DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE — Idm-E NO. 370 — DMEA NO. 2356

Application
- [ ] Denied
- [ ] Withdrawn

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

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

Folder No. 1:

Left Side

- [x] Royalty Audits
- [x] Certification of Discovery
- [ ] Closing Letter
- [x] Cost Audits
- [x] 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 Comoleted 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)
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No. 3 : 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.

Correspondence 8/30/54 To present

Folders No. 2 : ~~Maps (Use pocket folder or envelope)~~

Folders No. _____ : Settlement Sheets

Folders No. _____ : Drill Logs

Folders No. 4 : Royalty material

5/29

17963

DMEA 2356

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-E370, Docket DMEA-2356 (tungsten), dated July 18, 1952, with

Nikas Mining Company
239 North Church Street
Tucson, Arizona

for the purpose of determining the amount of royalty due the U. S. Government on sales of minerals from property referred to as the Morning Star Mine located in Pinal County, Arizona, during the period December 2, 1956, through October 16, 1961.

A certification of discovery or development was issued on March 3, 1954, and, in accordance with Article 9 of the contract, royalty is payable on all minerals mined or produced from the land described in Article 2 of the contract for a period of 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. An Audit Certificate dated February 18, 1954, indicated accepted costs under the exploration contract amounting to $24,212.35 with the Government's contribution, on a 75 percent basis, being $18,159.26.

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

This review disclosed no sales of production subsequent to the period covered by a prior Royalty Audit Certificate which found the sales subject to Government royalty through December 1, 1956, to be $62,745.20. The royalty account as of that date was:

Total Royalty Due	$3,137.26
Total Royalty Paid	2,136.70
Balance of Royalty Due	$1,000.56

At October 16, 1961, the royalty account of this project was found to be:

Total Royalty Due	$3,137.26
Total Royalty Paid	3,137.26
Balance of Royalty Due	$ -0-

E. D. Talbert

October 19, 1961

E. D. Talbert, OME Auditor

STATUS OF PROJECT, SCOPE OF REVIEW
AND REASONS THEREFOR

After unsuccessful attempts by the field and Washington offices to collect the $1,000.56 in delinquent royalties stated in the Royalty Audit Report and Certificate dated December 12, 1956, the matter was referred to the Attorney General of the United States on September 20, 1957. A program of periodical payments was arranged with the Operator by the United States Attorney at Tucson, Arizona. Final payment in liquidation of this delinquent royalty was received by the Government on June 29, 1959.

The files disclose no sales of production since December 1, 1956, the end of the period covered by the aforementioned audit. However, during December 1956, 35 tons of ore was cleaned from the floor of a stope by Tom D. Callas, one of the partners in the Nikas Mining Company. This production was milled into an estimated 800 lbs. of about 52% WO_3. The concentrates are stored in the basement of the residence of Mr. Callas' widow in Florence, Arizona.

In a letter dated December 2, 1959, the Nikas Mining Company, over the signature of John Gekas, one of the partners, advised that it was not aware of this stockpile but stated "If such is the case please rest assured that the Government will receive royalty when the concentrates are sold". In a letter dated February 14, 1961, Mrs. Tom Callas acknowledged custody of the concentrates and stated "So if I do anything with them I will let you know right away".

The sub-lease of the project property to D. K. Lieberman, d/b/a Don Lieberman Enterprises expired on September 12, 1955, and was not renewed. The lease of the Operator, a partnership composed of Tom D. Callas, A. Nikas, John Gekas, John Paulos, and Monte Seymour, was not extended on its January 3, 1957, expiration date. By the provisions of the Landlord's Subordination Agreement executed by Elizabeth L. Wood on February 20, 1952, the obligation for repayment is assumed by Mrs. Wood in event of termination of the lease.

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

(1) Periodic examinations and correspondence has disclosed no sales of production other than those reported in the prior Audit Report and Certificate;
(2) Proper royalty has been paid on all production except a small stockpile of concentrates; and

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

MME Form 22
Dec. 60

DEPARTMENT OF THE INTERIOR
Office of Minerals Exploration

CHECK SHEET OF EXAMINING ENGINEER

Operator's Name and Address

Nikas Mining Co.

Morning Star Mine

Contract No.	Docket No.
Idm E370	DMEA 2356

Prepared by (Signature)	Date
Hugh M. Connors	October 16, 1961

Hugh M. Connors

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

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

- [ ] Operating.
- [x] Inactive.
- [ ] Abandoned.

