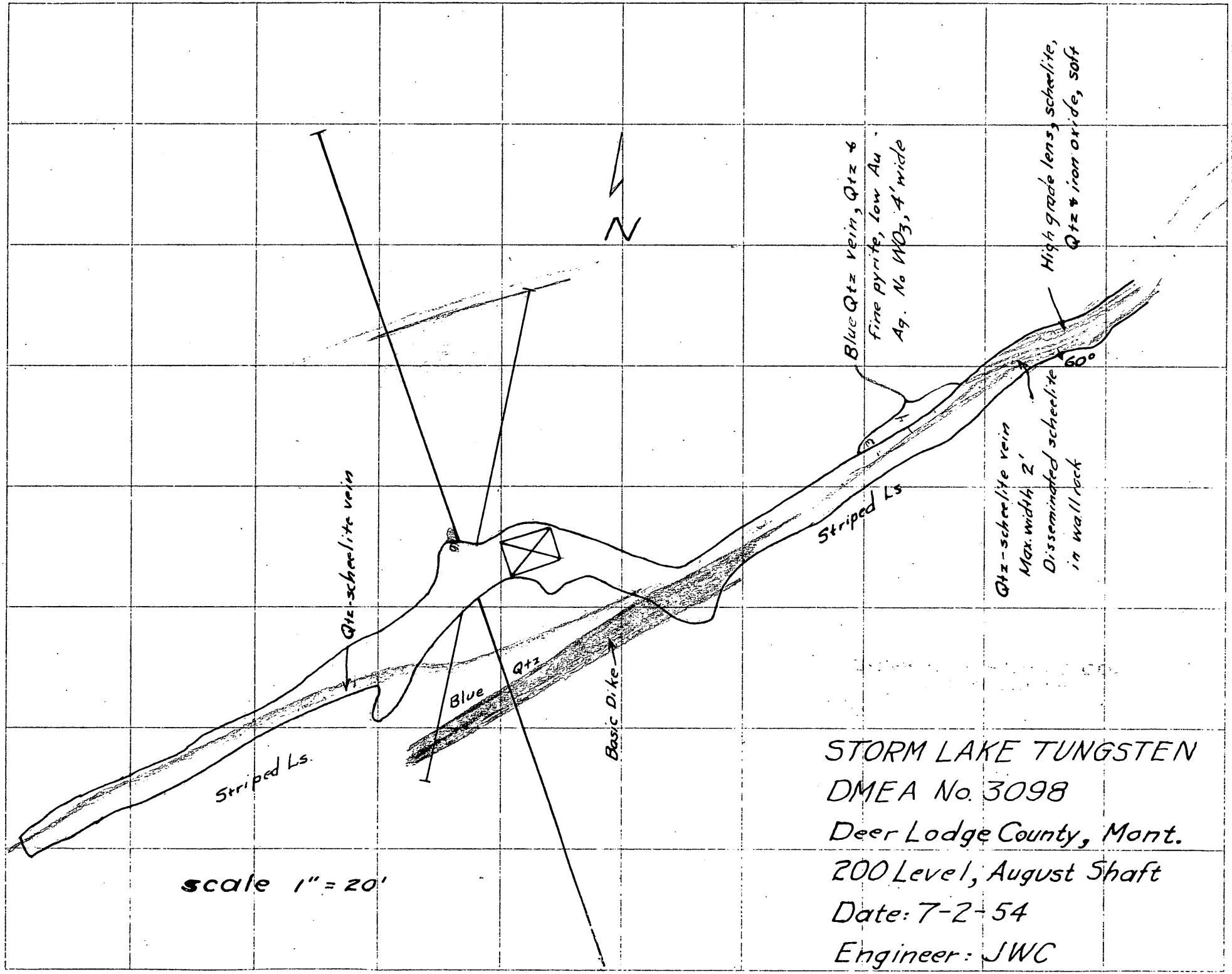


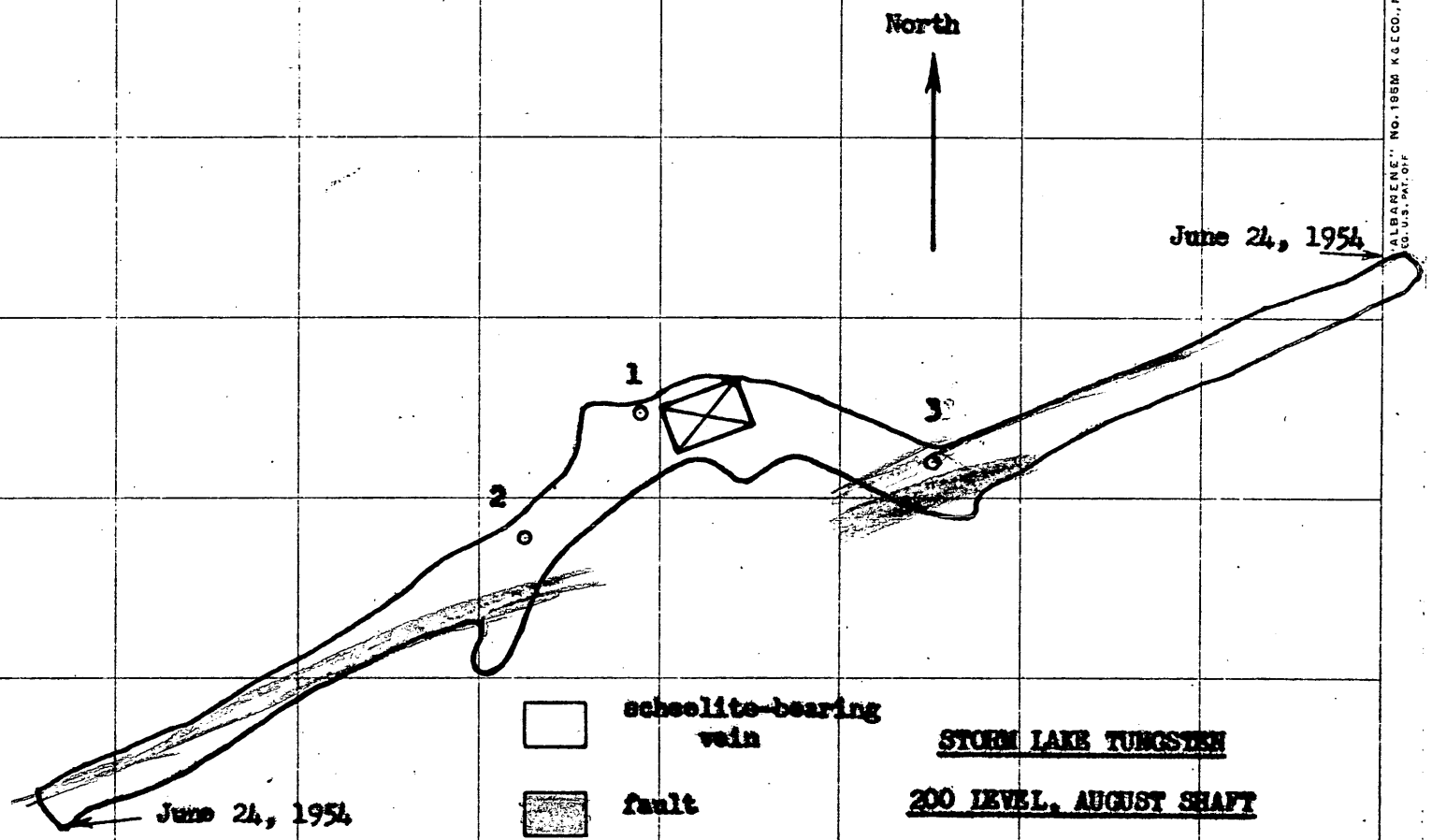
Plate 1

"ALBANENE" No. 196M K&E CO., N.Y. REG. U.S. PAT. OFF.

"ALBANENE" No. 195M K&E CO., N.Y. REG. U.S. PAT. OFF.



