DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

Idm-E NO. 598

DMEA NO. 3098

Application
- [ ] Denied
- [ ] Withdrawn

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

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

Folder No. 1:

Left Side

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

Right Side

- [x] Project summary (final)
- [x] Work Completed analysis (final)

All other material filed in chronological order including the following reports if checked:

- [ ] Field Team Semi-Annual Report for Certified Project
- [x] Final Field Team Report (Tab)
- [x] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [ ] Operator's monthly reports and all attachments
- [x] On-site Exam Report (Tab) - Prel & F.T. letter 8/19/53
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No. 2 : Reports
- [x] Analysis of Semi-Annual Inspection Reports
- [ ] Project Summary (Interim) by DMEA Engineers

Right Side

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

Folders No. 4 : Maps (Use pocket folder or envelope)

Folders No. _____ : Settlement Sheets

Folders No. _____ : Drill Logs

Folders No. 3 : Royalty material

Reported Inactive 12/28/59

17963

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF ROYALTY REVIEW

I have reviewed the files of the Washington office pertaining to Contract Idm-E598, Docket DMEA-3098 (tungsten), dated September 14, 1953, with

Sunshine Mining Company
W. 300 Mission Ave.
Spokane 1, Washington

for the purpose of determining the amount of royalty payable to the U. S. Government on sales of minerals from property referred to as the Storm Lake Tungsten Property and Tungstar and Tarlach Claim Group located in Deer Lodge and Granite Counties, Montana, during the period August 1, 1959, through April 8, 1963.

A certification of discovery or development was issued on August 26, 1955, and, in accordance with Article 6 and Annex II of the contract, royalty is payable on all minerals produced from the land described in Article 2 of the contract for a period of 10 years from the date of the contract or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first. A Report of Review dated September 6, 1955, indicated accepted costs under the exploration contract amounting to $44,927.80 with the Government's contribution on a 75 percent basis being $33,695.87.

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

This review found no sales subject to the Government's royalty subsequent to the period covered by a prior Report of Royalty Review which found the sales subject to the Government's royalty through July 31, 1959, to be $8,418.34. The royalty account as of July 31, 1959, was:

Total Royalty Payable	$420.92
Total Royalty Paid	420.92
Balance of Royalty Due	$ -0-

As of April 8, 1963, the royalty account of this project was found to be:

Total Royalty Payable	$420.92
Total Royalty Paid	420.92
Balance of Royalty Due	$ -0-

E. D. Talbert

April 17, 1963

E. D. Talbert, OME Auditor

STATUS OF PROJECT, SCOPE OF REVIEW
AND REASONS THEREFOR

This contract provides that the Operator, or its successor in interest, shall pay to the Government a percentage royalty on all minerals produced from the land thereunder. The land consists of 8 unpatented claims located in secs. 7, 8, and 12, T. 4 N., R. 13 and 14 W., M.P.M., Storm Lake mining district (a/k/a Silver Hill mining district). At the time the contract was executed the Operator was in possession by virtue of a March 24, 1953, agreement with James H., Marjorie M., William E., Regina, and John T. Maguire, part owners, and Mines Prospecting & Exploration Company, lessee-purchaser under an August 4, 1952, agreement with William Gallagher. In consideration of the contract, as amended, an Owner's Consent to Lien was executed on September 28, 1954, by the Mines Prospecting & Exploration Company, William Gallagher, and James H. Maguire for himself and as attorney-in-fact for the other Maguires. The exploration contract contains the so-called "abandonment" provision.

Exploration work under the contract was discontinued in January 1955 and the Operator abandoned the property in March 1955. No termination agreement was executed due to the Operator's refusal to sign such an agreement incorporating a provision that the Operator, as principal if the producer or as surety if not the producer, should pay the Government's percentage royalty.

During the exploration period approximately 245 tons of ore (averaging about 5 ounces of silver and 0.5% tungsten trioxide) were mined by the Operator, milled by the Contract Milling Company at North Butte, and sold to Mineral Recovery and Engineering Company for upgrading. Approximately 200 tons of exploration rock (averaging about 0.2% tungsten trioxide) were left stockpiled near the shaft.

During the latter part of 1955 Seymour Standish, 814 Forest Avenue, Evanston, Illinois, leased four of the claims and Gunnar S. Johnson, Box 775, Anaconda, Montana, leased the other four. Mr. Standish apparently dropped his lease in 1956, but Mr. Johnson milled 2,974 lbs. of 60.82 WO_3 from about 740 tons of ore. The sale of this production, as well as that during the exploration period, is covered by a Report of Royalty Review dated August 25, 1959.

Examinations of the property and inquiries by DMEA and OME regional representatives found the property inactive from late 1955 through

September 8, 1959, except for some diamond drilling by Mr. Johnson during 1957. In an April 8, 1963, reply to a MME Form 63 inquiry, James H. Maguire, Box A34, Grants, New Mexico, stated "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".

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

(1) The files indicate that the property has been inactive during the period covered by this review;

(2) Prior sales of production have been accounted for and proper royalty thereon paid; and

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

(1) File, West S.O.H.
(2) 225

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF ROYALTY REVIEW

I have reviewed the files of the Division of Minerals, Office of Minerals Exploration, Washington, D. C., pertaining to Contract No. Idm-E598, Docket No. DMEA-3098 (tungsten), dated September 14, 1953, with:

Sunshine Mining Company
738 Peyton Building
Spokane 1, Washington

for the purpose of determining the amount of royalty due the U. S. Government on sales of minerals from property referred to as Storm Lake Tungsten Prospect located in Deer Lodge and Granite Counties, Montana, during the period September 14, 1953, through July 31, 1959.

A certification of discovery or development was issued on August 26, 1955, and, in accordance with Article 6 of the contract as amended by Annex II, royalty is payable on all minerals mined or produced from the land described in Article 2 of the contract for a period of 10 years from the date of the contract, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first. A Report of Review in lieu of final cost audit dated September 6, 1955, indicated accepted costs under the exploration contract amounting to $44,927.80 with the Government's contribution, on a 75 percent basis, being $33,695.87.

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

(1) Both the Operator's and the Field Team's final reports pertaining to this project state that all production during the exploration period has been reported and proper royalty paid to the Government;
(2) The inspecting engineer's report for the 6 months period ended June 30, 1957, indicates that all production by a subsequent lessee of the property has been reported and the royalty has been paid;
(3) Subsequent reports by representatives of the Field Team, Region I, state that the property has been inactive since June 30, 1957; and
(4) The administrative cost to the Government of an on-site royalty audit at this time would be excessive in relation to the amount of possible additional royalty which might be disclosed.

The review established the total sales of minerals to be $8,418.34. Royalty due the Government at the contract rate of 5 percent is $420.92. The royalty paid and balance due are as follows:

Total Royalty Due	$420.92
Total Royalty Paid	420.92
Balance of Royalty Due	$ -0-

C. E. Fisher

August 25, 1959

C. E. Fisher, OME Auditor

MMB Form 22
April 59

DEPARTMENT OF THE INTERIOR
Office of Minerals Exploration

CHECK SHEET OF EXAMINING ENGINEER

Operator's Name Sunshine Mining Company

Address 738 Peyton Building

Spokane, Washington

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

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

Property inactive.

September 8, 1959
Date

S. W. Zoldok
Mining Engineer
S. W. Zoldok

53362

DOCKET
Surname
Chapman
Martin
Holliday
Killingsgard
Geehan
Selfridge

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

To: Sunshine Mining Company
738 Peyton Building
Spokane 1, Washington

Pursuant to the provisions of Exploration Project Contract No. Idm-E598, dated September 14, 1953 (Docket No. DMEA 3098), hereinafter called the "Contract," between you and the United States of America, hereinafter called the "Government;" to establish and fix the Government's percentage royalty on production and its lien thereon and on the land described in the contract, the Government considers and therefore certifies that a discovery or development from which production may be made has resulted from the exploration work.

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

A program of trenching, long-hole drilling, shaft-sinking, drifting, and diamond drilling has explored for possible extensions and occurrences of tungsten-bearing ores in a quartz vein or veins. This exploration work has exposed small ore lenses and has furnished data for calculation of minor indicated ore reserves and made such material accessible for mining operations.

THE UNITED STATES OF AMERICA

Dated: AUG 2 6 1955

C. A. Fredell
Administrator, Defense Minerals
Exploration Administration

cc: Docket
Code 400 - Mr. Martin
Code 800 - Mr. Chambers
Code 110 - Mr. Johnson
Adm. Reading File
Operating Committee
R. W. Geehan, USGS
R. Holliday, USGS
T. Killingsgard, USGS
Finance Officer,
FT, Reg. I - Spokane

cc: Mines Prospecting & Expl. Co
Missoula, Mont.
C. A. Fredell, EPS, GSA

TLChapman/ls
3/14/55

Chapman
Martin
Fa
Holli
Na
Hoffland K.

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

RECEIVED
SEP 12 1955

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

3098

WSM

Sunshine Mining Company
738 Peyton Building
Spokane 1, Washington

pertaining to Exploration Project Contract No. DMA-596, Docket No. DMEA-3098, including amendments Nos. 1 and 2, for the period of September 14, 1953 to August 29, 1955, inclusive, covering a project for the exploration of tungsten ~~ore~~ on properties known as the Storm Lake Tungsten Prospect and the Derlach Claims, located in Deer Lodge and Granite Counties, State of Montana.

My review included an examination of the Monthly Reports (Forms MF-104) and supporting documents attached thereto, comparison of the costs claimed with the contract and pertinent schedules, consultation with the Government representative who visited and examined the project, and a determination of the reasonableness and propriety of the costs.

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

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

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

Total Cost as billed by Contractor	$44,927.60
Exceptions	None
Total Accepted Cost	$44,927.60

The contract calls for a 75 percent participation of exploration expenses by the United States Government. Therefore, payment to the Contractor by the Government in the amount of Thirty three thousand six hundred ninety five and 87/100 Dollars

--$33,695.87--

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

C. A. Turner, Auditor

September 6, 1955

Docket copy

EXPLORATION PROJECT CONTRACT
SUNSHINE MINING COMPANY
DOCKET NO. DMEA 3098

AMENDMENT NO. 2

It is agreed this 22nd day of September, 1954, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and Sunshine Mining Company, that Exploration Project Contract No. Idm-E598 (Docket No. DMEA 3098), dated September 14, 1953, as amended, is further amended effective August 25, 1954, as follows:

1. In Article 3, Exploration project, delete "12 months" and substitute "24 months."

2. In Article 4 of the contract, delete the figures "$33,828.75" and "$45,105.00" and substitute the figures "$46,016.25" and "$61,355.00," respectively.

3. In Exhibit "A", under "Description of the Work," add two new stages of work, as follows:

Stage III

The work under Stage III is indicated, in part, on Map No. 3 attached hereto and made a part hereof entitled "Tarlach Vein Contour Map," and consists of five diamond drill holes of EX size as indicated to explore the downward extension of the Tarlach vein. Four drill holes shall be drilled, as indicated on Map No. 3, bearing approximately No. 20° W. and at an inclination of approximately minus 45°. The location, bearing, and inclination of Drill Hole No. 5 will depend upon the results of the first four drill holes. Drilling of this hole is subject to the prior written approval of the Government. The aggregate drilling under Stage III shall not exceed 1,000 feet.

Stage IV

Stage IV shall be undertaken only after completion of Stage III and upon prior written approval of the Government.

Diamond drill not to exceed an aggregate of 1,500 feet, of EX size in an estimated five drill holes to further explore the Tarlach Vein. The number of holes, and the location, bearing, and inclination of all holes are subject to prior written approval of the Government.

4. In Exhibit "A", under "Estimated Costs of the Project, Agreed Unit Costs," add:

Diamond drill 2,500 feet @ $6.50/ft. 1/ $16,250.00

5. In Exhibit "A", under "Estimated Costs of the Project, Agreed Unit Costs," delete the figures "$45,105.00" and "$33,828.75" and substitute the figures "$61,355.00" and "$46,016.25," respectively.

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By C O Mittendorf
Administrator, Defense Minerals Exploration Administration

Hoffland
Rutledge
Martin
Talbot
Selfridge
F Johnson

SUNSHINE MINING COMPANY

By Rowland Krug
President

1/ Refers to footnote 1/ in Exhibit "A".

DEPARTMENT OF THE INTERIOR
Bureau of Mines Administration
RECEIVED
NOV 3 - 1954

MF-203
(Revised July 1, 1954)

OWNER'S CONSENT TO LIEN

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of Montana, County of Deer Lodge, described as follows:1/ The Echo, September, Scheelite, Tungstar, South Tarlach, R.R.W.Tarlach as amended, Ridge Claim No. 2 (Uncle Jake), and the Scotty Tom Lode Mining Claims, as recorded in the Deer Lodge County Courthouse, Anaconda, Montana. Book 23, pages 16-20-23-37-45-47-49-51, Sections 7 & 8, Twp. 4 North; R. 13 W. & Sec. 12, Twp 4 North; R. 14 W. M.P.M.

which is the subject of a proposed exploration project contract, hereinafter called the "contract", between the United States of America, hereinafter called the "Government", and

2/ Sunshine Mining Company

hereinafter called the "Operator"; and

WHEREAS, under the provisions of said contract the Government is entitled to a percentage royalty on production and to other rights and equities which do or may conflict with or be adverse to the rights of the undersigned:

NOW THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to dismantle, sever, take possession of, and remove and dispose of facilities, buildings, fixtures, equipment, or other items as provided in the contract or any amendment thereof shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned, and the Government is authorized to enter upon the land for such purposes.

2. To secure the payment to the Government of the percentage royalty on production3/ provided for under the terms of said exploration project contract or any amendment thereof there is hereby granted to the Government a lien upon the land above referred to and upon any production of minerals therefrom until said royalty is fully paid or ten years have elapsed from the date of the contract, whichever occurs first.

1/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease [or contract, deed, or other document] dated _____, and recorded in book _____ page _____ official records of said county." If (b) is used, the book and page of recordation cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

2/ Insert the name of the Operator as it will appear in the exploration project contract.

3/ Mining or production from the land is not required, and in the absence of production there is no obligation to repay the Government.

(OVER)

3. The undersigned shall commit no act nor assert any claim that may contravene or conflict with the lien, claim, or rights of the Government under the provisions of said contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

4. Changes and added provisions _____

_____

_____

_____

Dated this 28 day of September, 1954.

Mines Prospecting & Exploration Co.

Earl F. Elstone Pres. [Seal]

Herbert C. Fisher Secretary [Seal]

James H. Maguire [Seal]
James H. Maguire

Marjorie H. Maguire
Marjorie H. Maguire

John T. Maguire Regina Maguire

William E. Maguire by James H. Maguire

by James H. Maguire as Attorney in fact for John T. Maguire, William E. Maguire and Regina Maguire, his wife.

William Gallagher

MF-203

OWNER'S CONSENT TO LIEN

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of Montana, County of Deer Lodge, described as follows: 1/ The Echo, September, Scheelite, Tungstar, South Tarlach, R.R.W.Tarlach as amended, Ridge Claim No. 2 (Uncle Jake), and the Scotty Tom Lode Mining Claims, as recorded in the Deer Lodge County Courthouse, Anaconda Montana. Book 23, pages 16-20-23-37-45-47-49-51

Sections 7 & 8, Twp. 4 North; R. 13 W. & Sec. 12, Twp 4 North; R. 14 W. M.P.M.

which is the subject of a proposed exploration project contract, hereinafter called the "contract", between the United States of America, hereinafter called the "Government", and

2/ Sunshine Mining Company

hereinafter called the "Operator"; and

WHEREAS, under certain provisions of said contract which are set forth on the reverse side hereof, the Government is entitled to a percentage royalty on production and to certain other rights and equities which do or may conflict with or be adverse to the interest of the undersigned in said property;

NOW THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to dismantle, sever, take possession of, and remove and dispose of facilities, buildings, fixtures, equipment, or other items as provided in the contract, or any amendment thereof, shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned, and the Government is authorized to enter upon the land for such purposes.

2. To secure the payment to the Government of the percentage royalty on production 3/ provided for under the terms of said exploration project contract, or any amendment thereof which does not increase the maximum amount of the Government's claim here stated or alter the provisions for repayment, there is hereby granted to the Government a lien upon the land herein described and upon any production of minerals therefrom, until the royalty claim is fully paid in the amount of the Government's contribution, not in excess of 4/$ _____, or ten years have elapsed from the date of the contract.

3. The undersigned shall commit no act nor assert any claim that may contravene or conflict with the lien, claim, or rights of the Government under the provisions of said contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

Dated this 12th day of June, 195 3.

Mines Prospecting & Exploration Co.

Earl F. Malone, Pres. [Seal]

Herbert E. Fraker, Secy. [Seal]

William E. Maguire
Regina Maguire
John T. Maguire
by James H. Maguire, Maigrie H. Maguire, James H. Maguire

William Gallagher [Seal]

1/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease [or contract, deed, or other document] dated _____, and recorded in book _____ page _____ official records of said county." If (b) is used, the book and page of recordation cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

2/ Insert the name of the Operator as it will appear in the exploration project contract.

3/ Mining or production from the land is not required, and in the absence of production there is no obligation to repay the Government.

4/ Insert the maximum amount of the Government's contribution.

RELEVANT CONTRACT PROVISIONS

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

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

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

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

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

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

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

Title to and disposition of property. All facilities, buildings, fixtures, equipment, or other items costing more than $50.00 each, paid for or purchased with funds contributed jointly by the Operator and the Government, although title may be taken in the name of the Operator, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the completion of the work or the termination of the contract shall be disposed of promptly by the Operator for the joint account of the Government and the Operator, either by return to the vendor, by sale to others, or purchase by the Operator at a price at least as high as could otherwise be obtained, as may appear to be for the best interest of the Government, unless the Government, in writing, waives its interest in any such item. If necessary to accomplish such disposition, the Operator shall dismantle, sever from the land, and remove any such item, the cost thereof to be for the joint account of the parties in proportion to their respective interests. If the Operator, within 90 days after the receipt of written notice from the Government, fails, neglects, or refuses to dispose of such property, the Government may itself enter upon the land, take possession of, and remove and dispose of any such property as above provided.

DOCKET COPY

Rec'd 12/30/53

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 23 1953

AMENDMENT NO. 1

It is agreed this 17th day of November 1953, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, and Sunshine Mining Company

each acting in consideration of the agreement of the other to the terms hereinafter set forth, that the Exploration Project Contract Idm-E 598 of September 14, 1953 between the parties hereto be modified and amended as described in Exhibit "F" attached hereto, which, with any maps or drawings attached thereto, is made a part of this agreement. The effective date of this amendment shall be November 6, 1953.

This amendment is made by authority granted the Executive Officer, DMEA Field Team, Region II, in Order No. 2684 by the Acting Secretary of the Interior.

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

Executed in sextuplicate the day and year first above written.

SUNSHINE MINING COMPANY
(Operator)

By Ronald King

THE UNITED STATES OF AMERICA

By A. E. Weissenborn
A. E. Weissenborn, Exec. Officer
DMEA Field Team, Region II

EXHIBIT "A"

EXPLORATION PROJECT CONTRACT
SUNSHINE MINING COMPANY
CONTRACT No. Idm-E598
DOCKET No. UMEA-3038 (Tungsten)

AMENDMENT No. 1

Changes and modifications:

In Exhibit "A" under the section entitled "Description of the work, Stage I, TRENCHING," add the following statement:

"At locations where it is not practical to test outcrops with a bulldozer, long-hole drilling may be substituted in lieu of bulldozing to more advantageously test those outcrop areas. The maximum amount of long-hole drilling which may be substituted for bulldozing shall not exceed 250 feet."

In Exhibit "A" under the section entitled "Estimated Costs of the Project, Agreed Unit Costs," add footnote "2/" to item 1--"Bulldozing (road and trenches) 250 hours @ $16.00/hr." Footnote 2/ is as follows:

"2/ Where long-hole drilling is performed in lieu of bulldozing it will be paid for out of funds allocated for bulldozing. Long-hole drilling will be paid for at the rate of $1.80 per foot, which includes costs of sampling and assaying. Further, as a maximum of 250 feet of long-hole drilling is allowed, the total cost of long-hole drilling which may be substituted for bulldozing shall not exceed $450."

SUNSHINE MINING COMPANY
CONTRACT No. Idm-E598
DOCKET No. DMEA-3098 (Tungsten)

Justification of Amendment No. 1

This amendment to the contract is made in order to permit the sampling and evaluation of promising outcrops which cannot adequately be uncovered with a bulldozer. In particular, the Jefferson limestone, in the vicinity of the Uncle Jake discovery cut, contains crystals of disseminated scheelite for a distance of 50 feet into the footwall of the Tarlach structure (see attached sketch map). It is believed that this disseminated scheelite may be in part representative of replacement ore out along favorable beds from the Tarlach structure. It is not possible to use the bulldozer in this area because of the massive nature of the limestone. However, as the beds which appear to contain the scheelite are very close to the surface it is proposed to use long holes to test the favorable bed or beds. It is proposed to drill the holes on 25-foot centers working from the area of the best showing. It is estimated that these holes will be approximately 10 feet deep, and that a maximum of 25 holes will be drilled.

The holes will be drilled with a jackhammer and the cuttings from every 5-foot interval will be saved for lamping and assaying. It is estimated that the cost of drilling will amount to $1.00 per foot. Assaying of the cuttings will cost $4.00 per sample or $0.80 per foot. Thus the total estimated cost per foot of long hole including sampling and assaying charges is $1.80 per foot or $450 for 250 feet of hole.

MF-200 (A)
(February 1952)

DOCKET NO. DMEA 3098

COMMODITY Tungsten

Docket Copy

IDM-E 598

Department of the Interior
Defense Minerals Administration
Received
OCT 14 1953

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

EXPLORATION PROJECT CONTRACT[1]
(Short Form)

IT IS AGREED this 14th day of September, 1953, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] Sunshine Mining Company, a corporation duly organized and existing under and by virtue of the laws of the State of Washington
733 Peyton Building
Spokane 1, Washington

hereinafter called the "Operator," as follows: and as set forth in Annexes I and II attached hereto and made a part hereof:

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

ARTICLE 2. *Operator's property rights.*—With respect to that certain land situated in the State of Montana Counties, ~~xxxx~~ of Deer Lodge and Granite, described as ~~follows~~[3] set forth in Annex I,

the Operator represents and undertakes:[4]

(*a*) ~~That the Operator is the owner in fee simple and entitled to possession, and that the property is subject only to the encumbrances, a copy of which is attached.~~

(*b*) That the Operator is a lessee, in possession and entitled to possession, and the Owner's Consent to Lien is attached.

The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof.

ARTICLE 3. *Exploration project.*—The Operator, within 30 days from the date of this contract shall commence work on a project of exploration for[5] Tungsten

in or upon the described land; and shall bring the project to completion within a period of 12 months from the date of this contract. The work to be performed is more fully described in Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, are made a part of this contract. The Government will contribute to the cost of this work as hereafter provided. The work shall be performed by the Operator or by independent contractor or contractors efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for workmen's compensation and employers' liability insurance, with suitable and adequate equipment, materials, and labor, to bring the project to completion within the time fixed. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

ARTICLE 4. *Costs of the project.*—The agreed, estimated costs of performing the work, expressed in terms of units of work to be performed (per foot of drifting, per foot of drilling, per cubic yard of material to be moved, etc.) are set forth in Exhibit "A," attached hereto. The Government will pay 75 percent of these agreed, estimated costs, as they accrue, for units of work actually performed that conform with the description or specifications for the work set forth in this contract, in an aggregate total amount not in excess of $33,828.75 which is 75 percent of $45,105.00 the agreed, estimated total cost of the project in which the Government will participate: *Provided,* That until the Operator's final report and final accounting have been rendered to the Government and any final check or auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of ten (10) percent of the maximum total which the Government might have been called upon to pay under the terms of the contract. The Government may, as it sees fit, make payments direct to the Operator's independent contractors, if any, for the account of the Operator, rather than to the Operator.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ARTICLE 9. *Changes and added provisions* _____

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

SUNSHINE MINING COMPANY
(Operator)

By Frank M. Hardy
Vice President

By C D Mitterdorf
Administrator, Defense Minerals Exploration Administration

Approved
Butler
Chambers

I, C. M. Hull, certify that I am the secretary of the corporation named as Operator herein; that Frank M. Hardy, who signed this contract on behalf of the Operator, was then Vice President of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

C M Hull

[CORPORATE SEAL]

U. S. GOVERNMENT PRINTING OFFICE 16—66329-1

EXPLORATION PROJECT CONTRACT
SUNSHINE MINING COMPANY
DOCKET NO. DMEA-3098

ANNEX I

The property referred to in Article 2 of the contract form consists of the following 8 unpatented lode mining claims located in Sections 7, 8, and 12, Township 4 North, Ranges 13 and 14 West, M. P. M., in the Storm Lake Mining District (also called the Silver Hill Mining District), Deer Lodge and Granite Counties, Montana; they are recorded in the Deer Lodge County Court House at Anaconda, Montana, as follows:

Claim Name	Book No.	Page No.
R.R.W. Tarlach, as amended	23	16
Ridge Claim No. 2 (Uncle Jake)	23	23
Scotty Tom	23	20
South Tarlach	23	37
September	23	45
Echo	23	47
Scheelite	23	49
Tungstar	23	51

EXPLORATION PROJECT CONTRACT
SUNSHINE MINING COMPANY
DOCKET NO. DMEA-3098

ANNEX II

The following provisions are in lieu of all of paragraph (a) of Article 6 which precedes the colon:

If the Government considers that a discovery or development from which production may be made has resulted from the exploration work, the Government, at any time not later than six months after a sufficient, complete, final report and final account referred to in the contract has been rendered, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development. The Operator, or his successor in interest, shall pay to the Government a royalty on all minerals mined or produced from the land described in Article 2, as follows: (1) Regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification of discovery or development, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first, unless the Government waives its right to a royalty; or (2) if the Government makes a certification of discovery or development, for a period of ten years from the date of the contract, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first. Said royalty shall be a percentage of the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production (including any bonuses), in whatever form disposed of, including ore, concentrates, or metal, as follows:

EXPLORATION PROJECT CONTRACT
SUNSHINE MINING COMPANY
DOCKET NO. DMEA-3098

EXHIBIT "A"

Description of the Work

The mining claims, and the proposed work which is to be performed in two stages, are shown on the attached maps—

Map No. 1, entitled "Storm Lake Tungsten Prospect," which shows the mining claims and the approximate location of proposed road and trenches; and

Map No. 2, entitled "Storm Lake Tungsten Prospect, Longitudinal Section," which shows the August shaft, drifts and raise, and the proposed shaft deepening and drifts.

The exact location, direction, inclination, and extent of all work shall be subject to the prior approval of the Government.

Stage I

ROAD

Approximately 2 miles of road to and on the property shall be constructed with a bulldozer, to be used not in excess of 64 hours. The bulldozer shall be a D-7 or equivalent.

TRENCHING

To uncover outcrops, approximately 6 surface trenches shall be dug with a bulldozer, to be used not in excess of 186 hours. The length and depth of the trenches will be dependent on the overburden and mineralization.

REHABILITATION

Where necessary, but not in excess of 95 feet, clean out and retimber the August shaft to the 95-foot level.

SHAFT SINKING

Sink the August shaft, with necessary timbering, from the 95-foot level to the 200-foot level, allowing an additional 10 feet for a sump—total of 115 feet. The shaft shall continue to follow the vein on its dip and be 6 feet by 9 feet in rock section.

DRIFTING

Based upon the geological conditions and mineralization, drift easterly and westerly along the vein for a distance of 300 feet. The drifts shall be not less than 5 feet by 7 feet in the clear and timbered where necessary.

Stage II

If warranted by the results obtained in Stage I, continue the drift or drifts on the 200-foot level for a distance of 300 feet. The drifts shall be not less than 5 feet by 7 feet in the clear and timbered where necessary.

Estimated Costs of the Project

Agreed Unit Costs

Bulldozing (road and trenches) 250 hours @ $16.00/hr.	$4,000.00	
Cleaning and retimbering shaft 95 feet @ $34.00/ft.	3,230.00	
Shaft sinking, 115 feet @ $105.00/ft 1/	12,075.00	
Drifting, 600 feet @ $37.00/ft. 1/	22,200.00	
Timbering drifts, 600 feet @ $6.00/ft.	3,600.00	
Total Agreed Unit Costs		$45,105.00
Government Participation at 75%		$33,828.75

1/ The unit costs include all costs of sampling and assaying.

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS:

That I, Regina Maguire of Miles City Montana, have made, constituted and appointed, and by these presents do make, constitute and appoint R. R. Wallace, Cable Mine, Anaconda Montana, or James H. Maguire, Silverton Idaho, either of which may act as my true and lawful attorney, for me and in my name, place and stead, and for my use and benefit, with full authority to make all contracts and to do all other acts of a business nature in connection with selling or leasing the following lode mining claim situated in the County of Deer Lodge, State of Montana, to-wit: Scotty Tom Lode Mining Claim, as recorded in Book 23, Page 20, in the records of Deer Lodge County, Anaconda Montana; including the conveyance of same, as effectually as I could do if personally present, with full power of substitution and revocation; and I hereby ratify and confirm all acts that either may lawfully do in performance of this power.

Witness my hand this 24 of March, 1953.

Regina Maguire

STATE OF MONTANA)
County of Custer) : ss.

On this 24 day of March, 1953, before me the undersigned, a Notary Public in and for the State of Montana, personally appeared Regina Maguire, personally known to me to be the person whose name is subscribed to the within instrument, and acknowledged to me that she executed the same.

Subscribed and sworn to before me this day and year first above written, and I hereunto set my hand and seal.

[illegible]
Notary Public for Montana
Residing at Miles City Montana
My commission expires _____

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS:

That we, William E. Maguire, and John T. Maguire, of Anaconda, Deer Lodge County, Montana, have made, constituted and appointed, and by these presents do make, constitute and appoint our brother, James H. Maguire, of Silverton, Idaho, our true and lawful attorney, for us and in our names, place and stead and for our use and benefit, with full authority to make all contracts and to do all other acts of a business nature in connection with mining claims owned by us and situate in the Counties of Deer Lodge and Granite, Montana, including the conveyance of said mining claims, if at his discretion he deems it advisable, and as effectually as we would do if personally present, with power of substitution and revocation; and we do hereby ratify and confirm all acts that he may lawfully do in performance of this power.

Witness our hands at Anaconda, Montana, this 16th day of August, 1952.

William E. Maguire

John T. Maguire

Subscribed and sworn to before me this 16th day of August, 1952.

M. E. Kuzan

Notary Public for the State of Montana,
Residing at Anaconda, Montana.
My commission expires November 28, 1953.

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved:
Budget Bureau No. 42-R1035.2.

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. DMEA-3098
Metal or Mineral
Date Received 6/29/53
Estimated Cost
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Sunshine Mining Company
738 Peyton Building
Spokane 1, Washington

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State which incorporated or otherwise organized. See attached sheets.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers. See attached sheets.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract See attached sheets.

(*b*) State any mine name by which the property is known. See attached sheets.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise
See attached sheets.

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property. See attached sheets.

(*e*) If you own the land, describe any liens or encumbrances on it

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. See attached sheets.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes. See attached sheets.& maps.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades. See attached sheets & maps.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you. See attached sheets and maps.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence facilities. See attached sheets and maps.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.
See attached sheets and maps.

16—66551-1

5. *The exploration project.*—(a) State the mineral or minerals for which you wish to explore Tungsten.

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if need of any present mine workings, and the location of the proposed exploration work as related to such features as conta veins, ore-bearing beds, etc. See attached sheets.

(*c*) The work will start within 30 days and be completed within 7 months from the date of an explorat project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such ex ration project, and also that of the person or persons who will supervise the operations. See attached sheets.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate she under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "no after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequ items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic y of material moved, etc.). See attached sheets.

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or for necessary labor, supervision and engineering and geological consultants. See attached sheets.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 e and power, water and fuel. See attached sheets.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is ow and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on pre value, as the case may be. See attached sheets.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repa of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which wil devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, f improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project. See att sheets

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensa and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated ab

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or other indirect costs, or work performed or costs incurred before the date of the contract, should be included in estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations Government participation (Sec. 7, DMEA No. 1)? See attached sheets.

(*b*) How do you propose to furnish your share of the costs? See attached sheets.

☑ Money ☑ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the of his knowledge and belief.

Dated June 17, 1953

Sunshine Mining Company
(Applicant)

By Rawland King

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

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

To accompany D.M.E.A. Form MF-103

(1) Sunshine Mining Company:

(a) 738 Peyton Bldg., Spokane 1, Wash.
(b) Corporation, State of Washington
(c)

President	R. M. Hardy	Yakima, Wash.
Vice President	J. B. Cox	Spokane, Wash.
Treasurer	F. M. Hardy	Yakima, Wash.
Secretary	C. M. Hull	Yakima, Wash.

(2)

(3) (a) Unpatented lode mining claims located in Sections 7, 8, and 12, Township 4 North, Ranges 13 and 14 west. Unsurveyed land in Deer Lodge and Granite Counties, Montana.

(b) Tungstar Group, also Tarlach Group.

(c) Lessee and purchaser under contract.

(d) Copy of lease agreement herewith.

(e) None.

(f)

Echo Lode Mining Claim	Book	23	Page	47
September Lode Mining Claim	"	23	"	45
Scheelite " " "	"	23	"	49
Tungstar " " "	"	23	"	51
South Tarlach Lode Mining Claim	"	23	"	37
R.R.W. Tarlach " " " as amended	"	23	"	16
Ridge Claim No. 2 (Uncle Jake) L.M.C.	"	23	"	23
Scotty Tom Lode Mining Claim	"	23	"	20

All situated in the Storm Lake Mining District, also called the Silver Hill Mining District (unorganized) in Deer Lodge and Granite Counties, State of Montana. All of above lode mining claims are filed in Deer Lodge County Courthouse, Anaconda, Montana.

(4) (a) One incline shaft on September claim, with levels at 35 feet and 50 feet from collar. Present bottom is 95 feet from collar; some statements have been made that this shaft was originally 160 feet deep. Several shallow prospect shafts and discovery cuts. The August shaft on the September claim can be examined by entry through a raise from the 35 foot level; it will be necessary to re-timber the collar of the shaft and install new ladders before a thorough inspection of the vein can be made in the shaft.

(b) No known production of tungsten ore. No blocked reserves; possibly 800 to 1200 tons of tungsten

bearing rock between present August shaft bottom and the surface.

(c) The mineralization occurs with quartz in a fissure type vein enclosed in limestone of the Cambrian period. Outcrops of granodiorite appear in the immediate vicinity. The proximity of the granitic rocks is favorable to possible contact metamorphic deposits of tungsten bearing ores. (Claim map showing locations of cuts and shafts. Section through August shaft with results of sampling shown.)

(d) The claims are approximately five miles from U. S. Highway 10A. Anaconda, Montana is some seventeen miles east of the claims where a branch line of the Northern Pacific railroad is terminated. Butte, Anaconda and Philipsburg are all readily accessible supply points.

(e) Manpower is normally available in this area as it is essentially a mining territory.

Water is available in sufficient supply in Dry Creek, which flows across the most westerly claims of the group.

Electric power is near Highway 10A, five miles from the claims.

(5) (a) Tungsten

(b) See attached maps and sections. Bulldozing work to expose mineral showings and to check for continuity of vein structures. Examination of shaft on the September claim (August shaft); determination of actual depth; probably some drifting on the vein from a lower level of this shaft. Exploratory work at various places on the claims as warranted by results of bulldozing.

(c) Work can start as soon as road and weather conditions permit. Completion to depend upon scale of operations decided upon.

(d) Sunshine Mining Company has had more than 25 years of profitable operation. Supervisor of this project will be a member of the Sunshine Mining Company's staff.

(6) (a) Preparatory work:

Road building -

Contract bulldozer 64 hrs @ $14/hr	$896.00
Transportation of bulldozer	35.00
	$931.00

Exploratory work:

Trenching to expose mineralized structure -

Contract bulldozer 200 hrs @ $14/hr	$2,800.00
Transportation of bulldozer	35.00
	$2,835.00

(b)

4 miners	)	Average wage = $15.00
1 timber framer	)	Overtime = 1.25
2 hoistmen	)	Ind.Ins. OAB, UEC = 1.63
2 trammers	)	Total $17.88
		or $18.00/man shift

1 foreman-engineer-bookkeeper @ $500.00/mo

Estimated labor costs $28,856.25

(c) To include 210 feet of shaft, timbered and lagged where necessary, plus 600 feet of drifting on the 200-foot level. Shaft 9' x 6'; Drift 5' x 7'.

40 sets of shaft timber @ $22.00/set	$ 880.00	
40 " " 2" lagging @ $18.00/set	720.00	
20 - 10 foot ladders @ $3.00 each	60.00	
200 feet of 3" galv. water column @ $1.00/ft	200.00	
850 " " 2½" " pipe (air line) @ 76¢/ft	646.00	578
850 " " 1½" " " (water line)@ 35.6¢/ft	302.00	0n
6.0 tons of 20 lb. mine rail @ $189/ton	1,134.00	0n
Fish plates, bolts, spikes for 900' of track	156.00	0n
280 ties @ $1.00 each	280.00	0n
Pipe fittings and valves	100.00	15
5.0 tons of 45% powder @ $440.00/ton	2,200.00	0n
750 electric delay caps @ $27.00/100	202.50	0n
3,000 - #6 blasting caps @ $23.75/M	71.25	0n
15,000 ft of blasting fuse @ $13.40/M	201.00	0n
Drill steel and replaceable bits	1,000.00	0n
15,000 gals of diesel fuel oil @ 20¢/gal	3,000.00	
7,500 " " gasoline @ 30¢/gal	2,250.00	0n
200 " " lubeoil @ $1.00/gal	200.00	
	$13,602.75	

Sets and lagging for 600' of drift, if necessary $ 3,120.00

520

(d) To be purchased:

1 - 315 c.f.m. Diesel driven compressor	$10,100.00
1 - Mucking machine	3,280.00
1 - 1470 gal. fuel tank 5' dia x 10' long	302.00
1 - 30" x 84" air receiver	405.00
1 - 36" sheave, complete with bearings	212.00
1 - 20 cu.ft. skip complete	483.00
3 - 21 cu.ft. ore cars, roller bearings	1,000.00
300 feet of 5/8" 6 x 19 wire rope	77.00
1 - Sump pump (air)	483.00
2 - Jackhammers	780.00
2 - Drifters	2,120.00
2 - 50 foot air hoses, fittings & oilers	129.00
2 - 50 " water " with fittings	129.00
Miscellaneous shop tools	250.00
Estimated freight	230.00
	$19,980.00

To be furnished by operator:

1 - 78 h.p. double drum gasoline hoist allowable monthly depreciation @$100	$ 700.00

(e) None

(f) 1 - Wooden headframe and transfer bin:

Lumber and materials	$ 325.00
Labor	500.00
	$ 825.00

1 - Compressor & hoist house

Lumber and materials	$ 425.00
Labor	625.00
	$ 1,050.00

Shaft Estimate:

One and one-half feet advance per shift.
Work two shifts per day.
Labor - one shift.

	Per Foot
2 miners	
1 timber framer	
1 hoistman	
1 trammer	
5 men @ $18.00/man shift	$ 60.00
3" water column	1.00
2½" air line	.76
1½" water pipe	.36
Fittings, pipe	.25
Powder 20#/ft @ 22¢/lb	4.40
6½ delay caps per ft @ 27¢ each	1.75
Drill steel and replaceable bits	1.80
Shaft timbers and lagging	8.00
Ladders	.30
Fuel & lube oil for compressor & hoist	8.93
Track, plates, bolts, etc.	1.44
Foreman, engineer, bookkeeper	6.66
Contingencies & Miscellaneous	9.42
	$105.07
Maximum per foot =	$105.00

Drift Estimate:

Three feet of advance per shift.
Work two shifts per day.
Labor - one shift.

	Per Foot
2 miners 1 trammer 1 hoistman 4 men @ $18.00/man shift	$ 24.00
2½" air line	.76
1½" water pipe	.36
Pipe fittings	.09
Powder 12#/ft @ 22¢/lb	2.64
Caps #6 (5 @ 2.5¢) +(22' of fuse @ 1.5¢)	.46
Drill steel and bits	1.30
Rail 13.3#/ft	1.26
Fish plates, spikes, bolts, etc.	.18
Ties	.40
Fuel and lube oil for compressor & hoist	4.46
Foreman, engineer, bookkeeper	3.33
Contingencies, repairs & miscellaneous	3.92
	$ 43.16
Maximum per foot without timber	$ 44.00

Drift timbers & lagging:

80 f.b.m./foot @ $65/M	$5.20
Labor/foot	2.30
Maximum per foot including timber	$ 51.50

Estimated Cost:

Step I

Preparatory work -		
Road building		$ 931.00
Erect Headframe		825.00
Compressor & hoist house		1,050.00
Timber and lag shaft to 95 foot level, install ladders, track, pipe -		
Timber @ $8.00/ft	$800.00	
Ladders @ 30¢/ft	30.00	
Track, plates, bolts, etc. @ $1.44/ft	144.00	
Water column, air and water pipe	280.00	
Fuel & lube oil for hoist	105.00	
Labor, 15 shifts @ $90/shift	1,350.00	
Supervision	150.00	
		2,859.00
	Sub-total	$5,665.00
Exploratory work -		
Trenching surface with bulldozer		$2,835.00
Sink shaft 115 feet (200' level + 10' sump) @ $105/ft		12,075.00
Purchase equipment		19,980.00
Depreciation on hoist		350.00
	Total for Step I	$40,905.00

Step II

300 lineal feet of drifting on 200 ft level @ $44/ft	$13,200.00
Or @ $51.50/ft, if timber necessary	
Depreciation allowance on hoist	175.00
Total for Step II	$13,375.00

Step III

300 lineal feet of drifting on 200 ft level @ $44/ft	$13,200.00
Or @ $51.50/ft if timber necessary	
Depreciation allowance on hoist	175.00
Total for Step III	$13,375.00

Summary:

Step I	$40,905.00	
Step II	13,375.00	
Step III	13,375.00	
	Total	$67,655.00

(7) (a) Yes.

(b) Money and use of some equipment.

Sunshine Mining Company will pay all accounts for labor, equipment, supplies, etc., and will submit statements as required by the D.M.E.A. for reimbursement of 75% of such authorized expenditures.

A G R E E M E N T

This Agreement, made and entered into this 24 day of March, 1953, by and between the Mines Prospecting & Exploration Company, a Montana corporation with its principal office at 219 Radio Central Building, Missoula, Montana, James H. Maguire and Marjorie H. Maguire, his wife, William E. Maguire and Regina Maguire, his wife, and John T. Maguire, all owners of certain interests and property rights as hereinafter set out, as parties of the first part, and the Sunshine Mining Company, a Washington Corporation with principal office in Yakima, Washington, party of the second part,

Witnesseth: That if the said party of the second part shall perform the covenants hereinafter mentioned on its part to be made and performed, the said parties of the first part hereby covenant and agree to convey to the second party, by good and sufficient deeds and assignments of all its rights, interests and title, clear of all encumbrances, excepting those hereinafter mentioned, except as to the rights of the United States of America, in and to the following described lode mining claims situated in the Storm Lake Mining District, also called the Silver Hill Mining District, (Unorganized), in the Counties of Deer Lodge and Granite, State of Montana, to-wit:

The Echo Lode Mining Claim	Book 23	Page 47
September Lode Mining Claim	Book 23	Page 45
Scheelite Lode Mining Claim	Book 23	Page 49
Tungstar " " "	Book 23	Page 51

South Tarlach Lode Mining Claim	Book 23	Page 37
R.R. W. Tarlach " " " as amended	Book 23	Page 16
Ridge Claim No. 2(Uncle Jake) L.M.C.	Book 23	Page 23
Scotty Tom Lode Mining Claim	Book 23	Page 20,

Which claims are believed to be in Section Seven (7), Township Four (4) North, Range Thirteen (13) West, in Deer Lodge County, Montana. A portion of the Scotty Tom claim may extend into Section Eight (8) of the above Township and a portion of the Tungstar claim may extend into Section Twelve (12), Township Four (4) North, Range Fourteen (14) West, of unsurveyed land in Granite County, Montana. All of the above lode mining claims are filed in the Deer Lodge County Courthouse, Anaconda, Montana.