Dec. 1956 Date of last production if not operating.

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

On October 6, 1961 I tried to contact Mrs. Tom Callas in Florence, Arizona. The postmaster suggested I contact the Public Utilities office. I found that there is no light, gas, or telephone in her name.

84861-60

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

FIRST ROYALTY AUDIT CERTIFICATE

I have examined the available records pertaining to the sale of tungsten ores and concentrates for the period July 18, 1952 to December 1, 1956 by

Nikas Mining Company
55 West Congress Street,
Tucson, Arizona

and

Don Lieberman Enterprises, Sublessee
1500 West Ajo Way
Tucson, Arizona

produced from the Morning Star Mine, located in Pinal County, Arizona, under the terms of Contract Idm-K370, Docket No. DMEA-2356, (Tungsten) dated July 18, 1952, as amended.

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

The audit established the total sales of such ores and concentrates for this period, subject to DMEA royalties, to be $62,745.20. Royalty due the Government at the contract rate of 5% is $3,137.26. The royalty paid and the balance due are as follows:

Total royalties due	$3,137.26
Total royalties paid	2,136.70
Balance of royalties due	$1,000.56

December 12, 1956

T. N. Breading, Auditor

FIRST ROYALTY AUDIT REPORT

I INTRODUCTION

On October 9 and 10, 1956, an audit was made of the available records of

Nikas Mining Company, a Partnership Composed of
Tom D. Callas, A. Nikas, John Gekas, John Paulos and Monte Seymour
55 West Congress Street, Tucson, Arizona

and

Don Lieberman Enterprises (Sublessee)
1500 W. Ajo Way, Tucson, Arizona

pertaining to the sales of tungsten ore and concentrates during the period July 18, 1952 to December 1, 1956, produced from the Morning Star Mine located in Pinal County, Arizona, on which royalties are due the U. S. Government under the terms of Contract Idm-E370, Docket No. DMEA-2356, dated July 18, 1952, as amended.

Mr. Victor J. Tronolone, Public Accountant, who maintains the records of Nikas Mining Company, was contacted on October 10, 1956, and he advised that to the best of his knowledge and belief, production records as such were not maintained by Nikas Mining Company, and available records were at his office, 235 North Church Street, Tucson, Arizona. Mr. Tronolone advised also that he knew of no records of the White Mountain Mining and Milling Company, and that the two partners who operated the Morning Star Mine for a short time live some place in California. Shipments of concentrates made by White Mountain Mining and Milling Company were verified by communication with C. W. Jones, Buyer, Bishop, California. Records of Don Lieberman Enterprises were in the custody of Mrs. Sadie Lee Stuart, Accountant and Office Manager for Don Lieberman Enterprises, at the company office located at 1500 West Ajo Way, Tucson, Arizona. Mr. V. J. Tronolone, Mrs. Stuart, and Mr. Lieberman were consulted during the audit. Mr. T. M. Romslo, Mining Engineer, Bureau of Mines, Tucson, Arizona, collaborated in the audit.

II GENERAL INFORMATION

The exploration contract provides that should the Government within six months after completion or termination of the exploration contract certify that a discovery or development has resulted from the work, the operator and his successor in interest shall be obligated to pay a percentage royalty on the net smelter returns or other net proceeds realized from the ore, concentrates, or metals produced within ten years from the date of the contract, until the amount contributed by the Government, without interest, is fully repaid or said ten years have elapsed, whichever occurs first. A Certificate of Discovery or Development was issued on March 3, 1954.

According to an audit report and certificate dated February 18, 1954, prepared by Donald T. Finch, DMEA Auditor, the total accepted costs of the exploration amounted to $24,212.35, with the Government's contribution on a 75% basis being $18,159.26.

The last MF-104 filed by Nikas Mining Company covered the month of June, 1953. From that date until June, 1954 there is no record of operations. The White Mountain Mining and Milling Company, under a sublease from Nikas Mining Company, operated the mine and a tungsten mill of their own design from June, 1954 until about April, 1955. Nikas Mining Company cancelled the sublease of White Mountain Mining and Milling Company in April, 1955. From that date until September, 1955 the property was operated by Nikas Mining Company. In September, 1955 Nikas Mining Company subleased the property for one year to Don Lieberman Enterprises. Mr. Lieberman stated that he operated the mine from September, 1955 to May, 1956 when operations were halted due to a disagreement between one of the Nikas partners (Tom Callas) and Lieberman's mine superintendent.