"ALBANENE" REG. U.S. PAT. OFF. No. 196 M K&L CO., N.Y.



scheelite-bearing vein

fault

dike

STORM LAKE TUNGSTEN

200 LEVEL, AUGUST SHAFT

~~Sheldine Mining Company~~

Deer Lodge & Granite Counties
Montana

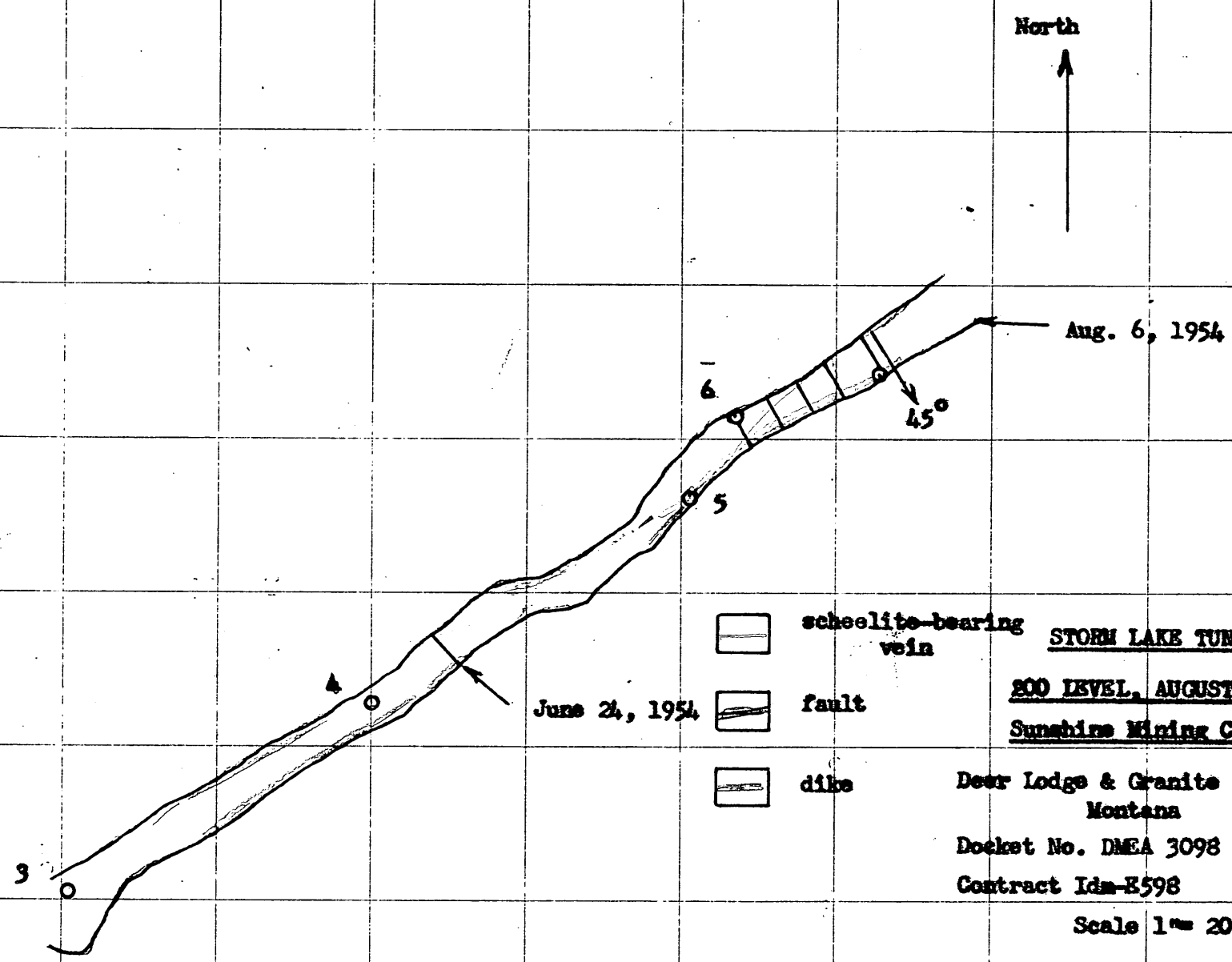
Docket No. DMEA 3098 (tungsten)

Contract Idm-E598

Scale 1" = 20'

J.D.B.