It is now, therefore, agreed between the parties as follows:

1. That for and in consideration of the execution of this Agreement, the party of the second part agrees to expend the sum of Fifteen Thousand ($15,000.00) Dollars, or its equivalent, in the exploration and/or development of the said claims, with the provision that a minimum of Five Thousand ($5,000.00) be spent in the vicinity of the August Shaft workings on the September claim; and that all records and data of such program be delivered to first parties.

2. That second party agrees to enter upon the said properties and to commence the said program as soon as weather and road conditions permit, and to complete the said program on or before September 15, 1953. It is agreed, however, that in case of hardship

or unforeseen conditions, the parties may, by mutual agreement, extend the completion date for a reasonable period. It is further agreed that if second party shall arrange an exploration program financed in part by a D.M.E.A. loan the completion date shall be changed to conform to the terms of the D.M.E.A. agreement.

3. That upon the completion of the program as set out in Paragraph 1., second party may elect to withdraw from this property, and in that event it shall surrender all its rights and privileges under this Agreement and it shall, upon return of all papers, contracts, escrows and deeds, be under no further obligations to the parties of the first part.

4. That in the event the second party shall elect to proceed with the operation of the properties, considering the entire group as a whole, then first parties do hereby Lease, Demise and Let unto second party the hereinabove described property, upon the payment of Ten (10%) Percent of the net smelter return, or net sale from refiner, purchaser or processor, as the case may be; that such royalty shall continue until the sum of One hundred fifty thousand ($150,000.00) Dollars shall have been paid to first parties as hereinafter provided. Second party agrees to mill, process or treat such ores as produced from this property, in accordance with such methods or processes now known so as to market as high grade a product as possible, as may be economically feasible, to secure the highest return.

5. Second party agrees to proceed with the exploration and development of the property and to the placing thereon of such

mining, milling and other equipment, buildings, etc., as it may find justified and desirable in the best interest of the property. Second party agrees to do a minimum of seven hundred (700) man shifts of work per year as required in the Purchase Lease Agreement dated August 4, 1952, by and between William Gallagher and the Mines Prospecting & Exploration Company, and that all costs in connection with this program shall be born by second party. Second party may remove machinery and equipment and appurtenances except buildings of a permanent nature or mine rails.

6. At all reasonable times the accredited representative of first parties shall have full and free access to the property hereby and to the plants handling the ores and to the metallurgical and financial records, and to be currently informed of the progress and results of the operation.

7. Second party shall cause to be paid, upon the sale of any and all ores, concentrates, minerals, Ten (10%) Percent of the net smelter returns, or from refiner or processor, to the first parties as follows:

Five (5%) Percent of the net return to William Gallagher, at the Western Montana National Bank, Missoula, Montana, until the sum of Twelve thousand five hundred ($12,500.00) Dollars has been paid, without interest, as provided in the Purchase Lease Agreement dated August 4, 1952, and the Escrow Agreement dated August 5, 1952.

That Two and one-half (2½%) Percent of the net return be paid to the Mines Prospecting & Exploration Company, and be

sent to 219 Radio Central Bldg., Missoula, Montana.

That Two and one-half (2½%) Percent is to be paid as follows: Five-sixths of the said Two and one-half (2½%) Percent is to be paid to James H. Maguire, and sent to Box 135, Silverton, Idaho; One-twelfth (1/12) of the said (2½%) is to be paid to John T. Maguire and sent to Box 135, Silverton, Idaho; that one-twelfth (1/12) of the said (2½%) is to be paid to William E. Maguire, and sent to Box 135, Silverton, Idaho.

That after the full amount of ($12,500.00) Twelve thousand five hundred has been paid to William Gallagher as hereinabove set out, then any further payments to his account shall cease. Thereafter, Five (5%) Percent shall be paid to the Mines Prospecting & Exploration Company and Five (5%) Percent divided in the same proportion as above among James H. Maguire, John T. Maguire and William E. Maguire.

That after the total sum of Twenty-five thousand ($25,000.00) Dollars has been paid in the respective proportions to James H. Maguire, John T. Maguire and William E. Maguire, then any and all further payment to their account shall cease, and the full royalty payment of Ten (10%) Percent shall be paid to the Mines Prospecting & Exploration Company, until the total sum of One hundred fifty thousand ($150,000.00) Dollars, including all of the above separate royalty payments shall have been made.

8. The parties of the first part agree to execute good and sufficient deeds, conveying all of the above described properties to first party, free and clear of all encumbrances; to execute assignments of any and all agreements of rights to the above claims,

and to place all such instruments in escrow in the Western Montana National Bank of Missoula, Montana, with the provision, that said Escrow Bank is to credit all payments of royalties made under this Agreement and that when the total sum of One hundred fifty thousand ($150,000.00) Dollars has been paid, that said deeds and contracts shall be delivered to second party.

9. That upon the termination of this Agreement by the withdrawal of the second party or its failure in other material particular to perform every covenant and condition of this Agreement by them to be made and performed, then second party agrees to deliver up to the parties of the first part, the said mining property with the appurtenances and improvements, in good order and condition, but that second party shall have sixty days after notice of non-compliance with the terms hereof to perform the conditions and covenants hereof, and it is agreed between the parties to this Agreement that upon failure of said party of the second part to perform any of the oovenants or conditions of this agreement within said sixty day period, this contract shall, without any further procedure, demand, or notice, become null and void and this Agreement shall be cancelled and discharged and all payments made by the party of the second part to apply on the purchase price, and all taxes, or other sums paid, shall be forfeited and held and retained by first parties as liquidated damages and rental.

10. That second party agrees to pay any and all taxes, assessments and charges, on the property and for the development thereof, and to file each year an affidavit of proof of labor on the said claims.

Each and every clause of this Agreement shall extend to the heirs, executors, administrators, successors and assigns of the parties hereto.

In Witness Whereof, the parties hereunto have set their hands and seals, the day and year hereinbefore written.

Party of the second part:

SUNSHINE MINING COMPANY

C. M. Hull
Attest: Secretary

R. M. Hardy
President

Parties of the first part:

MINES PROSPECTING & EXPLORATION CO.

Herbert C. Fisher
Attest: Secretary

Earl F. Elstone
President

James H. Maguire

Marjorie H. Maguire

William E. Maguire

Regina Maguire

John T. Maguire

By: James H. Maguire
Attorney in fact

(Acknowledgements for Parties of Second Part)

STATE OF WASHINGTON }
County of Yakima } ss.

On this 20th day of March, 1953, before me, the undersigned, a Notary Public in and for the State of Washington, personally appeared R. M.Hardy and C. M. Hull, known to me to be the president and secretary, respectively of the Sunshine Mining Co., and acknowledged to me that they executed the within instrument on behalf of the corporation.

Witness my hand and seal this day and year first above written.

L. E. Ronlean
Notary Public for Washington
Residing at Yakima, Wash.
My commission expires Jan.11, 1955

(Acknowledgements for Parties of First Part)

STATE OF MONTANA }
County of Missoula } ss.

On this 24th day of March, 1953, before me the undersigned, a Notary Public in and for the State of Montana, personally appeared Earl F. Elstone and Herbert C. Fisher, known to me to be the president and secretary, respectively of the Mines Prospecting & Exploration Co., and acknowledged to me that they executed the within instrument on behalf of the corporation.

Witness my hand and seal this day and year first above written.

Donald G. Bradley
Notary Public for Montana
Residing at Missoula, Montana
My commission expires Dec. 17, 1955

STATE OF IDAHO)
County of Shoshone) ss.

On this 31 day of March, 1953, before me the undersigned, a Notary Public for the State of Idaho, personally appeared James H. Maguire and Marjorie H. Maguire, known to me to be the persons that executed the within instrument, and acknowledged to me that they executed the same.

In Witness whereof, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Elsie M. Ryan
Notary Public
Residing at Wallace, Idaho

STATE OF IDAHO)
County of Shoshone) ss.

On this 31 day of March, 1953, before me the undersigned, a Notary Public for the State of Idaho personally appeared James H. Maguire, known to me to be the person whose name is subscribed to the within instrument as the attorney in fact of William E. Maguire, Regina Maguire and John T. Maguire, and acknowledged to me that he subscribed the names of William E. Maguire, Regina Maguire and John T. Maguire thereto as principals, and his own name as attorney in fact.

In Witness Whereof, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Elsie M. Ryan
Notary Public
Residing at Wallace, Idaho

DOCKET
Surname:
Chapman

August 11, 1955

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: General Summary of Contract and Results Obtained
Docket No. DMEA 3098 - Tungsten
Tungstar Group (Tarlach Group)
Sunshine Mining Company, Lessee
Deer Lodge and Granite Counties, Montana
Contract No. Idm-E598

Operator: Sunshine Mining Company
738 Peyton Building
Spokane, 1, Washington

Property Rights: Lease, dated March 24, 1953, from Mines Prospecting and Exploration Company, 219 Radio Central Bldg., Missoula, Montana, Lessor, to Sunshine Mining Company, 738 Peyton Bldg., Spokane 1, Washington, Lessee. The property includes 8 lode mining claims, unpatented, located in the Silver Hill Mining District, Deer Lodge and Granite Counties, Montana.

Contract: Dated September 14, 1953; and two amendments. Owner's Consent to Lien dated June 12, 1953. With the work approximately 70 percent complete, the main objectives of the contract had been reached and further work was not considered worthwhile. In a teletype dated March 22, 1955, the Field Team advised that the Sunshine Mining Company was willing to sign a Termination Agreement with a clause concerning payment of royalties regardless of certification. A Termination Agreement with a clause that the Operator agreed to pay royalties on any production regardless of possession was issued. The Operator on June 7, 1955, returned this Termination Agreement unsigned, with reasons for not signing. Under these circumstances, a Certification of Discovery or Development is being issued.

Work Authorized: The Contract and Amendments No. 1 and No. 2 authorized 250 hours of bulldozing for road building and trenching, rehabilitation of 95 feet of shaft, 115 feet of shaft-sinking, 600 feet of drifting, and 250 feet of long hole drilling, (in lieu of bulldozing, Amendment No. 1) and diamond drilling 2,500 feet (Amendment No. 2). The contract authorized an expenditure of $45,105.00, with Government participation, 75 percent, $33,828.75. Amendment No. 2 authorized an increase of $16,250.00 for diamond drilling, making a total of $61,355.00, with Government participation $46,016.25.

Work Completed: The contract was terminated by mutual agreement when the following work had been completed:

212 hours of bulldozing for road and trenches, 95 feet of shaft rehabilitation, shaft sinking 115 feet, drifting 52½ feet, long hole drilling 88 feet and diamond drilling 1,001.6 feet. The cost of this work was $44,927.80, with Government participation, 75 percent, $33,695.85.

Production: Prior to the date of the contract there is no record of any production from the property. During the time of the contract The Contract Milling Company at Butte, Montana milled 245 tons of ore saved from exploration work. This ore sampled 5.15 ounces silver and 0.50 percent WO_3. For 1.112 tons of gold-silver-lead concentrates sold to the American Smelting and Refining Company at Helena, Montana, a royalty of $18.63 was paid the Government. No record of settlement has been received for the tungsten as yet.

Audit: The contract is on a unit cost basis and a Report of Review will be necessary, but has not been issued yet.

Certification: A certification of discovery or development or a requirement for payment of royalty regardless of certification was recommended by the Field Team. A certification of discovery or development is being prepared by this Division.

Comments: The project was established to explore a quartz vein for extension or new occurrences of tungsten ore. The work, composed of shaft-sinking, drifting, trenching, long-hole drilling and diamond drilling, indicated approximately 1,425 tons of minable ore that would average about 0.50 to 0.63 percent WO_3.

TLCHAPMAN:fec
3-15-55
cc to: Docket
Code 400
Adm. Reading File
Operating Comm.

W. S. Martin, Chief
Iron and Ferro-Alloys Division

DMEA Form 17
Feb. 58

DEFENSE MINERALS EXPLORATION ADMINISTRATION

WORK COMPLETED ANALYSIS

After final audit or review report is received, prepare original only and file in official docket

Operator Sunshine Mining Company		Actual Cost	
State Montana		Agreed Unit Cost	x
Final Report of Audit		Commodity	Docket No. DMEA 3098
Final Report of Review	x	Tungsten	Contract No. Idm-E598

Operation	Authorized by Contract and Amendments		Completed		Net cost after sale of Government Property
	Units	Cost	Units	Cost	
Drifting & Crosscutting	600	$25,800.00	524	$19,598.00	$19,598.00
Raising					
Shafts	115	$12,075.00	115	$12,075.00	$12,075.00
Winzes					
Drilling Core	2500	$16,250.00	1001.6	$6,510.40	$6,510.40
(Specify) Long Hole	68	$122.40		$122.40	$122.40
Surface Excavation (Included with Roads and Trails)					
Underground Excavation					
Roads and Trails (Included Trenches)		$3,877.60		$3,392.00	$3,392.00
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation (Shaft)		$3,230.00		$3,230.00	$3,230.00
New Building, Improvements, etc.					
Other (Specify)					
Totals		$61,355.00		$44,927.80	* $44,927.80

* Net cost total must agree with final report of audit or review.

Prepared by W S Martin Date 4/4/58

31390

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
	Selfridge	220
5/22	[illegible]	110
4	[illegible]	100
		220

MAY 2 2 1963

Mr. Earl R. Smith
Office Manager
Westmont Tractor Co.
P. O. Box 1445
Missoula, Montana

Re: DMEA-3098 (Tungsten)
Sunshine Mining Company
Tungstar Group (Tarlach Group)
Deer Lodge and Granite
Counties, Montana
Contract Idm-K598

Dear Mr. Smith:

Thank you very much for your May 15 letter. It was truly gracious of you to have gone to such lengths to be of help to us.

Sincerely yours,

W. R. Griswold
mm

W. R. Griswold, Chief
Division of Minerals

WRGriswold/mm
5/21/63
cc: Director's Reading File
Region I (2) w/2 copies of incoming letter
✓Docket
Code 500

43683

CATERPILLAR®

WESTMONT TRACTOR Co.

P. O. BOX 1445 MISSOULA, MONTANA

May 15, 1963

OFFICIAL FILE COPY
O. M. E
RECEIVED MAY 20 1963

DATE	INITIALS	CODE
5/20	[illegible]	500
	[illegible]	500

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

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

Gentlemen:

Reference is made to your May 10 letter on the subject of DMEA-3098 (Tungsten), Sunshine Mining Company, Tungstar Group(Tarlach Group), Deer Lodge and Granite Counties, Montana, Contract IDm-E598.

We are returning your photostatic copy of the owners consent to lien. I can tell you definitely that the signature of the William Gallagher is not the one associated with our company.

Now that we know what it is all about, I can tell you that the William Gallagher involved was formerly a resident of Butte, Montana but we understand that he has been deceased for several years.

We do not know whether or not you have been in communication with Mr. Elstone and Mr. Fisher of the Mines Prospecting and Exploration Company on this same matter, but both of those gentlemen are now residing in Missoula. Mr. Earl F. Elstone, 2115 26th Avenue and Mr. Herbert C. Fisher at 2109 26th Avenue and incidently Mr. Fisher also maintains a public accounting office at 259 W. Front Street here in Missoula.

We hope this information contributes to the solution of the problem involving the property.

Very truly yours,

Earl F. Smith

Earl Smith
Office Manager

jas
file

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
12/4	Murphy	500
12/4	Van Leeke	500
12/4	Talbert	800
	Selfridge	120
12/4	Johnson	110
	Fumich	100
		220

Mr. James H. Maguire
P. O. Box A-34
Grants, New Mexico

DEC 4 1963

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

Dear Mr. Maguire:

This is with reference to the Owner's Consents to Lien, dated June 12, 1953, and September 28, 1954, which you executed for yourself and as attorney-in-fact for William E., Regina, John T., and Marjorie H. Maguire.

By the terms of the subject Exploration Project Contract, as amended, and the certification of discovery or development dated August 26, 1955, all minerals mined or produced from September 14, 1953, to September 14, 1963, were subject to the Government's percentage royalty as set forth in said contract.

As the period during which production was subject to royalty has now expired, the Government according to its present records retains no claim or lien against the property subject to the contract or any future production therefrom. We, therefore, are closing our books and records on this contract.

Sincerely yours,

George Fumich, Jr.

Acting Director

FMMurphy/mm
12/4/63
cc: Director's Reading File
CA&A Division
Region I
Docket
Code 500

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
12/3	Murphy	500
12/3	on leave	500
12/3	Talbot	800
	Selfridge	120
12/4	Johnson	110
	Fumich	100
		220

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

DEC 4 1963

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

Dear Mr. Elstone:

This is with reference to the Owner's Consents to Lien, dated June 12, 1953, and September 28, 1954, which you executed as president of your Company.

By the terms of the subject Exploration Project Contract, as amended, and the certification of discovery or development dated August 26, 1955, all minerals mined or produced from September 14, 1953, to September 14, 1963, were subject to the Government's percentage royalty as set forth in said contract.

As the period during which production was subject to royalty has now expired, the Government according to its present records retains no claim or lien against the property subject to the contract or any future production therefrom. We, therefore, are closing our books and records on this contract.

Sincerely yours,

George Fumich, Jr.

Acting Director

FMMurphy/mm
12/3/63
cc: Director's Reading File
CA&A Division
Region I w/cy of Form 63 dated 10/15/63
Docket
Code 500

43683

MF-203

OWNER'S CONSENT TO LIEN

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of Montana, County of Deer Lodge, described as follows 1/ The Echo, September, Scheelite, Tungstar, South Tarlach, R.R.W.Tarlach as amended, Ridge Claim No. 2 (Uncle Jake), and the Scotty Tom Lode Mining Claims, as recorded in the Deer Lodge County Courthouse, Anaconda Montana. Book 23, pages 16-20-23-37-45-47-49-51

Sections 7 & 8, Twp. 4 North; R. 13 W. & Sec. 12, Twp 4 North; R. 14 W. M.P.M.

which is the subject of a proposed exploration project contract, hereinafter called the "contract", between the United States of America, hereinafter called the "Government", and

2/ Sunshine Mining Company

hereinafter called the "Operator"; and

WHEREAS, under certain provisions of said contract which are set forth on the reverse side hereof, the Government is entitled to a percentage royalty on production and to certain other rights and equities which do or may conflict with or be adverse to the interest of the undersigned in said property;

NOW THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to dismantle, sever, take possession of, and remove and dispose of facilities, buildings, fixtures, equipment, or other items as provided in the contract, or any amendment thereof, shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned, and the Government is authorized to enter upon the land for such purposes.

2. To secure the payment to the Government of the percentage royalty on production 3/ provided for under the terms of said exploration project contract, or any amendment thereof which does not increase the maximum amount of the Government's claim here stated or alter the provisions for repayment, there is hereby granted to the Government a lien upon the land herein described and upon any production of minerals therefrom, until the royalty claim is fully paid in the amount of the Government's contribution, not in excess of 4/$ _____, or ten years have elapsed from the date of the contract.

3. The undersigned shall commit no act nor assert any claim that may contravene or conflict with the lien, claim, or rights of the Government under the provisions of said contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

Dated this 10th day of June, 195 2.

Hines Prospecting & Exploration Co.

William F. Maguire [illegible] Pres. [Seal]

Regina Maguire

Secy. [Seal]

John T. Maguire James H. Maguire

by James H. Maguire Marjorie H. Maguire

William Gallagher [Seal]

1/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease [or contract, deed, or other document] dated _____, and recorded in book _____ page _____ official records of said county." If (b) is used, the book and page of recordation cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

2/ Insert the name of the Operator as it will appear in the exploration project contract.

3/ Mining or production from the land is not required, and in the absence of production there is no obligation to repay the Government.

4/ Insert the maximum amount of the Government's contribution.

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
	Selfridge	120
5/10	Johnson	110
	Farrell	100
		220

Mr. Earl R. Smith
Office Manager
Westmont Tractor Co.
P. O. Box 1445
Missoula, Montana

MAY 10 1963

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

Dear Mr. Smith:

We have your most cooperative letter of April 10. As requested, we are enclosing a photo copy of the document in question.

You may be sure that we shall appreciate any information you might be able to give us.

Sincerely yours,

W. R. Griswold
mm

W. R. Griswold, Chief
Division of Minerals

Enclosure

WRGriswold/mm
5/9/63
cc: Director's Reading File
Region I w/2 copies of Apr. 10 incoming letter
Docket
Code 500

8623

CATERPILLAR®

WESTMONT TRACTOR CO.

P. O. BOX 1445 MISSOULA, MONTANA

April 10, 1963

OFFICIAL FILE COPY
O. M. E.
RECEIVED APR 16 1963

DATE	INITIALS	CODE
4/16	[illegible]	800
	Griswold	500

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

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

Gentlemen:

Reference is made to your letter of April 5, concerning:

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

This ma tter was again brought to Mr. W. J. Gallagher's attention, and he does not have any recollection of the incident. It is recalled that at one time as an outcome of a mortgage foreclosure, he had some involvement in the affairs of the Noon Mining Co., but he has no recollection of that involvement being in any way associated with a contract concerning the Sunshine Mining Co.

It is also recalled that at one time, there was a little confusion involving the delivery of mail in Missoula, concerning another Mr. Gallagher, but none of us recall whether or not his given name was William.

As a means of approaching a solution to this, we are wondering if you could send us a photo copy of a portion of the document concerned, showing clearly the signature of the Mr. Gallagher who is involved in the situation. That way we could determine whether or not the W. J. Gallagher of this company is the person to whom the correspondence should be addressed. Perhaps also, if we knew the names of the other individuals concerned, or the names of the officers of the Mines Prospecting & Exploration Co. we might be able to identify the project, and if it turns out that we ourselves are not interested, we might be able to suggest to you the means of contacting the owners, which appears to be the ultimate purpose of your initial correspondence. Obviously, we are willing to cooperate in any way we can.

Yours very truly,

Earl R. Smith

Earl R. Smith
Office Manager

njs

So. 157 Howard Street
Spokane 4, Washington
April 29, 1963

Memorandum

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

From: Acting Field Officer, Region I

Subject: DMEA-3098 (Tungsten)
Sunshine Mining Company
Tungstar Group (Tarloch Group)
Deer Lodge and Granite Counties, Montana
Contract Ldm-8598

There is enclosed a Report of Royalty Review dated April 17, 1963, covering the subject contract for the period August 1, 1959, through April 8, 1963.

One copy of the report has been retained for the Spokane Office files. The report is for record purposes only, and no copy was provided for the Operator.

D. R. MacLaren

Enclosure

DRMacLaren:my

cc: CAER(2)
CA&A
CFF

Reading copies to:
Nolan
McKalvey

OFFICIAL FILE COPY
O. M. E
RECEIVED MAY 1 1963

DATE	INITIALS	CODE
5/1		800
	Returned	500
		220

Form 7
(-58)

OFFICIAL FILE COPY

Date	Surname	Code
		220

April 17, 1963

Memorandum

To: Acting Field Officer, Region I

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

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

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

(a) Original to the Fiscal Section, Division of Administrative Services, Office of the Secretary, U. S. Department of the Interior, Washington 25, D. C.; and

(b) One copy for your files.

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

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

Enclosures

EDTalbert/ama 4-17-63

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

43683

Form 7
(6)

OFFICIAL FILE COPY

Date	Surname	Code
	Selfridge	125
5/5	Johnson	110
5/8	Fancy	100
		220

APR 5 1963

Westmont Tractor Co.
P. O. Box 1445
Missoula, Montana

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

Lead Foyer!

Gentlemen:

We have your March 25 letter of inquiry. Under date of June 12, 1953, Mr. William Gallagher, along with other individuals and the Mines Prospecting & Exploration Co. (signatures of the company president and the secretary) executed an Owner's Consent to Lien in favor of the Government covering the following mining claims:

Echo
September
Scheelite
Tungstar
South Tarlach
R.R.W. Tarlach, as amended
Ridge Claim No. 2 (Uncle Jake)
Scotty Tom

Above claims were recorded in the Deer Lodge County Courthouse, Anaconda, Montana; book 23, pages 16-20-23-37-45-47-49-51.

This was in connection with an exploration project contract between the Sunshine Mining Company and the Government.

Sincerely yours,

W. R. Griswold
Name

W. R. Griswold, Chief
Division of Minerals

WRGriswold/mm
4/5/63
cc: Director's Reading File
Region I w/2 copies of Westmont Tractor Co. ltr 3/25
Docket
Code 500

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	name	Code
4/3	Lefforge	120
		110
		100
		220
		1

Westmont Tractor Co.
P. O. Box 1445
Missoula, Montana

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

Gentlemen:

We have your March 25 letter of inquiry. Under date of June 12, 1953, Mr. William Gallagher, along with other individuals and the Mines Prospecting & Exploration Co. (signatures of the company president and the secretary) executed an Owner's Consent to Lien in favor of the Government covering the following mining claims:

Echo
September
Scheelite
Tungstar
South Tarlach
R.R.W. Tarlach, as amended
Ridge Claim No. 2 (Uncle Jake)
Scotty Tom

Above claims were recorded in the Deer Lodge County Courthouse, Anaconda, Montana; book 23, pages 16-20-23-37-45-47-49-51.

This was in connection with an exploration project contract between the Sunshine Mining Company and the Government.

Sincerely yours,

W. R. Griswold
mm

W. R. Griswold, Chief
Division of Minerals

WRGriswold/mm
4/2/63
cc: Director's Reading File
Region I 2 w/2 copies of Form 63 and incoming letter
✓Docket

8623

CATERPILLAR®

WESTMONT TRACTOR CO.

P. O. BOX 1445 MISSOULA, MONTANA

March 25, 1963

OFFICIAL FILE COPY
O. M. E
RECEIVED MAR 28 1963

DATE		
3/28		800
		~~120~~
3/28		100
3/28		110
	Greenwood	500
		220

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

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

Gentlemen:

Reference is made to a letter dated March 15, of which one of the copies is attached for identification.

We have no record of having made any inquiry concerning the property referenced, nor do we have any recollection of having any interest in such a property.

We have, on occasions, in times past had transactions involving mortgages on mining properties and equipment, and possibly if you could provide us the names of the individuals involved in the application, we might then be able to identify the property to the extent of then being able to inform you concerning any continuing interest we may have, or the termination of any interest.

Yours very truly,

Earl R. Smith

Office Manager

Earl R. Smith
njs

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. 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

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 ☐

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

GENERAL SERVICES ADMINISTRATION

Seattle 4, Wash.

March 29, 1957

10CRE

Mr. Gunnar Johnson
Box 775
Anaconda, Montana

Docket DMEA-3098 (Tungsten)
(Sunshine Mng Co.)
Stevens County
Northport, Idaho Co., Idaho
Id No. E598

Dear Mr. Johnson:

Enclosed are three copies of your tungsten invoice covering Lot No. 1 as requested in your letter dated March 23, 1957.

It is suggested that if you expect to ship other lots from this mine you contact the Regional Director, Defense Materials Service, General Services Administration, Denver Federal Center, Denver, Colorado and advise him in advance of the DMEA loan. Future shipments will be handled through that office and he may wish to arrange for payment of the loan from amounts due from the ore.

Sincerely yours

C. E. NELSON
Chief, Examination Branch

Enclosures - 3

cc: Regional Director, DMS, GSA, Denver
AEWeissenborn, DMEA, Spokane
Official File - 10CRE

OFFICIAL FILE COPY
DMEA
RECEIVED APR 1 1957

DATE		CODE
4/15	C	220
4/16		800
		225

RECEIVED
APR 1 1957
U.S.G.S.
SPOKANE, WASH

Bureau of Mines
Proposed Publication —

"Tungsten Resources of Montana:
Philipsburg Batholith, Granite
& Deer Lodge Counties, Mont."

DMEA Projects —

Docket	Name	Contract Amount	Spent
1981	Black Pine, Anderson	$70,000.	$2,962
		Not certified	
1958	[illegible]	$12,287	$5,139
		Not certified	
3098	Sunshine Mng Co. Tarlach - Stamp Mills (Tungsten)	$61,355	$3,696
		certified	
4100	Tip Top Mining Tip Top Mines	$16,540	$9,942
		not certified	

No credit for DMEA work, no DMEA credit on maps or assays.
To be corrected —

J. P. Hoff
10/8/59

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 21 1957

DATE	INITIALS	CODE
3/22	C	220
3/22	[illegible]	800
		225

So. 157 Howard Street
Spokane 4, Washington

March 15, 1957

Mr. Gurmar Johnson
Box 775
Anaconda, Montana

Re: Docket No. ~~DMEA-3098 (Tungsten)~~
(Sunshine Mining Company)
Storm Lake Tungsten Property
Deer Lodge and Granite Counties,
Montana
Contract No. Idm-E598 (Terminated)

Dear Mr. Johnson:

This is in reply to your letter of March 7, 1957, regarding the payment of royalties due the Government from production on the above-referenced property. A certification of discovery or development was made by the Government on August 26, 1955.

Article 6, paragraphs (a), (b), (c) and (d), and Annex II (2) of the contract states that:

Annex II

" * * * (2) if the Government makes a certification of discovery or development, for a period of ten years from the date of the contract, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first. Said royalty shall be a percentage of the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production (including any bonuses), in whatever form disposed of, including ore, concentrates, or metal, as follows:

Article 6(a)

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

"(2) One and one-half ($1\frac{1}{2}$) percent of any such net amounts, plus one-half ($\frac{1}{2}$) percent of such net amounts for each additional full fifty cents ($0.50) by which such net amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such net amounts. (For instance: The percentage royalty on a net amount of five dollars ($5.00) per ton, would be one and one-half ($1\frac{1}{2}$) percent; on a net amount of ten dollars ($10.00) per ton, three and one-half ($3\frac{1}{2}$) percent.)

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

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

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

The date of the contract is September 14, 1953 and the amount on which royalty is due is $33,695.87, of which $162.93 has been paid, leaving a balance due the Government of $33,532.94.

Checks, accompanied by copies of the settlement statement signed by the buyer, should be made payable to the Defense Minerals Exploration Administration and should be mailed to:

A. E. Weissenborn, Executive Officer
Region I, Northwest District
Defense Minerals Exploration Administration
South 157 Howard Street
Spokane 4, Washington

Most Operators request the purchaser to deduct the royalty due the Government and send it, with a copy of the settlement sheet, to the above address.

By Field Team, Region I, NW Dist.

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wing G. Agnew, Member
U. S. Bureau of Mines

cc: DMEA (3)
USBM (2)
USBM (AD)
CPF

COPY COPY

Box 775
Anaconda, Mont.
March 7, 1957

A. E. Weissenborn
D.M.E.A. Field Team
S. 157 Howard St.
Spokane 3, Wash.

Dear Mr. Weissenborn:

I have gotten the returns on some tungsten concentrates from the Tarlach Group of claims, Storm Lake Creek area, T 4 N, R 13 W, Sec. 7.

This property had a gov't. loan when it was worked several years ago. Please advise the rate of payment, to whom paid, etc.

Thank you,

/s/ Gunnar Johnson

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 21 1957

DATE	INITIALS	CODE

RECEIVED
MAR 11 1957
U. S. G. S.
SPOKANE WASH

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

RECEIVED
MAY 8 - 1956

May 5, 1956

Memorandum

To: W. S. Martin, Chief, Iron and Ferroalloys Division-DMEA
Through: Chief, Branch of Ferrous Metals & Ferroalloys

From: R. W. Holliday, Commodity Specialist, Branch of Ferrous Metals & Ferroalloys

Subject: Certification of Discovery
Docket No. DMEA - 3098
Storm Lake Tungsten Property
Tarlach and Tungsten Claim Group
Deer Lodge and Granite Counties, Montana
Sunshine Mining Company
738 Peyton Building
Spokane 1, Washington

The final report of April, 1956 recommends no further Government participation. A certification of discovery has been issued to protect the Government's interest in the small amount of ore indicated by project work.

I concur in the action taken.

R W Holliday
R. W. Holliday

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

RECEIVED
APR 13 1956

April 12, 1956

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

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

Dear Mr. Selfridge:

Enclosed are four copies of a Field Team final report written by John D. Bardill, Metallurgist, Bureau of Mines, and James J. Quinlan, Geologist, Geological Survey, on this property.

The authors state that the property is believed to have been adequately prospected and that no further Government participation in exploration is recommended.

A certification of discovery has been issued to protect the Government's interest in the small amount of ore indicated by project work.

By Field Team, Region I, NW District

A. E. Weissenborn
A. E. Weissenborn, Executive Officer
U. S. Geological Survey

Wing G. Agnew
Wing G. Agnew, Member
U. S. Bureau of Mines

Enclosures
cc: USBM(2)
USGS(SRO)
Quinlan

Reviewed by
DMEA OPERATING COMMITTEE
4-20-56
(date)

DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

FIELD TEAM, REGION I
Northwest District

RECEIVED
APR 16 1956

FINAL REPORT

Contract Idm-E598

by

John D. Bardill
Metallurgist
U. S. Bureau of Mines

James J. Quinlan
Geologist
U. S. Geological Survey

SUNSHINE MINING COMPANY
738 Peyton Building
Spokane 1, Washington

Docket No.:	DMEA-3098
Commodity:	Tungsten
Contract date:	September 14, 1953
Completion date:	January 16, 1955

Reviewed by
DMEA OPERATING COMMITTEE
4-20-56
(date)

STORM LAKE TUNGSTEN PROPERTY
Tarlach and Tungstar Claim Group
Storm Lake Mining District
Deer Lodge and Granite Counties
Montana

Spokane, Washington

April 1956

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THE PROJECT	7
Exploitation Possibilities	8
Summary of Factual Data	9
Work	9
Discussion of Conclusions	11
ANNEX I - Diamond Drill Logs	i - x

ILLUSTRATIONS

Plate No. 1 - Surface and Claim Map

2 - Assay Plan Tarlach Group

3 - Longitudinal Assay Section, Upper August Workings

4 - Geology of August Shaft - Section East

5 - Geologic Map August 200 Level

6 - Assay Plan August 200 Level

FINAL REPORT

SUNSHINE MINING COMPANY
STORM LAKE TUNGSTEN PROPERTY
Tarlach and Tungstar Claim Group
Storm Lake Mining District
Deer Lodge and Granite Counties
Montana

Contract Idm-E598

* * * *

INTRODUCTION

This report describes an exploration project at the Storm Lake Tungsten prospect, Deer Lodge and Granite Counties, Montana. The project was conducted jointly by the Sunshine Mining Company and the Defense Minerals Exploration Administration.

Summary

The project was undertaken to explore for scheelite ore bodies along and in the immediate vicinity of the Tarlach fault. Project work included construction of approximately 4,300 feet of bulldozer road, 1,200 feet of bulldozer trenching, 1,001.6 feet of diamond drilling, 68 feet of long-hole drilling, sinking of the August shaft from a depth of 95 to 210 feet, and 524 feet of drifting and crosscutting on the 200 level from the August shaft. The total cost of the project was $44,927.80 of which the Government's share was 75 percent or $33,695.87.

Although a small amount of ore was found by project work, the over-all results were disappointing. In all, the company mined and milled from the project area 245 tons of ore averaging about 5 ounces of silver per ton and 0.5 percent tungsten trioxide. In addition to the ore mined and milled, reserves indicated as a result of project work amount to 1,425 tons of ore averaging 5 ounces of silver per ton and 0.5 percent tungsten trioxide. Approximately 200 tons of exploration rock, averaging about 0.2 percent tungsten trioxide is stockpiled on the surface near the August shaft.

210
95
115

Recommendations

The property is believed to have been adequately prospected, and no further Government participation in exploration is recommended.

A certification of discovery has been issued to protect the Government's interest in the small amount of ore indicated by project work.

LOCATION AND ACCESSIBILITY

The property is in the Storm Lake (Silver Hill unorganized) mining district and lies on the county boundary separating Deer Lodge and Granite Counties, Montana. Most of the property is within Deer Lodge County in secs. 7 and 8, T. 4 N., R. 13 W., M.P.M. Only about one-third of one claim lies within Granite County in sec. 12, T. 4 N., R. 14 W., M.P.M. (pl. 1).

The property is about 4 miles south of Silver Lake on the south side of U. S. Highway 10A, 17 miles west of Anaconda, Montana. The property is reached from the highway by following the Forest Service road up Storm Lake Creek. This road leaves the highway at the east end of Silver Lake, and it is about 6 miles from the highway to the property.

Altitude at the mine is about 7,500 feet in heavily wooded, rugged, mountainous country.

The winters are severe with sub-zero temperatures and heavy snowfalls making the property accessible from January to May only with the help of snow removal equipment. Summers are mild.

THE PROPERTY

The property consists of eight unpatented lode mining claims (pl. 1). The claims are recorded in the Deer Lodge County Courthouse at Anaconda, Montana, as follows:

Claim name	Book No.	Page No.
R. R. W. Tarlach, as amended	23	16
Ridge Claim No. 2 (Uncle Jake)	23	23
Scotty Tom	23	20
South Tarlach	23	37
September	23	45
Echo	23	47
Scheelite	23	49
Tungstar	23	51

Sunshine Mining Company leased the property from the following parties: Mines Prospecting and Exploration Company, Missoula, Montana, James H. and Marjorie H. Maguire, William E. and Regina Maguire, and John T. Maguire. James H. Maguire of Silverton, Idaho, is attorney-in-fact for the Maguires' interest. The Lease Agreement dated March 24, 1953, between the Sunshine Mining Company and the above-listed parties indicates that ~~William Gallagher of~~ Missoula, Montana, along with the Maguires, is part owner of the property and that the Mines Prospecting and Exploration Company interest is also that of a leaseholder. The Sunshine Mining Company relinquished its lease on the property shortly after the DMEA project work was completed.

Reportedly, the only production from the property prior to the contract was approximately 40 tons of silver ore which was shipped to a smelter about 1910.

Mine workings prior to the project consisted of the August shaft and several shallow prospect shafts which were inaccessible. The August shaft, inclined at about 70°, was 95 feet deep with drifts 60 feet to the northeast and 45 feet to the southwest at the 35-foot level, and a drift 15 feet to the northeast at the 50-foot level. Although the collar of the August shaft was caved prior to the project, access to the August workings could be gained through a raise to the surface near the end of the southwest drift on the 35-foot level.

There were no surface improvements.

GEOLOGY

The Storm Lake property is within the Philipsburg quadrangle. The geology of the quadrangle has been described by Emmons and Calkins (U. S. Geol. Survey Prof. Paper 78, 1913).

The geology of the Philipsburg quadrangle is complex, and many types of ore deposits are found within its boundaries. Much of the quadrangle is underlain by sedimentary rocks which range in age from Precambrian to Recent. A part of the area is underlain by granitic rocks which are believed to have been emplaced in Tertiary time.

The property is underlain principally by sedimentary rocks of the Cambrian Hasmark and Red Lion formations, the Silurian (?) Maywood formation and the Devonian Jefferson formation (pl. 1). These rocks are for the most part limy in character and consist of a series of limestones, dolomites, shales, and some sandstones. The sedimentary rocks for the most part strike northeast and dip 20°-75° NW. Much of the area in the immediate vicinity of the property is covered by glacial material. The main ore control fault, i.e., the Tarlach fault, passes under this glacial cover immediately southwest of the August working and on the Scotty Tom claim (pl. 1).

The Paleozoic sedimentary rocks in the area are cut by a number of diorite dikes. The geologic map of the quadrangle accompanying Professional Paper 78 shows that a small granodiorite pluton lies south of the property. This pluton is similar in composition and texture to the Philipsburg batholith. It is of interest to note that most of the known tungsten occurrences within the Philipsburg quadrangle are in sedimentary rocks near plutons similar in composition and texture to the Philipsburg batholith.

A small fault, locally known as the Tarlach fault, crosses the property. This fault strikes northeast and dips about 70° SE. and is shown on the quadrangle geologic map accompanying Professional Paper 78 and on plate 1 accompanying this report. Available information suggests that the magnitude of movement along this fault is 60 to 100 feet in a reverse direction. The fault is well-exposed in outcrop on the Tarlach claim, where its offset can be measured by the displacement of formation contacts. It is also evident in the August shaft workings, but here it is not possible to accurately measure its offset as limestones of the Jefferson formation are exposed on both sides of the fault. Because of overburden it is not possible to trace the fault from the Tarlach claim to the August shaft workings, a distance of approximately 2,500 feet. Undoubtedly, however, the fault exposed in the August shaft workings is a part of the same fault system, if not actually the same fault that is exposed on the Tarlach claim.

The known scheelite occurrences on the property are found along the Tarlach fault zone. The scheelite occurs along with tetrahedrite in quartz lenses along the fault and in small quartz veins which intersect the fault. (Concentrates also indicate the vein material contains some galena and sphalerite.) In a few places scheelite also occurs as fine, disseminated grains in limestone in the walls of the fault. The three principal areas of known scheelite occurrences are described in the paragraphs that follow.

Quartz vein material is found along the fault in the vicinity of the Tarlach shaft (pls. 1 and 2). Here, the fault is marked by the outcrop of a massive quartz vein. Within this area the wall rocks on both sides of the quartz vein are massive limestones of the Hasmark formation. On the northwest side of the fault, beds of the overlying Red Lion formation are evident immediately southwest of the vein outcrop. On the southeast side of the fault, however, the Hasmark-Red Lion contact is about 200 feet southwest of the outcrop. Samples taken along the vein outcrop are shown on plate 2. The samples include 14 channel samples taken at 13 places along the outcrop by the Operator, and two channel samples taken by a DMEA field representative. The weighted average of the Operator's samples along this section of the vein indicates an average width of 5.62 feet and an average grade of 0.283 percent tungsten trioxide.

Diamond drilling under the contract to test the vein below the Tarlach outcrop showed the vein to be little different at depth than indicated at the outcrop. Plate 1 accompanying this report shows the location of the five holes drilled to test this outcrop at depth, and the Operator's logs of these holes are contained in Annex I to this report. Although the vein structure encountered in all five holes showed some scheelite, only the vein encountered in DDH 4 showed enough scheelite to be of sufficient interest for the Operator to split the core and have it assayed. The vein encountered in this hole was 5.6 feet wide, and the assay showed 0.308 percent tungsten trioxide.

In the upper part of the August shaft workings, i.e., the workings above a depth of 100 feet, the Tarlach fault is also occupied by quartz vein material. In this part of the workings the vein varies in width from about 2.5 to 5 feet. Samples taken by the Operator and by the Mines Prospecting and Exploration Company in this area prior to the project showed erratic but interesting values (pl. 3). The Operator cut four samples in this area prior to the project; however, these samples appear to have been somewhat selective and range in value from 0.10 to 5.96 percent tungsten trioxide. The Mines Prospecting and Exploration Company cut 13 samples at approximately 10-foot intervals on the 35- and 50-foot levels. These samples ranged in value from 0.04 to 2.8 percent tungsten trioxide. An average of these 13 samples indicates an average vein width of 3.65 feet and an average grade of 0.82 percent tungsten trioxide.