Mr. Tromolone advised that the records which he maintained for Nikas Mining Company were the only records of the company's operations. These records consist of a combined cost book and journal and a general ledger. The only records of production were reflected on settlement sheets, copies of which had, in most instances, been forwarded to the Executive Officer, DMEA Field Team, Region III, Denver, Colorado, or were obtained by this auditor at the time of the on-site audit. Cash receipts for ore and tungsten sales, as reflected on this auditor's work sheets, were reconciled with records in Mr. Tromolone's office.

Mrs. Sadie Lee Stuart, Accountant and Office Manager for Don Lieberman Enterprises, advised that all records pertaining to mining operations of Morning Star Mine and milling operations of the tungsten mill, which is not far from the company office, were included in the records of Don Lieberman Enterprises, which includes construction, financing, mining and other activities. Information relating to the production from Morning Star Mine for the period it was operated by Don Lieberman Enterprises, about October 1, 1955 to May 11, 1956, were limited to a memorandum transcript of weight tickets of ore shipped from Morning Star Mine, near Oracle, Arizona, to the mill operated by Don Lieberman Enterprises located at 1500 West Ajo Way, Tucson, Arizona. Copies of these weight tickets were checked to transcript and this total tonnage reconciled with the tonnage reported to Nikas Mining Company on settlement sheets prepared by Don Lieberman Enterprises. In a discussion with Mrs. Stuart, she stated that it would be impossible to determine the amount of low grade concentrates produced from ore extracted from the Morning Star Mine, the ore produced at Arivaca (another Lieberman Enterprises operation), and ore purchased from other operators. The records, however, indicate that all high grade concentrates milled for the period from December, 1954 to May, 1956 were sold to G.S.A. The low grade concentrates resulting from this milling were commingled, as is common practice in smaller mills.

The only low grade tungsten concentrates shipped by Don Lieberman Enterprises, on which no settlement has been made with Nikas Mining Company, are represented by Settlement Sheet No. 3 dated February 28, 1956 to Salt Lake Tungsten Company. The shipper's affidavit attached to this shipment by Don Lieberman Enterprises dated January 16, 1956, indicates that the ore from which these low grade concentrates were derived was mined in four different locations. The total tonnage reported is 874.47 tons, of which 590.82 tons, or 67.5% is reported as having been mined in the Morning Star Mine. All ore from

this mine is subject to DMEA royalty. Accordingly, 67.5% of the net settlement (67.5% of $2,914.20 or $1,967.09) is subject to DMEA royalty at 5%. The amount of royalty due on this shipment is $98.35. Photo copies of settlement sheet and affidavit are attached to and made a part of this report.

III SCOPE OF AUDIT AND FINDINGS

(A) Conference with the examining engineer (Mr. T. M. Romslo) disclosed the following:

(a) The operator does not stockpile ore subject to royalty repayment.

(b) The sublessee (Lieberman Enterprises) did commingle some production purchased from the operator; however, the resulting concentrates produced and sold were verified by communication with G.S.A., and the allocation appears to be equitable.

(c) The operator does not stockpile mine or mill rejects (low grade ore, tailing or middlings, etc.) which may have a potential value within the royalty payment period.

(d) The assay controls in effect are considered reasonably adequate.

(e) The manner of disposing of production gives the Government its fair royalty returns.

(f) Lieberman, sublessee, did buy some ore and concentrates from other operators. Returns on those purchases was verified by communication with G.S.A.

(B) Audit of Settlement Sheets

A considerable amount of pre-audit work was accomplished in the DMEA Office, Region III, Denver, Colorado, prior to the field audit. During this pre-audit work a statement of royalties received was prepared from copies of liquidation settlement sheets furnished by purchasers of ore and concentrates in support of royalty payments made by such purchasers directly to the Regional DMEA Executive Officer. The royalty receipts were verified with deposits made by the Regional Finance Officer. All of the data included in the statement were confirmed by detailed recomputation. This statement is filed as a part of my audit working papers.