"ALBANENE" No. 195M K&E CO., N.Y.
CO.U.S.A. OF



STORM LAKE TUNGSTEN

200 LEVEL, AUGUST SHAFT

Sunshine Mining Company

Deer Lodge & Granite Counties
Montana

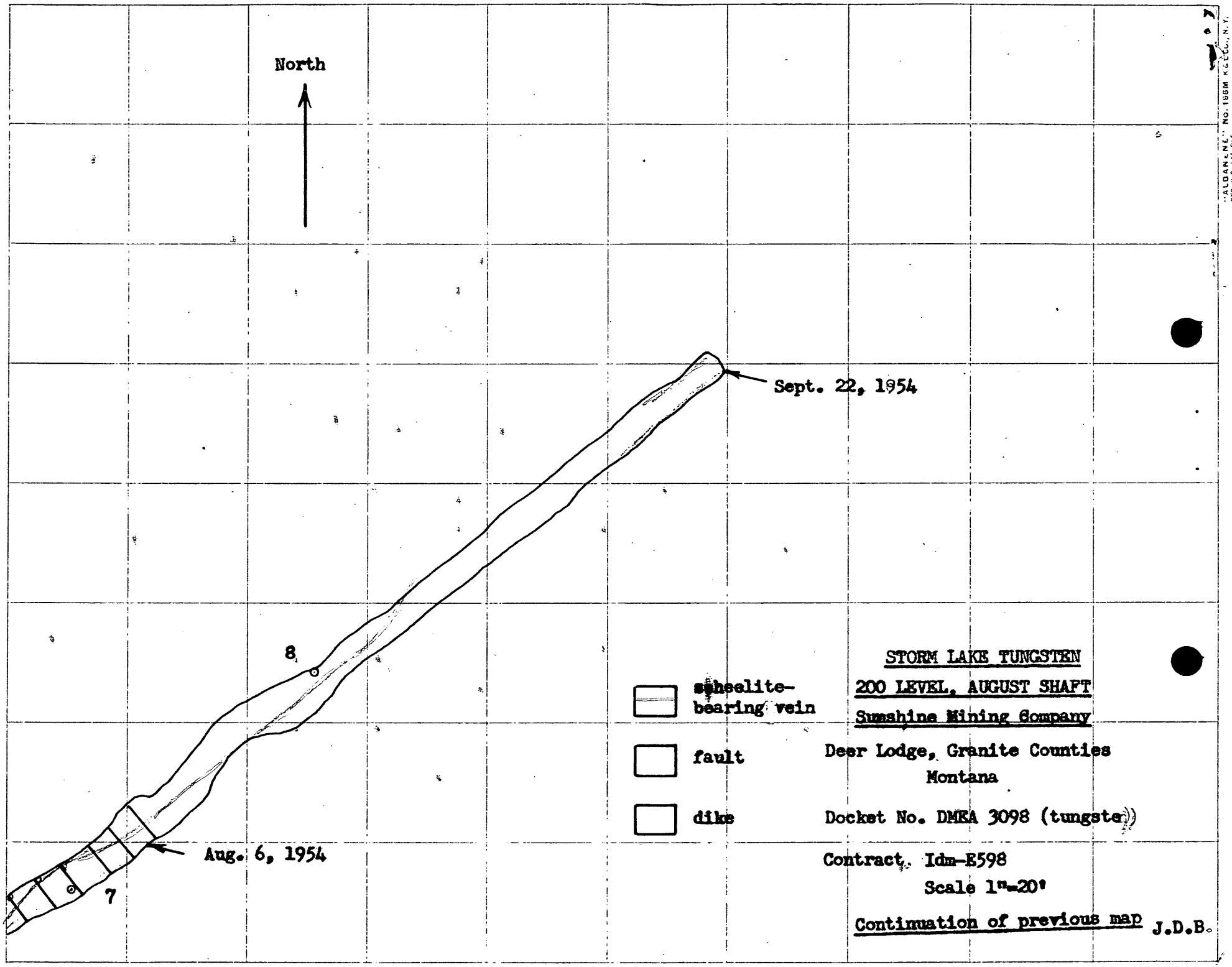
Docket No. DMEA 3098 (tungsten)