The quartz vein material in the fault pinches out in the shaft at about the 100 level (pl. 4). Below this point the shaft was sunk in the footwall of the fault. At first this pinching out of the vein was believed to be due to post-mineral movement along a fault which cut the vein at a very small angle. Subsequent work on the 200 level suggests, however, that the "vein" actually consists of a number of lenslike quartz masses that lie along the fault (pl. 5).

On the 200 level it is also of interest to note that a diorite dike follows the fault for much of its length where exposed on the level.

Two small lenses of ore were found on the 200 level by DMEA work. One lens, in the northeast drift between survey stations 4 and 5, is about 50 feet long. A 60-foot raise and 35-foot winze driven on company account shows this ore lens to extend only about 25 feet above and about 15 to 25 feet below the level. The ore lens occurs within a 4- to 5-foot wide limonitic-stained shear zone. Most of the scheelite and tetrahedrite in this lens is in a quartz vein that ranges in width from about 12 to 22 inches. On the level this quartz vein follows the hanging wall of the shear zone, but in the raise it can be seen cutting the shear zone and then following for a short distance along the footwall of the shear before it dies out (see raise section, plate 5). A few feet above the point where this veinlet dies out

another quartz veinlet containing sparse amounts of scheelite begins along the hanging wall of the limonitic-stained shear. Grab samples (583 through 592 shown on plate 6) taken by the Operator from drift rounds within this lens and representing 142 tons of muck averaged 5.8 ounces of silver per ton and 0.56 percent tungsten trioxide. The Operator reports that grab samples of muck from the lower 25 feet of the raise and a small stope off the raise averaged about 0.8 percent tungsten trioxide. Additional samples which the Operator took from the raise and winze are shown on plate 6.

The second ore lens found by DMEA work on the 200 level is in the southwest drift heading about 20 feet south of the shaft. This lens occurs along a small subsidiary shear which intersects the Tarlach fault at a small angle (pl. 5). The subsidiary shear strikes S. 68° W. and generally dips steeply to the southeast, but at one point in the vicinity of the ore lens it reverses dip to about 50° NW. The shear along which the lens is found is strong and well-defined and is from 1 to 2 feet wide. Where first intersected in the southwest drift heading, the shear zone is almost entirely filled with quartz. However, work to the southwest along this structure, i.e., away from its intersection with the Tarlach fault, showed the quartz in the shear zone to narrow to a thin stringer, but the shear itself remained strong. Also the scheelite content of the vein decreased as the vein was followed to the southwest (pl. 6). The Operator stoped about 40 tons of ore from the small lens on this structure. Grab samples of the muck from this stope are reported to have averaged 0.7 percent tungsten trioxide.

In all, the Operator mined and milled about 243 tons of ore from the two ore lenses on the 200 level.

Although mine grab samples indicated the grade ranged from 0.56 to 0.8 percent tungsten trioxide, the calculated mill head assay is reported to have been only 0.50 percent tungsten trioxide.

Diamond and long-hole drilling to test the wall of the August workings and to guide exploration was done on company account. The locations of the drill holes completed are shown on plates 4, 5, and 6 accompanying this report, and the Operator's logs of the diamond drill holes are contained in Annex I of this report. In all, 11 long holes and eight diamond drill holes were completed. The long holes failed to find any other structures of interest. DDH's 1 and 2, drilled south from a point near the shaft on the 200 level, aided in finding the Tarlach fault structure on the 200 level. DDH 5 drilled on bearing N. 20° W. and at an angle of -30° from the 50-foot level near the shaft cut quartz vein material between 18.6 and 23.9 feet. The Operator never assayed this core but estimated the core from 21.2 and 23.9 feet would contain more than 1 percent tungsten trioxide. DDH 6, drilled from the same setup and on the same

setup and on the same bearing as DDH 5 but horizontally, failed to cut any structure similar to the one cut in DDH 5. The other diamond drill holes failed to show any structure of interest.

The Jefferson limestone, in the vicinity of the discovery cut on the Uncle Jake claim (pl. 1), contains crystals of disseminated scheelite for a distance of about 90 feet in the footwall of the Tarlach fault. Eight jackhammer holes were drilled under the contract to test this occurrence. The holes ranged in depth from 5 to 10 feet, and the total drilling amounted to 67.8 feet. Cuttings from the holes were preserved and lamped. In all, 14 samples were taken of which 10 contained sufficient scheelite for the Operator to have cuttings assayed. Assay results from these samples ranged from 0.05 to 0.288 percent tungsten trioxide indicating that this occurrence is of little economic importance.

THE PROJECT

The project was undertaken to explore for scheelite ore bodies along the Tarlach fault. Testing of this structure appeared justified considering the favorable showings in the August workings and the outcrop of the vein on the Tarlach claim.

Exploration was to be done in two stages. Stage I provided for bulldozing an access road to the mine, six bulldozer trenches to expose the vein, rehabilitating 95 feet of the August shaft, sinking the shaft an additional 105 feet to the 200 level and 10 feet below for a sump (total shaft sinking 115 feet), and 300 feet of drifting on the 200 level from the August shaft. Contingent on the results of Stage I, Stage II provided for an additional 300 feet of drifting on the August 200 level.

The contract was amended to substitute long-hole drilling for bulldozer trenches where bulldozing was impracticable. The contract was further amended to add Stages III and IV, thus increasing the nominal amount of the contract from $46,016.25 to $61,355.00. Stage III provided for five diamond drill holes, not to exceed a total of 1,000 feet, to prospect the quartz outcrop along the Tarlach fault on the Tarlach claim. Contingent upon the results of Stage III, Stage IV provided for an additional 1,500 feet of diamond drilling to test the fault in the same area.

The project was started in September 1953 and completed January 15, 1955. Approximately 4,300 feet of access road was bulldozed to the August mine (pl. 1). Six bulldozer trenches aggregating 1,200 linear feet were cut. While no ore was found by this trenching, it was an aid in tracing the Tarlach fault particularly on the Tarlach claims (pl. 1). Eight jackhammer holes were drilled in lieu of bulldozer trenching in the vicinity of the discovery cut on the Uncle Jake

claim. Holes ranged from 5 to 10 feet in depth. Five diamond drill holes were drilled to test the Tarlach fault below the outcrop on the Tarlach claim (pl. 1) under Stage III of the project, but the results were disappointing, and Stage IV diamond drilling was never undertaken.

The company constructed a 16- by 16-foot change house, an 18- by 40-foot shop with a 20- by 14-foot hoist-compressor house attached, and a 22-foot headframe was erected over the shaft.

The first 25 feet of the old 95-foot August shaft was recribbed, and the shaft was sunk 115 feet at an incline angle of 68° to a depth of 210 feet. Below a depth of 100 feet the shaft was sunk in the footwall of the Tarlach fault. A bulkhead was placed at the 200 level for a station platform. The shaft required only enough timber to support the bucket skids, pipes, and ladders.

On the 200 level the Operator completed 219 feet of drifting and crosscutting southwest of the shaft and 305 feet of drifting and crosscutting northeast of the shaft to test the Tarlach fault zone.

Eight diamond drill holes and 11 long holes were drilled on company account to guide exploration and prospect the walls of the August workings for other possible veins (pls. 3 and 6). Four of the diamond drill holes were drilled horizontally from the 200 level near the shaft, two from the 50-foot level near the shaft, and two from the 118-foot level of the shaft. The 11 long holes were drilled on the 200 level of the August workings.

Exploitation Possibilities

Two small ore lenses were indicated by project work on the 200 level. These lenses are described in the geologic section of this report. Assuming the ore lens in the northeast is 50 feet long, has a mining width of 5 feet, and extends an average of 25 feet above and below the 200-level sill, there remains approximately 840 tons of ore in this block after allowing for 200 tons that was mined.

Assuming the ore lens in the southwest heading is 50 feet long, has a mining width of 3 feet, and extends 25 feet above and below the 200-level sill, there remains approximately 585 tons of ore in this block after allowing for the 40 tons mined.

The ore for the mill tests from these two blocks averaged about 0.5 percent tungsten trioxide and 5 ounces of silver per ton, and this grade is assigned to the 1,425 tons of ore remaining in the two blocks.

Since these small reserves will not justify a mill nor are they high grade enough to ship, they are not considered of any economic consequence.

Two mill tests were made of 200 and 45 tons, respectively, in the quartz-flotation mill of the Contract Milling Company at Butte in December 1954. The larger of the two mill test lots contained better silver values than the smaller of the two lots.

The higher grade silver ore was ground and floated to recover a silver sulfide concentrate. Flotation tailings were sized. The fines were floated to recover a scheelite concentrate, and the coarse was tabled to recover a high-grade scheelite table concentrate.

The calculated head assay for the combined two tests was 0.50 percent tungsten trioxide and 5.15 ounces of silver per ton. The sulfide concentrate assayed 1.88 ounces of gold per ton, 314.6 ounces of silver per ton, 5.8 percent lead, 1.9 percent copper, and 5.3 percent zinc. The scheelite flotation concentrate assayed 13.2 percent tungsten trioxide and 44.9 ounces of silver per ton. The scheelite table concentrate assayed 1.2 ounces of gold per ton, 21.4 ounces of silver, and 50.7 percent tungsten trioxide. Over-all tungsten recovery was 89.8 percent. The scheelite concentrates were sold to Mineral Recovery and Engineering Company for upgradings.

Summary of Factual Data

Work

This project was conducted on an independent contract basis with fixed unit costs for each item of work.

The following are the costs for bulldozing roads and drill sites, shaft rehabilitation, shaft sinking, drifting, timbering, long-hole drilling, and diamond drilling:

Item	Total cost	Cost per foot
(1) Independent Short Form Contracts		
Bulldozing:		
Access roads, 4,300 feet, 64 hrs. @ $16/hr.	$ 1,024.00	$ 0.24
Trenching, 1,200 lineal feet, 148 hrs. @ $16/hr.	2,368.00	1.97
Cleaning and retimbering shaft:		
95 feet @ $34/ft.	3,230.00	34.00
Shaft sinking:		
115 feet @ $105/ft.	12,075.00	105.00
Drifting and trenching:		
Drifts, 524 ft. @ $37/ft. Timbering, 35 ft. @ $6/ft.	19,388.00) 210.00)	37.40
Long Hole Drilling:		
68 ft. @ $1.80/ft.	122.40	1.80
Diamond drilling:		
1,001.6 ft. @ $6.50/ft.	6,510.40	6.50
	$44,927.80	

Note: Costs are based on final Report of Review by a DMEA auditor.

The total approved cost of the project was $61,355.00; however, only $44,927.80 was expended of which the Government participated in the amount of $33,695.87.

Approximately 245 tons of ore were milled by the Contract Milling Company at North Butte from which $2,761.00 was recovered in

a scheelite concentrate and $321.62 from a sulfide concentrate. Royalties of $144.30 and $18.63 were paid the Government, respectively, from the sale of these concentrates.

The Government did not have an equity in any of the equipment used on the project.

Discussion of Conclusions

Heavy snows during the winter months slowed the work to a one-shift basis and made access to the mine difficult. Snow removal equipment was needed to keep the road open.

The work was done in a minerlike manner by a competent operator.

Project work is believed to have adequately tested the better scheelite showings on the property. Although a small amount of ore was indicated by project work, the over-all results were very disappointing. It is conceivable that further drifting along the Tarlach fault zone might find an ore body of interest to a small operator; however, the size of any ore body that might be expected is not commensurate with the risks involved, particularly considering the disappointing results of the DMEA project which tested the most promising showings on the property. For this reason further Government participation in exploration is not considered warranted.

Enclosures
cc: DMEA(4)✓
USBM(5)
USGS(SRO)
Docket
Quinlan

ANNEX I

Storm Lake Tungsten
Sunshine Mining Company
Granite and Deer Lodge Counties, Montana
Docket No. DMA 3099 (tungsten)
Contract No. Ida 5390
Copy of Company Diamond Drill Logs

RECEIVED
APR 16 1956

Core logged by J. W. Cole

Holes Drilled from Underground Stations in August Workings

Hole No. 1

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

Footage	Core recovered (ft.)	Description
0 - 4.0	3.8'	Ls., qtz stringers, 1/4" qtz stng. 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 sparse mineral, no scheelite.
15.9 - 18.2	2.3'	Hard blue qtz, sparse mineral
18.2 - 19.0	0.8'	Hard blue qtz, sparse 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 disc. 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. 0.5% 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 - 28.3	1.5	Light and dark banded ls.

Hole No. 3

Location: 200 level August shaft (3 feet southwest of shaft)
Bearing: S. 50° W. Angle Drilled: Horizontal
Depth: 71.3 Core size: 0 - 1.4 AX, 1.4 - 71.3 BX

Footage	Core recovered (ft.)	Description
0 - 1.4		
1.4 - 22.7	21.3	Brown to gray ls, some silicification
22.7 - 25.9	3.4	Qtz and ls, fine hematite crystals in ls
25.9 - 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 veins 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 (5 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 BX

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 (30 feet below collar)
Bearing: S. 20° W. Angle Drilled - 30°
Depth: 52.6 Core size: 0 - 0.7 AX, 0.7 - 52.6 BX

Footage	Core recovered	Description
0 - 0.7		
0.7 - 16.1	15.4	Ls, at 8.5 - 0.3' calcite strx. 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 - 23.0	1.8	Qtz - scheelite ore 21.2 to 23.9 (est + 1% WO_3)
23.0 - 50.0	25.0	Light brown ls, occasional qtz.
50.0 - 52.6	1.3	Broken brown ls, some silica.

Hole No. 6

Location: August shaft (50 feet below collar)
Bearing: N. 80° 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 - schelite ctg.
12.8 - 28.3	15.5	Ls, grey with light grey 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, grey broken gouge shreak at 45.6 - 6" vein 45° to core. Schelite and copper stain.
56.4 - 60.5	3.2	Ls, gouge at 58.5
60.5 - 61.5	1.0	Calcite cemented breccia vein 45° to 70° to core
61.5 - 63.0	1.5	Ls
63.0 - 63.6	0.6	Calcite vein with schelite, 50° to core probably on beds
63.6 - 64.1	0.5	Gouge gray to white ls.
64.1 - 71.2	6.3	Dark gray to brown ls, soft

Hole No. 7

Location: August shaft (115 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 disp. 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, schelite 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	1a.	

Holes Drilled from Surface Station on Tarlach Claim

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	Ax to Bx	0 - 58.8
	25.0 - 96.0		58.8 - 70.2
	96.0 - 115.0		70.2 - 90.0
	115.0 - 158.0		

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

DDH No. 5

Sunshine Mining Company Storm Lake Project

Depth 260.1
Start 11/2/54
Finish 11/15/54
Logged by: J. Cole

Bearing N. 20° W.
Angle drilled: -57°
Formation: Limestone and quartz
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	do.
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 Mineralization 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	do.
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	do.
201.5-207.0	5.5	5.3	97	do. 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'

DDH No. 5 Continued

Sunshine Mining Company Storm Lake Project

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	Banded weathered Ls 0.05' calcite with minor sch. at 1.0
241.4-243.7	2.3	0.25	10	Qtz with Sch. Est 1.0% WO_3
243.7-246.7	3.0	0.55	18	Qtz to 0.15' limonite st 1s 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% WO_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

x

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D. C.~~
1201 N. Division St.
Spokane 2, Washington
November 4, 1955

Mr. Gunnar Johnson
Box 775
Anaconda, Montana

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

Dear Mr. Johnson:

Expenditures at the Tarlach group of claims in the Storm Lake Creek area total $44,927.80 of which the Government reimbursed the Sunshine Mining Company, the Operator under the contract, in the amount of $33,695.87. The latter amount is repayable as royalty on production.

We regret that DMEA policy prevents us from supplying you with maps of the workings. However, with the permission of the owners we will permit you to examine the factual data in our file on the property.

Sincerely yours,

Wing G. Agnew, Chief
Spokane Field Office

cc: DMEA (2)
USGS (2)
SFO

RECEIVED
NOV 14 1955

Box 775

Anaconda, Montana

October 30, 1955

DMEA Field Team

1201 No. Division St.

Spokane 2, Washington

Dear Sir:

Please advise how much of a DMEA loan stands against Jim Maguire's claims located in the Storm Lake Creek area above Anaconda. The claims are as follows: Tarlach, South Tarlach, Scotty Tom and Uncle Jake.

The Sunshine Mining Co. had a loan on several claims in this area and the 4 above were in this property at the time. Some dozing and diamond drilling were done on them.

Any maps you have would be appreciated.

Thank you,

GUNNAR JOHNSON

RECEIVED
NOV 14 1955

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
SEP 20 1955

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

September 23, 1955

3098

Mr. Seymour Standish
Consulting Engineer
814 Forest Avenue
Evanston, Illinois

Dear Mr. Standish:

Thank you for your letter of September 20, 1955.

Government expenditure at the Tungstar exploration project totaled $33,695.85. A certification of discovery has been issued and royalty due the Government would total $33,695.85 pending final audit. Mines Prospecting and Exploration Company has a copy of the certification.

By Field Team, Region I, Northwest District

Verne C. Fryklund, Jr., Acting Executive Officer
United States Geological Survey

Stephen W. Zoldok, Acting Member
United States Bureau of Mines

[illegible] (2)
USBM (2)
[illegible]

Re: Docket No. [illegible]-3098 (tungsten)
Sunshine Mining Company
Tungstar Group (Tarlman Group)
Deer Lodge and Granite Counties, Montana
Contract No. [illegible]

Note: Report of Review 9/6/55 approved $33,695.87
Talbot

DAVIS 8-9983

SEYMOUR STANDISH
CONSULTING ENGINEER
814 FOREST AVENUE
EVANSTON, ILL.

Sept. 20, 1955

Mr. A. E. Weissenborn,
Executive Officer, DMEA,
So. 157 Howard St.,
Spokane 4, Washington.

RECEIVED
SEP 29 1955

Dear Sir,

On September 5, 1955, I made a lease-purchase contract with MINES PROSPECTING & EXPLORATION CO., a Montana Corporation, of Missoula, covering four lode mining claims, namely, Echo, Scheelite, Tungstar, and September, all duly recorded in Deer Lodge County Seat. As you are, of course, familiar with the details, I am writing to ask if you will let me know the amount of money advanced by DMEA to Sunshine Mining Co., who, I understand negotiated a mining loan on this property and did development work on it in the period 1954-1955, and subsequently returned it to the owners mentioned above? If it is not within your province to advance such information, will you kindly advise me the correct source of such information? You can readily understand that it is pertinent to our occupation and proposed development of that property.

I might add that we are entirely familiar with the loan provisions requiring an operator pay a royalty of not to exceed 5% on any ore mined thereafter, but we would like to know the total amount that we would be liable for during the 10 year period.

I might add that I have also taken a contract on the Atlantic Cable Quartz Lode mill, which we are planning to recondition and to adapt it for the processing of scheelite ore.

Thanking you for any aid you may give in this matter I am,

Yours very truly,

P.S. You may recall me more easily when I tell you that I am the Agent for the Rock Creek Mines Operation, who submitted a DMEA manganese application in Jun. 1954.

RECEIVED
SEP 21 1955

COPY OF A COPY

C

Wmalz)

SUNSHINE MINING CO.
738 Peyton Building
Spokane 1, Washington

RECEIVED
SEP - 3 1955

September 1, 1955

3098

Mr. Earl F. Elstone, President
Mines Prospecting & Exploration Co.
312 Radio Central Building
Missoula, Montana

Dear Mr. Elstone:

Enclosed herewith please find Verifax copies of letters from the DMEA at Washington, D. C.

One dated August 26, 1955 is a certification of a discovery under the exploration project contract.

The second letter, dated August 29, 1955, is a letter of transmittal; both letters are signed by C. O. Mittendorf, Administrator.

Mr. Weissenborn had been notified of the release of the claims to the owners; that takes care of the last paragraph of the letter of August 29, 1955.

Will you be good enough to acknowledge receipt of these copies.

Yours very truly,

SUNSHINE MINING COMPANY
Exploration Division

Rowland King
Chief Engineer

RK:DO
Encs. 2

c/c RDL
AE Weissenborn

RECEIVED
SEP 2 1955
U.S.G.S.
Spokane, Wash.

DOCKET
Surname:
Chapman
Kilsgaard
Holliday
Geehan
Selfridge

400

cc: Docket
Oper. Comm.
Code 400
Adm. Read. File
R. W. Geehan, USBM
Thor Kiilsgaard, USGS

cc: FT, Reg. I-Spokane
Robt. Holliday, USBM
Code 110 - Mr. Johnson
Code 800 - Mr. Chambers

AUG 29 1955

Mr. C. A. Fredell, Acting Director
Materials Division, Emergency Procurement Service
General Services Administration
Washington 25, D. C.

Re: Docket No. DMEA 3098 - Tungsten
Sunshine Mining Company
Tungstar Group (Tarlach Group)
Deer Lodge & Granite Counties, Montana
Contract No. Idm-E598

Dear Mr. Fredell:

Enclosed is a certification of discovery or development for the above-noted project.

Contract No. Idm-E598 was executed September 14, 1953. Expenditures up to $45,105.00 were authorized, of which the Government share at 75% was $33,828.75. By Amendment No. 2, executed September 22, 1954, the authorized expenditures were increased to $61,355.00, of which the Government share at 75% was $46,016.25. The project was terminated with an expenditure of $44,927.80, of which the Government share at 75% is $33,695.85, subject to final audit.

The object of the exploration program was to explore the extensions and occurrences of tungsten-bearing ores in a quartz vein or veins for additional reserves. The project necessitated building of a road, rehabilitation of shaft, and exploration by trenching, long hole drilling, shaft-sinking, drifting, and diamond drilling.

The contract and Amendments No. 1 and No. 2 authorized 250 hours of bulldozing for roads and trenching, rehabilitation of 95 feet of shaft, sinking shaft 115 feet, drifting 600 feet, long hole drilling 250 feet (in lieu of bulldozing trenches, Amendment No. 1), and diamond drilling 2,500 feet (Amendment No. 2). Of the above, 212 hours of bulldozing, rehabilitation of 95 feet of shaft, shaft-sinking 115 feet, drifting 524 feet, 68 feet of long hole drilling, and 1,001.6 feet of diamond drilling were completed. With the work approximately 70% complete, the main objectives of the contract had been reached and further work was not considered worthwhile.

It is estimated that about 1,425 tons of ore that will assay from 0.50 to 0.63% WO_3 are indicated by the exploration project.

Sincerely yours,

C. O. Mittendorf

Administrator

Enclosure

TLChapman/ls
8/12/55

DOCKET
Surname:

Chapman
Martin
Kiilsgaard
Holliday
Selfridge

100

AUG 29 1955

Mr. A. E. Weissenborn, Executive Officer
DMEA Field Team, Region I - Northwest District
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 3098 - Tungsten
Sunshine Mining Company
Storm Lake Tungsten Property
Deer Lodge & Granite Counties, Montana
Contract No. Idm-E598

Dear Mr. Weissenborn:

Reference is made to your letter of July 29, 1955, from which we note that the objectives of the above-noted contract have been accomplished. We conclude, therefore, that no formal termination is necessary now.

Consequently, we are issuing a Certification of Discovery or Development, and we are enclosing your copies of the certification and related letters.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (HB)

Enclosures

APPROVED:

/s/ Robert W. Geehan (HB)
Member, Bureau of Mines

/s/ N. E. Nelson (HB)
Member, Geological Survey

cc: DOCKET
FT, REG. I-SPOKANE
CODE 400 - Mr. Martin
CODE 800 - Mr. Chambers
CODE 110 - Mr. Johnson
OPERATING COMMITTEE
R. W. GEEHAN, USBM
ROBERT HOLLIDAY, USBM
THOR KIILSGAARD, USGS
ADM. READING FILE

TLChapman/
WSMartin / ls 8/9/55

R.G.S.

DOCKET
SURNAME

400 Chapman
Martin
Talbott
Holliday
Newcomb
Hedges
Kilgaard
Gerhan
Selfridge

AUG 29 1955

Sunshine Mining Company
736 Paxton Building
Spokane 1, Washington

Re: Docket No. DMEA 3096 - Tungsten
Tungster Group (Terlach Group)
Deer and Granite Counties, Montana
Contract No. Idm-E598

Gentlemen:

Transmitted herewith is a certification of discovery or development for Contract No. Idm-E598, on the Terlach Group, Deer Lodge and Granite Counties, Montana.

By the terms of the exploration project contract and of the certification, all production from the property from the date of the exploration project contract, September 14, 1953, is subject to the Government's percentage royalty as set forth in the contract until the sum of $33,695.85 is paid or until September 14, 1963, whichever occurs first. The sum of $33,695.85 is subject to final audit.

Payments should be made to Mr. A. E. Weissenborn, Executive Officer, DMEA Field Team, Region I, Northwest District, South 157 Howard Street, Spokane 4, Washington. Checks should be drawn to the Defense Minerals Exploration Administration. The purchaser should be advised to deduct the royalties from the amount due on each shipment and forward check to the Executive Officer.

Royalty payments to the Government should be accompanied by suitable evidence, such as copies of settlement sheets, showing quantity and grade of ore purchased, the name of purchaser, and the price and charges certified to be correct by the purchaser.

You are requested to notify Mr. Weissenborn of any changes in ownership or production rights that may have any effect on the Government's right to its percentage royalty. Also, if production ceases at any time for an extended period, please notify Mr. Weissenborn at 6-month intervals that no production has been made.

Sincerely yours,

C. O. Mittendorf

Administrator

Enclosure

cc to: Killgaard, USGS
Holliday, USBM

cc to: FT. REG. I-NW Dist.
Messrs. Johnson, Code 1BO
Chambers, Code 800
Hedges, USBM

cc to: Docket, Code 400
Adm. Reading File
Operating Comm.

TLChapman:fec 3-15-55

R.C.L.

DOCKET
SURNAME
400
Chapman
Kiilsgaard
Yopal
Selfridge

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

AUG 29 1955

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

Re: Docket No. DMEA 3098 - Tungsten
Sunshine Mining Company
Tungstar group (Tarlach group)
Deer Lodge and Granite Counties,
Montana
Contract No. Idm-E598

Gentlemen:

Transmitted herewith for your information is a copy of the certification of discovery or development issued as a result of the exploration program under the above-referenced contract. The property as set forth in the contract was leased to the Sunshine Mining Company by the Mines Prospecting and Exploration Company on March 24, 1953, and is the same property referred to in the Owners' Consents to Lien, executed by Mines Prospecting and Exploration Company, Earl F. Elstone, President, Herbert C. Fisher, Secretary, on June 12, 1953, and Sept. 28, 1954.

By the terms of the exploration project contract and of the certification, all production from the aforesaid lands from the date of the exploration project contract is subject to the Government's percentage royalty as set forth in the contract until the sum of $33,695.85 is paid or until September 14, 1963, whichever occurs first. This sum is subject to final audit.

Sincerely yours,

C. O. Mittendorf

Administrator

TLCHAPMAN:ls/foc
cc to: Docket
Code 110 - Mr. Johnson
Code 800 - Mr. Chambers
Code 400 - Mr. Martin
FT. REG. I - NW DIST.
Adm. Read. File
Operating Comm.
R. W. Geehan, USBM
Thor H. Kiilsgaard, USGS
Robert Holliday, USBM

8/23/55

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

Docket PLC

RECEIVED
AUG 29 1955

August 25, 1955

Mr. Rowland King, Chief Engineer
Sunshine Mining Company
738 Peyton Building
Spokane 1, Washington

Copy retained 400

Re: Docket No. DMEA-3098
(tungsten)
Tarlach Claims
Deer Lodge & Granite
Counties, Montana
Contract No. Idm-E-558

Dear Mr. King:

Thank you for your letter of August 18, 1955, transmitting to us five copies of your Final Report.

By Field Team, Region I, NW District

Wing G. Agnew, Acting Exec. Officer
U. S. Bureau of Mines

James J. Quinlan, Acting Member
U. S. Geological Survey

cc: DMEA (2)
USBM (2)
Quinlan

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

RECEIVED
AUG 29 1955

August 25, 1955

Mr. Rowland King, Chief Engineer
Sunshine Mining Company
738 Peyton Building
Spokane 1, Washington

Re: Docket No. DMEA-3058
(tungsten)
Tarlach Claims
Deer Lodge & Granite
Counties, Montana
Contract No. Idm-E-558

Dear Mr. King:

Thank you for the Final Report on the Tarlach project. Mr. Cole and Mr. Colson have submitted the report in excellent form and it is hereby accepted.

By Field Team, Region I, NW District

Wing G. Agnew, Acting Exec. Officer
U. S. Bureau of Mines

James J. Quinlan, Acting Member
U. S. Geological Survey

cc: DMEA (2)
USBM (2)
Quinlan

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

August 25, 1955

Memorandum

To: The Administrator, DMEA
Attention: Mr. T. L. Chapman

From: Acting Assistant Solicitor, Defense Minerals

Subject: Docket No. DMEA-3098, Sunshine Mining Company
Contract Idm-2598 (Tungsten)

Under date of August 24 Mr. Chapman submitted to me a certification in the above matter with accompanying correspondence. In his memorandum to me Mr. Chapman says:

> "It will be appreciated if you will review the docket and, if advisable, write a unilateral termination agreement to accompany the aforementioned certification."

In view of the status of the project as set forth in Mr. Chapman's memorandum, I believe that no termination notice need be given; but rather treat the contract as having been fully performed. This is reflected in the proposed letter from the Operating Committee to the Executive Officer in which it is stated:

> "We conclude, therefore, that no formal termination is necessary now."

I surnamed the proposed Certification of Discovery and Development on March 17.

J. L. Hofflund

J. L. Hofflund
Acting Assistant Solicitor
Defense Minerals

JLHofflund/emd
Copy to: DMEA Docket
Solicitor's Docket
W. S. Martin (2)
J. L. Hofflund
chron.

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

RECEIVED
AUG 29 1955

August 19, 1955
AUG 25 1955

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

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

Dear Mr. Selfridge:

Enclosed are three copies of the Operator's Final Report.

The report is well above average in quality.

By Field Team, Region I, NW District

Wing G. Agnew, Acting Exec. Officer
U. S. Bureau of Mines

James J. Quinlan, Acting Member
U. S. Geological Survey

Enclosures (3)

cc: USBM (2)
USBM (AD)
Quinlan

OPERATOR'S FINAL REPORT

AUGUST 1955

SUNSHINE MINING COMPANY
EXPLORATION DIVISION

RECEIVED
AUG 29 1955

STORM LAKE TUNGSTEN PROJECT

DEER LODGE COUNTY

MONTANA

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

By

John W. Cole and James B. Colson

August 1955

OPERATOR'S FINAL REPORT

SUNSHINE MINING COMPANY, EXPLORATION DIVISION

RECEIVED
AUG 29 1955

STORM LAKE TUNGSTEN PROJECT, DEER LODGE COUNTY, MONTANA

By John W. Cole /1 and James B. Colson /1

CONTENTS

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Water supply and power	1
Geology	1
Work accomplished	2
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Conclusion	4

Appendix I Units of work and costs under contract
Appendix II Drill hole logs

ILLUSTRATIONS

Fig.
1. Index and claim map
2. Surface geology
3. 200 level August shaft, drill holes and geology
4. 200 level August shaft, assay plan
5. Geologic section, August shaft
6. Longitudinal section, August workings
7. Contour map, Tarlach area, trenches and drill holes
8. Tarlach vein, outcrop, sampling
9. Drill hole, sections, Tarlach vein
10. Plan, long hole drilling, Uncle Jake claim
10A. Sections and assays, Uncle Jake claim

/1 Field engineer and chief geologist, respectively, Sunshine Mining Co.

SUMMARY

The Storm Lake group of claims was explored for scheelite ore during 1953-55 by the Sunshine Mining Company, operating under a Defense Minerals Exploration Administration contract. The property is located near Anaconda, Montana; it consists of six unpatented lode mining claims owned or under the control of Mines Prospecting and Exploration Company, Missoula, Montana. Scheelite bearing quartz-calcite veins are associated with a reverse fault that transects Cambrian to Devonian limestone beds. Work consisted of trenching and road building, sinking, drifting, raising and drilling to explore the veins.

INTRODUCTION

The work described herein was accomplished, in part, under a contract between the Defense Mineral's Exploration Administration (DMEA), acting as agent for the United States Government, and the Sunshine Mining Company. The contract provides for the reimbursement of the company by the Government of 75 per cent of the cost of certain specified exploration work. Quantities and cost of contract work are tabulated in Appendix I.

LOCATION AND ACCESSIBILITY

The property is situated six miles up Storm Lake Creek road from U. S. Highway 10A, at a point 17 miles west of Anaconda, Montana (Fig. 1). It is in Deer Lodge County, Section 7, T 4 N, R 13 W. Altitude at the mine is 7500 feet. The mine road is under the authority of the U. S. Forest Service. It is passable most of the year with the help of snow removal equipment from January to May.

PROPERTY AND OWNERSHIP

The mining property consists of six unpatented lode claims (Fig. 1) held by location and lease by Mines Prospecting and Exploration Company, Missoula, Montana, who leased it to Sunshine Mining Company.

WATER SUPPLY AND POWER

Storm Lake creek is one of the tributary streams that supply the Anaconda Company with water for the city of Anaconda and the company's copper smelter. The mine is one and one-quarter miles from the creek. Water was hauled by truck for the project work.

The nearest public power source is at Silver Lake, 5 airline miles from the mine.

GEOLOGY

Sedimentary rocks of the area consist of a series of conformable shales, quartzites, dolomites, and limestones ranging in age from

RECEIVED
AUG 29 1955

Algonkian to Jurasic. Diastrophism has folded the beds into north trending folds. On the Storm Lake property, the formations strike north 35-40 degrees east and dip 20-50 degrees west (Fig. 2). The sediments have been intruded by granite stocks and dikes of cretaceous age. Principle mineralization of base and precious metals as well as scheelite is found in the Hasmark and Jefferson formations, both of which consist principally of dolomitic limestone.

Scheelite mineralization is no doubt related to the granite intrusives, but is in veins and replacement bodies in the dolomite at various distances from granite contacts. Typical garnet tactite has developed in only a few places in the area. Wollastonite and chlorite has developed at many places in the beds particularly in the Hasmark formation.

The scheelite mineralization on the Storm Lake group is related to a reverse fault fracture that strikes N 50-70 degrees E, and dips 70 degrees south across the strike of the beds. The outcrop of the fault is obscure from the August shaft to the Jefferson-Maywood contact, but may be followed from this contact for 1500 feet where it is covered by detritus in Storm Lake Creek valley. From the horizontal displacement of the beds measured at the Hasmark-Red Lion contact, the fault has a vertical displacement of approximately 60 feet.

Scheelite mineralization with minor sulfides is found in quartz-calcite veins in the August workings along the fault and in branching fractures. The Tarlach vein is massive quartz-calcite with fine disseminated scheelite crystals. It occupies the fault for several hundred feet. Its maximum width is 11 feet.

WORK ACCOMPLISHED

Contract work was initiated in September 1953, with construction of one mile of road to the August shaft. Road work was followed by trenching of the outcrops..

Head frame, dry room, compressor house and shop, and hoist house were constructed of timber at the old August shaft which was 95 feet deep. The shaft was rehabilitated and sinking started in December 1953. The shaft was completed to depth of 210 feet in March 1954. Drifting was started immediately and continued until January 1955. A raise was driven 65 feet above the 200 level and a winze was sunk 35 feet below the raise. Eight core drill holes and 11 jackhammer holes were drilled from the August workings.

On the 200 level (Fig. 3) the fault is occupied by a diorite dike and by the quartz-calcite-scheelite vein. Scheelite bearing veins also occupy fractures that branch at acute angles from the fault.

Grab samples were taken from each car of broken rock from the exploration work (Figs. 4 & 6). The samples were tested by panning with the aid of the ultra-violet light. If appreciable quantities of scheelite were contained, sampled were analyzed.

The shaft entered the footwall of the fault (Fig. 5) shortly after sinking was started. It encountered silicified dolomite with occassional veinlets containing scheelite from that point to the bottom at 210 feet. Before drifting was started, holes 1 - 8 (Figs. 5 & 6) were core drilled to locate the vein on the 200 level and to prospect the walls above. Logs of these holes are given in Appendix II.

The Tarlach area (Fig. 7) was mapped and core drill holes planned to explore the vein. Since scheelite mineralization on the surface terminates at the west end at the Hasmark-Red Lion contact, it was assumed that an orebody might occur in the Hasmark dolomite under this contact which dips about 35 degrees west. Quartz with some scheelite was encountered in all five holes (Fig. 9). The best intersection was 5.6 feet of 0.30 per cent WO3 in hole 4. Logs of holes are given in Appendix II.

Scheelite in rather large crystals occurs in the Jefferson limestone in the footwall adjacent to the Tarlach fault, at a point near the discovery cut on the Uncle Jake claim. Apparently the mineralization is associated with quartz veinlets that follow the bedding. The beds strike N 35 degrees E and dip flatly west (Figs. 10 & 10A). Eight holes, ranging in depth from 5 to 9.8 feet, were drilled on 20 foot centers with a jackhammer. Cuttings were examined under ultra-violet light. Samples containing scheelite were assayed.

When ore was encountered on the 200 level, it appeared probable that it would extend to the upper levels and constitute a small reserve. Therefore, 244 dry tons of ore were hauled from the exploration work to a combination flotation-gravity mill in Butte and treated for recovery of a sulfide concentrate and the scheelite. Off grade scheelite flotation and table concentrates were sold to an upgrading plant. Final figures show 1.11 short tons of sulfide concentrate, containing 314.6 Oz. Ag, 1.88 Oz. Au, 5.8 % Pb and 1.9% Cu per ton, and 62.3 units of WO3 recovered.

RESULTS —

The raise from the 200 level entered sub-ore grade mineralization 15 feet above the drift sill. The winze from the same point ran out of ore immediately below the level. The drift followed the ore shoot for approximately 50 feet. As abandoned, no ore grade mineralization was left in any of the headings on the 200 level.

The Tarlach vein drill intersections show it to be approximately the same grade and width as the surface.

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CONCLUSION

The grade and quantity of ore in sight on the property is not sufficient to support a mining operation.

APPENDIX I

OPERATOR'S UNIT COST AND PROGRESS REPORT

Final Report Docket No. DMEA 3098 Contract No. Idm-E-598
Minerals Tungsten

Operation	Unit	Total Costs	Units	Unit Costs
Drifting	Ft.	19,598.00	524	37.40
Shaft sinking	Ft.	12,075.00	115	105.00
Shaft rehabilitating	Ft.	3,230.00	95	34.00
Drilling: Core	Ft.	6,510.40	1001.6	6.50
Longhole	Ft.	122.40	68.0	1.80
Bulldozing	Hr.	3,392.00	212.0	16.00
Total Distributed Costs		44,927.80		

Reimbursed by DMEA	$33,695.85
Repaid from production	162.93
Remainder	$33,532.92

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APPENDIX II

CORE DRILL LOGS

SUNSHINE MINING COMPANY - DIAMOND DRILL LOGS

STORM LAKE

D.D.H. No. 1 200 Level. S 80 E Bearing

Length 78.5 Coordinates: S. E.

Start 4-5-54 Angle Drilled Horizontal

Finish 4-7-54 Formation

Bits Used: Number Footage

	9227	46.1
Ax	9057	4.0

Shell No. 9225 74.5

Logged by JWC

Date: 4-7-54

Footage Int.	Footage Feet	Core Feet	Core %	Description
0-4.0	4.0	3.8	95	Ls, qtz stringers, ¼" stringer with sulfides and scheelite at 4.0'
4.0-8.8	4.8	4.8	100	Ls, qtz stringers
8.8-15.9	7.1	7.1	100	8.8-9.1 Ls, brownish, 9.1-10.3 - 1.2' white massive qtz. with scheelite ~~(Lamp est. 0.3-0.5% WO3)~~ 70 deg. to hole, 10.3-15.9 vuggy blue qtz, sparse mineral, no scheelite.
15.9-18.2	2.3	2.3	100	Hard blue quartz.
18.2-19.0	.8	.8	100	Do
19.0-37.0	18.0	18.0	100	Ls, massive, streaked light and dark gray bands up to 1/2" in thickness.
37.0-63.4	26.6	26.6	100	Streaked light and dark gray crystalline Ls.
63.4-78.5	15.0	15.0	100	Streaked light and dark gray to lavender ls. Dark streaks and somewhat siliceous. Minor disseminated pyrite.

SUNSH[illegible] MINING COMPANY - DIAMOND DRIL[illegible]GS
STORM LAKE

D.D.H. No. 2 200 Level. S 10 W Bearing

Depth 28.8 Coordinates: S. E.

Start 4-8-54 Angle Drilled Horizontal

Finish 4-8-54 Formation

Bits Used:	Number	Footage
Ax	9057	2.0
	9228	26.8

Shell No. 9225- 26.8'

Logged by JWC

Date: 4-9-54

Footage		Core		Description
Int	Feet	Feet	%	
0-10.8	10.8	10.8	100	Silicified Ls.
10.8-12.2	1.4	1.4	100	White Qtz -calcite vein with scheelite (~~Comp est less than 0.3 %~~)
12.2-22.3	10.1	10.1	100	Qtz vein, some calcite, bluish color sparse mineral.
22.3-24.4	2.1	2.1	100	~~Fine grained dark dike.~~
24.4-26.5	2.1	2.1	100	Blue qtz.
26.5-28.8	2.3	1.5	60	Light and dark gray banded ls.

SUNSHINE MINING COMPANY - DIAMOND DRILL LOGS
STROM LAKE

D.D.H. No. 3 2003 Level. H 20 N Bearing

Depth 71.3 Coordinates: S. E.

Start 2-9-54 Angle Drilled horizontal

Finish 4-12-54 Formation

Bits Used: Number Footage

Ax	9057	1.4'
	9227	8.7
	6476	16.2
	9623	28.3
	9629	16.4

Shell No. 9225 - 53.8' 9625-16.4G

Logged by JWC

Date: 4-12-54

Footage		Core		Description
Lat.	Feet	Feet	%	
0-1.4	1.4	1.4	100	
1.4-22.7	21.3	21.0	100	Brown to gray ls some silicification lighter streaks 60 deg to hole
22.7-26.9	4.2	3.4	80	Qtz and ls. Fine hematite crystals in ls.
26.9-28.8	1.9	1.9	100	Do
28.8-35.3	6.5	6.1	96	White to gray qtz and calcite. Cu stain last 4". FW 30 deg to hole.
35.3-37.4	2.1	2.0	99	Broken ls. minor Cu stain.
37.4-40.0	2.6	2.2	85	Broken ls and fault gouge.
40.0-49.7	9.7	9.7	100	Silicified ls
49.7-55.2	5.5	5.5	100	Banded ls 47 deg to hole
55.2-60.1	4.9	5.0	100	Silicified ls.
60.1-71.3	11.2	10.3	92	Ls darker bands 47 deg to hole

SUNSHINE MINING COMPANY - DIAMOND DRILL LOGS
STORY LOG

D.D.H. No. 4 Sft 80 Level. N 10 E Bearing

Depth 45.2 Coordinates: S. E.