During the on-site audit it was ascertained that the operator had failed to pay royalty on six shipments of ore and concentrates. One of these shipments was to Salt Lake Tungsten Company and represented low grade concentrates not acceptable to G.S.A. Details of the royalty computation on this shipment are shown on Schedule 1 attached to and made a part of this report. Pertinent data with respect to other sales and the computation of royalty due thereon are included in Exhibit "A" attached to the report.

Correspondence with purchasers of concentrates confirmed the sales of high grade concentrates during the period under review totaled 38.148 tons, which is in agreement with the results of this audit as shown in Section IV CONCLUSIONS of this report.

IV CONCLUSIONS

A summary of the operator's sales subject to DMEA royalties follows:

ORE

Shipper: Nikas Mining Company

Year and Purchaser	Short Dry Tons	Net Receipts Amount	Net Receipts Per S.D.T.	Royalty Rate	Royalty Amount
1955 - 1956					
Lieberman Enterprises	530.55	$18,757.46	$ 35.35	5%	$ 937.88
TOTAL ORE	530.55	$18,757.46	$ 35.35	5%	$ 937.88

HIGH GRADE CONCENTRATES

Shipper: Nikas Mining Company

1953					
U.S.V. Corp.	17.927	$ 5,021.35	$ 280.10	5%	$ 251.07
C. W. Jones	1.168	4,402.41	376.92	5%	220.12
Shipper: White Mountain Mining & Milling Co.					
1954					
C. W. Jones	2.397	1,495.74	624.01	5%	74.79
Shipper: Don Lieberman Enterprises					
1956					
G. S. A.	16.656	31,101.15	1,867.26	5%	1,555.05
Total Concentrates	38.148	$42,020.65	$1,101.67	5%	$2,101.03
Total Ore (Royalty)		$18,757.46	19.63	5%	937.88
Subtotal					$3,038.91
Total Royalty Due Schedule I		1,967.09		5%	98.35
Total Royalties Due		$62,745.20		5%	$3,137.26
Total Royalties Paid					2,136.70
Balance Royalties Due					$1,000.56

This auditor was advised by Mr. Lieberman that settlement on all shipments with the exception of the value of low grade concentrates shown on Settlement Sheet No. 3, had been tendered to Nikas Mining Company. Settle-

ment on shipments Numbers 10 and 11, as shown on Exhibit "A", were not consumated at the time of this audit.

The audit has confirmed the accuracy and propriety of the royalty payments received by the regional office applicable to ore and concentrate sales during the period July 18, 1952 to December 1, 1956. It has also determined that all indicated sales during the period have been properly accounted for.

It is recommended that Nikas Mining Company be notified they are required to maintain adequate accounting records which will correctly reflect production and milling costs, as outlined in Article 7(d) of the contract.

December 12, 1956

T. H. Brading, Auditor

Exhibit "A"

NIKAS MINING COMPANY

SUMMARY OF ROYALTIES DUE

Contract Idm-E370

Docket IMEA-2356

Shipper	Purchaser	Date	Lot No.	Short Dry Tons	Net Value	Net Value S. D. T.	Rate	Due	Paid
CONCENTRATES									
White Mountain M. & M. Co.	C. W. Jones	5-17-54	1	.0049	$ 104.00	$2,122.41	5%	$ 5.20	-
White Mountain M. & M. Co.	C. W. Jones	5-17-54	2	.00285	16.59	587.25	5%	.83	-
Don Lieberman Enterprises	G. S. A.	6-1-56	10	2.8425	10,703.20	3,765.42	5%	535.16	-
Don Lieberman Enterprises	G. S. A.	7-1-56	11	2.000	4,429.08	4,429.08	5%	221.45	-
ORE									
Nikas Mining Company	Don Lieberman Enter.	4-14-56	4	142.92	2,803.52	19.62	5%	140.18	
Nikas Mining Company	Don Lieberman Enter.	6-21-55	2	105.97	3,397.39	32.06	5%	169.87	$170.08
Nikas Mining Company	Don Lieberman Enter.	9-30-55	3	176.64	6,040.15	34.19	5%	302.01	302.41
								$1,374.70	$472.49
								472.49	
					Subtotal			$ 902.21	
					Total Royalties Due Schedule I			98.35	
					Total Royalties Due			$1,000.56	

Schedule I

NIKAS MINING COMPANY

SUMMARY SETTLEMENT SHEET NO. 3

SALT LAKE TUNGSTEN COMPANY.