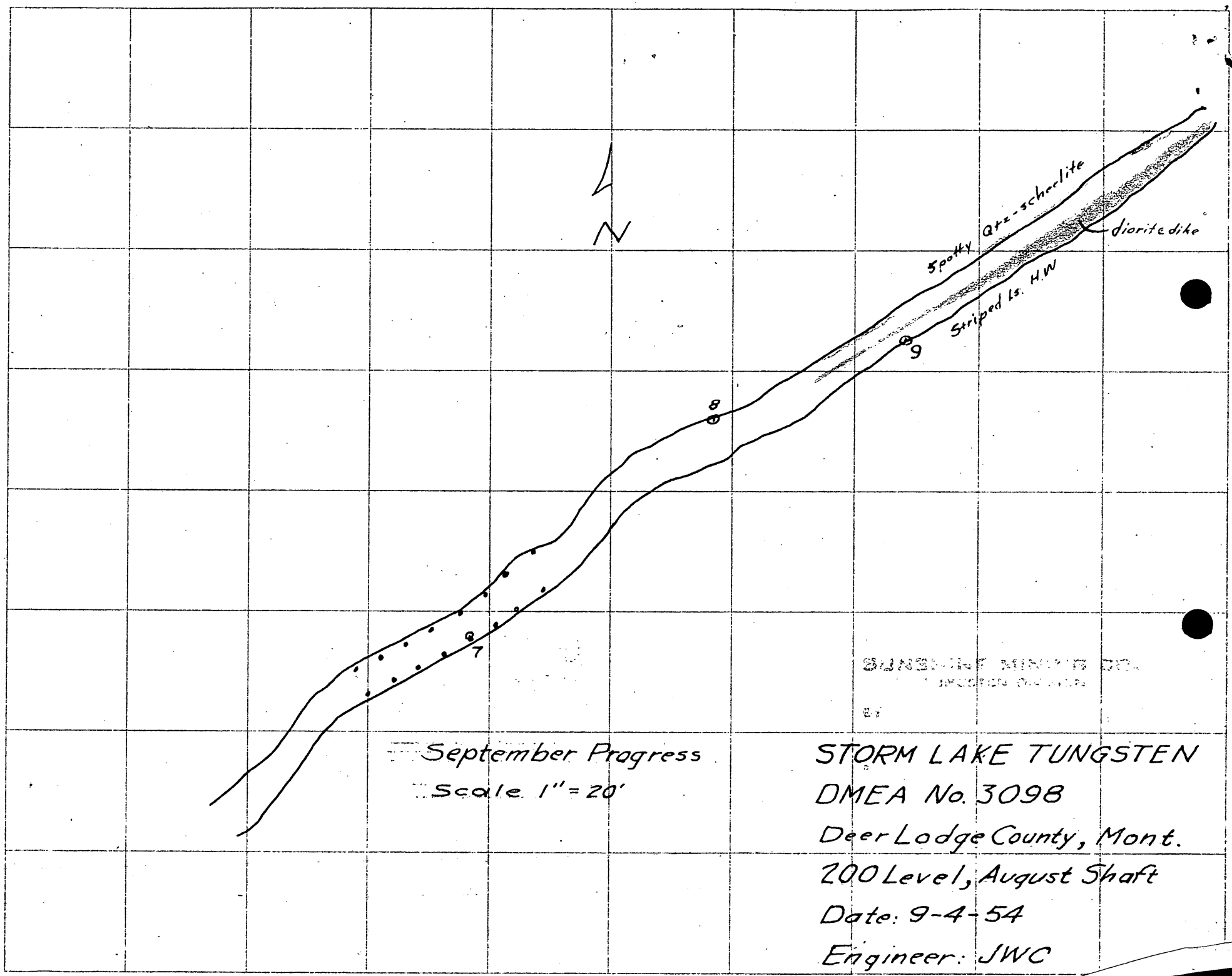
Contract Idm-E598

Scale 1" = 20'