Start 4-12-54 Angle Drilled horizontal

Finish 4-13-54 Formation

Bits Used:

	Number	Footage
Ar	9057	1.1
	9650	24.1
	6478	20.0

Shell No. 9625- 44.1

Logged by DMC

Date: 4-14-54

Footage Int.	Footage Foot	Core Foot	Core %	Description
0-1.1	1.1	1.1	100	
1.1-28.5	27.4	27.4	100	Lm
28.5-30.0	1.5	1.3	86	Hard, gray qtz
30.0-32.6	2.6	2.1	81	Rusty, vuggy qtz
32.6-44.0	12.4	11.6	95	Lm and qtz
44.0-45.2	0.4	.4	100	Fault gouge

SUNSHINE MINING COMPANY - DIAMOND DRILL LOGS
STORM LAKE

D.D.H. No. 5 50 Level. N 20 W Bearing

Depth 52.6 Coordinates: S. E.

Start 4-14-54 Angle Drilled -30 dor.

Finish 4-16-54 Formation

Bits Used:

Number	Footage
6475L	19.8
9632	32.1

Shell No. 9625 - 51.9

Logged by JWC

Date: 4-17-54

Footage Int.	Footage Feet	Core Feet	Core %	Description
0-0.7	0.7	0.7	100	
0.7-16.1	15.4	15.4	100	Lo. At 8.5'- 0.3' calcite with scheelite
~~16.1-18.1~~	~~1.0~~	~~1.8~~	~~80~~	~~Broken ls and qtz. qtz-scheelite ore~~
				18.6-19.1-- 0.5'
19.1-21.2	2.1	2.0	95	Rusty qtz, scheelite ore 20.9 -21.2.
21.2-24.0	2.8	1.8	64	qtz-scheelite ore 21.2-23.9 (lamp est. plus 1 % wos)
24.0-50.0	26.0	26.0	100	Light brown ls occassional qtz stringers
50.0-52.6	2.6	1.8	69	Broken brown ls. some silica

SUNSHINE MINING COMPANY - DIAMOND DRILLINGS
STORM LAKE

D.D.H. No. 6 50 Level. N 20 W Bearing

Depth 71.2 Coordinates: S. E.

Start 4-17-54 Angle Drilled Horizontal

Finish 4-20-54 Formation

Bits Used:

	Number	Footage
Ax	9057	1.5
	6476	3.1
	6477	25.1
	9632	41.5

Shell No. 9625- 69.7'

Logged by JWC

Date: 4-21-54

Footage Int.	Footage Feet	Core Feet	Core %	Description
0-1.5	1.5	1.5	100	
1.5-12.8	11.3	11.3	100	Silicified ls. 0.1' calcite-scheelite stringer at 11.5' 45 deg to hole
12.8-28.3	15.5	15.5	100	Gray ls with light gray to brown seams
28.3-29.3	1.0	1.0	100	Limonitic ls
29.3-36.5	7.2	6.2	86	Gray ls
36.5-42.5	6.0	4.8	80	Soft, broken, limonitic ls
42.5-56.4	13.9	11.0	79	Gray, broken ls, gouge streaks, ¼ inch veinat 45.6 45 deg to hole, scheelite and copper stains.
56.4-60.5	4.1	3.2	78	Ls gouge at 58.5.
60.5-61.5	1.0	1.0	100	Calcite cemented breccia vein 40 -70 deg to core.
61.5-63.0	1.5	1.5	100	Ls
63.0-63.6	0.6	0.6	100	Calcite vein with scheelite 50 deg to core. probably parallel to bedding.
63.6-64.1	0.5	0.5	100	Gougy, gray to white ls
64.1-71.2	7.1	6.3	89	Soft dark gray to brown ls.

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TOM LAKE PROJECT

Sunshine Mining Company - Diamond Drill Logs

D.D.H. No. 1 Jurich 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 schoolite 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.

[illegible]

Sunshine Mining Company - Diamond Drill Logs

D.D.H. [illegible]
Depth [illegible]

Inclinab [illegible] Bearing

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	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 schoolite crystal at 125.9
133.1-136.6	3.5	2.0	57.0--Altered ls and vein calcite, crystal schoolite at 134.8
136.6-144.0	3.2	5.3	64.7--Ls with Qtz stringers. Schoolite from 144.0-144.8. Est. 1.0% WO3
144.0-150.3	5.5	4.6	83.8--Ls with Qtz stringers. Crystals schoolite 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.

STORM LAKE PROJECT

Sunshine Mining Company - Diamond Drill Logs

D.D.H. No. 3 Inclinch 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: 10-25-54

Footage	Core Ft	Core %	Description
0-4.2	4.2		
4.2-140.0	135.8	78.0	57.9-----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 lo. Scheelite in stringers and spots Lamp est. less than 0.1%
164.2-169.3	5.1	1.8	35.0 Altered lo.
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
96.0-113.0
113.0-158.0

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 Inclinch 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 C.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.

Storm Lake Project

SUNSHINE MINING COMPANY--DIAMOND DRILL LOGS

D.D.H. No. 5
Depth--260.1
Start--11/2/54
Finish--11/15/54
Logged by--J.Cole

Tarlach Claim

N 20 W---Bearing

Angle drilled-- -57
Formation--Ls and Qtz
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'

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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.
249.8-254.6	4.8	2.9	60	0-2.6 Quartz (Best Sch 2.3-2.6, est. 0.5% WO3) 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

DOCKET
Surname: Chapman

400

August 24, 1955

MEMORANDUM

To: Acting Assistant Solicitor, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Termination and Certification
Docket No. DMEA 3098 - Tungsten
Sunshine Mining Company
Tarlach property
Deer Lodge and Granite Counties, Montana
Contract No. Idm-E598

Submitted herewith is a certification of discovery or development of the subject project. On June 7, 1955, the Sunshine Mining Company returned unsigned the mutual termination agreement which we submitted on March 30, 1955. It will be appreciated if you will review the docket and, if advisable, write a unilateral termination agreement to accompany the afore-mentioned certification.

It is considered that the objective of the project was reached, although 76 feet of drifting remains in Stage II, and Stage IV has not been approved or done.

As the Sunshine Mining Company stopped work and withdrew from the property in the first week of March 1955, we believe on the 6-month clause that the certification should be issued within that time.

Thos. L. Chapman, Acting Chief
Iron and Ferro-Alloys Division

Attachment

cc: Docket
Adm. Read. File

Code 400

TLChapman/ls

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

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AUG - 3 1955

July 29, 1955

Mr. W. S. Martin, Acting Chairman
DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Air Mail

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

Dear Mr. Martin:

In reply to your teletype, the Operator's objection to signing the termination agreement is not to certification or pseudo-certification of a discovery but to Clause b of Annex III of the Termination Agreement, which makes him responsible for royalty payments for a ten-year period even if he surrenders the lease. Sunshine has given up the lease.

Stages I and II drifting has found small pods of ore but in insufficient amounts to interest the Sunshine Mining Company. Seventy-six feet of drifting remains to be done, but the objective of Stage II exploration can be considered as having been accomplished. Stage III drilling on a different part of the property has also been completed, and both the Field Team and the Operator agree that the results do not warrant Stage IV, which is dependent on Field Team's approval. The objectives of the contract have thus in our opinion been accomplished, even though Stage IV was not done, and perhaps the contract could be considered completed without a termination agreement.

The possibility of recovering any significant amount of royalty appears quite remote in our opinion.

By Field Team, Region I, NW District

A. E. Weissenborn
A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wilg G. Agnew
Wilg G. Agnew, Member
U. S. Bureau of Mines

cc: USBM (2)
USBM (AD)
Quinlan

Interior Department
Defense Minerals Exploration
Administration

XXXXXXXXXXXXXXXXXXXXXXXX

14X4601 (01) Revolving Fund, Defense Production Act, Interior (Allocated Working Fund to the Office of the Secretary)

T E L E T Y P E

DOCKET
SURNAME
Rutledge
Martin
Hoffland
Johnson
Gibbon
Kildegaard
Mittendorf

JUL 29 1955

Mr. A. E. Weissenborn, Executive Officer
DMEA Field Team, Region I - Northwest District
South 157 Howard Street
Spokane 4, Washington

Reurlet June 16, Sunshine Mining Company, Docket DMEA 3098, Contract Idm-E598. We contemplate preparing mutual termination agreement omitting pseudo certification clause that operator found objectionable but including usual right to certify under contract clause. Please find out if operator would agree. After operator signs we plan to certify a discovery or development. Our files show operator discontinued work because results of Stage III were not sufficiently encouraging. Do you agree with Operator that Stage IV was not justified.

Chairman, Operating Committee

FEJOHNSON/WSMARTIN/fcd
7-28-55
cc to: Docket
Code 400
Adm. Read. File
Operating Comm.
FT. REG. I - NW DIST.
Robert Holliday, USBM
Thor H. Kiilsgaard, USGS

R.C.J.

DOCKET
Surname

Martin
Hoffland
Chapman
Kiilsgaard
Gehan

INTERIOR DEPT.

JUL 22 1955

SOLICITOR

Interior Department

Defense Minerals Exploration Administration
14X4401(01) Revolving Fund, Defense Production Act,
Interior (Allocated Working Fund to the Office of the Secretary)

T E L E T Y P E

Mr. A. E. Weissenborn, Executive Officer
DMEA Field Team, Region I - Northwest District
South 157 Howard Street
Spokane 4, Washington

Reurlet June 16, Sunshine Mining Company, Docket DMEA-3090, Contract Idm-E598. Inasmuch as Operator is unwilling to sign mutual termination agreement, please prepare customary unilateral termination.

W. S. Martin
ACTING Chairman, Operating Committee

Copy to:
Docket
Code 400
Oper. Comm.
Adm. Read. File
Thor Kiilsgaard, USGS
Robt. Holliday, USBM
FT, Reg. I-Spokane

WSMartin/ls
7/21/55

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

July 6, 1955

MEMORANDUM

To: Acting Assistant Solicitor, Defense Minerals

From: Iron and Ferro-Alloys Division, DMEA

Subject: Request for review of letter of June 7, 1955, from Sunshine Mining Company, taking exception to Termination Agreement
Docket No. DMEA-3098, Tungsten
Sunshine Mining Company
Tungstar group (Tarlach group)
Deer Lodge and Granite Counties, Montana
Contract No. Idm-E598

On March 30, 1955, a Termination Agreement, prepared in your office for the subject contract, was mailed to the Field Team, Region I, Northwest District, and in turn was mailed to the Sunshine Mining Company on April 12, 1955, for execution.

On June 7, 1955, the Sunshine Mining Company returned the Termination Agreement unsigned, with an accompanying letter advising their reasons for not signing.

It will be appreciated if you will review the attached docket and recommend action to us.

A Certification of Discovery or Development, prepared earlier than the Termination Agreement but not used, is included in the docket.

July 15 - Rec'd to Martin without reply per phone conversation

W S Martin
W. S. Martin, Chief
Iron and Ferro-Alloys Division

Attachment

RECEIVED
JUL 7 1955
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED
JUN 20 1955

June 16, 1955

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

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

Dear Mr. Selfridge:

Enclosed is the unsigned Termination Agreement (orig.&5) closing out the Tarlach contract. In an accompanying letter dated June 7, 1955, Mr. Rowland King, chief engineer of the Exploration Division of the Sunshine Mining Company, states his reasons why the company is unwilling to sign the Termination Agreement.

Please advise us what steps should now be taken.

By Field Team, Region I, NW District

A. E. Weissenborn

A. E. Weissenborn, Exec. Officer
(U. S. Geological Survey)

Wing G. Agnew

Wing G. Agnew, Member
(U. S. Bureau of Mines)

Enclosures
cc: USBM(2)
Quinlan

Sunshine Mining Company

Exploration Division

738 PEYTON BUILDING - RIVERSIDE 5396

SPOKANE 1, WASHINGTON

RECEIVED

JUN 20 1955

June 7, 1955

Messrs. A. E. Weissenborn, Exec. Officer and
Wing G. Agnew, Member
Field Team, Region I, Northwest District
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-3098
(tungsten)
Tarlach Claims
Deer Lodge and Granite
Counties, Montana
Contract No. Idm-E598

DMEA

Gentlemen:

Attached hereto please find the original and six copies of a termination agreement for the above captioned contract.

These copies have not been signed for Sunshine Mining Company as it is still not clear to us why Sunshine Mining Company should be held responsible for payment of royalty from any production on these claims for ten years, or until the amount paid by the DMEA on this account is fully repaid. The government has the Owner's Consent to Lien, and Sunshine Mining Company is releasing the claims to the original owners and has no further interest in them.

We can understand the need for protecting the U.S. Government's interest in the event that there should be some production from these claims within the time period set; however, the original owners, having signed the Consent to Lien, are aware of the conditions and it is our belief that they are the ones to look to for any future royalty payments.

Yours very truly,

SUNSHINE MINING COMPANY
Exploration Division

Rowland King

Rowland King
Chief Engineer

RK:DO
Encs.

Docket Co

TERMINATION AGREEMENT

It is agreed this 30th day of March, 1955, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Sunshine Mining Company, hereinafter called the "Operator," parties to that certain Exploration Project Contract Idm-E 598, Docket No. DMEA-3038, dated September 14, 1953, as amended, hereinafter called the "Contract," that:

1. Effective January 16, 1955, the Contract and all obligations of the parties thereunder, except as otherwise herein expressly provided, shall be and are hereby terminated.

2. The Government shall contribute only to the fixed unit costs of work performed prior to said effective date.

3. The Operator shall promptly perform all winding-up and settlement actions provided for in the Contract, including the rendering of the final report and final account.

4. Annex II attached to the Contract is deleted and Annex III attached hereto and made a part hereof is substituted for the provisions of Article 6 of the Contract form.

5. The total net amount contributed by the Government shall be repayable in the form of a percentage royalty on any minerals mined or produced from the land described in Article 2 of the Contract, in the manner and amount provided in Annex III to this agreement and for the period provided in paragraph b.(2) of said Annex III, a certification of discovery or development being hereby waived.

6. The Operator hereby releases and agrees to save the Government harmless from all claims or demands under or arising out of said Contract, except as otherwise provided in this termination agreement.

IN WITNESS WHEREOF, these parties have executed this agreement as of the day and year first above written.

THE UNITED STATES OF AMERICA

By C O Mettenbergs
Administrator, Defense Minerals
Exploration Administration

SUNSHINE MINING COMPANY

By _____

_____

Chapman
Martin
Talbert
Holliday
Selfridge

ANNEX XXI

The following provisions are in lieu of Article 6:

Repayment by Operator.--a. Certification.--If the Government considers that a discovery or development from which production may be made has resulted from the work, the Government, at any time not later than six months after the Operator has rendered the final report and final account, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

b. Royalty on production.--The Operator, as principal, if the Operator is the producer, or as surety, if the Operator is not the producer, shall pay to the Government a royalty on all minerals mined or produced from the land* as follows: (1) regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first; or (2) if the Government makes a certification of discovery or development, for a period of ten years from the date of the contract, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first.

c. Basis for computation.--The Government's royalty shall be a percentage of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrates, metal, or equivalent), at the point of delivery (the f.o.b. point); except, that charges of the buyer arising in the regular course of business, and shown as deductions on the buyer's settlement sheets, on account of the cost of treatment processes performed by the buyer, sampling and assaying to determine the value of the production sold, and freight paid by the buyer to a carrier (not the Operator), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. Any costs of treatment processes, sampling or assaying, or transportation, performed or paid by the

* The word "land" refers to that land described in Article 2 of the Contract.

Operator or by anyone other than the buyer, are not deductible in arriving at the "gross proceeds" as that term is here used. The term "treatment processes," as here used, means those processes (such as milling, concentrating, smelting, refining, or equivalent) applied to the raw ore or other production after it is extracted from the ground, to put it into a commercially marketable form; excluding fabricating or manufacturing.

d. Unsold production.--If any production (ore, concentrates, metal, or equivalent), after the lapse of six months from the date the ore was extracted from the ground, remains neither sold nor used by the Operator in integrated manufacturing or fabricating operations (for instance, if it is stockpiled), the Government, at its option, as long as it so remains, may require the computation and payment of its royalty on the value of such production in the form (ore, concentrates, metal, or equivalent) it is in when the Government elects to require computation and payment. If any production is used by the Operator in integrated manufacturing or fabricating operations before the Government makes its election, the Government's royalty on such production shall be computed on the value thereof in the form in which and at the time when it is so used. "Value" as here used means what is or would be gross income from mining operations for percentage depletion purposes in Federal income tax determination, or the market value, whichever is greater.

e. Percentages of royalty.--The percentages of the Government's royalty shall be as follows:

> One and one-half ($1\frac{1}{2}$) percent of amounts ("gross proceeds" or "value") not in excess of eight dollars ($8.00) per ton of production in the form in which sold, held, or used, plus one-half ($\frac{1}{2}$) percent for each additional full fifty cents ($0.50) by which such amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such amounts.
>
> (For instance: the royalty on an amount of five dollars ($5.00) per ton, would be one and one-half ($1\frac{1}{2}$) percent; on an amount of ten dollars ($10.00) per ton, three and one-half ($3\frac{1}{2}$) percent.)

f. Lien for payment.--To secure the payment of its percentage royalty, there is hereby granted to the Government a lien upon the land or the Operator's interest in the land and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

g. Notice to purchasers.--The Operator shall give notice of the Government's claim for royalty to any purchaser of the production, and shall authorize and direct such purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets. If the records of any production and sales or other disposition of production, whether the production is by the Operator or by others, are not made available to the Government, the amount of the royalty may be estimated by the Administrator, Defense Minerals Exploration Administration, or his successor, and his estimate thereof shall be final and binding upon the Operator.

h. No obligation to produce.--Nothing in this contract is to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations.

i. Government not obligated to buy.--Nothing in this contract shall be construed as imposing any obligation on the Government to purchase any minerals mined or produced from the land.

58694

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

[redacted]

[redacted]

[redacted]

Mr. [redacted] King, Field Engineer
[redacted] Mining Company
[redacted] Building
[redacted], Washington

Re: Contract No. [redacted] (Tungsten)
[redacted] Claims
[redacted] Lodge and [redacted] Counties,
[redacted]
Contract No. [redacted]

Dear Mr. King:

In a telephone conversation you requested clarification of the meaning of some terms of the Termination Agreement, dated March [redacted], [redacted], before signing this agreement. This request was referred to the Washington office of the DMEA. Briefly we have been advised as follows:

> "Article 7 of the contract form provides that the Operator shall not transfer the interest in the lease without preserving the Government's right to royalty and lien for payment thereof, and provides further that a surrender of the leasehold without consideration does not violate the prior provision."

> However, "Paragraph 4 of the Termination Agreement substitutes the royalty provisions in Article 6 of the contract form (as amended by Annex II attached to the contract). Paragraph 5 of the Termination Agreement provides that the requirement of a certification of discovery or development is waived, and that the total net amount of the Government's contribution under the contract is repayable by the Operator in the manner described in Annex III and for the period set forth in paragraph 4.(d) of Annex III (ten years or until repayment is fully made). As these provisions in the Termination Agreement constitute the latest agreement of the parties concerning royalty, they supersede any provisions of the contract form which may be in conflict."

Therefore, we are interested to inform you that the intent of the royalty provisions of the Termination Agreement is that you pay royalty on any production from the land until the Government

[redacted] respectfully request the account be reconstituted for a period of 30 years, regardless of whether or not you are in possession.

We hereby that this will clarify the wording of the Termination Agreement with respect to the payment of royalty.

[redacted]
[redacted]

[redacted]
[redacted]

[redacted]
[redacted]

cc: [redacted] (2)
[redacted] (AD)
[redacted] (2)
[redacted]

140

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

MAY - 9 1955

Martin
Hollwood
Chapman
Martin
Chamberlin
Johnson

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region I
Northwest District
So. 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-3098 (Tungsten)
Sunshine Mining Company
Deer Lodge and Granite Counties, Montana
Contract No. Idm-E598

Dear Mr. Weissenborn:

Your letter dated April 19 to the Operating Committee requested a clarification of the obligation of the Operator under the subject contract as amended by the Termination Agreement dated March 30, 1955, if the latter agreement has been executed by the Operator.

The contract was executed on Form MF-200A (February 1952). The Operator is a lessee, and the Owner's Consent to Lien on the form as revised July 1, 1954, was submitted to the Government in connection with Amendment No. 2.

Article 7 of the contract form provides that the Operator shall not transfer its interest in the lease without preserving the Government's right to royalty and lien for payment thereof, and provides further that a surrender of the leasehold without consideration does not violate the prior provision.

Paragraph 4 of the Termination Agreement substituted the royalty provisions in Annex III attached thereto for the royalty provisions of Article 6 of the contract form (as amended by Annex II attached to the contract). Paragraph 5 of the Termination Agreement provides that the requirement of a certification of discovery or development is waived, and that the total net amount of the Government's contribution under the contract is repayable by the Operator in the manner described in Annex III and for the period

R.C.S.

set forth in paragraph b.(2) of Annex III (ten years or until repayment is fully made). As these provisions in the Termination Agreement constitute the latest agreement of the parties concerning royalty, they supersede any provisions of the contract form which may be in conflict.

Therefore, the Operator should be advised that the intent of the royalty provisions of the Termination Agreement is that the Operator pay royalty on any production from the land until the Government is fully repaid the amount it contributed or for a period of ten years, regardless of whether the Operator is in possession. This arrangement carries out the understanding expressed in our exchange of teletypes, both dated March 22.

Moreover, as the Owner's Consent to Lien consents to any amendment of the contract, the agreement concerning payment of royalty regardless of certification is secured by the Owner's Consent to Lien.

Sincerely yours,

W. S. Martin
ACTING Chairman, Operating Committee (2/B)

Approved:

John E. Crawford (2/B)
Member, Bureau of Mines

/s/ R. D. Trace (2/B)
Member, Geological Survey

HCRubin/emd MAY 4 1955.
Copy to: DMEA Docket
Solicitor's Docket
Adm. R. File
Operating Committee
J. L. Hofflund
H. C. Rubin
W. S. Martin
R. Holliday, USBM
T. Kiilsgaard, USGS
chron.
pending

400

DOCKET
Surname:
Rutledge
Martin

April 26, 1955

MEMORANDUM

To: Acting Assistant Solicitor, Defense Minerals

From: Chief, Iron and Ferro-Alloys Division, DMEA

Subject: Preparation of reply to letter dated April 19, 1955, from Executive Officer, DMEA Field Team, Region I, Northwest District.
Docket No. DMEA 3098 - Tungsten
Sunshine Mining Company
Tungstar group (Tarlach group)
Deer Lodge and Granite Counties, Montana
Contract No. Idm-E598

Under date of April 19, 1955, the Executive Officer of Region I - Northwest District - has asked several questions concerning the abandonment clause contained in the proposed Termination Agreement.

It will be appreciated if you will prepare an appropriate reply.

W. S. Martin

W. S. Martin, Chief
Iron and Ferro-Alloys Division

cc: Docket
Adm. Read. File
Code 400

FARutledge/ls
4/26/55

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

Defense Minerals Administration
RECEIVED
APR 22 1955

April 19, 1955

Air Mail

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3098 (tungsten)
Sunshine Mining Company
Tarlach Claims
Deer Lodge & Granite Counties, Montana
Contract No. Idm-E598

Dear Mr. Selfridge:

Recently a question has been raised informally by the Sunshine Mining Company as to the meaning and intent of paragraph b of Annex III which is attached to the Termination Agreement and which replaces Annex II of the contract. This paragraph of Annex III states "The Operator, as principal, if the Operator is the producer, or as surety, if the Operator is not the producer, shall pay to the Government a royalty on all minerals mined or produced from the land* as follows: . . ." This provision is the same as article 8(b) of the new contract form.

The meaning of this is of interest to the Sunshine Mining Company because the company intends to surrender its lease on the Tarlach claims. According to one possible interpretation of this provision of Annex III, the Sunshine Mining Company would be liable for the payment of royalty to the Government from any ore that might be produced should the property, after it is returned by the owner, be worked by somebody else. This provision then would apparently be in conflict with article 7 of the original contract which provides, as we understand it, that the operator can drop these claims without being liable should he so desire and should there be no consideration running to him in so doing.

Another interpretation of this provision is that it is merely intended to make it clear to the Operator that should he retain the property but sublease it to someone else to operate, he is still responsible for royalty payments. He should, therefore, be sure the new Operator understands and accepts the fact that royalty is due the Government, else he may himself be stuck for it. We believe this obligation already exists but this would make it unequivocal.

As you can see the interpretation could make some difference as to whether a company gave up its lease or not. If the first interpretation is true, they would hesitate to abandon a property lest someone else take it over and operate it. If the operation were unwise and the production mined at a loss the company could still find itself liable for royalty payments and would have no recourse.

We have told the Sunshine Mining Company that we are not certain how article 6b of Annex III would be interpreted but would refer the matter to you. We would appreciate your advice as soon as possible.

By Field Team, Region I, NW District

A. E. Weissenborn, Executive Officer
U. S. Geological Survey

Wing G. Agnew, Member
U. S. Bureau of Mines

cc: USBM (2)
USBM(AD)
Quinlan

xxxxxxxxxxxxxxxxx
So. 157 Howard Street
Spokane 4, Washington

April 12, 1955

Mr. Rowland King, Field Engineer
Sunshine Mining Company
738 Peyton Building
Spokane 1, Washington

Re: Docket No. DMEA-3098 (tungsten)
Tarlach Claims
Deer Lodge and Granite Counties,
Montana
Contract No. Idm-8598

Dear Mr. King:

Enclosed are the original and six copies of an agreement, signed by the Administrator, terminating the captioned contract.

If the terms and conditions of the termination agreement are satisfactory to you please sign all copies, retain the one marked for the Operator and return the others to this office.

If any part of the agreement does not meet with your approval, please return all copies of the agreement to this office, together with proposed changes for consideration.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I
Northwest District

Enclosures

cc: DMEA (2)
USBM (2)
USBM(AD)
Quinlan

400

DOCKET
Surname:
Chapman
Martin
Talbot
Newcomb
Selfridge
Holliday

MAR 3 0 1955

Mr. A. E. Weissenborn, Executive Officer
DMEA Field Team, Region I-Northwest District
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 3098 - Tungsten
Sunshine Mining Company
Tungstar group (Tarlach group)
Deer Lodge and Granite Counties,
Montana
Contract No. Idm-K598

Dear Mr. Weissenborn:

Enclosed are the original and five copies of a proposed agreement terminating the above-referenced contract.

If the terms and conditions of the proposed termination agreement are satisfactory to you and the operator, all six copies should be signed and the usual distribution made.

If any part of the proposed agreement does not have either your approval or that of the operator and cannot be amended within your delegated authority, the original and all copies of the proposed agreement are to be returned to this office, together with the proposed changes for consideration.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GHS)

Enclosures

APPROVED:

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

E. L. Newcomb (GHS)
Member, Geological Survey

cc: Docket
FT, Reg. I - Spokane
Code 400
Adm. Read. File
Oper. Committee
Robt. Holliday, USBM
Thor Kiilsgaard, USGS

TLChapman/ls
3/29/55

R.C.L.

400

DOCKET
Surname:
Chapman
Martin

March 23, 1955

MEMORANDUM

To: Acting Assistant Solicitor, Defense Minerals

From: Iron and Ferro-Alloys Division, DMEA

Subject: Preparation of mutual termination agreement pseudo-certification
Docket No. DMEA 3098 - Tungsten
Sunshine Mining Company
Tungstar group (Tarlach group)
Deer Lodge and Granite Counties, Montana
Contract No. Idm-E598

Submitted herewith are teletype to Mr. A. E. Weissenborn and reply thereto, concerning a mutual termination agreement with royalty payable although no certification will be made.

It will be appreciated if you will prepare such an agreement in legally acceptable form.

W. S. Martin, Chief
Iron and Ferro-Alloys Division

Attachments

cc: Docket
Adm. Reading File
Code 400

TLChapman/WSMartin/ls

DOCKET

Chapman
Martin
Selfridge
Johnson
McHardy

Interior Department
Defense Minerals Exploration Administration
14X8401(01) Revolving Fund, Defense Production Act,
Interior (Allocated Working Fund to the Office of the Secretary)

MAR 22 1955

TELETYPE

A. E. Weissenborn, Executive Officer
DMEA Field Team, Region I - Northwest District
South 157 Howard Street
Spokane 4, Washington

Reurlet March 2, Docket DMEA 3098, Sunshine Mining Company, advising us Operator has indicated willingness to sign mutual termination agreement. Please confirm if Operator would accept such agreement if including clause requiring royalty payments although project would not be certified as discovery or development.

George C. Selfridge

Chairman, Operating Committee

CC: FT, REG. I - Spokane (Confirmation)

cc: Docket
Adm. Read. File
Oper. Committee
Code 400
T. Kiilsgaard, USGS
R. Holliday, USBM

GSMartin/ls 3/22/55

R.C.L.

AXXXXXXX-096K

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YWA201 WAF SP 37 I-GS-G

SPOKANE WASH 3-22-55 500P

GEORGE C. SELFRIDGE, CHAIRMAN

OPERATING COMMITTEE, DMEA

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 23 1955

DEPT. OF INTERIOR WA 25 DC

REURTEL MARCH 22, DOCKET NUMBER DMEA 3098, SUNSHINE MINING COMPANY. OPERATOR IS WILLING TO SIGN MUTUAL TERMINATION AGREEMENT REQUIRING ROYALTY PAYMENTS REGARDLESS OF CERTIFICATION. HAVE LEARNED THAT OPERATOR PLANS TO RELINQUISH LEASE AND RETURN PROPERTY TO OWNERS.

A E WEISSENBORN

EXECUTIVE OFFICER, DMEA FIELD TEAM, REGION 1, NORTHWEST DISTRICT

VA 502P

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

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

Re: Docket No. DMEA 3098 - Tungsten
Sunshine Mining Company
Tungstar group (Tarlach group)
Deer Lodge and Granite Counties,
Montana
Contract No. Idm-E598

Gentlemen:

Transmitted herewith for your information is a copy of the certification of discovery or development issued as a result of the exploration program under the above-referenced contract. The property as set forth in the contract was leased to the Sunshine Mining Company by the Mines Prospecting and Exploration Company on March 24, 1953, and is the same property referred to in the Owner's Consent to Lien, executed by Mines Prospecting and Exploration Company, Earl F. Elstone, President, Herbert C. Fisher, Secretary, on June 12, 1953, and July 1, 54

By the terms of the exploration project contract and of the certification, all production from the aforesaid lands from the date of the exploration project contract is subject to the Government's percentage royalty as set forth in the contract until the sum of $33,695.85 is paid or until September 14, 1963, whichever occurs first. This sum is subject to final audit.

Sincerely yours,

Administrator

Enclosure

2/25/55

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

March 2, 1955

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

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

Dear Mr. Selfridge:

Enclosed are four copies of a memorandum report by J. J. Quinlan and Don Kellum, geologists, Geological Survey, recommending that the captioned contract be terminated and that provision be made to protect the Government's royalty rights in production from the property.

Work on the Storm Lake project has been carried to a logical conclusion, although some drifting and diamond drilling footages remain in the contract. For this reason we are requesting permission to terminate the contract by agreement with the operator, as he has indicated a willingness to sign such an agreement.

Although two small ore lenses have been found by work under the project (Quinlan estimates the reserves remaining in these lenses at 1,425 tons), it is obvious that work has not resulted in a significant discovery; therefore, we do not believe that formal certification need be made, but we do believe that provision should be made in the termination agreement to protect the Government's royalty rights in any production from the property regardless of certification.

If you concur, please advise us immediately so that we can terminate the contract.

By Field Team, Region I, NW District

A. E. Weissenborn

A. E. Weissenborn, Executive Officer
U. S. Geological Survey

Wing G. Agnew

Wing G. Agnew, Member
U. S. Bureau of Mines

Attachment
cc: USBM (2)
USBM(AD)
Quinlan

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

February 18, 1955

Memorandum

To: DMEA Field Team, Region I, Northwest District

From: J. J. Quinlan and Don Kellum, Geologists, U. S. Geological Survey

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

The Storm Lake Tungsten property was inspected January 31, 1955, in company with Mr. John W. Cole, superintendent of the operation.

Since work was resumed in the southwest drift heading, this heading has been advanced 108.5 feet (see attached map). Thus, approximately 510 of 600 feet of drifting provided for in the contract has been used.

The new work in the southwest drift heading includes 38.5 feet of crosscutting and 70 feet of drifting along the main strand of the fault structure exposed on the 200 level of the August shaft. The fault strikes N. 51° W. and dips 60° to 70° SE. in this new section of drift. A narrow diorite (?) dike, 1 to 2 feet wide, occurs along the fault in this area. The limestone wall rock along the footwall of the dike is well bleached and altered for about 1.0 to 1.5 feet from the wall of the dike. Only a few scattered grains of scheelite were seen along this section of drift; however, for the record a sample was cut across the dike and associated bleached zone at the face of the southwest drift. This sample, 1.6 feet wide, assayed 0.10 ounce gold per ton and no tungsten trioxide. The operator stopped work in the heading on January 15, when he believed that an adequate amount of work had been completed.

It was suggested to Mr. Cole that before pulling out of the southwest drift heading it would be well to drill one long hole to the northwest in order to test the subsidiary vein structure which originally was followed by the southwest drift (see attached map). Mr. Cole agreed that the hole should be drilled and that the company would drill it on their own account. Since the inspection we have learned that this proposed hole has been drilled and no ore was found; thus exploration in this heading has been carried to a logical conclusion.

Completion of work in the southwest drift heading brings all DMEA work to a logical conclusion. As some unused contract funds remain, it is recommended that action be initiated to terminate the contract. Mr. King, field engineer for the company, stated that the company would be willing to sign a mutual termination agreement.

In addition to the DMEA work completed, the operator has advanced the company raise on the ore lens in the northeast drift heading to a point 43 feet above the sill. The raise was started with three compartments, but the northeast compartment was discontinued at a point 24 feet above the sill, and above this point only two compartments have been driven. The vein-fault structure exposed in the raise is from 4½ to 5 feet wide. The good quartz vein exposed on the level and in the lower 20 to 25 feet of the raise is not present near the top. Instead, the structure consists of a shear zone laced with thin quartz stringers and heavily stained with limonite. Mr. Cole reported that the muck from the upper 20 feet of the raise has averaged about 0.3 percent tungsten trioxide. It had been reported that the muck from the lower part of the raise and adjacent stope averaged about 0.8 percent tungsten trioxide.

At the time of the inspection Mr. Cole inquired as to whether or not the Government would consider sinking a 25-foot winze on the high-grade tungsten lens on which the company is now raising. He was informed that the inspectors did not think the Government would be interested in such a program but that we would discuss it with other members of the Field Team. When discussed by Field Team personnel it was the concensus of opinion that the proposed sinking would accomplish little as far as over-all project objectives were concerned, and for that matter a winze on the small ore lens should be considered more as development than as exploration. Mr. King was recently advised during a phone conversation that the Government would not consider participating in sinking a winze on the ore lens. The company, therefore, plans to sink the winze a short distance on their own account.

During December the Contract Milling Company of Butte, Montana, milled 245 tons of ore from the Storm Lake property. According to mill head assays, the grade of this ore was 5.15 ounces silver per ton and 0.50 percent tungsten trioxide. This reported grade is somewhat lower than the average indicated by company grab samples taken at the time the ore was stockpiled. According to original stockpile data ore which made up the mill run was from several sources. The tonnages and grades as originally reported from these sources are tabulated below.

Source	Tons	Ag (ozs)	WO_3
Drift muck from ore lens in northeast drift	150	5.8	0.56
Raise and stope muck from ore lens in northeast drift	50	-	0.8
Muck from small stope southwest of shaft (see attached map)	40	-	0.7

Although the project has not resulted in a significant discovery some production has been made from two small ore lenses discovered by project work and it is likely that additional ore will be mined. Therefore, it is recommended that the project be certified as a discovery, or a pseudo-certification be made a part of a mutual termination agreement in order to protect the Government's interest in production. Of the two types of certification, it is believed that a pseudo-certification would be most appropriate as the project has not resulted in a significant discovery.

For the purposes of certification the following indicated reserves have been calculated:

Block 1

Location: 200 level northeast drift from point 20 feet northeast of Survey Station No. 4 to point 70 feet northeast of Survey Station No. 4.

Assumed length: 50 feet

Assumed vertical limit: 25 feet above and below sill; total 50 feet

Assumed width: 5 feet

Factor: 12 cubic feet of ore per ton

Block contains: 1,040 tons

Reported mined: 200 tons

Tons remaining: 840 tons

Block 2

Location: 200 level southwest drift from point on subsidiary vein 12 feet southwest of Survey Station No. 2 to vein intersection with main fault near Survey Station No. 3 in northeast drift.

Assumed length: 50 feet

Assumed vertical limit: 50 feet

Assumed width: 3 feet

Factor: 12 cubic feet of ore per ton

Block contains: 625 tons

Reported mined: 40 tons

Tons remaining: 585 tons

As there appears to be some discrepancy between the mill head sample data and that of the original grab sample data it is difficult to assign a grade to the above reserve. On the basis of present information, however, it would be safe to assign a grade equal to that of the mill head sample data as it is the lower of the grades reported. On the basis of this data the ore reserve could be assigned a grade of 5 ounces silver per ton and 0.5 percent tungsten trioxide.

In conclusion, it is recommended that action be initiated to terminate the contract by mutual agreement. It is also recommended that provision be made to protect the Government's royalty rights in production from the property, preferably by pseudo-certification as a part of the termination agreement, or if this is not applicable by standard certification as provided for in the contract.

Attachment
Distribution:
DMEA (orig. & 3)
USBM (2)
USBM(AD)
Docket
Quinlan

400

Excerpt from "The Mining Record -- Thursday, January 27, 1955"

Page 8, column 2.

3098

TUNGSTEN MINING IN WASHINGTON IS GETTING MORE ORE

Spokane, Wash.--Although data on tungsten production as yet are not available, reports of operations in the state during the year indicated some increase in activity, and it was expected that output would be somewhat in excess of the quantity produced in 1953. At the Germania Consolidated Mines, Inc., property in Stevens County, H. W. Traver and Henry Ewing stepped up output of tungsten concentrates from an area which included the Keith, Norton, and Seidlitz mines.

Concentrates produced at the property were shipped to the Big It mill near Pinehurst, Idaho, for further upgrading before sale to the government. At the nearby Germania mine, Pentiston Tungsten Mines, Inc., which obtained the property under a lease and purchase option in the latter part of 1953, began operations in the spring. The Germania mine, once the nation's leading source of tungsten, was discovered in 1894.

Further work which included mill improvements and additional exploration was undertaken by Big Q Tungsten Mine, Inc., at its property in Stevens County, and in the same area Sunshine Mining Co. continued exploratory work at its Little King prospect. Operations were resumed after a winter shutdown by Border Lord Mining Corp. at its property located in an isolated section of Okanogan county near the Canadian border. Paul Floyd and Frank Birch began development of the Addy Mining Co. property in Stevens county under a lease and purchase option agreement reached late in the year. Tungsten concentrates produced as a by-product of its copper output by Kromona Mines Corp. were stockpiled pending a decision to install additional concentrating equipment. The Kromona property is located in the Sultan mining district of Snohomish country.

Copied from The Mining Record - Thursday, December 30, 1954

SUNSHINE MINING HAS TUNGSTEN ORE IN MONTANA GROUP

Butte, Mont---Sunshine Mining Co. of Kellogg, Idaho, developing a tungsten property at Storm Lake, south of Silver Lake, Deer Lodge county, has made a trial shipment of ore to the Contract Milling Co.'s concentrator near Butte, Sunshine has deepened the old shaft by about 100 feet, and on the 200-foot level about 500 feet of drifting has been done as well as some diamond drilling.

xxxxxxxxxxxxxxxx
So. 157 Howard Street
Spokane 4, Washington

November 12, 1954

Mr. Rowland King, Field Engineer
Sunshine Mining Company
Peyton Building
721 West Riverside
Spokane, Washington

Re: Docket No. DMEA-3098 (tungsten)
Storm Lake Tungsten Property
Deer Lodge and Granite Counties, Montana
Contract No. Idm-2598

Dear Mr. King:

This will confirm an oral agreement reached between you and Mr. Quinlan of this office on November 1, 1954, regarding drilling of the fifth diamond drill hole under Stage III of the captioned contract. This hole shall be drilled approximately 100 feet southeast of hole No. 4 on bearing approximately N. 20° W., and at an inclination of approximately minus 45 degrees.

By Field Team, Region II

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wing G. Agnew, Member
U. S. Bureau of Mines

cc: DMEA (2)
USBM (2)
USBM (AD)
Quinlan

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

Defense Minerals Administration
RECEIVED
NOV 8 1954

November 4, 1954

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

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

Dear Mr. Selfridge:

Enclosed are the original and two signed copies of Amendment No. 2 to the captioned contract, to which we have attached the new Owner's Consent to Lien from.

Distribution of this amendment is being made in the usual manner.

Sincerely,

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

Enclosure

cc: Finance Office w/encl.
USBM (2)
Quinlan

OCT 1 1954

xxxxxxxxxxxxxxxxxx
So. 157 Howard Street
Spokane 4, Washington

September 27, 1954

Mr. Earl F. Elstone
219 Radio Central Building
Missoula, Montana

Re: Docket No. DMEA-3098 (tungsten)
Sunshine Mining Company
Tungstar Group (Yurlock Group)
Deer Lodge and Granite Counties, Montana
Contract No. Ida-2598

Dear Mr. Elstone:

Copies of proposed Amendment No. 2 to the cited contract have been received at this office. However, before we can send them out for signature, it is necessary that we obtain a new Owner's Consent to Lien.

Enclosed are seven copies of this form for signatures of the owners. I understand that Mr. Rowland King, field engineer for Sunshine Mining Company, contacted you by telephone with regard to the completion of these forms. It would be appreciated if you would return the completed forms to this office as soon as possible so that Amendment No. 2 can be put into effect.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

Enclosures

cc: DMEA (2)
USBM (2)
Quinlan

400

DOCKET
SURNAME
Rutledge
Martin
Talbott
Geehan
Selfridge
J. E. Clemons

SEP 23 1954

Mr. A. E. Weissenborn, Executive Officer
DMEA Field Team, Region II
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 3098 - Tungsten
Sunshine Mining Company
Tungstar Group (Tarlach Group)
Deer Lodge and Granite Counties, Mont.
Contract No. Idm-3598

Dear Mr. Weissenborn:

Enclosed are the original and five copies of proposed Amendment No. 2 to the subject contract signed by the Administrator for the Government.

If the terms and conditions of this proposed amendment are satisfactory to you and the Operator, all six copies should be signed and the usual distribution made.

If any part of this proposed amendment does not have either your approval or that of the Operator and cannot be amended within your delegated authority, the original and all copies of the proposed amendment are to be returned to this office, together with the proposed changes for consideration.

Sincerely yours,

George C. Selfridge (by ESF)
Chairman, Operating Committee

Enclosures

FARutledge:foc 9-17-54
cc to: Docket
Code 400
Adm. Reading File
Operating Comm.
FT. REG. II
R. W. Geehan, USBM
T. H. Kiilsgaard, USGS

APPROVED:

J. E. Hedges

Member, Bureau of Mines

Thor H. Kiilsgaard

Member, Geological Survey

P. S. Please do not give the proposed amendment to the Operator until he provides you with Owner's Consent to Lien on our form of July 1, 1954.

R.G.S.