(Don Lieberman Enterprises, Shipper)

Date of settlement sheet		2/22/56
Date of certificate		1/16/56
Total tons of ore shipped		874.77
Morning Star Mine (DMEA) Tons shipped		590.82
% DMEA ore		67.5
Total dry tons concentrate (per settlement sheet)		33.885
Total Net Value Received		$2,914.20
Net Value Per Dry Ton		$86.00
Net Value subject to DMEA Royalty,	67.5% of $2,914.20 =	$1,976.09
Royalty at 5%		$98.35

THE SALT LAKE TUNGSTEN COMPANY

Concentrate Settlement Sheet

Date February 28, 1956 Shippers Lot No. 3 S.L.T. Co. Lot No. 204

Shipper Don Lieberman Enterprises

Shipped From Tucson, Arizona Date as of 2/1/56

Sampled By Salt Lake Tungsten Company Date Report No.

Assayed By Same Date Report No.

Truck Lieberman Gross Lbs. 120,120 Tare Lbs. 48,880 Wet Wt. Lbs. 71,240

Assay % Avg. Moisture 4.87 % Lbs. 3,470

Dry Weight Lbs. 67,770

Dry Tons 33.885 x Settlement/Avg. Assay 2.935 % Total Contained Units 99,461

SETTLEMENT

Contained Units 99.461 x $63.00 = $ 6,266.04 Gross Value

Less Deductions:

Losses	12.60	1,253.21
Sampling Charges		
Refinery Charge	21.10	2,098.63
Freight Charges		
Advances		

Total Deductions $ 3,351.84

Net Settlement $ 2,914.20

Date Paid:

Vo. No.:

GENERAL SERVICES ADMINISTRATION - REGION 8

COPY

CERTIFICATE

The undersigned certifies that Lot Number .....3..... is made up of .4..... lots of tungsten concentrates and that all of said lots were produced in the United States* from ores mined in the United States* and that the approximate date which the said lots were mined and/or concentrated was ..June.54.through.Sept..55.

* *United States means United States, its Territories and possessions.*

The undersigned further certifies that he knows of his own knowledge that the said lots of tungsten concentrates were obtained in the quantities and from the mines shown below. (If the person executing this certificate does not have personal first hand knowledge of the source of said lots, state this fact immediately following this sentence and in such case there must be presented with this certificate a similar certificate on the same form executed by the person who actually mined the same lots.)

NAME OF MINE	LOCATION OF MINE	QUANTITY (Lbs. of Concentrates)
Ja unita Mine	Sells, Arizona	134.75 Tons Ore
Yellow Star Mine	Fresnel Mining Dist. Tuscon, Arizona	59.20 " "
Morning Star	Ora cle, Arizona	590.82 " "
Good Enough	Ariva ca, Arizona	90.00 " "
		874.77 Tons Ore

The total of 71,5000 pounds of float you received on this shipment number 3 is floatation resulting from the run of the 874.77 tons of ore run through our mill.

This is a result of comingling of concentrate from the various mines listed above but there is no way of sorting out how much concentrate came out of what mine. This has been piling up out of these four mines for a period of over a year and this shipment is the result of flotation coming out of this ore.

DEC 17 1956
D.M.E.A.

In executing this certificate, I fully understand that the tungsten concentrates hereinabove described are being sold to or purchased from me for resale to the United States Government and that the representations I have hereinabove made concerning the source of said tungsten concentrates are being made to the United States Government.

I further understand that this certificate will be used to support a claim against the United States Government when the said tungsten concentrates are sold to the United States Government, and I understand the provisions of 62 Stat. 698; 18 U.S.C. 287, 1001, concerning penalty for presenting fraudulent claims, which statute provides for a fine of not more than $10,000.00 and imprisonment for not more than 10 years, or both.

I hold Certificate Number ..9-2462..... furnished by the General Services Administration.

Dated this ...16th..... day of .....Ja.nuary..... , 19 56... .

Don Lieberman Enterprises

s/n D.K. Lieberman
(Signature)

GSA-R8-423
(10-55)

Check Sheet of Examining Engineer

RECEIVED DEC 17 1956 D.M.E.A.