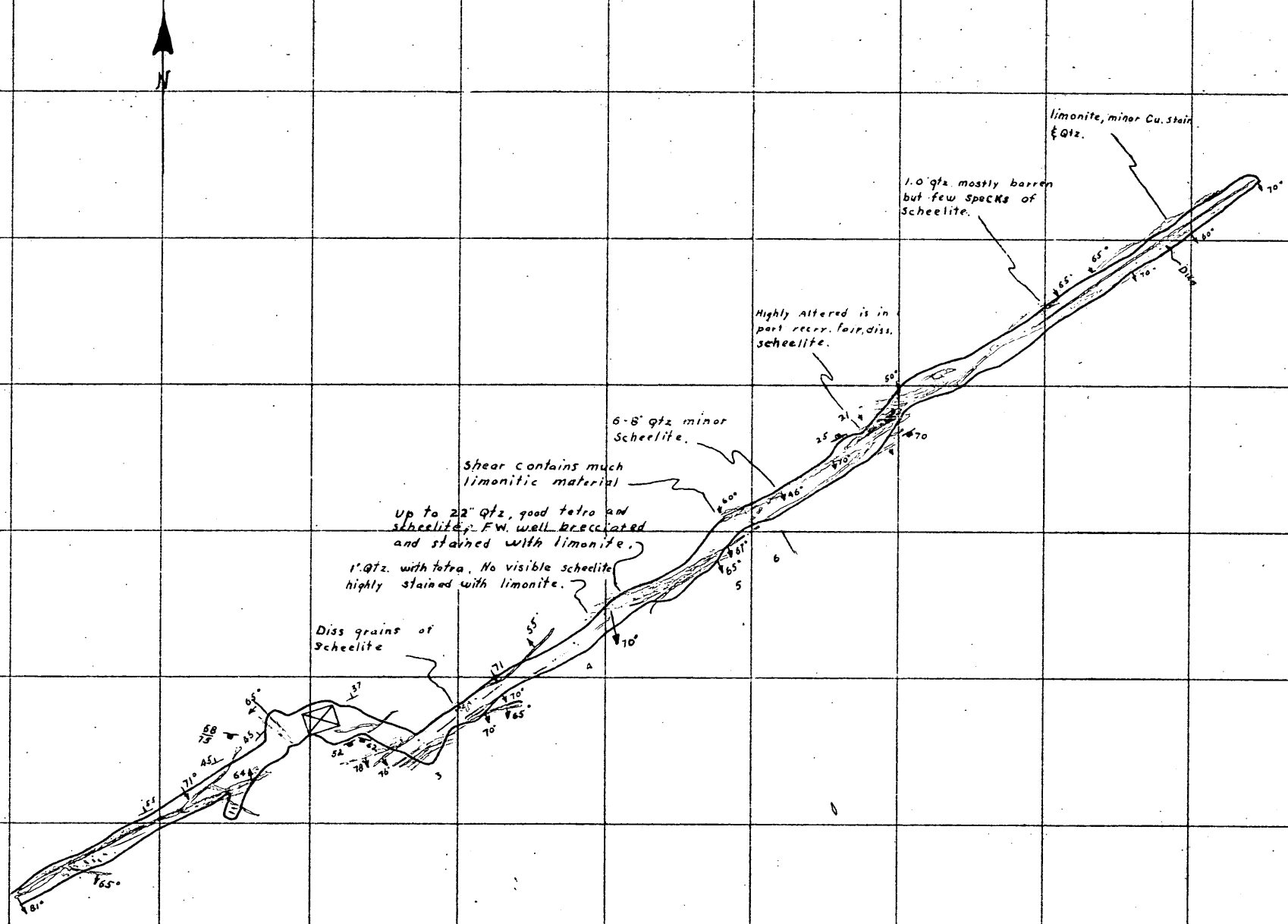
J.D.B.

"ALBANENE" REG. U.S. PAT. OFF. No. 195M KEECO N.Y.


North
Sept. 22, 1954
8
Aug. 6, 1954
7
scheelite-bearing vein
fault
dike
STORM LAKE TUNGSTEN
200 LEVEL, AUGUST SHAFT
Sunshine Mining Company
Deer Lodge, Granite Counties
Montana
Docket No. DMEA 3098 (tungsten)
Contract Idm-E598
Scale 1"=20'
Continuation of previous map
J.D.B.