DMEA Docket copy

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

September 22, 1954

Memorandum

To: The Administrator, DMEA
Through: Mr. G. C. Selfridge

From: Acting Assistant Solicitor, Defense Minerals

Subject: Sunshine Mining Company, Docket No. DMEA-3098
Contract Idm-E598

On September 15 I indicated by my surname my approval of Amendment No. 2 to the subject contract. This had been prepared by Mr. Rubin, and I surnamed it in his absence. No doubt Mr. Rubin would have called attention to the fact that Amendment No. 2 increases the amount of the work to be performed, increases the estimated cost, and increases the period fixed for the payment of royalties. The Owner's Consent to Lien is on an old form and does not permit such changes in the contract. In these circumstances, if the Government deems the Owner's Consent to Lien to be of importance, a new Consent should be executed on the current form to cover Amendment No. 2.

Mr. Selfridge called my attention to the desirability of procuring a new Owner's Consent to Lien.

J. L. Hofflund

J. L. Hofflund
Acting Assistant Solicitor
Defense Minerals

JLHofflund/emd

Copy to: DMEA Docket
Solicitor's Docket
W. E. Martinald (2)
G. C. Selfridge
H. C. Rubin
J. L. Hofflund
chron.

DOCKET
Surname:
Rutledge
Martin

September 1, 1954

MEMORANDUM

To: Acting Assistant Solicitor, Defense Minerals

From: Chief, Iron and Ferro-Alloys Division, DMEA

Subject: Review and preparation of Amendment No. 2
to Contract No. Idm-E598
Docket No. DMEA 3098 - Tungsten
Sunshine Mining Company
Tungstar Group (Tarlach Group)
Deer Lodge and Granite Counties, Montana
Contract No. Idm-E598

Transmitted herewith is the rough draft of a proposed amendment to the subject contract.

Copies of the map referred to in the proposed amendment are enclosed for attachment thereto.

W. S. Martin, Chief
Iron and Ferro-Alloys Division

Attachment

cc: Docket
Code 400
Adm. Reading File

FARutledge/ls

Docket

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

August 31, 1954

Re: DMEA-3098
Storm Lake Property
Deer Lodge & Granite
Counties, Montana
Proposed Amendment -
$16,500 - Tungsten

Memorandum

To: W. S. Martin
Defense Minerals Exploration Administration

From: E. L. Newcomb
U. S. Geological Survey

WSM

Subject: Concurrence with Field Team's two-stage project

The applicant requests his contract be amended to allow exploration of a tungsten vein on the Tarlach claim. The proposed work is about 3,000 feet northeast of the DMEA underground exploration at the August shaft. Surface evidence on the Tarlach claim indicates or suggests that the strike, dip and movement on the fault in the August shaft is the same or similar to the Tarlach fault.

The applicant proposes 4 holes be drilled to an aggregate total length of 1,000 feet. If this work gives favorable results, a second stage consisting of 1500 feet of drilling would be used to further delineate the tungsten mineralization.

The Field Team recommends five holes be drilled along the strike of the Tarlach vein. This drilling is planned to test for mineralization downdip, the rake of a possible ore shoot, and the possible control of mineralization by bedding in the upper Hasmark limestone formation. If the results from these 5 holes (1,000 feet of drilling) are promising, a second stage of drilling (1500 feet) would be carried out.

Sampling by the operator and two check samples by the Field Team indicates only a limited part of the vein is of ore grade. However, the average width of the vein and the persistence of tungsten mineralization along the exposed strike length strongly favors the proposed exploration on the Tarlach claim.

I recommend the Field Team's proposed 2-stage project be approved for a contract. The Field Team should be instructed to closely follow the progress of the work as the location of succeeding holes may need to be changed. The second stage (1,500 feet of drilling) should be allowed only after results of stage I have been carefully reviewed by the Field Team.

E. L. Newcomb

E. L. Newcomb

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

RECEIVED
SEP - 2 1954

August 30, 1954

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3098 (tungsten)
Sunshine Mining Company
Storm Lake Tungsten property
Deer Lodge and Granite Counties, Montana
Contract No. Idm-E598
Memorandum by Quinlan dated 8-18-54

Dear Mr. Selfridge:

Please substitute the attached page 7 to the subject memorandum. The reference to Stage II was inadvertently omitted.

Sincerely yours,

A. E. Weissenborn

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

Attachment
cc: USBM(2)
Quinlan

3098

Docket
Rutledge
Martin
Geehan
Kiilsgaard
Johnson
Rutledge

Interior Department
Defense Minerals Exploration
Administration
14X4401(01) Revolving Fund, Defense
Production Act, Interior
(Allocated Working Fund to the Office
of the Secretary)

AUG 26 1954

T E L E T Y P E

A. L. Weissenborn, Executive Officer, DMEA Field Team
Spokane, Washington

Amendment No. 2 to Contract No. Idm-15[illegible], Sunshine Mining Company, being prepared substantially as recommended by Field Team. This is your authority to advise Operator he may proceed at own risk with first phase of drilling project consisting of four holes as follows: No. 1 midway between sections B-B & G-G, No. 2 on section B-B, No. 3 midway between sections B-B & C-C, and No. 4 on section C-C.

W. S. Martin
ACTING Chairman, Operating Committee (WS)

cc: Docket
Field Team, Reg. 2 - confirmation
Code 400
Oper. Comm.
Adm. Read. File
R. W. Geehan, USBM
Thor Kiilsgaard, USGS

FARutledge/ls 8/25/54

R.L.H.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

August 20, 1954

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3098 (tungsten)
Sunshine Mining Company
Storm Lake Tungsten
Deer Lodge & Granite Counties, Montana
Contract No. Idm-E598

Dear Mr. Selfridge:

Enclosed are four copies each of a cost analysis prepared by Stephen W. Zoldok, Bureau of Mines, and an evaluation prepared by James J. Quinlan, Geological Survey, on the request submitted by the referenced company for additional Government assistance in order to test the Tarlach vein by diamond drilling. Because of an early snow season in this area, the Operator is anxious to get as much drilling done as possible before they will have to close for the winter.

The Field Team concurs with the recommendations of the field examiners and suggests that the Operator's request be given favorable consideration at the earliest possible date.

By Field Team, Region II

A. E. Weissenborn

A. E. Weissenborn, Executive Officer
U. S. Geological Survey

Wing G. Agnew

Wing G. Agnew, Member
U. S. Bureau of Mines

Enclosures
cc: USBM (2)
Quinlan

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25 D.C.~~
North 1201 Division Street
Spokane 2, Washington
August 11, 1954

Memorandum

To: DMEA Field Team, Region II

From: Stephen W. Zoldok, Mining Engineer, Region II

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

The Sunshine Mining Company is requesting additional exploration aid in order to test for~~th~~ the lateral extensions of tungsten mineralization at depth in the Tarlock vein. They propose to do this by diamond drilling from the surface stations. The program would be set up in two stages; Stage I to consist of 1000 feet of drilling and Stage II of an additional 1500 feet of drilling, if justified. The entire program, if approved, would cost $16,250.00.

The labor cost appears high by about 50 cents per foot, and the bit cost was undoubtedly overestimated by at least 25 cents and possibly 50 cents per foot. The new road and drill setups at 75 cents per foot is probably underestimated a little while the water, supplies core boxes and miscellaneous expenses at 75 cents per foot is underestimated by at least 100 percent. Supervisors, etc. at 75 cents per foot appears O.K.

The applicant has not requested mobilization expenses, and depreciation on his equipment.

The operator's overall estimate of $6.50 per foot for diamond drilling is considered very fair and should be granted provided the Government decides to participate in the additional exploration.

Stephen W. Zoldok

DMEA

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

August 18, 1954

Memorandum

To: DMEA Field Team, Region II

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

Subject: Docket No. DMEA-3098 (tungsten), Sunshine Mining Company, Storm Lake Tungsten property, Deer Lodge and Granite Counties, Montana, Contract No. Idm-E598, Evaluation of request for additional Government assistance in order to test Tarlach vein by diamond drilling.

INTRODUCTION

The Sunshine Mining Company in a letter dated August 3, 1954, and signed by Rowland King, requests Government assistance for a diamond drilling project to test the scheelite-bearing quartz vein which crops out on the Tarlach claim. The company proposes a two-stage diamond drilling program. Stage I is to consist of four holes, the total length of which is not to exceed 1,000 feet, to be followed, if conditions warrant, by Stage II, which is to consist of 1,500 feet of drilling. The size of the proposed drill holes is Ex, and the operator estimates the cost of drilling at $6.50 per foot or $16,500 for the entire drilling project.

The Tarlach and adjoining claims which might be involved in the proposed drilling project are a part of the captioned contract. Therefore, it is evident that this request for further Government assistance should be considered as an amendment to the present contract. The proposed drilling program could be considered as Stages III and IV of project work, as the present contract includes two stages. In this memorandum, however, the requested two-stage drilling program will be referred to as Stages I and II in line with the operator's request.

RESUME OF RESULTS OF PROJECT WORK TO DATE

Under the contract the August shaft has been rehabilitated and sunk an additional 115 feet to a depth of approximately 210 feet. As of August 1, 1954, the company reports that 260 feet of drifting have been completed on the 200 level from the shaft.

The vein exposed in the upper part of the August shaft was cut off by a fault 115 feet below the collar. Where exposed in the shaft, this fault strikes N. 50°-55° E. and dips 55°-60° SE. Below the fault the shaft was driven on line, because it was deemed inadvisable to stop work in the shaft to undertake an extensive program to try to locate the faulted vein segment in the footwall of the fault before reaching the 200 level. When the 200 level was reached, the operator undertook a diamond drilling program which located the faulted segment of the vein about 10 feet in the south wall of the shaft. Crosscuts were driven to the southwest and to the southeast from the shaft on the 200 level in order to cut the vein. (See attached assay plan of 200 level.)

From the point where it was intersected in the southwest crosscut from the shaft, the vein was followed 70 feet to the southwest. The vein exposed in this southwest drift strikes about S. 68° W. and generally dips steeply to the southeast. However, at one point it reverses dip to about 50° NW. The vein fissure exposed in the southwest drift is strong and well defined, and is from 1 to 2 feet wide. Where first intersected in the southwest heading, the vein fissure is almost entirely filled with quartz. However, as the vein is followed to the southwest, the quartz in the fissure narrows to a thin stringer but the fissure itself remains strong, being marked by a sheared and brecciated zone. Also, the scheelite content of the vein decreases as the vein is followed to the southwest (see attached assay plan of 200 level).

The southeast crosscut from the shaft on the 200 level intersects the vein at the point where it is being cut off on the level by the fault which also cut it off in the shaft. On the level this fault strikes about N. 58° E. and dips 60°-77° SE. 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 apparent strike slip movement is such that the vein in the hanging wall or southeast block has moved northeast relative to the footwall block (left hand throw), the variance in 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 about 140 feet.

The operator reports that he has now followed the fault about 130 feet northeast in order to locate the vein in the hanging wall of the fault. Although the vein has not as yet been located, this work has proved interesting in that it has shown the fault to contain some ore. This ore is indicated near the face of the northeast drift heading along the fault (see attached assay plan). I have not inspected the project work since this ore was cut; the

samples shown on the map in this area are those of the operator. The samples shown are grab samples of drift rounds. The average of 8 samples (583 through 592), which represent 142 tons of muck from a 50-foot section of drift, is 0.56 percent WO_3 and 5.8 ounces of silver.

The ore along the fault is of much interest when one considers the relation of the quartz and scheelite in the vein exposed in the southwest drift heading to the fault structure. The decrease in the amount of quartz and scheelite in the vein fissure as the vein is followed from the fault suggests that the vein may be a subsidiary structure mineralized by ore solutions which came up along the fault.

Although the fault structure has not been adequately traced on the surface, the strike, dip, and indicated movement along it suggest that it is the same as or similar to the Tarlach fault which is exposed in the vicinity of the Uncle Jake claim discovery pit, 2,300 feet northeast of the August shaft, and on the Tarlach claim, 3,000 feet northeast of the August shaft. (See maps 3 and 6 accompanying applicant's request for diamond drilling project.) The quartz vein which outcrops on the Tarlach claim appears to follow the Tarlach fault, and it is this structure that the operator proposes to test by the two-stage diamond drilling project.

The trenching authorized in the contract has not been successful in locating ore. However, it has been an aid in tracing the Tarlach fault, particularly on the Tarlach claim.

The long-hole drilling attempted in the vicinity of the Uncle Jake discovery pit did not prove successful.

PROPOSED DIAMOND DRILLING

The operator proposes to test the quartz vein which crops out on the Tarlach claim by a two-stage diamond drilling program (see Map 3 accompanying operator's request for drilling program). Present information indicates that the vein follows the Tarlach fault in this area. The vein strikes about N. 70° E. and dips 67°-77° SW.

Within the area in which the vein crops out, the wall rocks on both sides of the Tarlach fault are massive limestones of the Hasmark formation (Cambrian age). The bedding in this area generally strikes N. 30°-40° E. and dips about 40° NW. On the northwest side of the fault, beds of the overlying Red Lion formation are evident immediately southwest of the outcrop area. However, on the southeast side of the fault, the Hasmark-Red Lion contact is about 200 feet southwest of the outcrop area, indicating reverse movement along the Tarlach fault in this area.

Samples taken along this outcrop for a distance of 220 feet are shown on Map No. 4 accompanying the operator's request for this drilling program. These samples include 14 channel samples taken at 13 places along the outcrop by the operator, and 2 channel samples taken by DMEA. The DMEA samples are shown on the operator's map as USGS samples and were taken near the start of the project in order to gain some idea of the grade of ore in the vicinity of the Tarlach shaft. However, these two samples serve as a check on the operator's samples.

In the discussion of sample averages which follows, only the operator's samples are considered. These samples were assayed by both Union Assay, Salt Lake City, Utah, and Montana Laboratory Company, Philipsburg, Montana. In calculations, the average of the assay results reported by both assayers has been used. For purposes of discussion the operator's samples will be referred to as samples No. 1 through No. 14. These sample numbers refer to consecutive samples shown on the map starting with Sample 1 at the southwest end of the outcrop.

The operator reports that the 14 channel samples taken show an average width of 4.96 feet and a weighted assay grade of 0.359 percent WO_3. He also reports that the northeastern section of this outcrop for a distance of 110 feet (samples No. 7 through No. 14) shows an average width of 4.65 feet and a weighted average assay grade of 0.507 percent WO_3. In calculating these weighted averages, the operator did not take into account the distance along the outcrop each sample represents; nor have samples No. 3 and No. 4 been considered as a single sample of the vein, but rather each has been considered as a separate sample. The samples used in arriving at a strike length of 110 feet of vein containing 0.507 percent WO_3 include samples No. 4 through No. 11 and not samples No. 7 through No. 14 as indicated by the operator. Also, no consideration was given to sample No. 3 in this calculation.

The weighted average of the operator's samples shown on map 4, allowing for the distance along the outcrop each sample represents, is 5.62 feet of 0.283 percent WO_3. If one wishes to consider that certain of these samples are of an ore section, only samples No. 7 through No. 10 can be so considered. These samples represent 36 feet of outcrop. The weighted average width and grade indicated by these samples is 5.17 feet of 0.580 percent WO_3. If samples No. 6 and No. 11, which assay + 0.3 percent WO_3, are considered with this section, the length of the section is increased to 62 feet, and the average width to 5.59 feet. However, the grade is reduced to 0.465 percent WO_3.

Although sampling indicates that only a short section of the outcrop is of economic interest, it is believed that the showing does warrant some work to test it below the outcrop. It is believed

that the operator's proposal to test it by a two-stage drilling program is reasonable, provided that Stage I does not exceed 1,000 feet of drilling and that Stage II is contingent upon the results of Stage I. There are certain indicated changes, however, which should be made in the operator's proposed Stage I of the project. These changes are discussed below. They have also been discussed with the operator, and he is agreeable to them.

The operator proposes to drill 4 holes under Stage I of the project, the total length of which is not to exceed 1,000 feet. The collar locations of these holes are shown on map 3 accompanying the operator's request. The operator proposes to drill hole No. 1 at -45° approximately 150 feet; hole No. 2, located 100 feet southwest of hole No. 1 and shown on section B-B, at -45°, approximately 150 feet; hole No. 3, drill from same setup as hole No. 2, at -70° approximately 200 feet; and hole No. 4, located 100 feet southwest of hole No. 2 and No. 3, at -45° approximately 200 feet. The estimated total length of these holes is 700 feet. However, the operator requests that 1,000 feet of drilling be allowed for these holes as data regarding the dip of the veins in this area are incomplete. This figure is probably somewhat excessive for the 4 proposed holes, because after the first hole is drilled it should be possible to better locate the other holes to reduce the drilling footage if the angle of the dip of the vein is steeper than now indicated.

It should be pointed out that none of the operator's proposed holes under Stage I of the drilling program will test the vein in the area of the indicated rake shown on map 5 accompanying the operator's request. This indicated rake is postulated on the assumption that the oreshoot may be controlled by bedding in the upper part of the Hasmark formation (see cross sections B-B through G-G accompanying operator's request for drilling project). This possibility should be tested, but undue weight should not be given it at this time as it is based only on a theoretical assumption. It is therefore recommended that one hole be drilled under Stage I of the program to test this possibility. The proposed hole -45° shown on section C-C accompanying the operator's request would test this possibility. The indicated length of this hole is 220 feet. It is recommended that this hole be drilled in lieu of the operator's proposed hole No. 3, -70°, which is shown on section B-B accompanying the operator's request. On the basis of present information, the indicated length of the operator's proposed holes Nos. 1, 2 and 4 and the recommended -45° hole shown on section C-C is 720 feet.

It is believed that it would also be advantageous to allow for one more hole under Stage I of the drilling project, the location of this hole to depend on the results of the first four holes. This hole might be a steeper angle hole to test the vein at greater depth, if any of the first four holes indicate tungsten content of interest, or it might be drilled about 100 feet northeast of the operator's

proposed hole No. 1 to test for a possible northeast rake, if the first four holes prove completely blank. If 1,000 feet of drilling is allowed for Stage I of the project, this footage should allow for completion of this one additional hole.

The 1,500 feet of diamond drilling requested for Stage II of the project is only an estimate; it is, however, believed to be reasonable. This drilling would be undertaken only if the results of Stage I warrant, and it would be used to better delineate any indicated ore body of interest. The location and extent of individual holes would be determined from the results of drilling under Stage I and the results of drilling under Stage II as it progresses. Because there are at present so many uncertainties concerning this stage of the drilling, it is suggested that the 1,500 feet of drilling the operator requests in this stage be provided for in the contract. However, this 1,500 feet of drilling should be a maximum allowable item, and provision made for prior Government approval of any holes drilled under this stage. This in effect would give the Government adequate control over the amount of drilling that could be undertaken under this stage, if conditions did not warrant the use of the 1,500 feet of drilling provided for.

In review, the following two-stage diamond drilling program is recommended in order to test the quartz vein which crops out on the Tarlach claim:

Stage I:

Drill 5 diamond drill holes as described below. The total length of these 5 holes is not to exceed 1,000 feet, and the holes shall be of Ex size or larger.

Hole No. 1 - Bearing approximately N. 20° W., inclination -45°, approximately 150 feet, at location as shown on operator's Map No. 3.

Hole No. 2 - Bearing approximately N. 20° W., inclination -45°, approximately 150 feet, at location 100 feet southwest of Hole No. 1, and as shown on operator's Map No. 3 and section B-B.

Hole No. 3 - Bearing approximately N. 20° W., inclination -45°, approximately 200 feet, at location 100 feet southwest of Hole No. 2, and shown on operator's Map No. 3 as proposed Hole No. 4.

Hole No. 4 - Bearing approximately N. 20° W., inclination -45°, approximately 220 feet, at location 100 feet southwest of Hole No. 3, and shown on operator's section C-C.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP - 2 1954

Hole No. 5 - The location, bearing, inclination, and length of this hole to be mutually agreed upon by the operator and the Government, depending on results of first four holes.

The first four holes need not be drilled in the order indicated above.

Stage II:

If warranted by the results of drilling under Stage I, an additional 1,500 feet of diamond drilling is provided in order to better delineate any indicated ore body of interest. The 1,500 feet of diamond drilling provided for in this stage is an estimate and a maximum allowable item. The location and extent of holes drilled under this stage shall have prior Government approval.

CONCLUSION

Testing of the quartz vein which outcrops on the Tarlach claim by diamond drilling is considered a worthwhile project. The operator's proposal to divide the drilling project into two stages, the first to consist of 1,000 feet of drilling, and the second contingent on the results of the first and to consist of 1,500 feet of drilling, is considered a reasonable approach to the testing of this structure.

Certain changes should be made in the location of holes proposed by the operator under Stage I of the project, in order to test for a possible southwestward rake of the scheelite-bearing part of the vein which is exposed on the surface. Also, it is believed that it would be advantageous to allow for five holes under Stage I of the project instead of the four requested by the operator in order to more adequately test the structure under Stage I. These indicated changes will not affect the total amount of drilling requested by the operator for Stage I of the project. The changes have been discussed with the operator, and he is agreeable to them.

It is recommended that Contract No. Idm-E598 be amended to provide for the two-stage diamond drilling program outlined at the end of the section of this memorandum which discusses the proposed drilling project.

Attachment 1
Distribution:
DMEA(4)
USBM(2)
Docket
Quinlan

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

August 13, 1954

Mr. Rowland King, Field Engineer
Sunshine Mining Company
Peyton Building
721 West Riverside
Spokane, Washington

Re: Docket No. DMEA-3098 (tungsten)
Storm Lake Tungsten Property
Deer Lodge & Granite Counties, Montana
Contract No. Idm-E598

Dear Mr. King:

This is to advise that the Field Team considers that the results of work under Stage I of the captioned contract have been sufficiently encouraging to warrant undertaking of Stage II of the project.

We wish you the best of luck in this next stage of project work.

By Field Team, Region II

Wing G. Agnew, Acting Exec. Officer
U. S. Bureau of Mines

John S. Vhay, Acting Member
U. S. Geological Survey

cc: DMEA (2)
USBM (2)
Quinlan

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

August 6, 1954

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3098 (tungsten)
Sunshine Mining Company
Storm Lake Tungsten
Deer Lodge & Granite Counties, Mont.
Contract No. Idm-E598

Dear Mr. Selfridge:

Enclosed are the original and two copies of a letter dated August 3, 1954, from Rowland King, field engineer for the Sunshine Mining Company. Also enclosed are three sets of maps accompanying Mr. King's letter. Each set of maps consists of 4 maps and 6 sections.

Mr. King's letter requests Government assistance for a diamond drilling project on the Tarlach claim, one of the claims included in the captioned contract. If favorable consideration is given to this request, it is evident that it would involve an amendment to the captioned contract.

A two-stage drilling project is proposed in order to test the vein exposed on the Tarlach claim. Stage I is to consist of 1,000 feet of drilling, to be followed, if conditions warrant, by Stage II, which is to consist of 1,500 feet of drilling. The operator estimates the cost of drilling at $6.50 per foot or $16,500.00 for the entire drilling project.

A Field Team report and recommendation regarding the operator's request will be prepared. It is probable that favorable consideration of the operator's request essentially as proposed will be recommended.

By Field Team, Region II

A. E. Weissenborn

A. E. Weissenborn, Executive Officer
U. S. Geological Survey

Wing G. Agnew

Wing G. Agnew, Member
U. S. Bureau of Mines

Enclosures
cc: USBM(2)
Quinlan

SUNSHINE MINING COMPANY
EXPLORATION DIVISION
738 PEYTON BUILDING
SPOKANE 1, WASHINGTON

ROWLAND KING, E. M.
FIELD ENGINEER

August 3, 1954

RECEIVED
AUG 4 1954
U. S. G. S.
SPOKANE, WASH.

DMEA Field Team
Region II
Spokane, Washington

Gentlemen:

We are currently operating under an Exploration Project Contract, Docket No. DMEA 3098--Tungsten. At this time the work under the contract is being performed underground, through the August shaft on the September claim. Reference is made to Map No. 6 entitled "Storm Lake Tungsten Prospect."

A transit survey has recently been completed on a part of the Tarlach claim. This surveyed area lies some 3,200 feet northeast of the August shaft and along what is believed to be the same fault structure. Reference is made to Map No. 6, above, for distance and direction between the two locations. Attached hereto is Map No. 3 entitled "Tarlach Vein, Contour Map," which shows details of survey, vein exposures, diamond drilling sites, etc. Also attached hereto is Map No. 4 entitled "Assay Plan of Tarlach Vein," which shows sampling and assay details along some 220 feet of the exposed outcrop. The 14 channel samples taken there showed an average width of 4.96 feet and a weighted average assay of 0.359% WO_3. The northeastern section of this outcrop for a distance of 110 feet showed an average width of 4.65 feet and a weighted average content of 0.507% WO_3--within this section the WO_3 content ranges from 3.3 feet of 0.034% to 6.5 feet of 0.97%.

It is proposed that some diamond core drilling be done along this exposed outcrop at about 100 foot centers, starting with one hole midway between sections B-B and G-G; two holes on section B-B and one hole midway between section B-B and C-C. These locations are shown on Map No. 3. The first hole to be approximately 150 feet in length at -45 degrees. The two holes at B-B are shown on the attached sheet, and the fourth hole to be about 200 feet in length at -45 degrees. As these distances are based on incomplete data regarding angle of dip of the vein, it is suggested that this Stage I program be set at 1,000 feet of drilling, but restricted to the four holes.

Any subsequent drilling along the projected strike of this vein is to be determined by the results of Stage I; locations,

depths and angles of holes to be decided upon by consultation with members of the DMEA team. It is suggested that Stage II allow for 1,500 feet of core drilling, or a total for the two stages of 2,500 feet.

The Sunshine Mining Company will use its own core drilling equipment and also its regular drill crew. Supervision will be by John W. Cole, the superintendent of the Storm Lake Project.

It will be necessary to build a service road from a point near the southwest end line of the Tarlach claim to the drilling sites for the holes under Stage I. The nearest source of water for drilling is about one mile from the drilling sites; all water will have to be transported in a large tank mounted on a truck. This equipment is available on the claims now.

The costs of this operation are estimated to be as follows:

Labor	$3.25/foot
Bits	1.00
New road and drill setups	.75
Water, supplies, core boxes, misc. expense	.75
Supervision, engineering & assaying	.75
	$6.50

The claims are at 7,500 feet elevation and the snow comes early and stays very late. Due to bad ground conditions, it was not possible to finish the transit survey until late in July. It will be necessary to get on the ground with the equipment within the next few weeks if much drilling is to be done before snowfall.

Yours very truly,

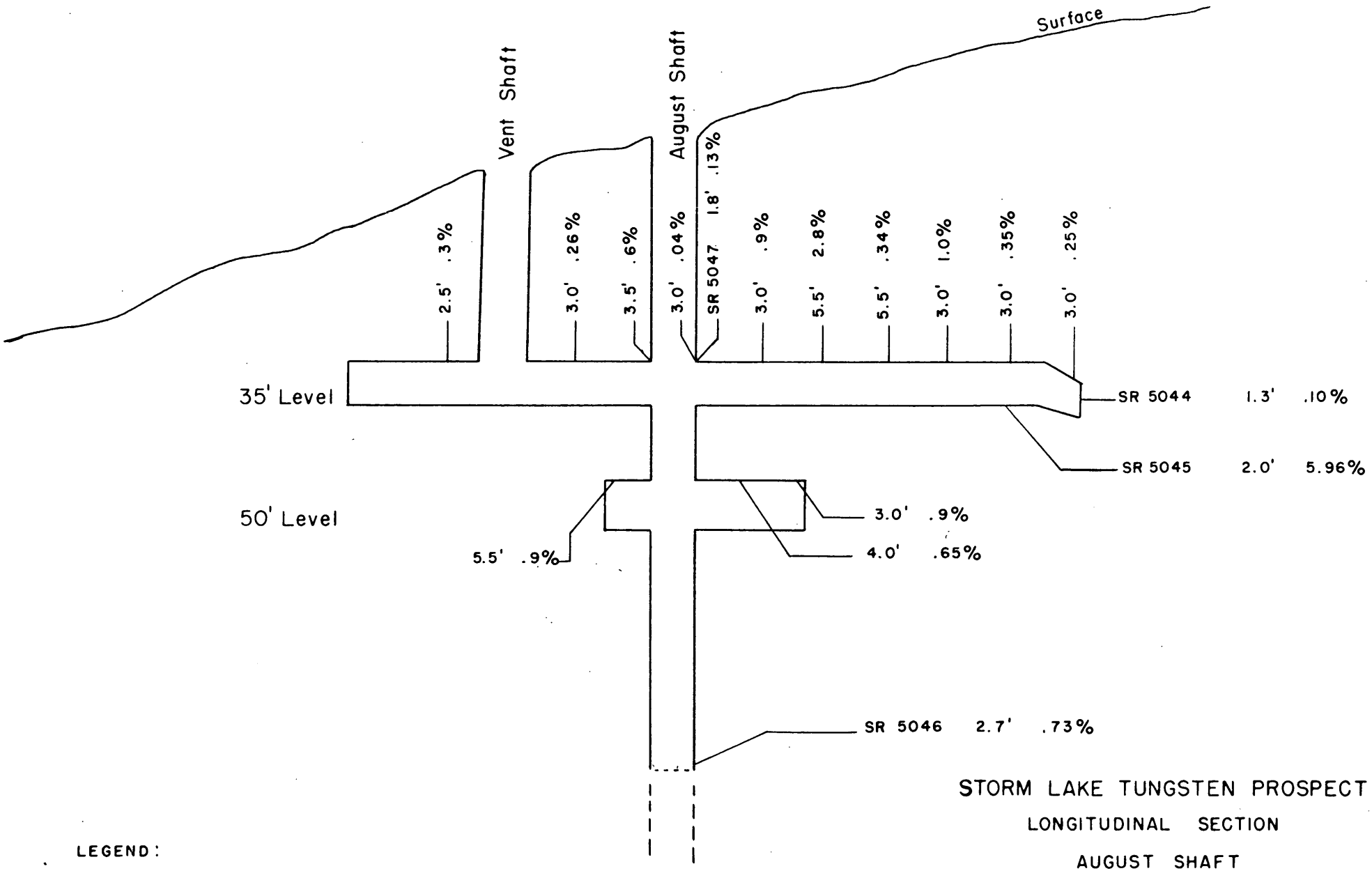
SUNSHINE MINING COMPANY
Exploration Division

Rowland King

Rowland King

RK:DO
Maps No. 3-4-5-6
Sections B-B
C-C
D-D
E-E
F-F
G-G

Encs.



STORM LAKE TUNGSTEN PROSPECT

LONGITUDINAL SECTION

AUGUST SHAFT

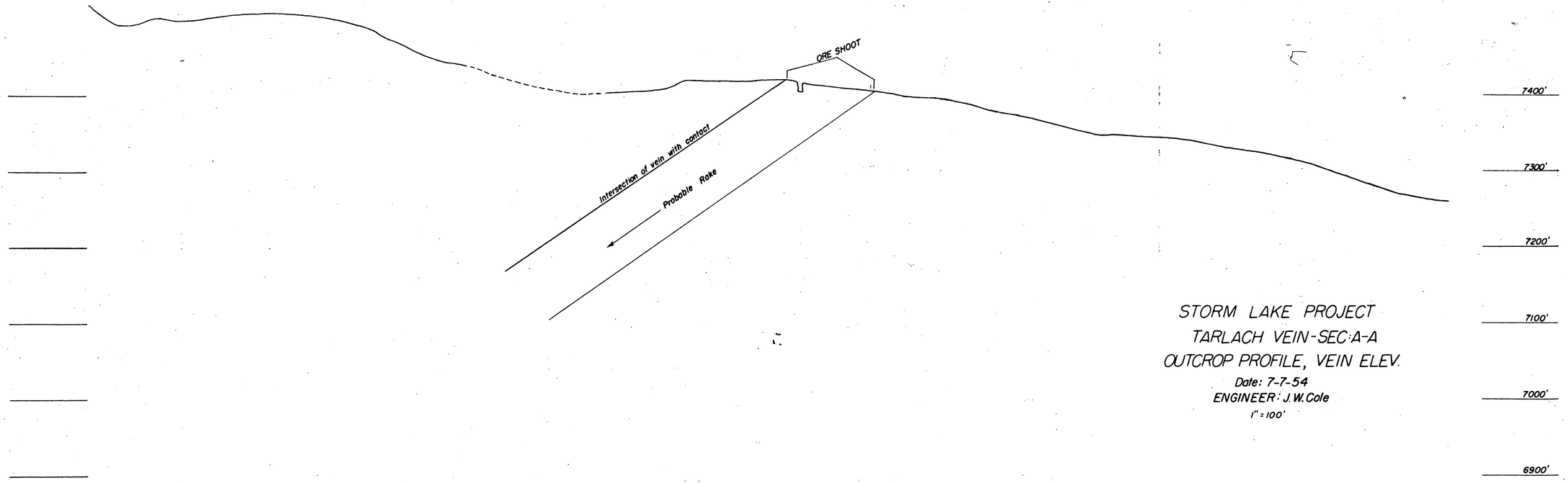
Scale: 1" = 20'

LEGEND:

' Width in feet

% Percent WO_3

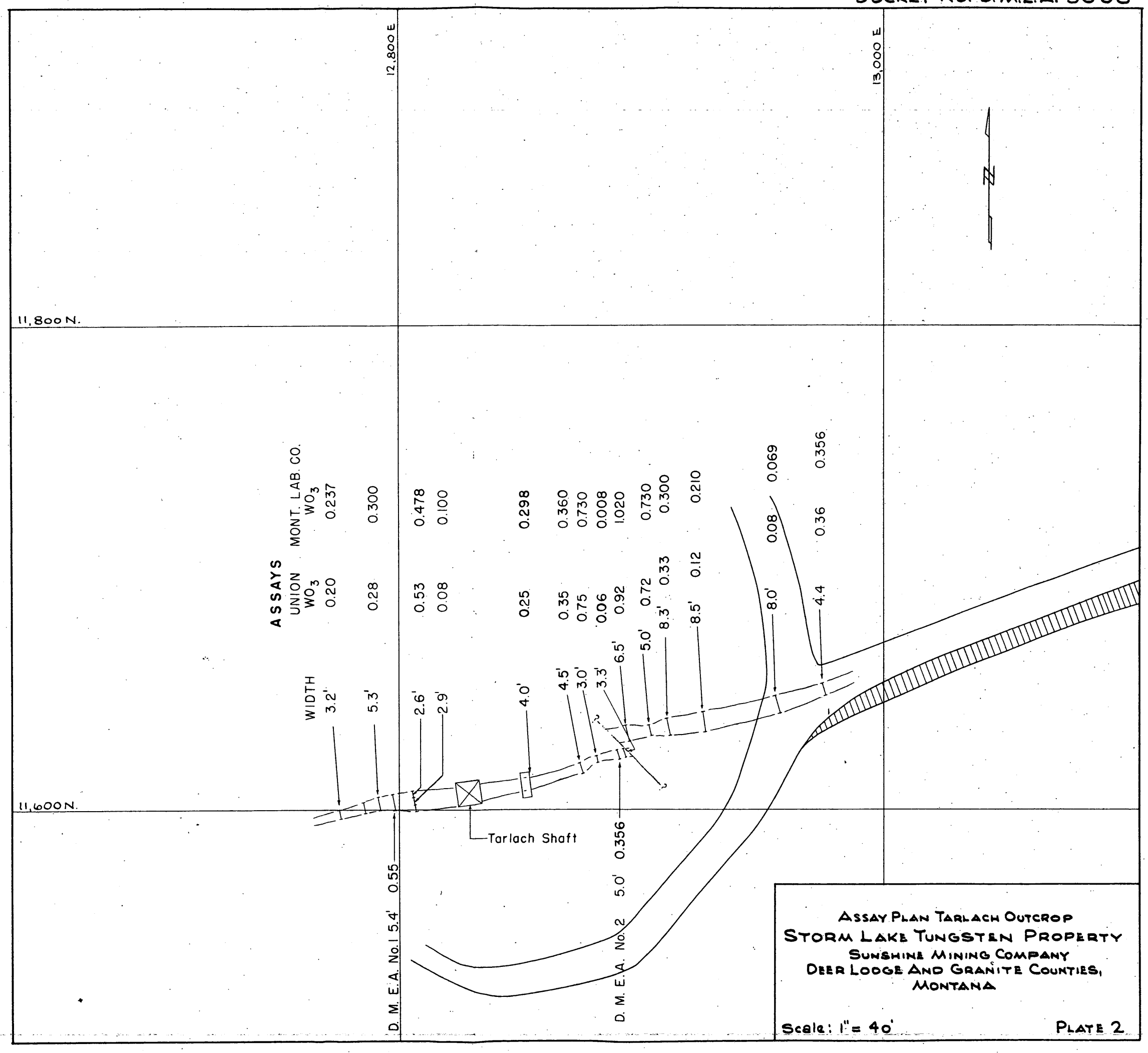
DMEA-3098



STORM LAKE PROJECT
TARLACH VEIN-SEC A-A
OUTCROP PROFILE, VEIN ELEV.

Date: 7-7-54
ENGINEER: J.W. Cole
1" = 100'

Map #5

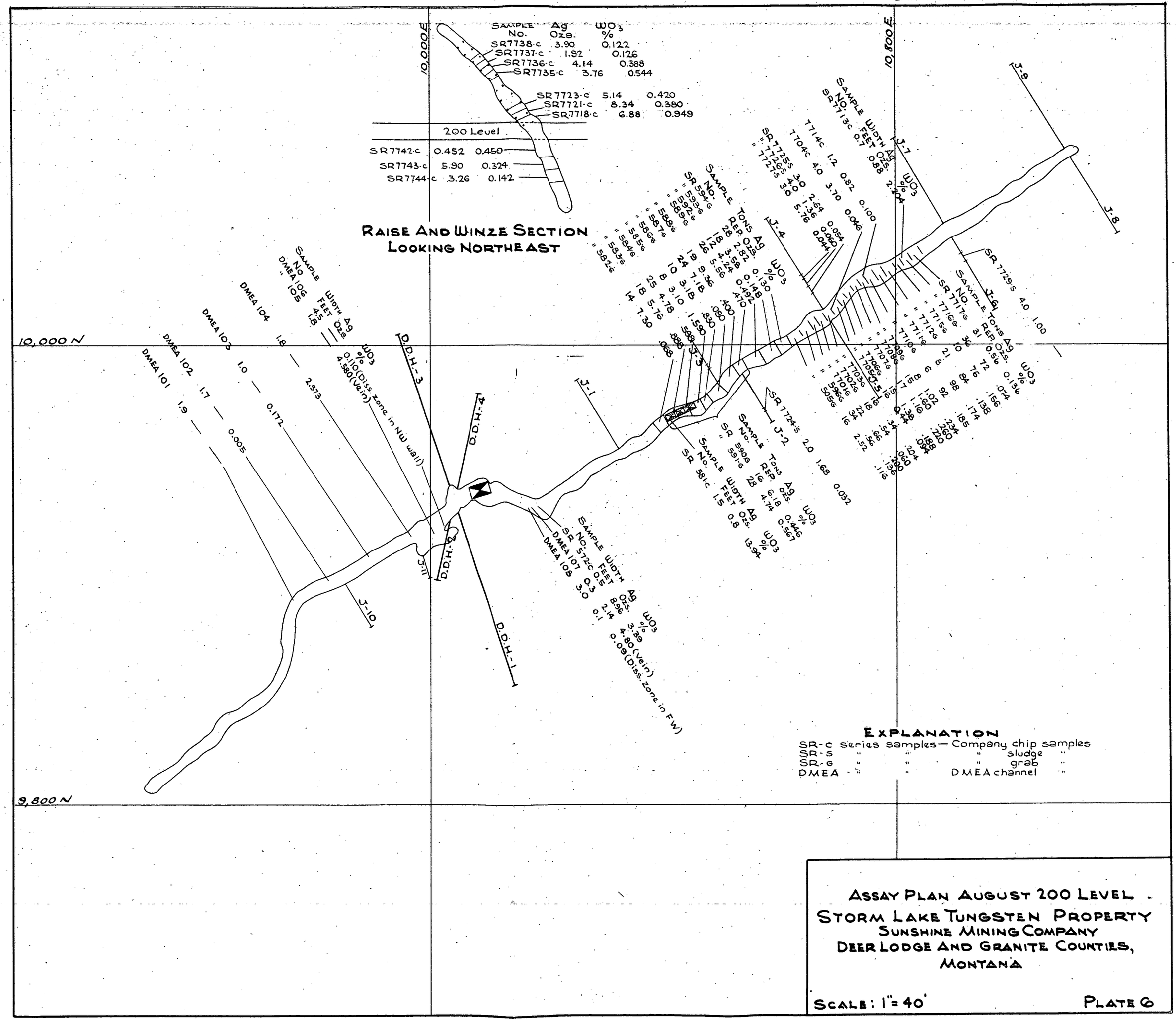


ASSAY PLAN TARLACH OUTCROP
STORM LAKE TUNGSTEN PROPERTY
SUNSHINE MINING COMPANY
DEER LODGE AND GRANITE COUNTIES, MONTANA

Scale: 1" = 40'

PLATE 2

DOCKET NO. D.M.E.A. 3098



ASSAY PLAN AUGUST 200 LEVEL

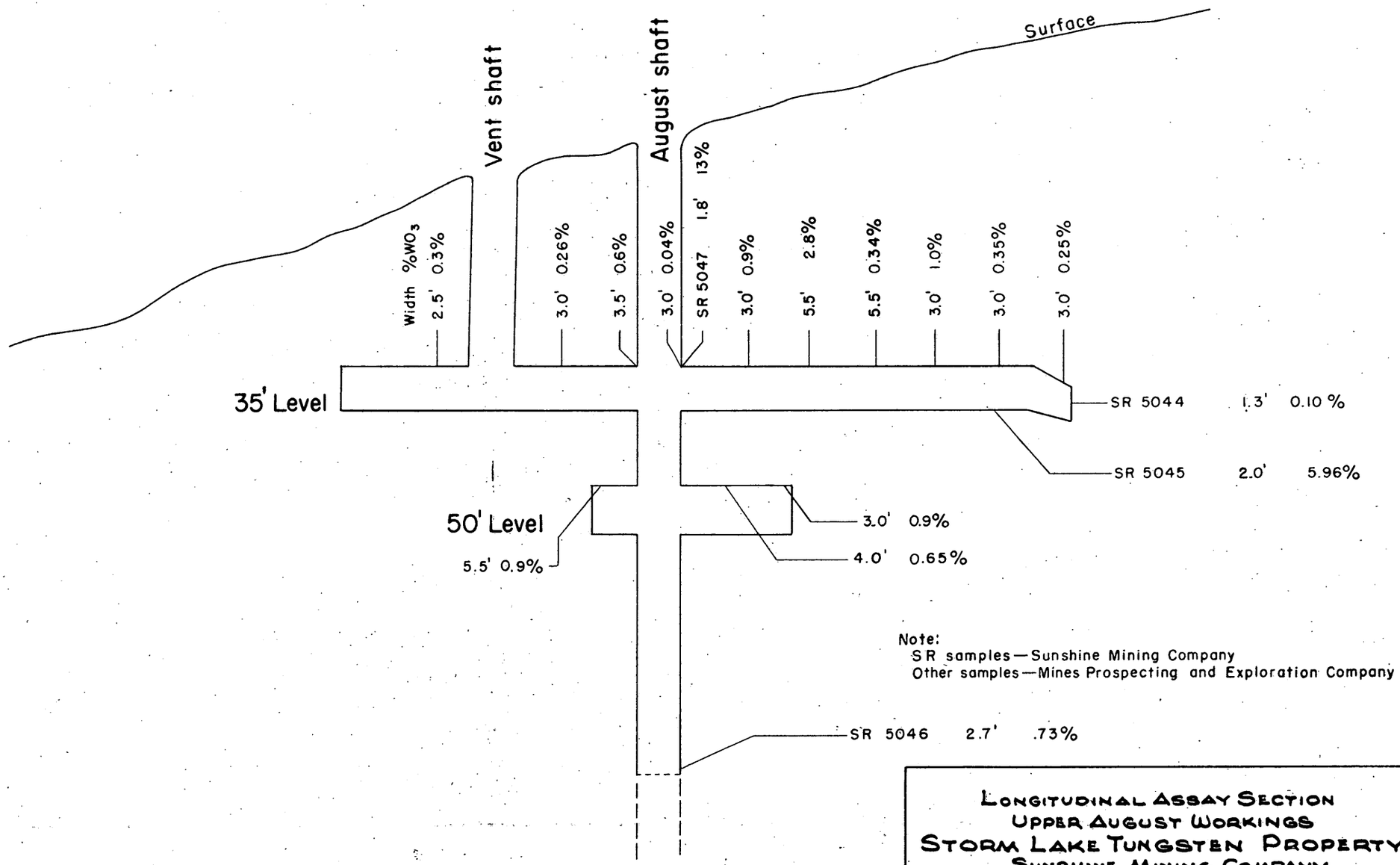
STORM LAKE TUNGSTEN PROPERTY

SUNSHINE MINING COMPANY

DEER LODGE AND GRANITE COUNTIES, MONTANA

SCALE: 1" = 40'

PLATE 6



Note:
SR samples—Sunshine Mining Company
Other samples—Mines Prospecting and Exploration Company

LONGITUDINAL ASSAY SECTION
UPPER AUGUST WORKINGS
STORM LAKE TUNGSTEN PROPERTY
SUNSHINE MINING COMPANY
DEER LODGE AND GRANITE COUNTIES,
MONTANA

Scale: 1" = 20'

PLATE 3

400

Docket
Surname
Rutledge
Meeting
Selfridge
Yellowsmith
Mittendorf

MAY 6 - 1954

Mr. A. E. Weissenborn, Executive Officer
DMEA Field Team, Region II
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 3098 - Tungsten
Sunshine Mining Company
Tungster Group (Tarlach Group)
Deer Lodge and Granite Counties,
Montana
Contract No. Ida-E598

Dear Mr. Weissenborn:

Reference is made to the subject docket, the Operator's monthly reports, and our letter of March 4, 1954.