Operator's Name Nikas Mining Company

Address 55 West Congress Street

Tucson, Arizona

Exploration Contract No. Idm-E370 Docket No. DMEA-2356

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

8. Comment on any item 2 (b) to 6 if answer is No.

* Small portion commingled by leaser, Lieberman
Allocation of commingled production verified by GSH

** Lieberman, leaser, bought concentrates verified by GSH

Date Oct 10, 1956

Mining Engineer

D M Ronald

Form No. USA-200
Rev. [illegible]
Form Approved by
[illegible] U. S.

Receipt No. 62759

DEPARTMENT OF JUSTICE

Office of United States Attorney

(Tucson) District of ARIZONA

(CHECKS ACCEPTED SUBJECT TO COLLECTION)

Claim Against	NIKAS MINING COMPANY		U. S. Att
Amount Received	ONE HUNDRED TWO and 85/100 DOLLARS ($ 102.85)		From
Agency File No.	USDI Docket No. DMEA 2356 Contract No. IDM-E370		
Type Claim: unpaid royalties	Amt. of Claim: $1,000.56	DJ File No.: 90-1-18-333	(X) Pre-judgment ( ) Judgment ( ) Compromise
Date Payment Received: June 29, 1959		By: Clerk	( ) Part in full (X) Partial Pay No.

Duplicate — With Remittance

Rutledge
Martin
Geehan
Guild
Robin
Hoffman
Hedges
Lovejoy
Selfridge
H Johnson

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

To: Nikas Mining Company, 55 West Congress Street Tucson, Arizona — a partnership composed of Tom D. Callas, A. Nikas, John Gekas, John Paulos, and Monte Seymour

Pursuant to the provisions of Exploration Project Contract No. Idm-E370, dated July 18, 1952, (Docket No. DMEA 2356), 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:

An exploration program consisting of sinking a 110-foot inclined shaft and drifting and crosscutting on the 100-foot level has resulted in the discovery of a substantial amount of tungsten ore. It is estimated that the orebody consists of several thousand tons of tungsten ore, both between the 100-foot level and the surface, and below the 100-foot level. The orebody extends into that portion of the Morning Star claim for which the Pure Gold claim has been granted extralateral rights and the occurrence of the same minerals is inferred within the Pure Gold claim by reason of the same discovery or development.

THE UNITED STATES OF AMERICA

Dated: MAR 3 1954

By: O Mitchell
Administrator, Defense Minerals Exploration Administration

cc: Docket
Field Team, REg. 4
Finance Office
Oper. Committee
Adm. Read. File
Code 400 - Mr. Martin
Code 800 - Mr. Chambers
Code 110 - Mr. Johnson
J. H. Hedges, USBM
R. W. Geehan, USBM
T. P. Thayer, USGS
P. W. Guild, USGS

cc: Mrs. Elizabeth L. Wood, Oracle, Arizona
YMCA, Tucson, Arizona
Irving Gumbel, Act.Dir., Mat. Divn., EPS, GSA, Wash. 25, D.C.

JHopkins/ls 3/4/54

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

AUDIT CERTIFICATE

I have examined the records and transactions of:

Nikes Mining Company, a Partnership
Composed of Tom D. Callas, A. Nikes, John
Gekas, John Paulos, and Monte Seymour
1323 East 5th Street
Tucson, Arizona

pertaining to Exploration Contract Idm-2370, Docket No. DMA 2330, including amendments No. 1 and No. 2, and termination agreement covering a project of exploration for tungsten, located in Pinal County, Arizona, and commonly known as Maudina and Morning Star Tungsten Mines, for the period August 27, 1952 to June 30, 1953, including subsequent settlement February 17, 1954.

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

The audit disclosed the following facts in regard to the amount to be paid the Contractor:

Total Cost per MF-104			$25,224.45
Less: Proceeds from Property Disposition			966.67
Net Claimed Costs			$24,257.78
Exceptions (See Audit Report for details)			
During this Audit		$119.05	
Less: Reinstatement of Disallowance			
Prior Audit	$55.50		
Adjustment of Under Claim for Labor	17.15	73.65	45.45
Total Accepted Cost			$24,212.33

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 Eighteen Thousand One Hundred Fifty Nine and 20/100ths Dollars

- $18,159.20 -

is valid and proper.

This certificate is issued on the provision that the Regional Executive Officer, the Administrator, or other competent official has accepted or will accept the project as having otherwise met the terms of the contract.

Dated: February 14, 1954.