N
spotty Qtz-scherlite
diorite dike
Striped ls. H.W
7
8
9
September Progress
Scale 1" = 20'
STORM LAKE TUNGSTEN
DMEA No. 3098
Deer Lodge County, Mont.
200 Level, August Shaft
Date: 9-4-54
Engineer: JWC

Docket No. DMEA-3098



STORM LAKE TUNGSTEN

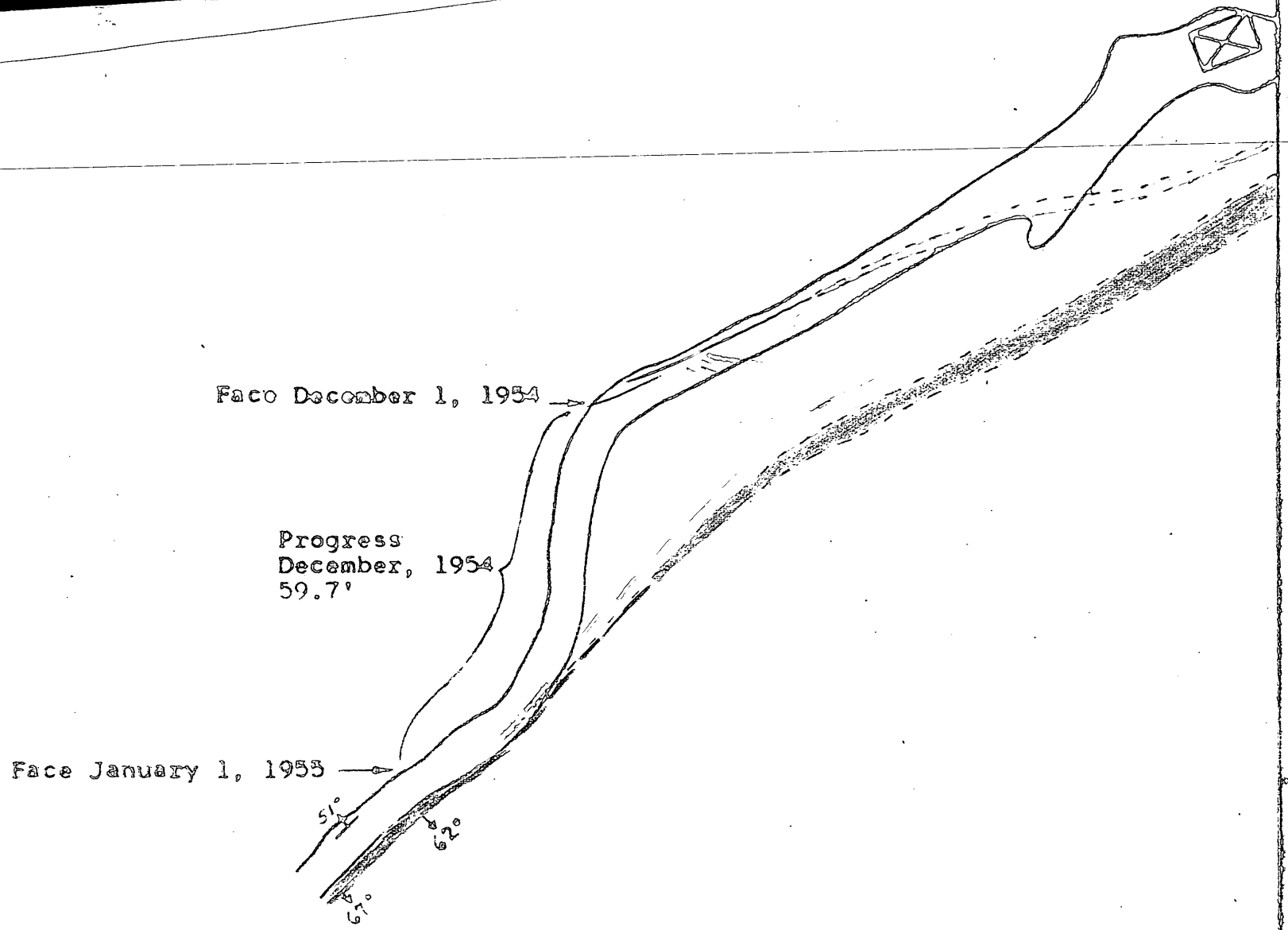
SUNSHINE MINING COMPANY

Granite AND Deer Lodge Counties Montana.

Geologic Plan 200 Level.