If you have not already done so, please advise the Operator that the MF-MMA unit cost and progress report should reflect the agreed unit costs only. Other costs to the Operator not allowed under the contract should not be entered on this form.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (JHB)

APPROVED:

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

Philip W. Guild
Member, Geological Survey (JHB)

FARutledge:foc
5-4-54
cc to: Docket
Code 400
Admr. Reading File
Operating Comm.
FT. Reg. 2
R. W. Geehan, USBM
T. P. Thayer, USGS

FILE COPY
SURNAME:

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

Rewritten:

Martin
Ryan
Hoffhund
Martin
Chevrolier
Selbrede
Richmond
Mortenson

MAR 12 1954

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region II
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-3098 (Tungsten)
Sunshine Mining Company
Storm Lake Prospect
Deer Lodge County, Montana
Contract Idm-E598

Dear Mr. Weissenborn:

This will acknowledge receipt of your letter of March 1 questioning the conclusion reached in our letter of February 11 in connection with your proposal for amending the subject short-form contract to provide for snow removal as an allowable cost of the project. Your letter contends that it should be possible to amend a short-form contract to provide for expenditures which were not foreseen at the time when the contract was written.

In reconsidering the conclusion stated in our letter, you must first distinguish between incidental additional expense entailed in performing the project work, unforeseen physical conditions, and additional project work. A short-form contract may be amended to provide for additional project work, and it may be amended, in exceptional cases, to increase unit costs because the physical conditions encountered while performing the work clearly are different than both parties expected them to be when the contract was executed (unforeseeable conditions). However, the short-form contract may not be amended merely to provide for incidental additional expense incurred in performing the work. Our letter explained that "under a short-form contract, all of the work described in the contract must be performed by the Operator, and the only costs of the work to which the Government will contribute are those agreed unit costs set forth in the contract, regardless of what the actual costs turn out to be." Our letter also pointed out the possibility of amending a contract to provide for increased costs of the work when it is clear from the contract that the physical conditions encountered were not contemplated when the contract was written.

R. C. R.
3-15-54

When the subject contract was written, allowance was made for delays which might be caused by winter weather. We concluded, therefore, that the snow removal was not an unforeseen item of work; that it was merely an incidental expenditure incurred by the Operator's election to work during the winter season. It was not work that the Operator had to perform in order to complete the project work. As we have stated on other occasions, the Operator is not required to work continuously so long as he conducts the work in a manner to complete it by the completion date fixed in the contract.

If we were to allow additional costs of this kind under every short-form contract, we would also have to make provision for reducing the unit costs when it was determined that elements of cost that went into the making up of the agreed, estimated unit costs were never realized as an expense by the Operator. Of course, the net result would be that no short-form contracts would be written.

If we have not clarified the matter, please let us know and we will try again.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (246)

Approved:

J. H. Hedges
Member, Bureau of Mines (246)

D. M. Larrabee
Member, Geological Survey (246)

WSMartin:HCR:ep 3-11-54

Copy to: Docket
Admr. Reading File
Operating Comm.
Mr. R. W. Geehan, B/M
Mr. T. P. Thayer, USGS
Mr. Martin
Mr. Hofflund
Mr. Rubin
Chron.
Pending

400

Rewritten 3/11/54 McAlvin ~~Martin~~

Mr. A. E. Weissenborn, Executive Officer
DMEA Field Team, Region II
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 3098 - Tungsten
Sunshine Mining Company
Storm Lake Prospect
Deer Lodge County, Montana
Contract No. Idm-E598

Dear Mr. Weissenborn:

This will acknowledge receipt of your letter of March 1, advising us that you are unable to follow the reasoning of our letter of February 11 explaining the limitations on the amendment of agreed unit cost contracts to provide for expenditures which were not foreseen.

The information given to you by our letter was not a matter of logic, but was simply an explanation of the regulations under which we operate. It is, therefore, important to us not only that you drop the point as one which you will not press any further but also that you understand this subject with which we will, of course, be concerned in every short form contract.

To express the matter in its simplest form: A short form contract can be amended to include new work or additional work. It cannot be amended to allow payment for any item which at the time the contract was written was presumably included in the agreed unit costs.

If this distinction is not entirely clear, please let us know so that we can explain the matter further.

Sincerely yours,

Chairman, Operating Committee

APPROVED:

Member, Bureau of Mines

Member, Geological Survey

cc: Docket
FT, Reg. 2
Code 400
Oper. Comm.
Adm. Read. File
R. W. Geehan, USBM
T. P. Thayer, USGS

WSMartin/ls 3/10/54

400

MAR 4 1954

DOCKET
SURNAME
Rutledge
Martin
Chamberlin
Selfridge
Kipnis
Wetherald

Mr. A. E. Weissenborn, Executive Officer
DMEA Field Team, Region II
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 3098 - Tungsten
Sunshine Mining Company
Tungstar Group (Tarlack Group)
Deer Lodge and Granite Counties,
Montana
Contract No. Idm-E598

Dear Mr. Weissenborn:

Reference is made to the subject docket and the Operator's monthly reports.

In reviewing the "Operator's Unit Cost and Progress Report" (form MF-104A), it was noted that the Operator, instead of carrying forward only authorized costs, has reported amounts charged on his own books to the project, including depreciation as well as other costs that cannot be charged to our project. Please inform the Operator that only the agreed unit costs should be reported under the short form exploration project contract in which all costs are agreed unit costs.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee

APPROVED:

J. H. Hedges
Member, Bureau of Mines

D. M. Larrabee
Member, Geological Survey

FARutledge:foc 3-1-54
cc to: Docket
Code 400
Adm. Reading File
Operating Comm.
FT. Reg. 2
R. W. Geehan, USBM
T. P. Thayer, USGS

R.C.R. 3-4-54

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

DEPARTMENT OF THE INTERIOR
Bureau of Mines Administration
RECEIVED
MAR 8 - 1954

March 1, 1954

Mr. George C. Selfridge, Chairman
DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA 3098 (tungsten)
Sunshine Mining Company
Storm Lake Prospect
Deer Lodge County, Montana
Contract No. Idm-E598

Dear Mr. Selfridge:

This is in reference to your letter of February 11 informing us that you regard our proposed amendment to provide for snow removal as inappropriate.

We are unable to follow your reasoning in this matter as we feel that it should be possible to amend a short-form contract to provide for expenditures which were not foreseen. In this instance also it appears to us to be distinctly to the Government's advantage to encourage winter work where this can be done at no unusual additional expense, so that the contract can be terminated sooner than would have otherwise been the case, and, therefore, we see no reason why the Government should not participate in these costs. The matter is, however, of no great importance to the Sunshine Mining Company, as the amount involved is relatively small and, therefore, we will not press the point any further.

By Field Team, Region II

A. E. Weissenborn
A. E. Weissenborn, Executive Officer
(U. S. Geological Survey)

For: Thomas E Howard
Wing G. Agnew, Member
(U. S. Bureau of Mines)

cc: C. O. Mittendorf
USBM (2)
Quinlan

140

FILE COPY
SURNAME:

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

FEB 11 1954

Austin
Hoffman
Martin
Chandler
Selfridge
Bergan
Whitesides

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region II
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-3098
(Tungsten)
Sunshine Mining Company
Storm Lake Prospect
Deer Lodge County, Mont.
Contract Idm-E598

Dear Mr. Weissenborn:

Reference is made to Mr. J. J. Quinlan's memorandum dated January 5 to DMEA Field Team, Region II, our teletype dated January 15 to you, and your memorandum dated January 18 to the Operating Committee, concerning a proposal to amend the subject contract to provide for snow removal as a cost of the project by reducing the estimated requirements for bulldozing.

Our teletype of January 15 stated that:

> "Ordinarily, costs not provided under short-form contract must be borne by operator. Cannot increase agreed unit costs of exploration work under guise of added incidental work."

These statements mean that, under a short-form contract, all of the work described in the contract must be performed by the operator, and the only costs of the work to which the Government will contribute are those agreed unit costs set forth in the contract, regardless of what the actual costs of the work turn out to be.

Unless the description of the work in a contract specifies the physical conditions which are expected to exist when the work is performed, it is generally difficult to amend a short-form contract to increase costs, even when the physical conditions turn out to be different than expected by both parties. (See page 8 of DMEA Circular 21.) In this case, the contract was dated September 14, 1953, and provided for the completion of the work within

R.C.S.
2-11-54

a period of 12 months. The application, filed July 29, 1953, estimated 7 months' time for completion of the work. The additional 5 months were allowed to take care of delays which might result from the approaching winter season. In these circumstances, we are of the opinion that the proposed amendment is inappropriate.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (2/5)

Approved:

J. H. Hedges

Member, Bureau of Mines (2/5)

D. M. Larrabee

Member, Geological Survey (2/5)

HCRubin:ep 2-5-54

Copy to: Docket
Adm. Reading File
Operating Committee
Mr. R. W. Geehan, B/M
Mary Miller, USGS
Mr. Martin
Mr. Hofflund
Mr. Rubin
Chron.
Pending

Docket

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

January 19, 1954

Memorandum

WSM

To: Mr. W. S. Martin, Acting Chief
Iron and Ferro Alloys Division

From: Jay K. Chambers, Chief
Contract Administration and Audit Division

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

In a memorandum to the DMEA Field Team, Region II, under date of January 5, 1954, J. J. Quinlan, Geologist, made a report on a visit on the above-cited project, in which he made certain recommendations in regard to the use of bulldozing funds.

Mr. Quinlan recommended that the balance of the bulldozing fund which he placed at $625.00 be authorized for use in removing snow on the property access highway.

I would like to call your attention in this memorandum, as I did orally a few days ago, to the fact that the bulldozing balance was only $608.00, instead of $625.00, and of this amount Amendment No. 1 to the contract allows $450.00 for long-hole drilling. This would leave a balance of only $158.00.

The question also arises in my mind as to the legality of an amendment authorizing snow removal on a short form contract. The contract calls for so much work at a stipulated agreed unit price. The matter of having access to the property, it appears, would be entirely for the account of the Operator. On this point, however, Legal should be consulted.

I am writing this memorandum because I think the matter should be called to the attention of the Executive Officer of Region II.

Copy retained 400

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

Department of the Interior
Defense Minerals Administration
RECEIVED
JAN 22 1954

January 18, 1954

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3098 (tungsten)
Sunshine Mining Company
Storm Lake prospect
Deer Lodge County, Montana
Contract No. Idm-E598

Dear Mr. Selfridge:

Reference is made to your teletype of January 15, 1954 and the last paragraph of Mr. Quinlan's inspection report of January 5, 1954 regarding a request by the Sunshine Mining Company to use unexpended dozer funds for snow removal.

At the time Quinlan's memorandum was prepared the exact amount of unexpended dozer funds was not yet available to us. The approximate $625 quoted in the memorandum was based on Mr. King's statement of "some 39 hours" of dozer time remaining. We now have the exact figure, which is $485.60. This represents what remains of $4,000 allotted for this phase of the work, out of which $3,392 was spent for dozing and $122.40 for longhole drilling.

We would like to point out that as far as we know consideration was not given to the snow removal problem or for that matter winter operation when the contract was prepared. The company had not expected to work during the winter months when they applied for the loan, but hoped to be well along with the project by the end of the summer season. However, for one reason or another it was the middle of September before the contract was signed and work started. When fall weather proved nice and a good crew acquired, it was decided it would be well to work through the winter if possible. This is of definite benefit to the Government as the sooner the project is completed the less the administrative cost will be. We therefore feel that snow removal is an expense the Government should share in.

We do not wholly understand the last sentence of your teletype "Cannot increase agreed unit costs of exploration work under guise of additional incidental work." We are not advocating an increase in agreed unit costs. As we see it, there is $485.60 of unused dozer funds in the contract which are not expected to be used. We merely are asking permission to use these unexpended funds to help share in the cost of an unforeseen item of expense. We would, therefore, like your permission to prepare such an amendment, making it retroactive to provide for snow removal. We prefer, however, not to make this amendment until we know what the actual cost of the snow removal will be.

By Field Team, Region II

A. E. Weissenborn

A. E. Weissenborn, Executive Officer
(U. S. Geological Survey)

Thomas E Howard

T. E. Howard, Acting Member
(U. S. Bureau of Mines)

cc: USBM (2)
Quinlan

FILE COPY
SURNAME:

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

Rewritten by

Rutledge
Martin
Chambers
Hofflund
Martin
Hodgson
Thayer
Selfridge
Weissenborn

DMEA

Rutledge/Hofflund
5284 3538

14X3923.970-Working Fund-DMEA
January 15, 1954

A. E. Weissenborn, Executive Officer, DMEA Field Team Region II,
Spokane 4, Washington

Re memo January 5, 1954, inspection report, Storm Lake Tungsten Property, Docket No. DMEA-3098, Sunshine Mining Company, Contract No. Idm-E598, request by Rowland King for unused bulldozing funds approximately $625 to be made available for snow removal. November MF-104 report indicates only $608.00 remained, of which a maximum of $450.00 was allocated to long-hole drilling by Amendment No. 1. Ordinarily, costs not provided for under short-form contract must be borne by operator. Cannot increase agreed unit costs of exploration work under guise of added incidental work.

George C. Selfridge

G. C. Selfridge, Chairman
Operating Committee

FARutledge/JLHofflund/emd
1/15/54
Copy to: Docket
Adm. R. File
Op. Comm.
W. S. Martin
R. W. Geehan, USBM
T. D. Thayer, USGS
Audits Div, B.M.
J. L. Hofflund chron. pending

R.C.S. 1-15-54

TELETYPE

XXXXXXXXXXXXXXXXXXXXXXXXX

Rutledge
Martin
Chamberlain
Rubin

Interior Department

Defense Minerals Exploration
Administration
14X3923.970 - Working
Fund - DMEA

To: A. E. Weissenborn
DMEA Executive Officer, Region 2
Spokane 4, Washington

January 15, 1954

Reurmemo January 5, 1954, inspection report, Storm Lake Tungsten Property, Docket No. DMEA 3098, Sunshine Mining Company, Contract No. Idm-E598, request by Rowland King for unused bulldozing funds approximately $625 to be made available for snow removal. November MF-104 report indicates only $608.00 remained, of which a maximum of $450.00 was allocated to long-hole drilling by Amendment No. 1. For our consideration please submit proposed justification for transfer of funds to snow removal under short form contract.

G. C. Selfridge
Chairman, Operating Committee

CC: DOCKET
CODE 400
ADM. READING FILE
OPER. COMMITTEE
FT, REGION II
R. W. GEEHAN, USBM
T. P. THAYER, USGS
AUDITS DIV., BUREAU MINES

FARutledge/ls
1/14/54

STANDARD FORM No. 14
APPROVED BY THE PRESIDENT
MARCH 10, [illegible]

TELETYPE

TELEGRAM

OFFICIAL BUSINESS—GOVERNMENT RATES

FROM Interior Department

BUREAU Defense Minerals Exploration Administration

CHG. APPROPRIATION 14X3923.970 - Working Fund - DMEA

10—1723 U. S. GOVERNMENT PRINTING OFFICE

To: A. E. Weissenborn
DMEA Executive Officer, Region 2
Spokane 4, Washington

January 15, 1954

Reurmemo January 5, 1954, inspection report, Storm Lake Tungsten Property, Docket No. DMEA 3098, Sunshine Mining Company, Contract No. Idm-E598, request by Rowland King for unused bulldozing funds approximately $625 to be made available for snow removal. November MF-104 report indicates only $608.00 remained, of which a maximum of $450.00 was allocated to long-hole drilling by Amendment No. 1. For our consideration please submit proposed justification for transfer of funds to snow removal under short form contract.

G. C. Selfridge
Chairman, Operating Committee

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 23 1953

November 18, 1953

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3098 (Tungsten)
Sunshine Mining Company
Contract No. Idm-E598

Dear Mr. Selfridge:

Enclosed are the original and two signed copies of Amendment No. 1 to the subject contract, with attached justification.

Distribution of this amendment is being made in the usual manner.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

Enclosures

cc: Finance Office w/encl.
USBM (2)
Quinlan

ee
11-23

DEC 30 1953
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

V 7

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DEPARTMENT OF THE INTERIOR
Bureau of Mines
RECEIVED
NOV 23 1953

SUNSHINE MINING COMPANY
Exploration Division
738 Peyton Building
Spokane 1, Washington

November 4, 1953

Rowland King. E. M.
Field Engineer

DMEA Field Team
Region II
S. 157 Howard St.
Spokane, Wash.

Subject: DMEA-3098

Gentlemen:

In connection with the exploration work on the above captioned project, we wish to do some sampling with long hole drill steel near the east end line of the Uncle Jake claim. The Jefferson formation here shows the presence of scheelite; nothing further can be accomplished by the use of a bulldozer at this place.

The enclosed sketch shows the relative location and the grid with 25 holes at 25 foot centers. It is our intention to drill the holes 10 feet deep and take two five-foot samples of the cuttings.

We estimate the cost of drilling will be $1.00 per foot; the assaying at $4.00 per sample will be 80 cents per foot, or a total of $1.80 per foot. If the 250 feet of drilling is done, the total cost will be $450.00.

Yours very truly,

SUNSHINE MINING COMPANY
Exploration Division

/s/ Rowland King

Rowland King
Field Engineer

RK:DO
Enc.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

Cal
10-12

October 6, 1953

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3098 (Tungsten)
Sunshine Mining Company
Tungstar Group (Tarlach Group)
Deer Lodge and Granite Counties,
Montana
Contract No. Idm-E598

Dear Mr. Selfridge:

Enclosed are the original and two signed copies of the referenced contract; one copy has been retained by the Operator, one for the files of this office, and one for the files of the Certifying Officer.

In accordance with your letter of September 14, forwarding the contract to the field for signature, we have requested the applicant to produce evidence of Mr. James H. Maguire's authority to sign for the other persons mentioned in the lease agreement. An instrument authorizing such signature has been received and is attached to the contract.

Sincerely yours,

Thor H. Kiilsgaard

Thor H. Kiilsgaard
For: A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

Enclosure

cc: USBM (2)
Finance Officer w/encl.
Quinlan

FILE COPY
SURNAME

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

Martin
Chairman
Selfridge
K. Smith

Defense Minerals Exploration Administration
WSMartin/ls
5285 3538

14X3923.970 - Working Fund - DMEA
September 15, 1953

A. E. Weissenborn, DMEA Executive Officer, Spokane, Washington

Reurtt Docket DMEA 3098. Sunshine Mining Company contract airmailed September 14.

G. C. Selfridge, Chairman
Operating Committee

WSMartin/ls
9/15/53
cc: Docket
Confirmation - FT, Reg. 2
Code 400
Oper. Comm.
Adm. Read. File
Audits Division, Bur. Mines
Mary Miller, USGS
R. W. Geehan, USBM

9-16-53

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 15 1953

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GENERAL SERVICES ADMIN.
PUBLIC BLDGS. SERVICE
BMD - COMMUNICATIONS

340 WA SP /I-GS-G/

SPOKANE 9-14-53 1220P

dmea 3098 Fri. 9/11
thru commutes
mailed yesterday 9/14

MR. ERNEST W. ELLIS

ACTING CHAIRMAN OPERATING COMMITTEE

DEFENSE MINERALS EXPLORATION ADMIN., DEPARTMENT OF THE INTERIOR

WA 25 DC

RE DMEA DOCKET NBR. 3098 TARLACK TUNGSTEN PROPERTY, SUNSHINE MINING COMPANY GRANITE COUNTY, MONT. PLEASE ADVISE AS TO STATUS OF THIS APPLICATION. OPERATOR WANTS TO COMMENCE WORK BEFORE WINTER SETS IN.

THOR H. KIILSGAARD

FOR A E WEISSENBORN

EXECUTIVE OFFICER, DMEA FIELD TEAM REGION II.

3098

VA 1222P

SEP 15 10 12 AM '53
BUREAU OF MINES
MAIL ROOM
WASHINGTON D. C.

400

FILE COPY
SURNAME:

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

SEP 14 1953

Mr. A. E. Weissenborn, Executive Officer
DMEA Field Team, Region II
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 3098, Tungsten
Sunshine Mining Company
Tungstar Group (Tarlach Group)
Deer Lodge and Granite Counties,
Montana

Dear Mr. Weissenborn:

We are enclosing the original and five copies of the above-referenced exploration contract, signed by the Administrator for the Government, together with Exhibit "A" (2 pages), Annex I (1 page), Annex II (1 page), and 2 maps.

If any part of this contract does not have either your approval or that of the Operator and cannot be altered within your delegated authority, the original and all copies of the contract are to be returned to this office, together with the proposed changes for consideration.

It would appear that the Owner's Consent to Lien has been signed by James H. Maguire for himself, William E. Maguire, Regina Maguire, and John T. Maguire. This Owner's Consent to Lien should not be accepted unless evidence is produced of Mr. James H. Maguire's authority to sign for the other persons above mentioned. If he does not have that authority, it will be necessary to obtain a new set of Owner's Consent to Lien forms signed individually by all the owners before execution of the contract.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Enclosures

APPROVED:

J. H. Hedges

Member, Bureau of Mines

A. R. Kinkel, Jr.

Member, Geological Survey

TLChapman/ls 9/8/53

Copy to: Docket
FT, Reg. 2
Code 400
Adm. Read. File
Oper. Committee
Mary Miller, USGS
R. W. Geehan, USBM

Mr. Weissenborn:

With respect to the attached contract, in reviewing the cost estimates, our engineers felt that these estimates were somewhat high and, therefore, in setting up costs on an agreed unit basis, have reduced them to costs comparable to those of similar operations.

You will note that no separate allowances have been made for headframe, compressor, hoist house, and equipment to be purchased or furnished by the Operator, as the costs for these items have been incorporated in the agreed unit costs. The costs for bulldozing trenches are high but we have retained this item in the contract as you suggested so that this work can be changed to diamond drilling, if found desirable at a later date.

C. O. Mittendorf (fw)

C. O. Mittendorf
Administrator

FJ

FILE COPY
SURNAME:

140

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

September 4, 1953

N.S. in R.R.

Memorandum

To: The Administrator
Through: Mr. W. S. Martin

From: Chief Counsel

Subject: Sunshine Mining Company, Docket No. DMEA-3098 (Tungsten)

Attached in satisfactory legal form for execution is a contract covering the above-entitled project, subject to the following:

1. The maps referred to in Exhibit "A" should be attached.

2. The owner's consent to lien seems to have been signed by James H. Maguire for himself, William E. Maguire, Regina Maguire, and John T. Maguire. This owner's consent should not be accepted unless evidence is produced of Mr. James H. Maguire's authority to sign for the other persons above mentioned. If he does not have that authority, it is suggested that the others sign an owner's consent to lien on the new form.

/s/ Albert E. Kane
for J. L. Hofflund
Chief Counsel

AEKane:ep

Copy to: Mails & Files
Mr. Martin
Mr. Hofflund
Mr. Kane
Chron.

FILE COPY
400
SURNAME:

Chapman
Rutledge

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

August 31, 1953

Memorandum

To: Chief Counsel, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Review and preparation of Exploration Project Contract
Docket No. DMEA 3098 - Tungsten
Sunshine Mining Company
Tungster Group (Terlach Group)
Deer Lodge & Granite Counties, Montana

Transmitted herewith is the rough draft of a proposed exploration project contract for your use in preparing the proposed contract in final form.

Owner's Consent to Lien forms are attached.

Copies of the maps referred to in the draft are being prepared and will be furnished to the Legal Division for attachment to the proposed contract.

F. A. Rutledge, Acting Chief
Iron and Ferro-Alloys Division

FARutledge:foc
cc: Docket
Code 400
Adm. Reading File

Attachments

MF-200 (A)
(February 1952)

DOCKET NO. DMEA 3098

COMMODITY Tungsten

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

EXPLORATION PROJECT CONTRACT[1]
(Short Form)

IT IS AGREED this ____ day of ____, 195__, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] Sunshine Mining Company, A Corporation, State of Washington
738 Peyton Building, Spokane 1, Washington.
President, R. M. Hardy

hereinafter called the "Operator," as follows:

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

ARTICLE 2. *Operator's property rights.*—With respect to that certain land situated in the State of Montana, Counties ~~of~~ Deer Lodge and Granite, described as follows:[3] Annex 1

the Operator represents and undertakes:[4]

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

(*b*) That the Operator is a lessee, in possession and entitled to possession, and the Owner's Consent to Lien is attached.

The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof.

ARTICLE 3. *Exploration project.*—The Operator, within 30 days from the date of this contract shall commence work on a project of exploration for[5] Tungsten

in or upon the described land; and shall bring the project to completion within a period of 12 months from the date of this contract. The work to be performed is more fully described in Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, are made a part of this contract. The Government will contribute to the cost of this work as hereafter provided. The work shall be performed by the Operator or by independent contractor or contractors efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for workmen's compensation and employers' liability insurance, with suitable and adequate equipment, materials, and labor, to bring the project to completion within the time fixed. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

ARTICLE 4. *Costs of the project.*—The agreed, estimated costs of performing the work, expressed in terms of units of work to be performed (per foot of drifting, per foot of drilling, per cubic yard of material to be moved, etc.) are set forth in Exhibit "A," attached hereto. The Government will pay 75 percent of these agreed, estimated costs, as they accrue, for units of work actually performed that conform with the description or specifications for the work set forth in this contract, in an aggregate total amount not in excess of $33,828.75, which is 75 percent of $45,105.00 the agreed, estimated total cost of the project in which the Government will participate: *Provided,* That until the Operator's final report and final accounting have been rendered to the Government and any final check or auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of ten (10) percent of the maximum total which the Government might have been called upon to pay under the terms of the contract. The Government may, as it sees fit, make payments direct to the Operator's independent contractors, if any, for the account of the Operator, rather than to the Operator.

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

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

16—66329-1

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

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

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

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

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

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

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

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

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

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

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

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

ARTICLE 9. *Changes and added provisions* .....

.....

.....

.....

.....

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

.....
(Operator)

By .....

By .....

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

..... [CORPORATE SEAL]

U. S. GOVERNMENT PRINTING OFFICE 16—66329-1

EXPLORATION PROJECT CONTRACT
SUNSHINE MINING COMPANY
TUNGSTAR GROUP
DOCKET NO. DMEA 3098 , TUNGSTEN

EXHIBIT "A"

Description of the Work

The mining claims and proposed work is shown on the attached maps. Map No. 1 entitled "Storm Lake Tungsten Prospect" shows mining claims and location of proposed road and trenches.

Map No. 2 entitled "Storm Lake Tungsten Prospect, Longitudinal Section", shows August shaft, drifts and raise and proposed shaft deepening and drifts.

Stage 1

ROAD

Approximately two miles of road to and on the property. The work to be done with a bulldozer, not to exceed 64 hours.

TRENCHING

Surface trench (approximately 6 trenches) with a bulldozer to uncover outcrops, not to exceed 186 hours. The approximate location of the trenches are shown on Map No. 1. The length and depth of the trenches will be dependent on the overburden and mineralization.

REHABILITATION

Clean out and retimber where necessary the August shaft to the 95 foot level.

SHAFT SINKING

Sink the August shaft with necessary timbering from the 95 foot level to the 200 foot level, plus 10 feet for a sump or a total of 115 feet. The shaft to be 6 feet X 9 feet in rock section. The shaft shall continue to follow the vein on its dip.

DRIFTING

Drift easterly and westerly along the vein for a distance of 300 feet. The distances easterly and westerly to be determined by the geological conditions and mineralization. The drifts shall be not less than 5 feet X 7 feet in the clear and timbered where necessary.

STAGE II

Continue drift or drifts on the 200 foot level for a distance of 300 feet, if warranted by the results obtained in Stage 1. The extension of the drift or drifts shall be determined by the Operator with the prior approval of the Government.

Estimated Costs of the Project

Agreed Unit Costs

Stage 1

Road.	Bulldozing, 64 hours at $16.00 per hour.		$1,024.00
Trenching.	Bulldozing, 186 hours at $16.00 per hour. 1/		2,976.00
Rehabilitation.	Clean and retimber shaft where necessary to the 95 foot level at $34.00 per foot.		3,230.00
Shaft Sinking.	Sink shaft from the 95 foot level, 115 feet at $105.00 per foot 1/		12,075.00
Drifting.	Drift 300 feet at $37.00 per foot 1/	$11,100.00	
	Timber drift where necessary, 300 feet at $6.00 per foot	1,800.00	12,900.00
	Total for Stage 1		$32,205.00

STAGE II

Drifting.	Drift 300 feet at $37.00 per foot 1/	11,100.00	
	Timber drift where necessary, 300 feet at $6.00 per foot.	1,800.00	12,900.00
	Total for Stage 1 and Stage 11		$45,105.00
	Government participation, 75 percent		$33,828.75

1/ The unit costs include all costs of sampling and assaying.

ANNEX 1

The unpatented lode mining claims that follow are located in Sections 7, 8, and 12, Township 4 North, Ranges 13 and 14 West, in the Storm Lake Mining District (also called the Silver Hill Mining District), Deer Lodge and Granite Counties, Montana, and are recorded in the Deer Lodge County Court House at Anaconda, Montana, as follows:

CLAIM NAME	BOOK NO.	PAGE NO.
Echo Lode Mining Claim	23	47
September Lode Mining Claim	23	45
Scheelite Lode Mining Claim	23	49
Tungstar Lode Mining Claim	23	51
South Tarlach Lode Mining Claim	23	37
R.R.W. Tarlach Lode Mining Claim as amended	23	16
Ridge Claim No. 2, (Uncle Jake) Lode Mining Claim	23	23
Scotty Tom Lode Mining Claim	23	20

900 115 1725 6,000.00

Bulldozer and building	1,000.00
Dewatering	3,000.00
Bunker & Lay shaft to 95' level	
at 30 cu ft.	2,850.00
115 feet new shaft at 150.00	17,250.00
600 feet drifting at 50.00	30,000.00
	54,100.00

25 cu

40. 15,000.00

20'00 1870
60,000 234
5,000 1.92
36
150,000 980

2.5	x .3	.75
3.0	x .26	.78
3.5	x .6	2.10
3.0	x .04	.12
1.8	x .13	.23
3.0	x .9	2.70
3.5	x 2.8	9.80
5.5	x .34	1.87
3.0	x .1	3.00
3.0	x .35	1.05
3.0	x .25	.75
2.0	5.96	11.97
1.3	.16	.13
40.1		35.25

.88

37 / 280 = 7.6
222
80

Docket

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 24 1953

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

August 19, 1953

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3098 (Tungsten)
Sunshine Mining Company
Tungstar Group (Tarlach Group)
Deer Lodge & Granite Counties, Montana

Dear Mr. Selfridge:

Reference is made to your letters of August 3 and 10 concerning the subject application. As a result of these letters we have contacted Mr. Rowland King, engineer for the applicant, and have discussed the proposed program with him.

Mr. King explains the Tungstar property as an old prospect formerly worked for silver at a time when its tungsten content was unknown. The August shaft was sunk on a promising outcrop and from this shaft two sublevels were driven as shown on the longitudinal section attached to the application. The bottom of the shaft is now 95 feet below the portal but there are rumors that the shaft was originally 160 feet deep and that it was back filled with muck from the sublevels. This back filling could imply that the vein at the 160-foot level did not warrant further exploration; however, if this was so it was probably from the silver standpoint as the tungsten content was unknown at that time. In any event it is a point the Sunshine Company wishes to clarify and they intend to do this by extending the shaft to the 200 level before doing any drifting. They do not agree to drifting above that level as they reason that if minable ore does not extend to a point 200 feet below the outcrop, the property does not warrant their further attention, and in this they have a point well taken and with which we are in accord.

The 200 hours of bulldozing requested in the application may be excessive; it would seem to us that such an amount is not needed for the work planned. However, Mr. King points out that they do not intend to do an excessive amount of dozing but merely enough to explore for the vein in the area between the August and Tarlach shafts. His idea

is that if the vein can be exposed with a minimum of dozing, the remaining dozing funds might be used to diamond drill the vein. He points out, however, that it would be pointless to lay out a drilling program at this time when so little is known of the vein. We are inclined to agree with Mr. King and suggest the requested bulldozing time be left as it is with the understanding that unused funds be devoted to drilling, if such drilling should be desired. It would most certainly be far easier to amend the contract to do drilling than it would to draw a new contract for that purpose.

The high cost of machinery to be purchased jointly by the Operator and the Government was also discussed with Mr. King. It was pointed out that the Government did not care to become involved with such amounts of machinery as we previously had trouble in disposing of our equity in such machinery. Mr. King stated that if a contract was negotiated, barring unforeseen and perilous economic conditions, the Sunshine Mining Company could be expected to make a firm and reasonable offer for all machinery in which the Government has an equity at the conclusion of contract work. Inasmuch as the Sunshine Mining Company is a highly reputable organization that would have use for such equipment on their other operating properties it would seem to us that the joint purchase of the machinery is justifiable.

If a contract is negotiated, the Sunshine Mining Company intends to immediately commence work on the project. The first step will be to construct the road and to erect the headframe at the August shaft and move machinery to the property. While machinery is being installed and the shaft repaired, the dozing will be completed. If results of dozing warrant, diamond drilling will be done at the same time the shaft is being sunk. This overlap of various phases of work is necessitated by the lateness of the working season and the desire of the applicant to complete as much work as possible before winter sets in.

In the light of our conversation with Mr. King and in view of the fast approaching fall weather, the Field Team recommends that a contract be negotiated using the costs and items of work as set forth in the application. To expedite the work to be done, the project should be set up in two stages as follows:

Stage I

1. Road building
2. Preparatory work
3. Shaft rehabilitation
4. Dozing, examination, and mapping and sampling of shaft and trenches.
5. Sink shaft to 200-foot level plus 10-foot sump.
6. Drift 300 feet on vein.

Stage II

1. Drift additional 300 feet if drifting is warranted by earlier work.

Mr. King has assured us that they will have competent supervision on the job at all times and that they will not enter into any phase of work that is not warranted. As the staff of the Sunshine mine is highly experienced and considered capable of conducting the work, and as the vein is strong and the assay data significant, the Field Team does not hesitate to recommend the proposed project. Certainly, the work to be done would give the property a good test which should determine its potentiality as a tungsten producer.

By DMEA Field Team, Region II

A. E. Weissenborn

A. E. Weissenborn, Executive Officer
(U. S. Geological Survey)

Thomas E Howard

Thomas E. Howard, Acting Member
(U. S. Bureau of Mines)

cc: USBM (2)
Geologist

FILE COPY
SURNAME:
400

Rutledge
Martin
Selfridge
Hedges
Kinkel

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

AUG 1 0 1953

Mr. A. E. Weissenborn, Executive Officer
DMEA Field Team, Region II
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 3098 - Tungsten
Sunshine Mining Company
Tungsten Group (Tarlach Group)
Deer Lodge & Granite Counties,
Montana

Dear Mr. Weissenborn:

Reference is made to the subject docket.

Enclosed for your information is a copy of letter of July 29, 1953, from the applicant that crossed in the mail with our letter to you of August 3, 1953. Probably you have already discussed with Mr. Rowland King the suggestion we made to you in our same letter, but otherwise please inform Mr. King that you have his application under review.

Sincerely yours,

George C. Selfridge
ESJ
Chairman, Operating Committee

APPROVED:

J. H. Hedges
ESJ
Member, Bureau of Mines

A. R. Kinkel, Jr.
ESJ
Member, Geological Survey

FARutledge:foc
8-7-53

8-11-53

cc: Docket
Code 400
Adm. Reading File
Operating Comm.
FT. Reg. 2
R. W. Geehan, USBM
D. M. Lemmon, USGS

Enclosure

FILE COPY
SURNAME:

Rutledge
Martin
Selfridge
Hedges
Kinkel

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

AUG 3 1953

Mr. A. E. Weissenborn, Executive Officer
DMEA Field Team, Region II
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 3098 - ~~Tungsten~~
Sunshine Mining Company
Tungsten Group (Terlach Group)
Deer Lodge & Granite Counties,
Montana

Dear Mr. Weissenborn:

Reference is made to the referenced docket and to your letter of June 23, 1953.

We concur with the Field Team's recommendation that further field work is probably undesirable because of the data already available to the Government. However, after a review of the subject application, it is believed that the proposed exploration project is more extensive than the target warrants.

Memoranda have been prepared by the Commodity Divisions of the Geological Survey and the Bureau of Mines. Two copies of each are enclosed for your information. Please let us have your recommendations at an early date in order that we may expedite the drafting of an appropriate contract.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee

Enclosures

FARutledge/ls
7/31/53

APPROVED:

J. H. Hedges
Member, Bureau of Mines

A. R. Kinkel, Jr.
Member, Geological Survey

cc: DOCKET
FIELD TEAM, REG. II
CODE 400
OPER. COMMITTEE
ADM. READ. FILE
D. M. LEMMON, USGS
R. W. GEEHAN, USBM

Omca 3098

Copied from Engineering and Mining Journal
Vol. 154 No. 8
August 1953

Sunshine Mining Co., Kellogg, Idaho, has contracted with the Mines Prospecting & Exploration Co. of Missoula, together with other owners of claims, to do a limited amount of exploratory work on mining claims having tungsten (scheelite) showings in the Storm Lake district west of Anaconda and south of Silver Lake, Deer Lodge County, Sunshine Lake, Deer Lodge County, Sunshine has applied to the DMEA for a 75% tungsten exploration loan and plans now are being made to start the work within a short time. The Storm Lake property was developed in a small way as a silver prospect years ago.

Docket

SUNSHINE MINING COMPANY
EXPLORATION DIVISION
738 PEYTON BUILDING
SPOKANE 1, WASHINGTON

ROWLAND KING, E. M.
FIELD ENGINEER

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG - 3 1953

July 29, 1953

8/5/53
WSM

Mr. C.O. Mittendorf
Administrator of DMEA
Department of Interior
Washington 25, D.C.

Subject: DMEA 3098

Dear Mr. Mittendorf:

Due to the location of, and the altitude at the property covered by the above docket number the season for outside work is relatively short; we are anxious to get the road work completed, some surface bulldozing done and preparations made for possible underground operations during the winter.

If there is any way in which we can assist in expediting action on this application please advise us.

Yours very truly,

SUNSHINE MINING CO.
EXPLORATION DIVISION

Rowland King

Rowland King
Field Engineer

RK:DT

Docket

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 29 1953

July 29, 1953

Memorandum

To: W. S. Martin, DMEA

From: Robert W. Geehan, Assistant Chief
Ferrous Metals & Alloys Branch

Subject: Sunshine Mining Company
Tarlach Prospect
Deer Lodge County, Montana

DMEA 3098
Tungsten

The Field Team recommend a 3-stage contract. Stage I comprises preparatory work, road building, shaft rehabilitation, and mapping and sampling. Stage II comprises shaft sinking and drifting from the 200-foot level. Stage III provides for additional drifting.

The work done by Stage I may indicate favorable areas not adjacent to the August shaft, where it is now proposed to conduct the work in Stages II and III. It is recommended that the initial contract be limited to Stage I and that ~~the~~ second contract provide for any additional work. Rehabilitation of the August shaft may well reveal information which would make it unnecessary to sink this working below the 160-foot level which is mentioned as its possible present depth. The bulldozer work may well indicate the desirability of diamond drilling rather than drifting.

Robert W. Geehan

Robert W. Geehan

Copy retained

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

MEMORANDUM

July 28, 1953

TO: W. S. Martin, DMEA

FROM: D. M. Lemmon, USGS

SUBJECT: Exploration application $67,655 DMEA 3098
Sunshine Mining Co. Tungsten
Tarlach (Storm Lake) prospect
Deer Lodge County, Montana

According to the application, and a memorandum by John Taber, Bureau of Mines, the principal tungsten prospect on the Tarlach property is exposed to a depth of 95 feet in the inclined August shaft, and for a length of 100 feet on the 35-foot level. The deposit is scheelite and tetrahedrite in a quartz vein 1.3 to 5.5 feet thick, dipping 60° to 70° south. The numerical average of 17 samples (range .04 to 5.96) is 0.95 percent of WO_3. If the highest (5.96) be disregarded, the average of the remaining 16 is 0.64 percent. The applicant estimates ore reserves in the shaft area at 800 to 1,200 tons.

It is proposed to deepen the shaft from 95 feet to 210 feet and drift 600 feet on the 200 level. In addition, 200 hours of bulldozer trenching will be done at the surface. The geologic map accompanying the application shows that the August vein cuts across the strike of the enclosing sedimentary rocks but does not show the dip of the beds (a possible control to the ore shoot).

The proposed expenditures appear large compared to the size of target. The available reports give no information about condition of vein or wall rocks, necessary in consideration of possible core drilling. I suggest that consideration be given to the following possible alternatives: (1) diamond drilling the vein at lateral intervals of 75 feet to a depth of 150 feet, (2) drifting on the 100-foot level to determine the length of ore shoot in order to justify additional sinking.

DM Lemmon

Dwight M. Lemmon

cc: Mr. Martin (3)

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

June 30, 1953

Memorandum

To: Executive Officer, DMEA Field Team, Region II

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

There is listed below the assigned docket number to an application recently received from Region II

DMEA - 3098 Sunshine Mining Company.