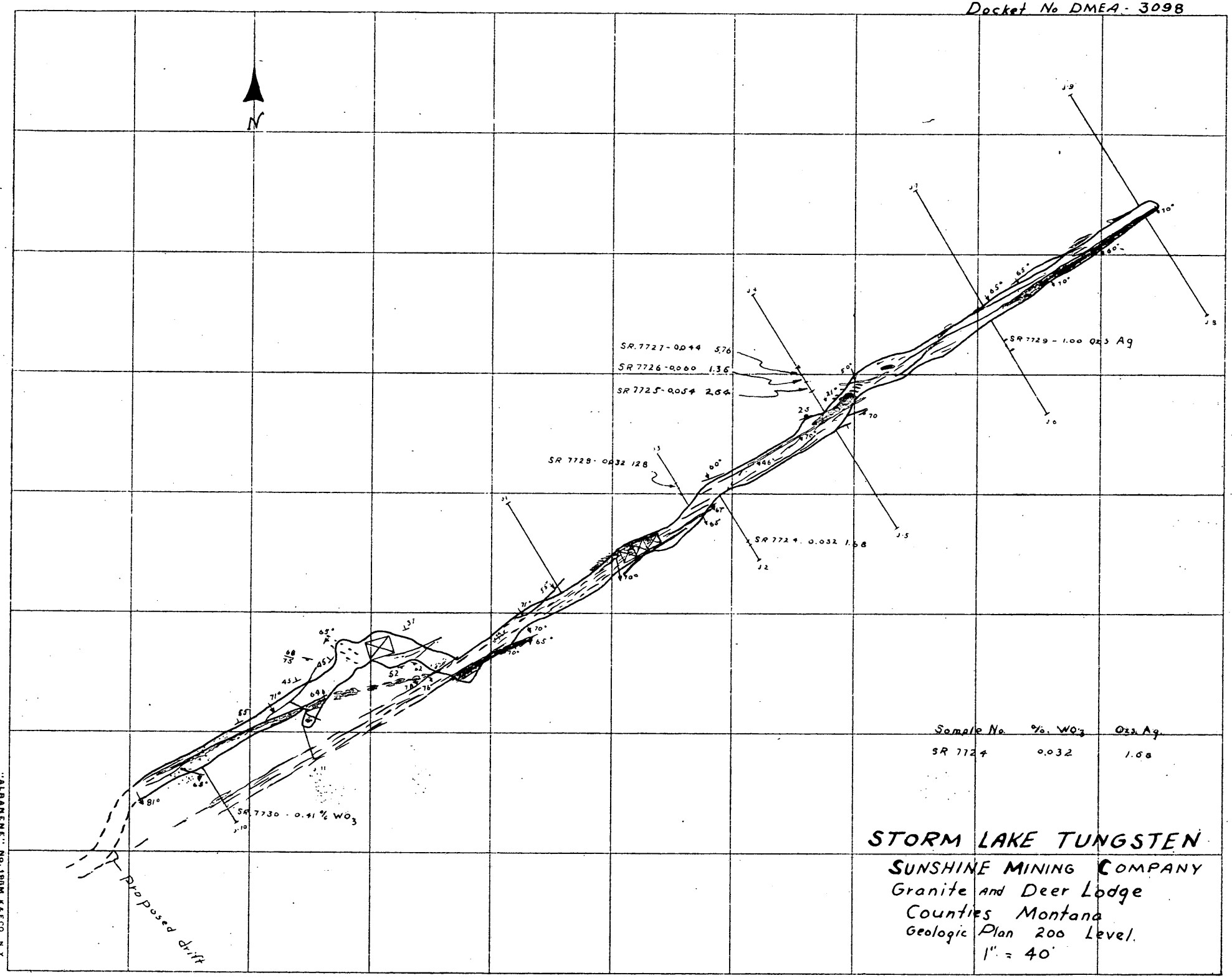
1" = 40'

"ALBANENE" NO. 196M K&E CO., N.Y. REG. U.S. PAT. OFF.



SUNSHINE MINING COMPANY
STORM LAKE PROJECT
200 Level August Shaft
Scale: 1" = 20'
DMEA Docket No. 3098
Contract No. Idm-E-598

Docket No DMEA-3098



"ALBANENE" NO. 180M K&E CO., N.Y.
REG. U.S. PAT. OFF.