ROBERT E. ADAMS

Robert E. Adams,
Chief, Operation's Control
and Statistics Division

38226

June 30, 1953

Mr. Rowland King
c/o Sunshine Mining Company
738 Peyton Building
Spokane 1, Washington

Subject: DMEA-3098
Re: Exploration Assistance
Tarlach Tungsten Prospect
Storm Lake Tungsten Prospect

My dear Mr. King:

The receipt of your application dated June 17, 1953, for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3098 and referred to the Iron and Ferro-Alloys Division.

Kindly refer to DMEA-3098 in any future correspondence relating to your application.

Sincerely yours,

ROBERT E. ADAMS

Robert E. Adams,
Chief, Operation's Control
and Statistics Division

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

1201 N. Division St.
Spokane 2, Washington
June 23, 1953

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Subject: Application for DMEA assistance (tungsten)
Sunshine Mining Company
Tarlach Tungsten Deposit
Deer Lodge County, Montana

Dear Mr. Selfridge:

Enclosed are three copies of an application from the Sunshine Mining Company for a DMEA contract to explore the Tarlach tungsten deposit in Deer Lodge County, Montana. One copy has been retained for our files.

The property was examined last year by John W. Taber, Mining Engineer, U. S. Bureau of Mines, in connection with the regular Bureau program of examinations and surveys of mineral deposits. An ozalid copy of his report is enclosed. You will note that the exploration proposed by the applicant is essentially the same as recommended by Taber. Subsequent to this examination the property was visited by M. E. Volin, Chief, Mining Division, Region II, and John S. McNabb, Mining Engineer, U. S. Bureau of Mines, both of whom were favorably impressed. No further field work will be scheduled unless requested by your office.

The applicant's estimate of the costs of the proposed work, given in detail in the application, is considered reasonable except for the cost of drifting which is high because of estimated low rate of advance. If an advance between 3½ and 4 feet per shift is assumed a drifting cost of $35 per foot is obtained; this is more in line with costs for like work on other DMEA projects in the Region.

The applicant would prefer a contract to provide for Government contribution to the cost of drifting on the basis of unit costs and to the cost of equipment, preparatory work, trenching, shaft rehabilitation and shaft sinking on the basis of actual costs. The Field Team agrees

Copy retained 400

that such a contract would be for the best interest of the Government and the Operator as there is uncertainty about the depth and condition of the existing shaft.

It is recommended that a contract be negotiated to provide for the work requested with the project set up in three stages as follows:

Stage I

1. Preparatory work.
2. Road building.
3. Shaft rehabilitation.
4. Examination, mapping and sampling of trenches and shaft.

Stage II

1. Sink shaft to 200 foot level plus 10-foot sump.
2. Drift 300 feet on vein.

Stage III

Drift additional 300 feet if justified by Stages I and II.

The Sunshine Mining Company is one of the most successful Operators in the Coeur d'Alene mining district, and its staff is considered competent to direct the proposed work.

By Field Team, Region II

A. E. Weissenborn

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Thomas E Howard

Thomas E. Howard, Acting Member
U. S. Bureau of Mines

Enclosure

NOT TO BE DUPLICATED EXCEPT BY PERMISSION
OF THE REGIONAL DIRECTOR, BUREAU OF MINES,
REGION II.

W. I. Bell, Leader, Field Team, Region II

August 6, 1952

J. H. Turner, Mining Engineer, Bureau of Mines

Preliminary examination of the Darlach Tungsten Prospect, Deer Lodge County, Montana.

A cursory walk-over examination of this prospect was made July 31, in compliance with a request from R. E. Wallace. The deposit is on a narrow ridge flanking the Storm Lake road, 5 miles south of its junction with U. S. Highway 10-A, which is 20 miles west of Anaconda. About one and a half miles of new road would be required for good access to the deposits.

The principal deposits are included in a group of 8 unpatented lode claims. Two of the claims are recent relocations of old prospects. The other four claims were original locations in 1951-52. Although claim locations are in the name of James Shapiro of Silverton, Idaho and William Hallagher of Anaconda, according to Wallace, the group of claims are to be acquired by Alaska Prospecting and Exploration Co. of which he is a director.

The prospects are revealed by natural outcrops, by several shallow prospect shafts and by the August shaft, said to be 140 feet deep. The August shaft is a inclined prospect shaft about 4' by 6' in cross section, down on the vein at about 40 degrees inclination. A level off this shaft at about 20 feet below the collar, connects with a nearby raise to the surface which also is on the vein. The raise and about 20 feet of the level are accessible but the shaft is inaccessible because of broken and rotten ceiling to have been overcut. The shaft should be in good condition below the first one or three timber sets as it is in limestone and coln quartz porphyry. The size of the dump indicates that the shaft probably is about the depth stated by Wallace.

The deposits are in an area of similar metamorphosed limestone intruded by small stocks of granodiorite. U.S.G.S. Professional Paper 78, Philipsburg quadrangle, Montana, indicates two small stocks about one mile apart in a position that would place the deposits directly between the granodiorite stocks. A prospect pit was noted in place about 200 feet west of the August shaft. The deposits comprise four veins or zones in rough alignment through a distance of about 4000 feet. All are in limestone.

The best deposit is a quartz body outcropping through a distance of 150 feet and of an average width of about 6 feet. Scheelite was not conspicuous, but responded to Wallace's sample as well (and shown up) quickly and on the average probably less than 0.5 percent WO3. The shaft exposure to about 40 feet and a prospect pit revealed the vein to be a hanging plane dipping northward 60 degrees.

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OF THE REGIONAL DIRECTOR, BUREAU OF MINES,
REGION II.

The two central deposits are the narrow westerly Harrison vein barely exposed by three shallow prospect holes and east of the Harrison vein a scheelite replacement zone in limestone exposed only by natural outcrop. The Harrison vein is a relatively weak structure, probably of significance only as a related link in the 4000 foot tungsten zone. It contains only a trace of scheelite.

The scheelite replacement deposit (Wallace calls it the cross vein) is an apparently high grade scheelite band in limestone 3 to 4.5 feet wide and at least 20 feet long. No recognizable vein structure was evident.

The largest vein on the west end of the 4000 foot scheelite zone is a narrow quartz vein which appears to cut the limestone roof. The vein is traced only about 30 feet on the surface but appears to have been explored by a shaft said to be 140 feet deep and by a 30 foot level drift at least 50 feet long and said to be 150 feet long. The shaft dump is large enough to represent about this much excavation. The predominance of quartz in the shaft dump indicates that probably all of the workings were driven on the vein.

The vein was observed in a raise to the surface from the 30 foot level and in about 30 feet of drift at the western end of this level. Here the vein is 4 feet wide.

The vein material comprises quartz with fine crystalline evenly distributed scheelite, irregular coarse masses and clusters of scheelite and a thin dark banding containing scattered crystals of tetrahedrite, mostly of sizes barely large enough to identify. The scheelite is remarkably persistent and uniformly distributed in the segment of the vein which was observed. A sample taken from the west face of the 30 foot level is estimated to contain one half to 1 percent WO_3.

Wallace's plans for exploration and development of the prospects were roughly formulated at the time of my examination but were contingent upon clearing the transaction on acquisition of the claims by Wallace's firm. Prospecting and exploration to. Wallace proposed construction of about 1-1/2 miles of road, a small amount of millsite trenching, rehabilitation of the August shaft workings and drift exploration off the bottom of the shaft.

The deposits appear to represent an extensive zone of scheelite mineralization favorably situated in a limestone block, partly and possibly entirely surrounded by granite. The inference is that the block in which the scheelite appears probably is underlain by granite and therefore there is a very good possibility that the tungsten mineralization may improve in depth as the contact is approached. With at least two of the deposits of ore grade at the exposed horizon it is obvious that the deposits all justify considerable exploration, both laterally and in depth.

It is my recommendation that these deposits be explored by bulldozer trenching on all of the 4 deposits and by rehabilitation and sampling of the August shaft workings, both to determine a step one in exploring the deposits.

NOT[illegible] BE DUPLICATED EXCEPT BY PERMI[illegible]ON
OF THE REGIONAL DIRECTOR, BUREAU OF MINES,
REGION II.

Step two of the exploration program should comprise drilling out the layout until at least the 150 foot level, contingent upon the findings in the rehabilitation shaft workings.

To begin the treatment, about one-half mile of new jeep road would have to be built to the surface entrance, hence about 400 feet of jeep trail to connect the central working areas along the outcrop zone.

The following is a rough estimate of the cost of the exploration:

Step I

Large jeep trail - 40 mm. bulldozing @ $12	$ 480
Bulldozer trenching - 200 hrs. @ $12	400
Shaft rehabilitation (for access only)	1000
Engineering and supplies	1000
Total	$ 2,880

Step II

Drilling at 150 foot level - 7000' @ $40 and shaft equipment to service job	$12,000
Engineering and supplies	2,000
Total	$14,000

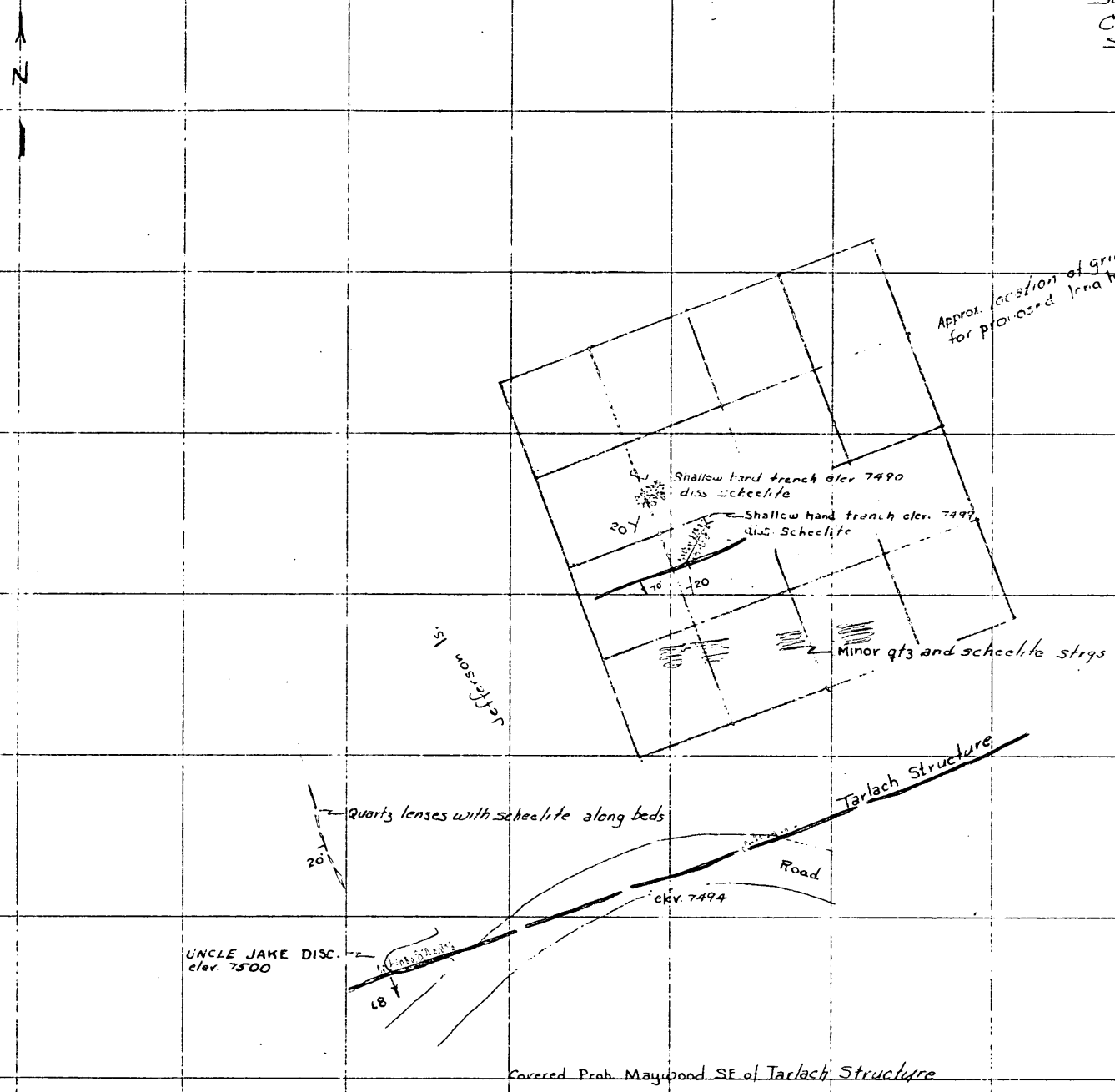
John W. Taylor

John W. Taylor

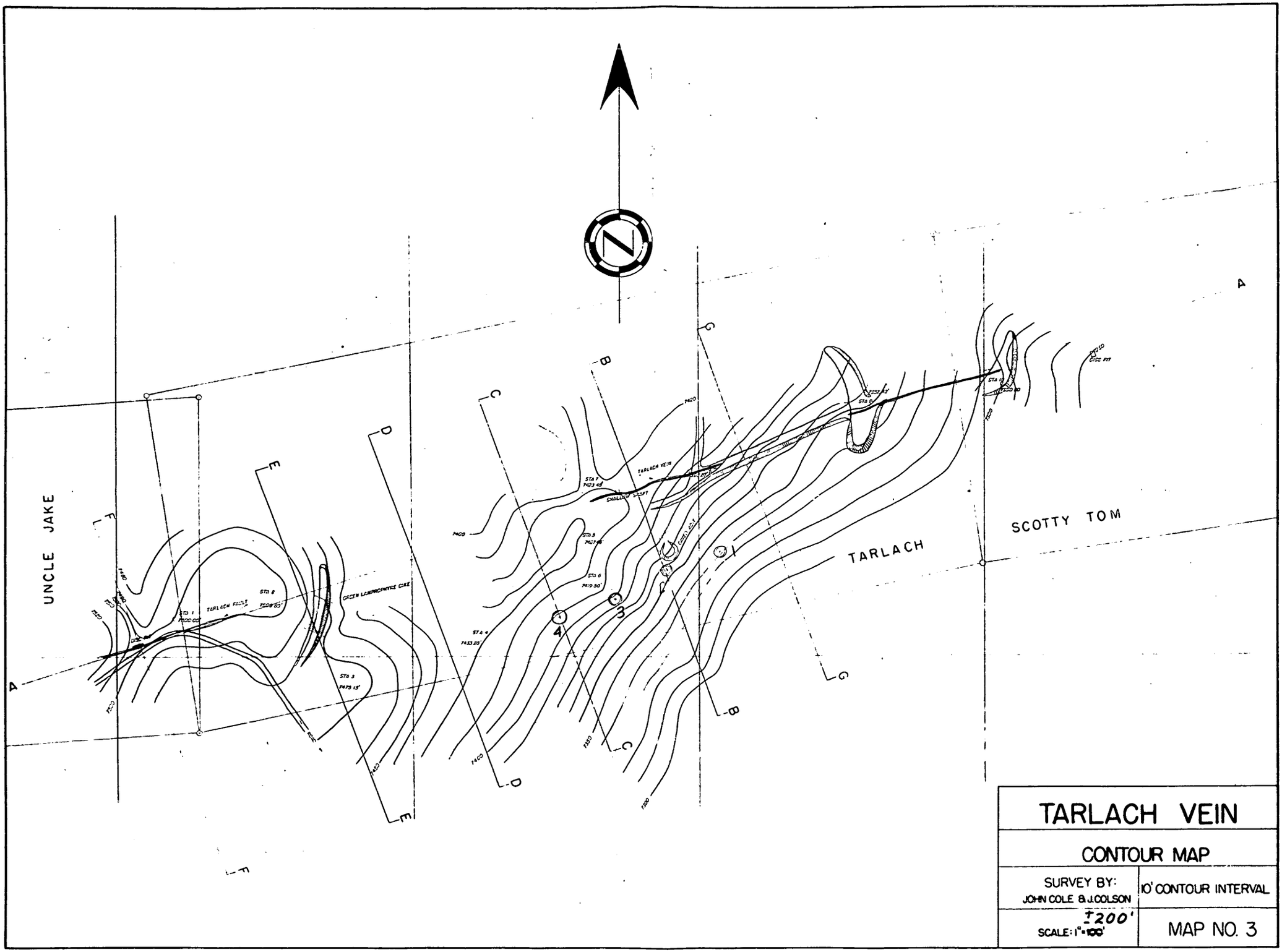
Docket No. DMEA 3098

STORM LAKE TU

Deer Lodge County, Mont.
Sunshine Mining Company
Contract No Idm: E 598
Scale: 1" = 40'



"ALBANENE" NO. 190-J K&LCO. REG. U.S. PAT. OFF.

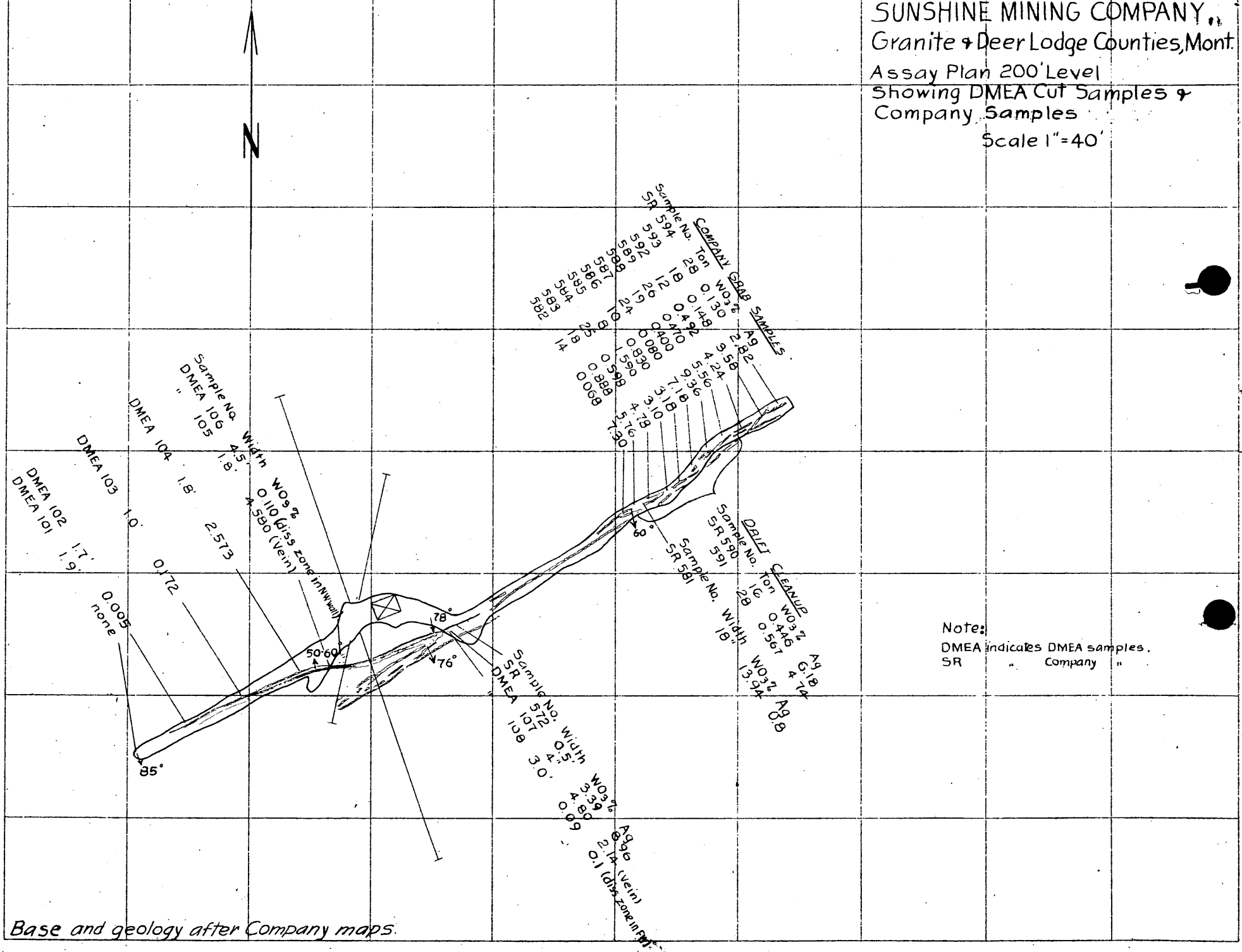

UNCLE JAKE
TARLACH
SCOTTY TOM
TARLACH VEIN
DRILLED SHAFT
GRIER LAMPROPHYRE DIKE
DISC FIT
A
B
C
D
E
F
G
1
3
4
TARLACH VEIN
CONTOUR MAP
SURVEY BY:
JOHN COLE & J. COLSON
10' CONTOUR INTERVAL
SCALE: 1" = 100'
±200'
MAP NO. 3

Docket No. DMEA 3098

STORM LAKE TUNGSTEN
SUNSHINE MINING COMPANY
Granite & Deer Lodge Counties, Mont.

Assay Plan 200' Level
Showing DMEA Cut Samples & Company Samples

Scale 1" = 40'

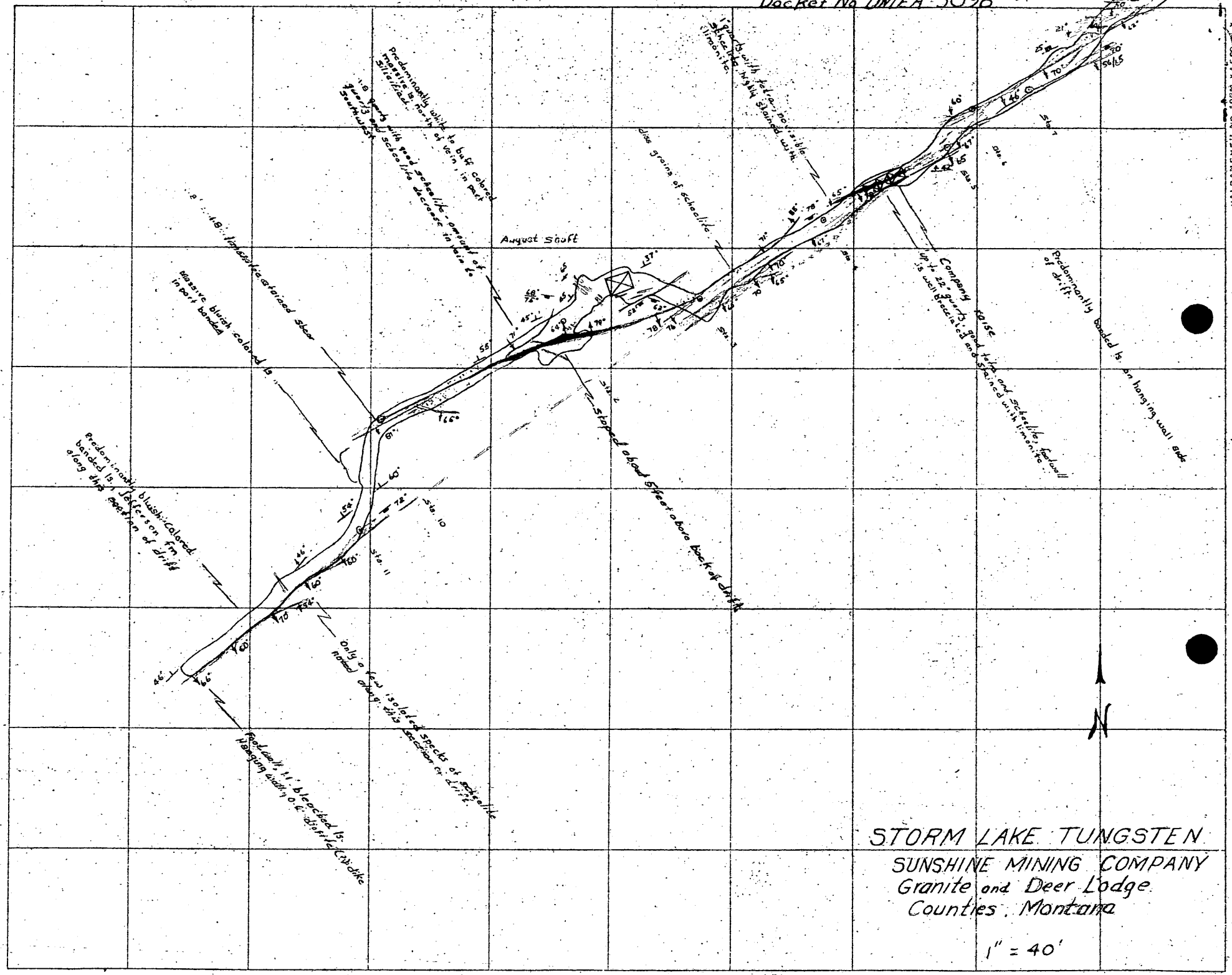


Note:
DMEA indicates DMEA samples.
SR " Company "

Base and geology after Company maps.

"ALBANENE" No. 198M K&E CO., N.Y. REG. U.S. PAT. OFF.

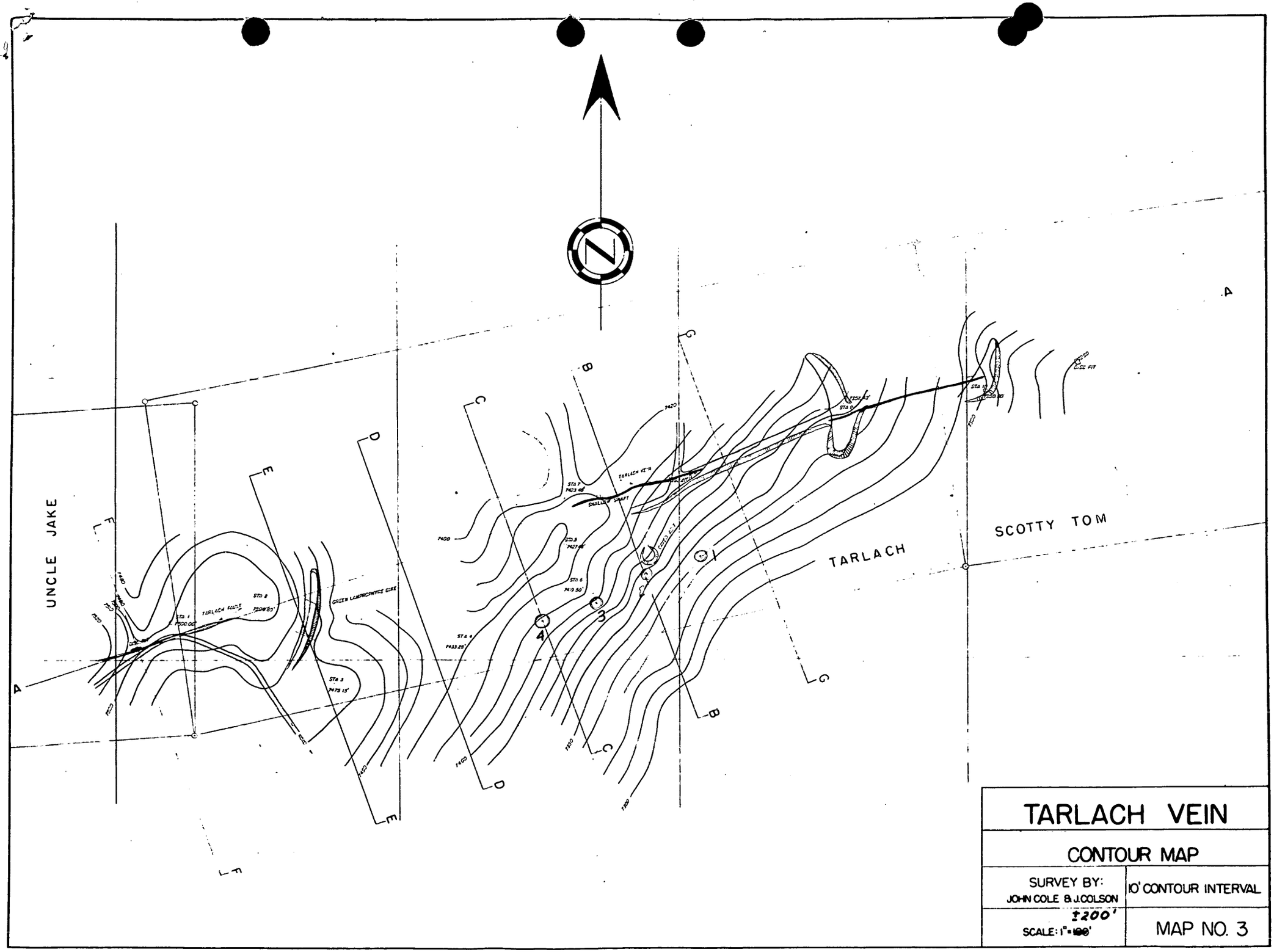
Docket No DMEA 3098



STORM LAKE TUNGSTEN
SUNSHINE MINING COMPANY
Granite and Deer Lodge
Counties, Montana

1" = 40'

"ALBANENE" NO. 1080 K&E CO. N.Y.
REG. U.S. PAT. OFF.

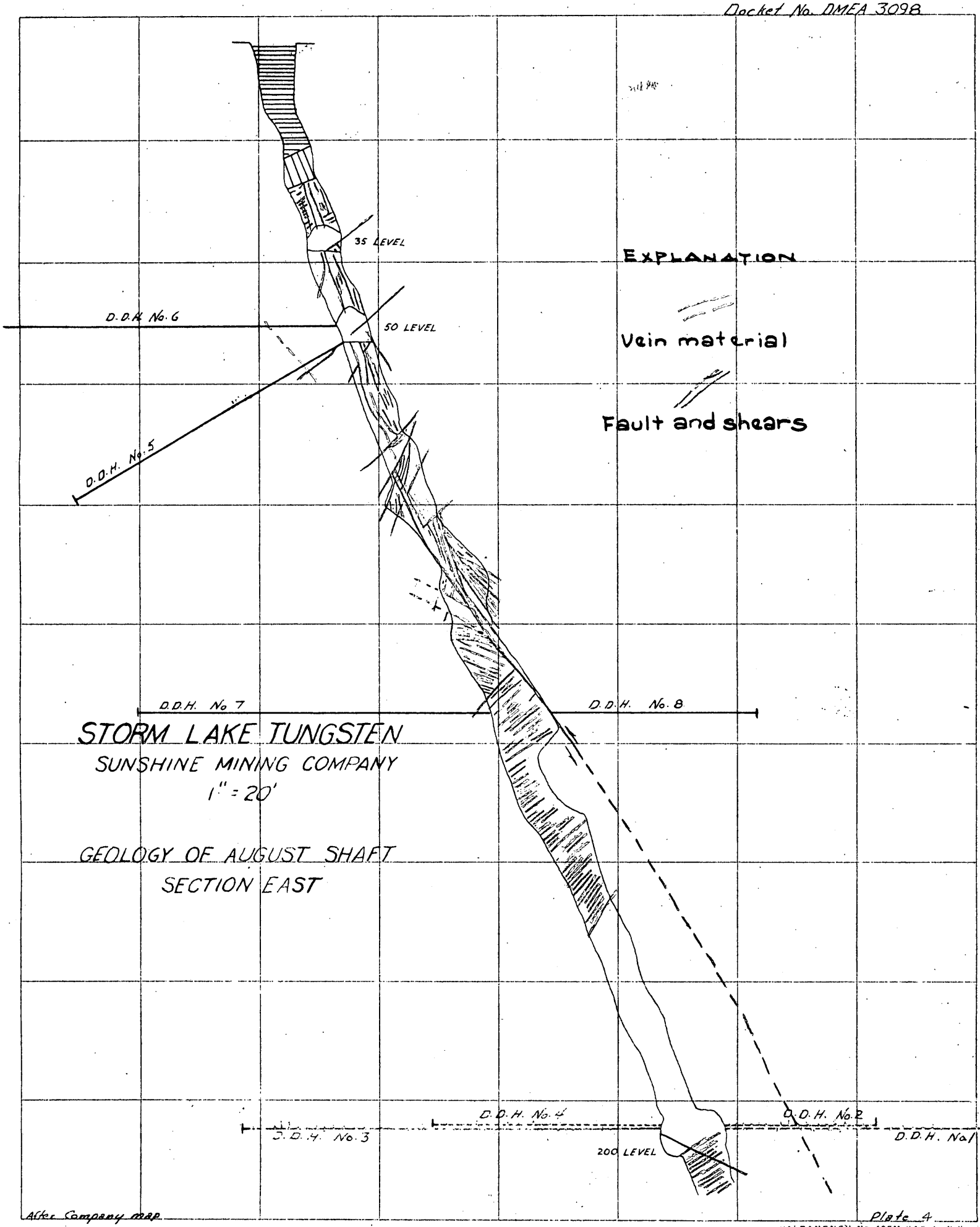


TARLACH VEIN

CONTOUR MAP

SURVEY BY: JOHN COLE & J. COLSON	10' CONTOUR INTERVAL
SCALE: 1" = ~~100'~~ ±200'	MAP NO. 3

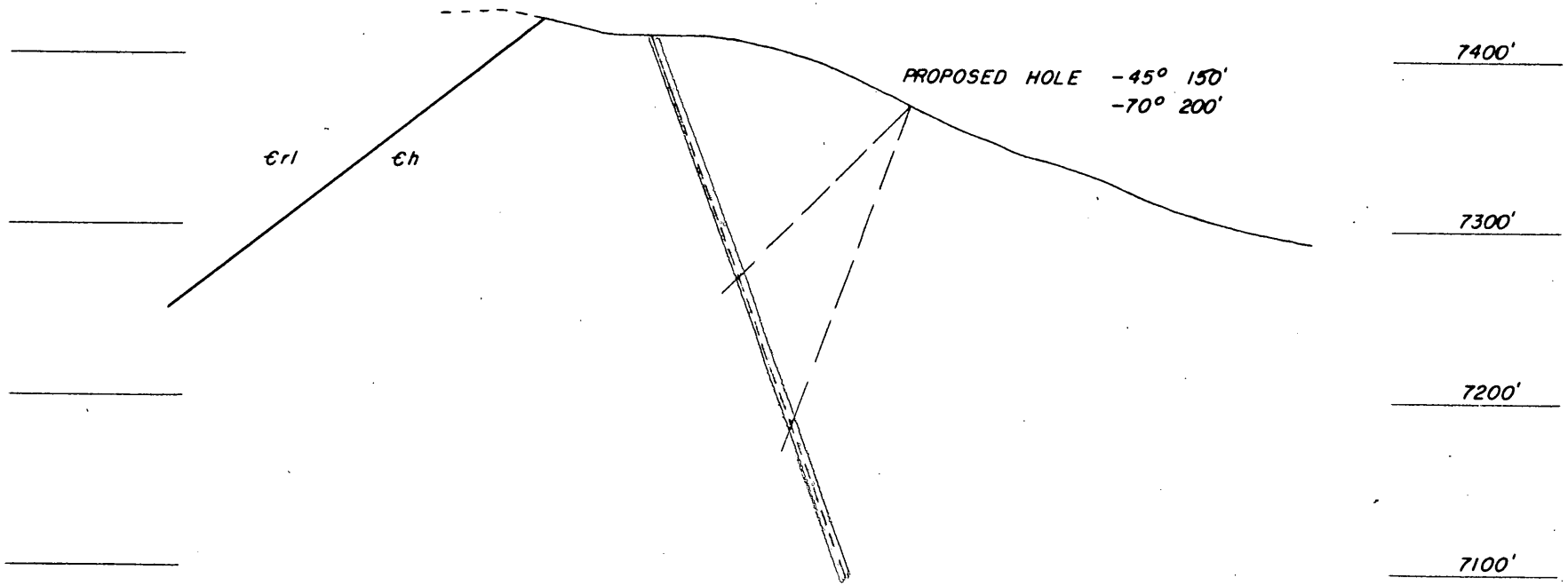
Docket No. DMEA 3098



After Company map

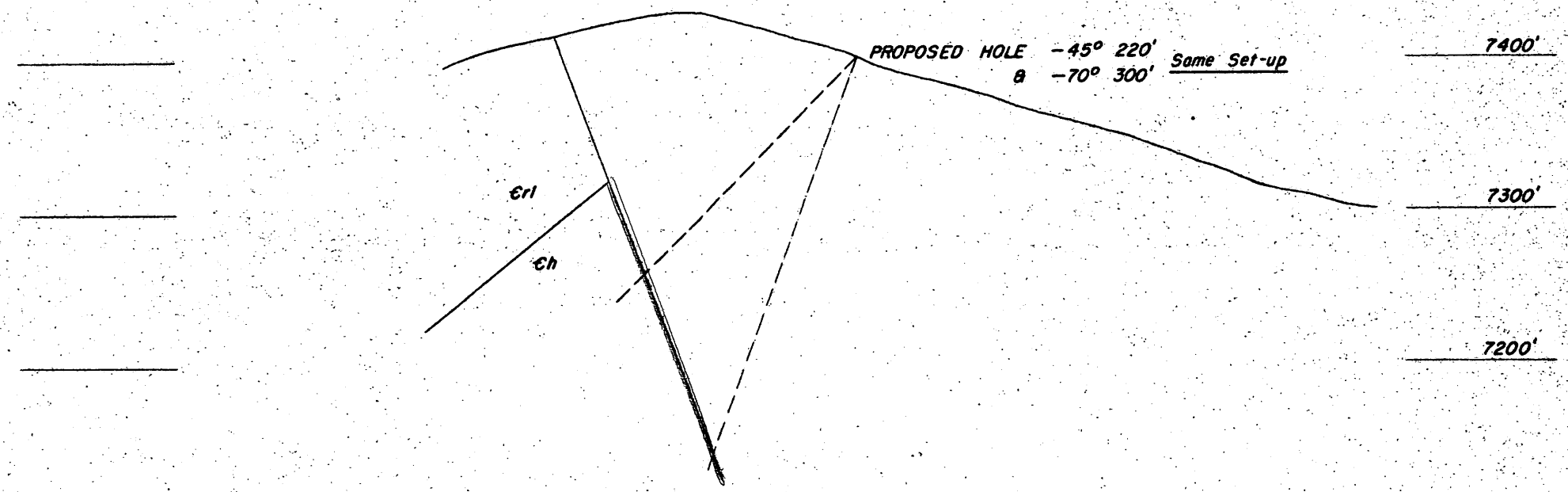
Plate 4

"ALBANENE" No. 105M KALL..., N.Y.
REG. U.S. PAT. OFF.

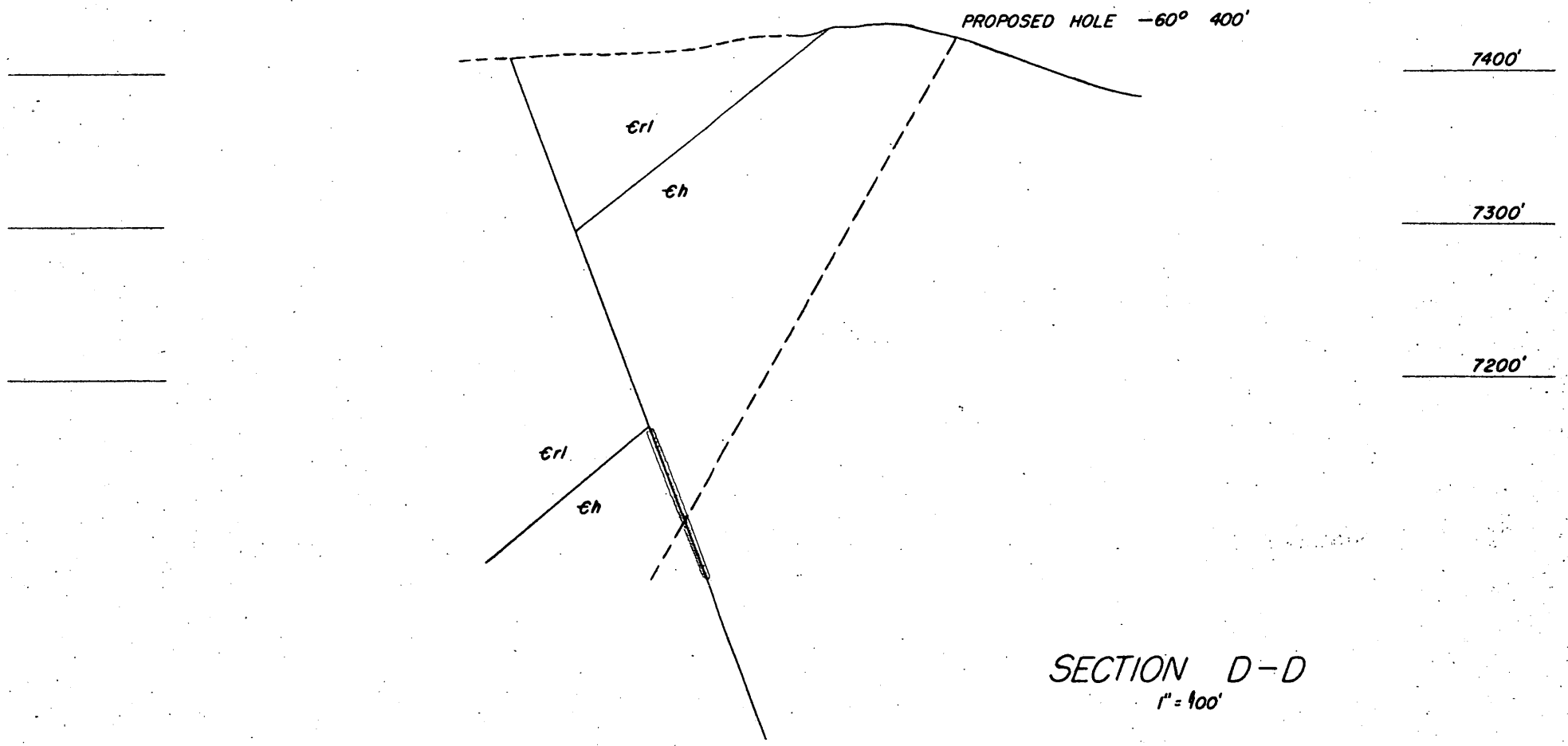


SECTION B-B

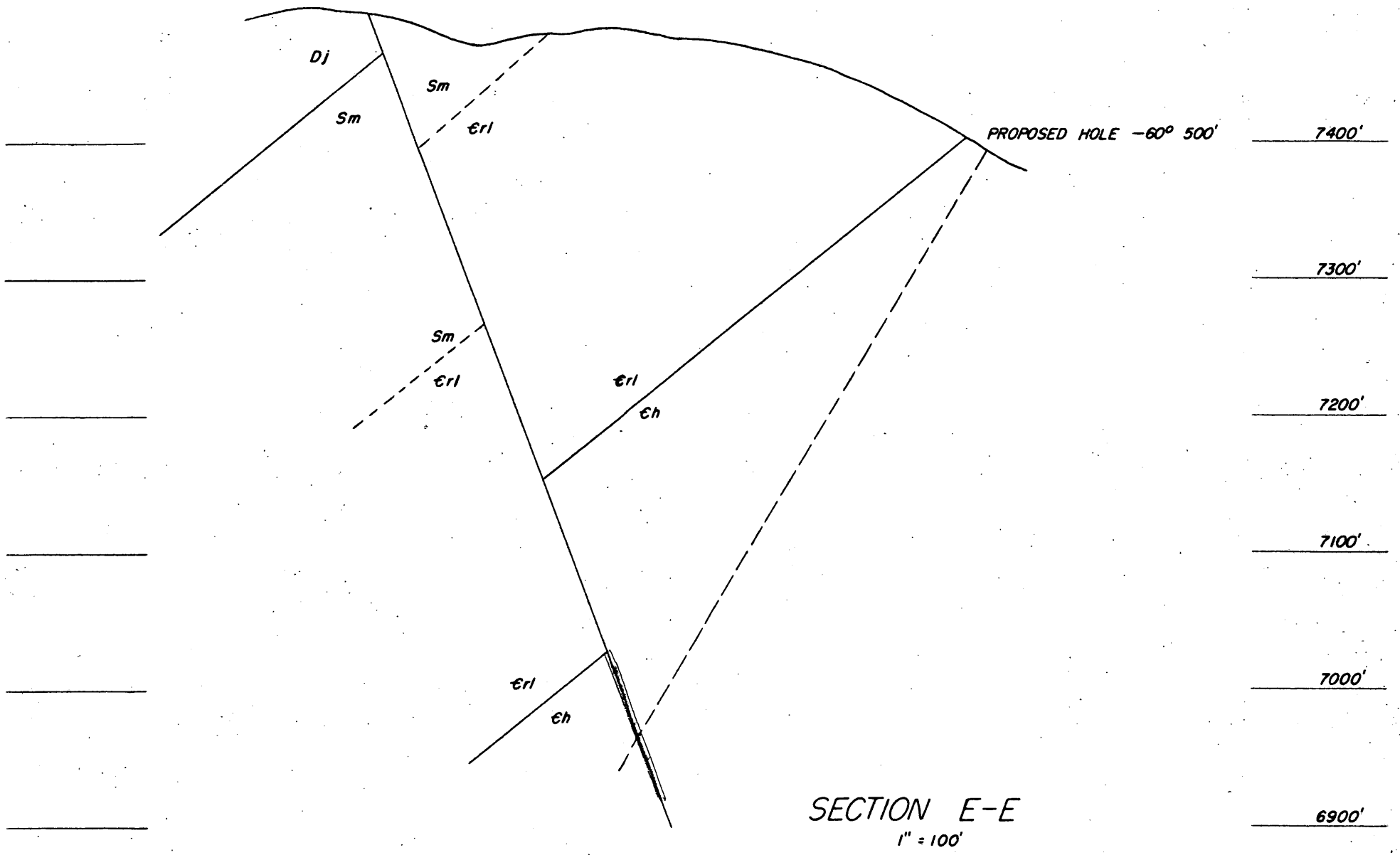
1" = 100'

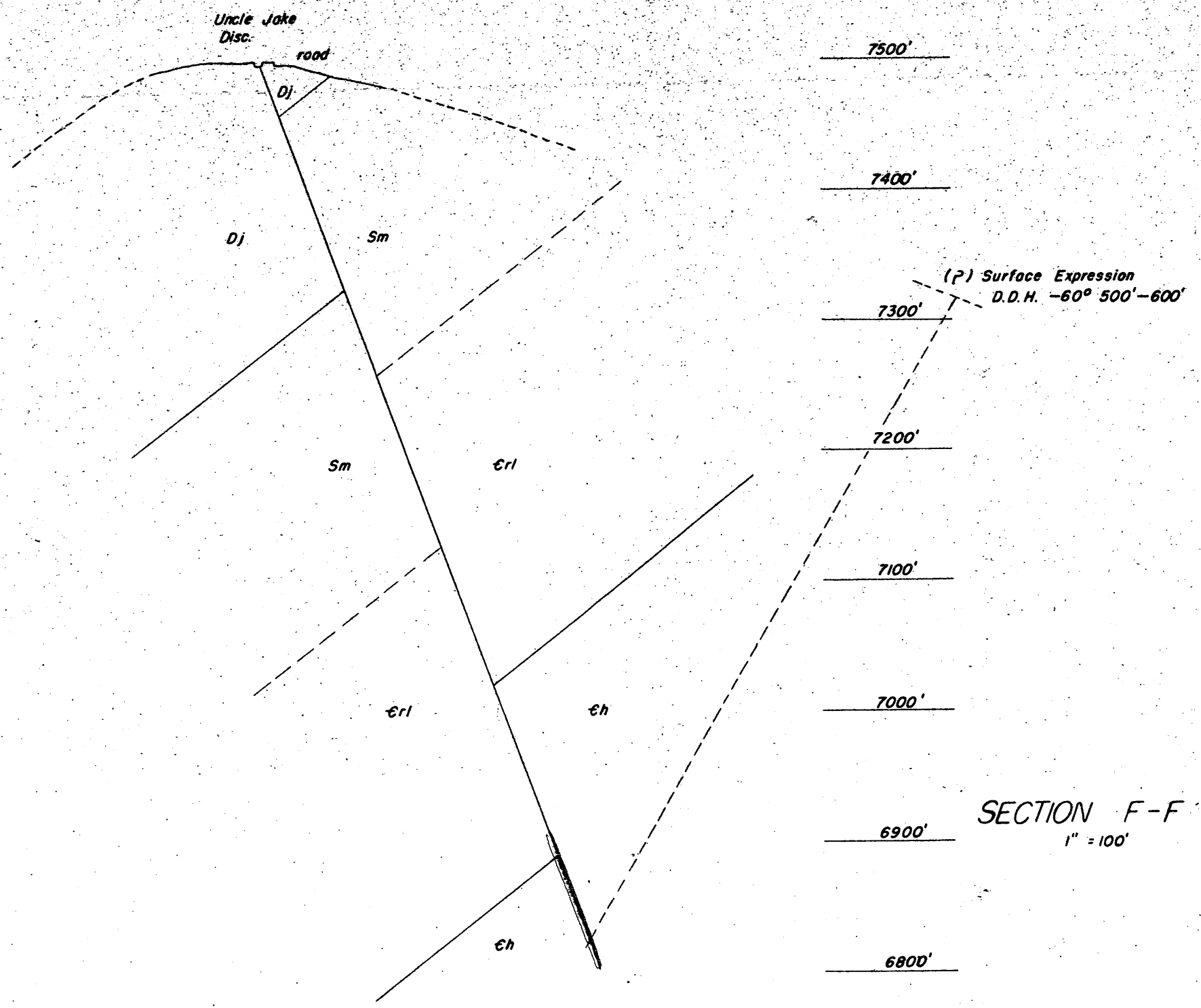


SECTION C-C
1" = 100'

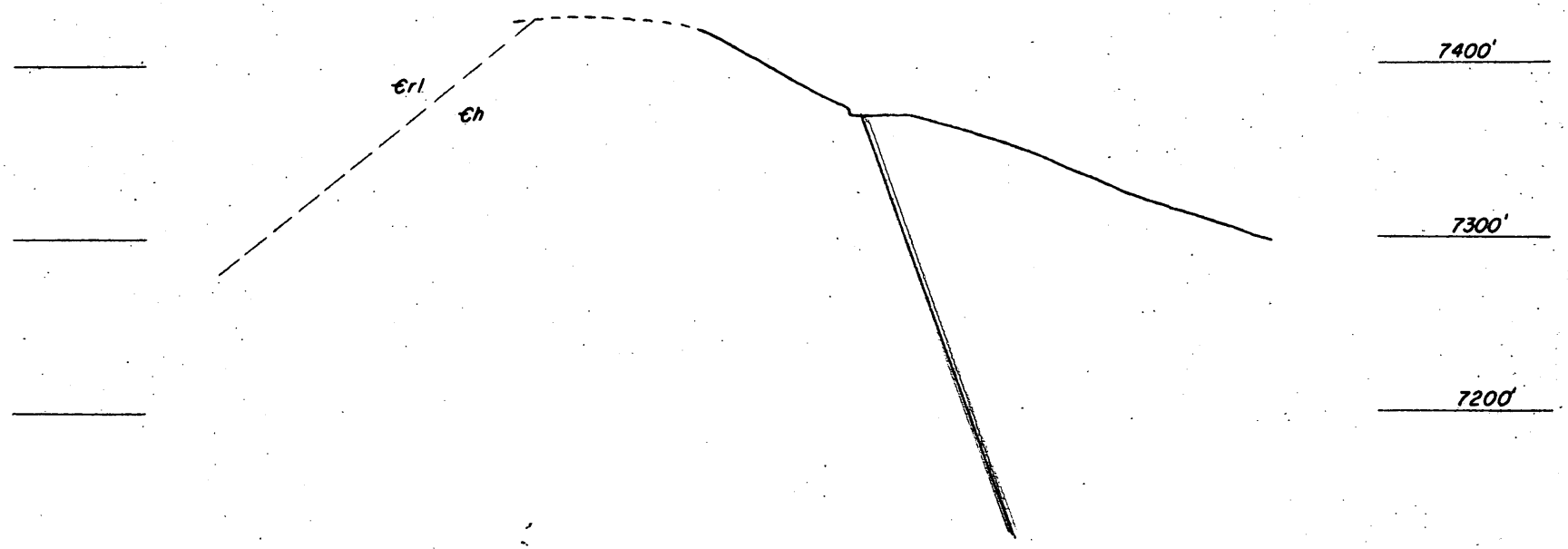


SECTION D-D
1" = 100'

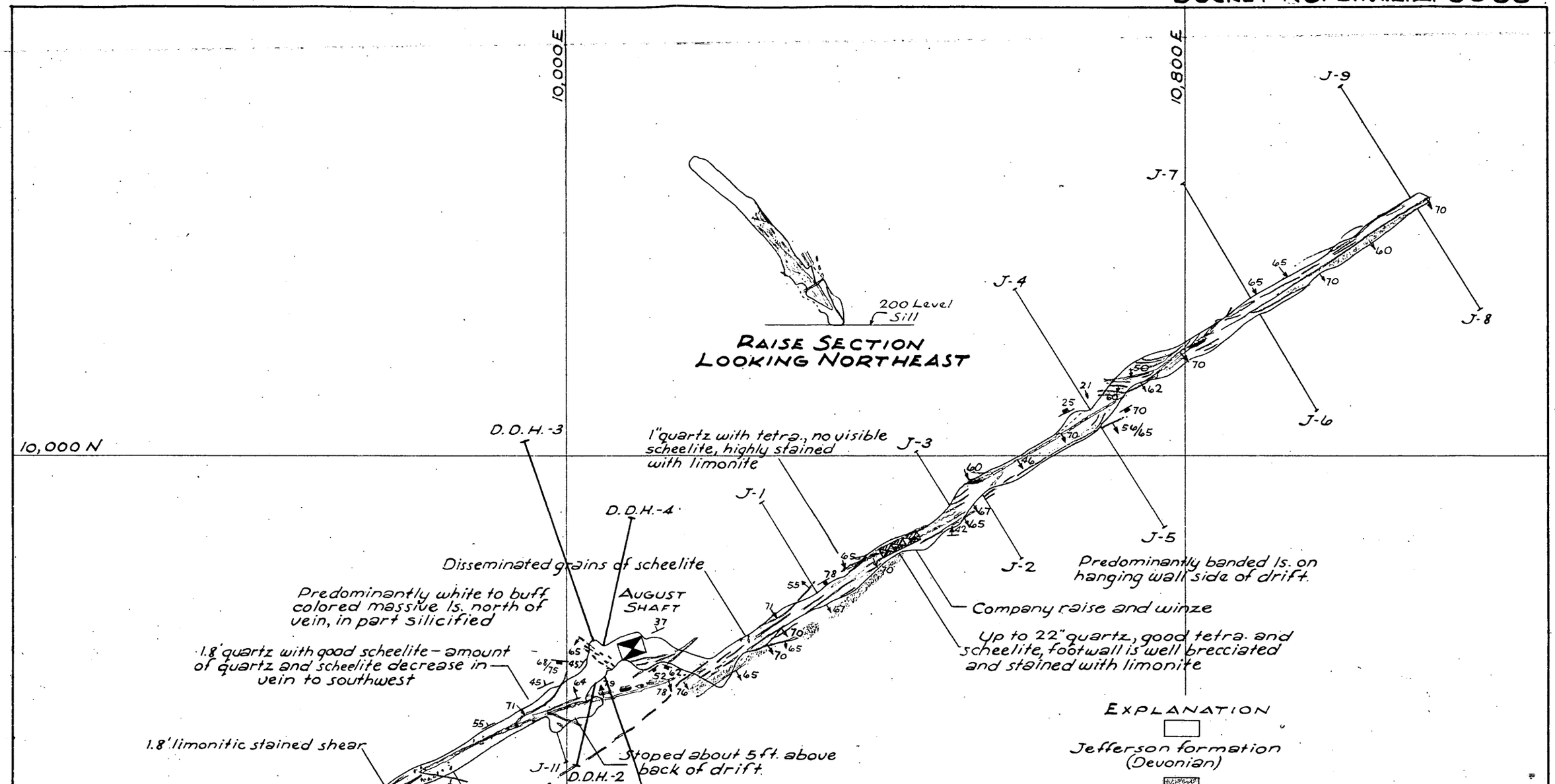

Dj
Sm
Sm
€rl
PROPOSED HOLE -60° 500'
7400'
7300'
Sm
€rl
€rl
€h
7200'
7100'
€rl
€h
7000'
6900'
SECTION E-E
1" = 100'



SECTION F-F
1" = 100'



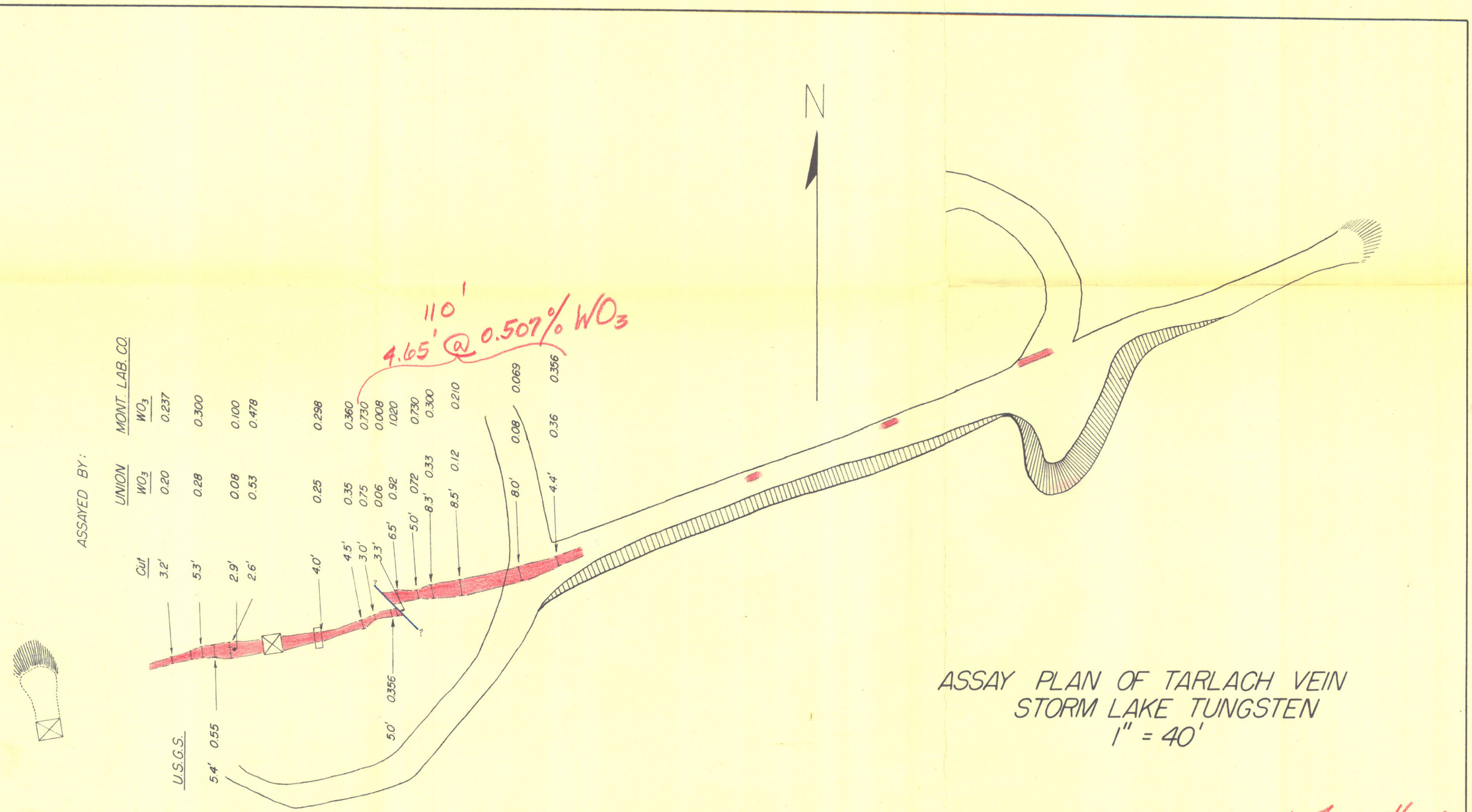
SECTION G-G
1" = 100'


10,000 E
10,800 E
10,000 N
200 Level Sill
RAISE SECTION
LOOKING NORTHEAST
D.D.H.-3
D.D.H.-4
D.D.H.-2
J-1
J-2
J-3
J-4
J-5
J-6
J-7
J-8
J-9
J-11
1" quartz with tetra., no visible scheelite, highly stained with limonite
Disseminated grains of scheelite
Predominantly white to buff colored massive ls. north of vein, in part silicified
AUGUST SHAFT
1.8' quartz with good scheelite – amount of quartz and scheelite decrease in vein to southwest
1.8' limonitic stained shear
Stoped about 5 ft. above back of drift
Predominantly banded ls. on hanging wall side of drift
Company raise and winze
Up to 22" quartz, good tetra. and scheelite, footwall is well brecciated and stained with limonite
EXPLANATION
Jefferson formation (Devonian)

Docket No. DMEA-3098 - Tungsten: Sunshine Mining Company Deerlodge & Granite Counties Montana

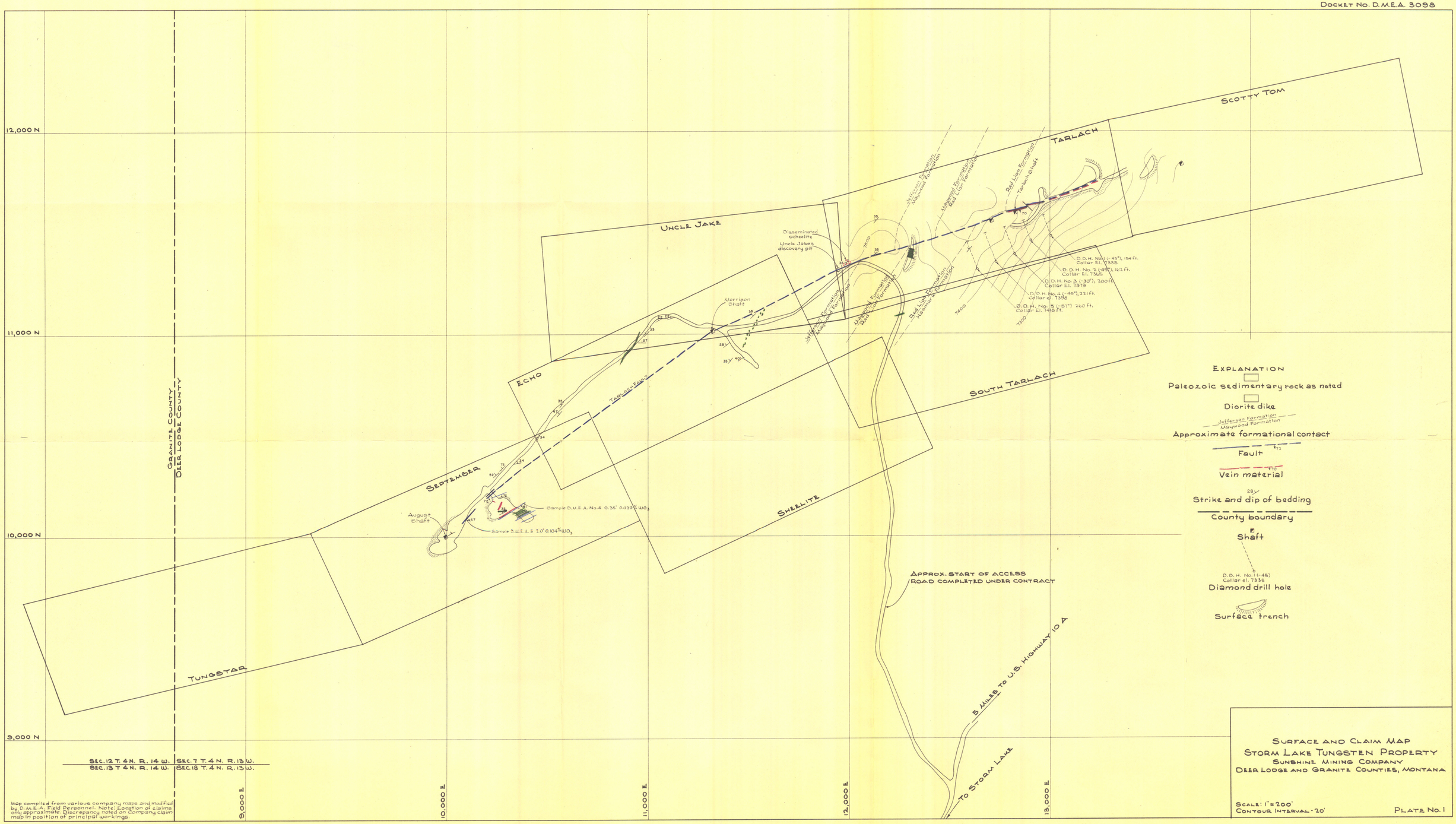
SUMMARY OF PERFORMANCE

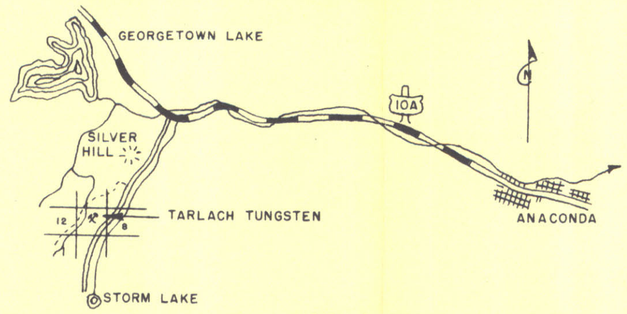
Month	Type of Work	Unit	This Month	To Date	Contract Allowance	Cost per Unit	Costs This Month	Costs To Date
September	Roads	Hrs	48	48		16.00		
October	Bulldozing Trenches		132	132			2880.00	
	Cleaning Shaft	Ft	6	6		34.00	204.00	3084.00
November	Bulldozing Roads	Hrs	16	64				
	Trenches		16	148 (212)	240	16.00	512.00	
	Cleaning Shaft	Ft	70	76		34.00	2380.00	5976.00
December	Cleaning Shaft	Ft	19	95	95	34.00	646.00	
	Sinking "	Ft	265	265		105.00	27825.00	9526.00
	Long Hole Drilling	Ft	68	68		1.80	122.40	substituted for Bulldozing (cost 480.00)
January	Sinking	Ft	297	562		105.00	31185.00	42645.00
February	Sinking	Ft	32.2	88.4		105.00	3381.00	16026.40
March	Sinking	Ft	26.6	115.0	115	105.00	2793.00	
	Drifting	Ft	10	10		37.00	320.00	19189.40



ASSAY PLAN OF TARLACH VEIN
STORM LAKE TUNGSTEN
1" = 40'

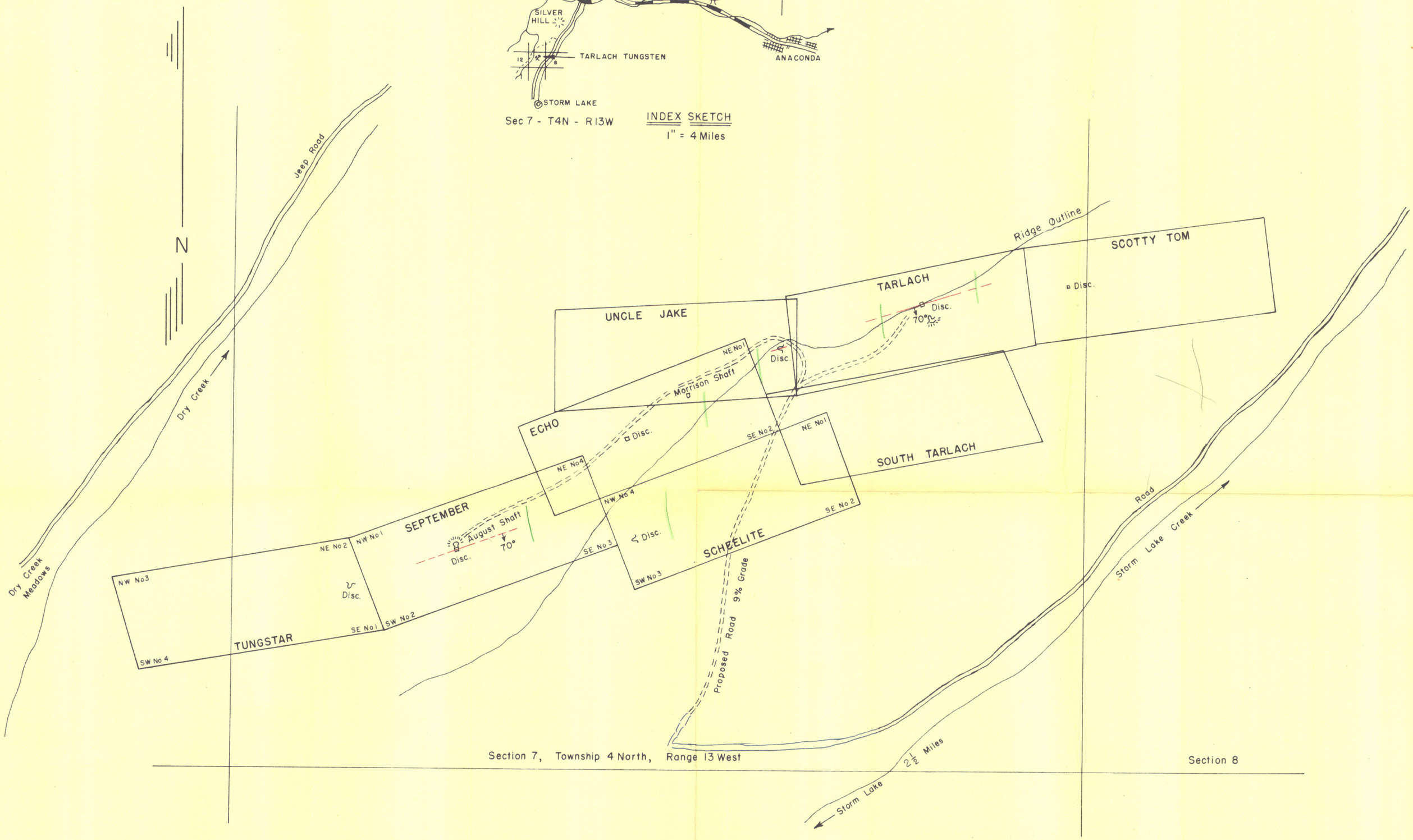
Map #4


12,000 N
11,000 N
10,000 N
9,000 N
9,000 E
10,000 E
11,000 E
12,000 E
13,000 E
GRANITE COUNTY
DEER LODGE COUNTY
SEC. 12 T. 4 N. R. 14 W.
SEC. 13 T. 4 N. R. 14 W.
SEC. 7 T. 4 N. R. 13 W.
SEC. 18 T. 4 N. R. 13 W.
Map compiled from various company maps and modified by D.M.E.A. Field Personnel. Note: Location of claims only approximate. Discrepancy noted on Company claim map in position of principal workings.
SCOTTY TOM
TARLACH
UNCLE JAKE
ECHO
SOUTH TARLACH
SEPTEMBER
SHEELITE
TUNGSTAR
Disseminated scheelite
Uncle Jakes discovery pit
Morrigan Shaft
August Shaft
Tarlach Fault
Jefferson Formation
Maywood Formation
Red Lion Formation
Tarlach Shaft
Sample D.M.E.A. No. 4 0.35' 0.039% WO3
Sample D.M.E.A. 5 2.0' 0.104% WO3
D.D.H. No. 1 (-45°), 154 ft. Collar El. 7335
D.D.H. No. 2 (-49°), 162 ft. Collar El. 7345
D.D.H. No. 3 (-30°), 200 ft. Collar El. 7379
D.D.H. No. 4 (-49°), 221 ft. Collar El. 7338
D.D.H. No. 5 (-57°) 240 ft. Collar El. 7418 ft.
APPROX. START OF ACCESS ROAD COMPLETED UNDER CONTRACT
5 MILES TO U.S. HIGHWAY 10 A
TO STORM LAKE
EXPLANATION
Paleozoic sedimentary rock as noted
Diorite dike
Jefferson Formation
Maywood Formation
Approximate formational contact
Fault
Vein material
Strike and dip of bedding
County boundary
Shaft
D.D.H. No. 1 (-45)
Collar el. 7335
Diamond drill hole
Surface trench
SURFACE AND CLAIM MAP
STORM LAKE TUNGSTEN PROPERTY
SUNSHINE MINING COMPANY
DEER LODGE AND GRANITE COUNTIES, MONTANA
SCALE: 1" = 200'
CONTOUR INTERVAL - 20'
PLATE NO. 1



Sec 7 - T4N - R13W

INDEX SKETCH
1" = 4 Miles



CLAIM MAP

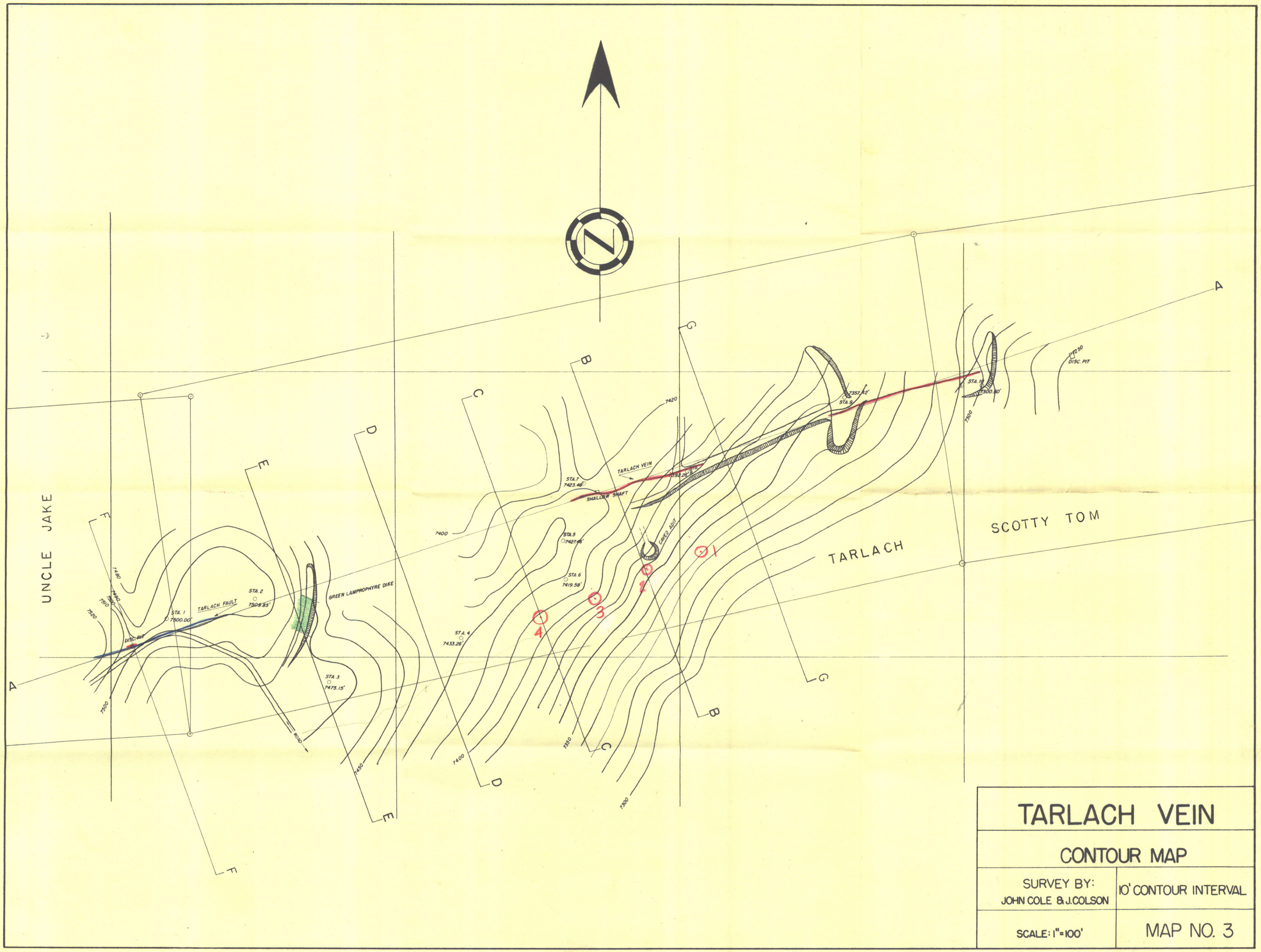
STORM LAKE TUNGSTEN PROSPECT

DEER LODGE COUNTY, MONTANA

SCALE: 1" = 400'

Surveyed by: Elstone & Wallace
August 10, 1952

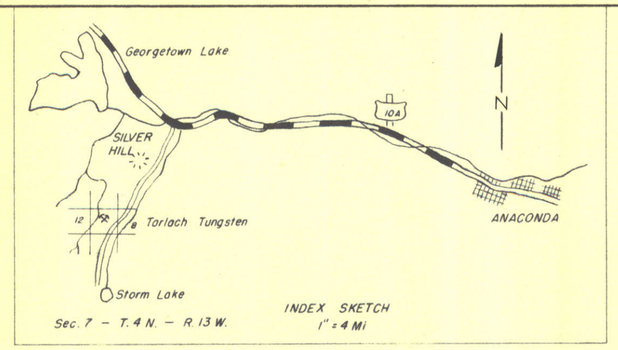
DMEA-3098

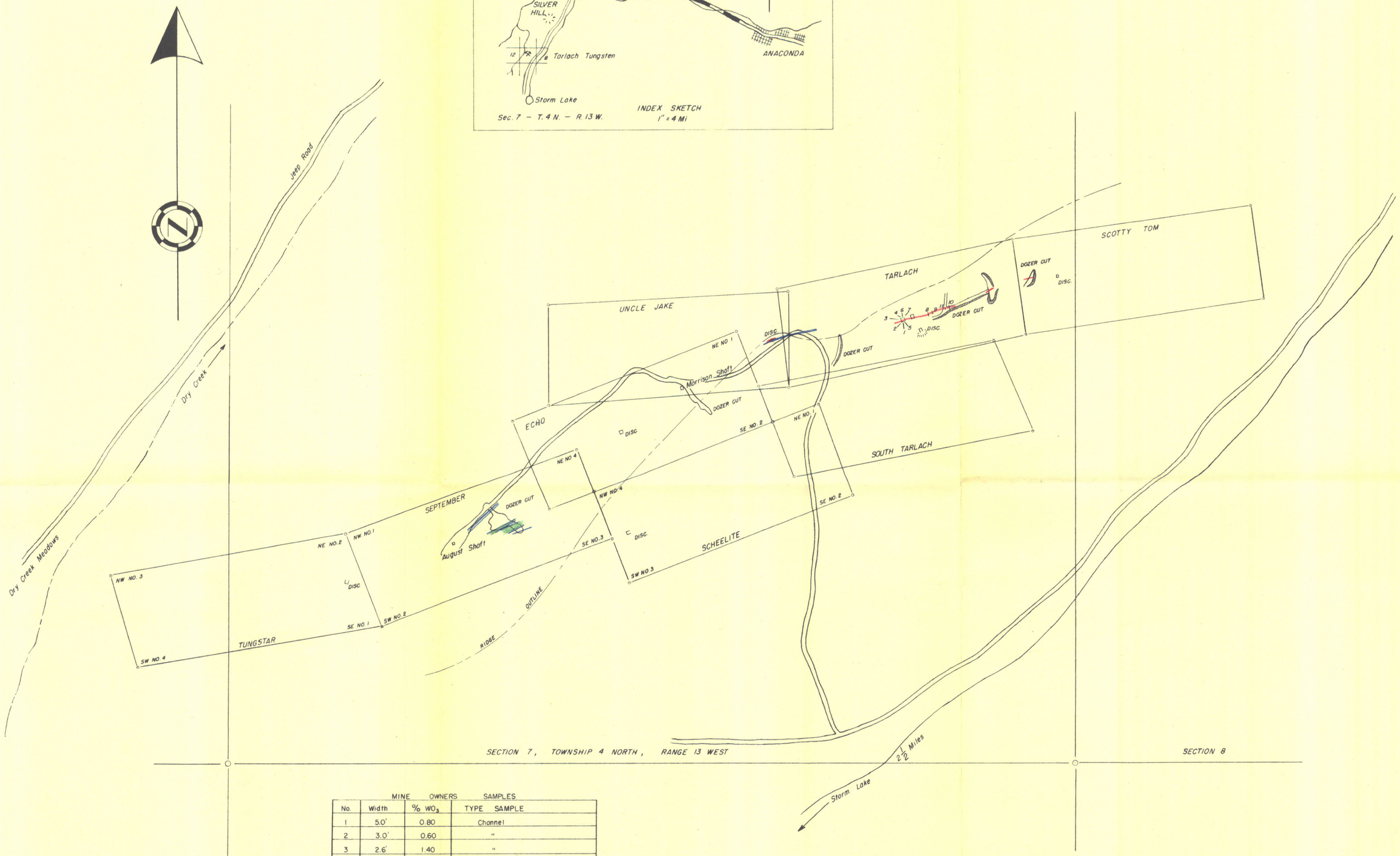


TARLACH VEIN

CONTOUR MAP

SURVEY BY: JOHN COLE & J. COLSON	10' CONTOUR INTERVAL
SCALE: 1" = 100'	MAP NO. 3





MINE OWNERS SAMPLES

No.	Width	% WO_3	TYPE SAMPLE
1	5.0'	0.80	Channel
2	3.0'	0.60	"
3	2.6'	1.40	"
4	8.0'	0.40	"
5	4.0'	0.02	"
6	6.0'	0.05	"
7	8.0'	1.10'	"
8	2.0'	2.80	"
9	0.5'	5.70	"
10	7.0'	0.02	"
11		5.30	DUMP SAMPLE
12	0.93 % Cu.	9.9 oz. Ag	6.4 % WO_3 (Select)

CLAIM MAP

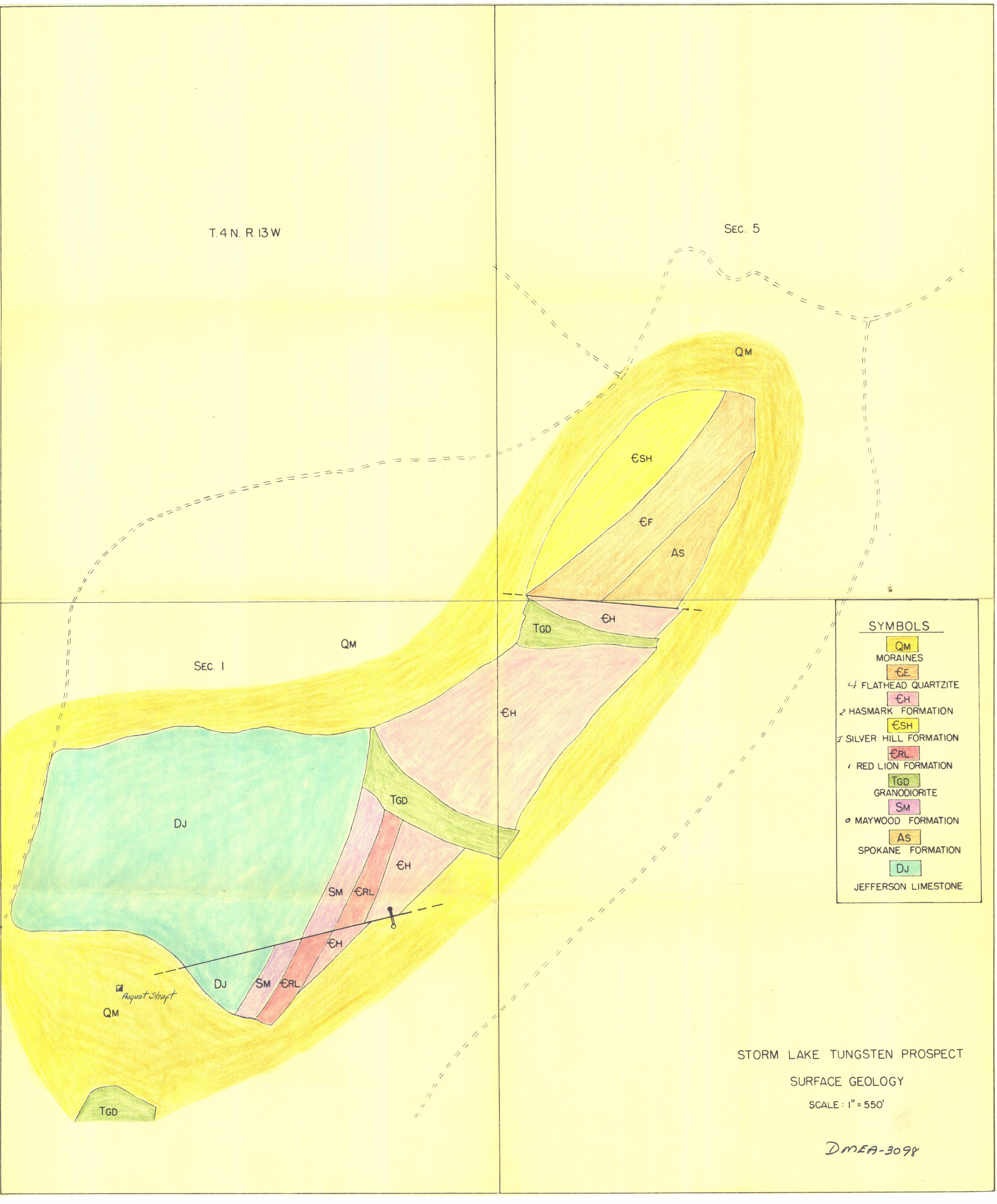
STORM LAKE TUNGSTEN PROSPECT

DEER LODGE COUNTY, MONTANA

SCALE : 1" = 400'

Surveyed by: Elstone & Wallace
August 10, 1952.

Map #6


T. 4 N. R. 13 W
SEC. 5
QM
€SH
€F
AS
€H
TGD
QM
SEC. 1
€H
TGD
DJ
€H
SM
€RL
€H
DJ
SM
€RL
August Shaft
QM
TGD
SYMBOLS
QM
MORAINES
€E
4 FLATHEAD QUARTZITE
€H
2 HASMARK FORMATION
€SH
3 SILVER HILL FORMATION
€RL.
1 RED LION FORMATION
TGD
GRANODIORITE
SM
0 MAYWOOD FORMATION
AS
SPOKANE FORMATION
DJ
JEFFERSON LIMESTONE
STORM LAKE TUNGSTEN PROSPECT
SURFACE GEOLOGY
SCALE: 1" = 550'
DMEA-3098