Donald T. Finch, Auditor

AUDIT REPORT

I. INTRODUCTION

On February 9, 1954, a final audit (covering the period August 27, 1952, to June 30, 1953, including subsequent settlement February 17, 1954) was made of the records and accounts of operations pertaining to Contract No. Idm-E370, Docket DMEA 2356, including amendments No. 1 and No. 2, termination agreement and approval of liquidation agreement with the

Nikas Mining Company
a Partnership composed of Tom D. Callas, A. Nikas
John Gekas, John Paulos, and Monte Seymour
1323 East 5th Street
Tucson, Arizona

covering a project of exploration for Tungsten, located in Final County, Arizona and commonly known as the Maudine and Morning Star Tungsten Mines.

Part of the accounting records under the contract are in the possession of Mr. H. E. Krumlauf, whose address is as above. Mr. Krumlauf was the general manager of the project and is authorized to act for the operator under a special power of attorney dated September 18, 1952. Mr. Krumlauf reported the partnership as being inactive but that his special power of attorney had not been revoked.

The balance of the accounting records are located in the office of Mr. Victor Tronolone, 239 North Church Street, Tucson, Arizona.

During the course of the audit Mr. Krumlauf and Mr. Tronolone were consulted when necessary. Their cooperation facilitated the audit.

Mr. T. M. Romslo, Mining Engineer, Tucson Office, collaborated in the audit.

II. GENERAL INFORMATION ON RECORDS

The accounting records for the exploration project are summarized in a cash journal and general ledger, which are maintained under the supervision of Mr. Tronolone.

The original records covering the costs of this project were recorded on monthly work sheets maintained by Mr. Krumlauf, General Manager, who prepared the Operator's Monthly Reports.

This audit in general involved an examination of original records, monthly work sheets and reconciliation with the monthly MF-104 reports. Costs were recorded on a combination of cash and accrual basis.

Prior to the on site audit considerable pre-audit analysis was performed in the DMEA Office at Denver, Colorado.

III. SCOPE OF AUDIT AND FINDINGS

The audit was limited to ascertaining the accuracy, propriety and validity of the costs as shown in the "Totals to Date" column of Form MF-104, Operator's Monthly Report and Voucher for the month of June, 1953.

In view of the previous audit by T. H. Brading, DMEA Auditor, covering the period August 27, 1952 to January 31, 1953, except as otherwise indicated, this audit was restricted to the costs claimed by the operator since that later date.

The extent of the audit and findings under each of the "Items of Cost" follows:

(1) Independent Contracts

None

(2) Labor and Supervision

(a) Labor

All charges for labor during the period February 1 to June 30, 1953, were supported by daily time reports and payrolls which were examined in detail as to number of hours, authorized rates, extensions and amounts.

Acceptable labor costs are as follows:

Balance per previous audit	$5,024.00
Period, February 1 to June 30, 1953	4,542.30
Accepted Total	$9,566.30

The audit disclosed that through error the total charge for labor applicable to the month of April, 1953, had been entered Net of Withholding Tax and Employee's OAB charges which totalled $165.65.

The operator's report for May, 1953, partially corrected this under charge by increasing the labor charge applicable to May in the amount of the Withholding Tax of $148.50. Through oversight the amount of the Employee's OAB Tax of $17.15 was not included in the correction. This under claim of $17.15 has been included in the acceptable

labor costs shown above.

(b) Supervision

All charges for supervision during the period February 1 to June 30, 1953, were supported by daily time sheets and payroll summaries which were examined in detail. These charges were for the salary of Mr. H. E. Krumlauf, Engineer-Supervisor. The rate of charge for supervision was equal or less than authorized by the exploration contract and is considered reasonable.

The acceptable charges for supervision are as follows:

Balance per previous audit	$1,281.25
Period February 1 to June 30, 1953	1,418.75
Acceptable Total Supervision	$2,700.00

(3) Operating Materials and Supplies

All charges for operating materials and supplies for the period February 1 to June 30, 1953, were supported by invoices which were examined for propriety and reasonableness of the items charged.

During the previous audit the cost of an electric blasting machine charged to explosives in the amount of $56.50 was disallowed because the item was not specifically authorized in the exploration contract. This disallowance was adjusted by the operator in subsequent monthly reports.

Subsequent to the release of the previous audit report the Iron and Ferro-Alloys Division of the DMEA advised that the item was necessary for use in electric blasting required by the Arizona Mine Safety Rules of the State Mine Inspector.

Further analysis also disclosed the operator's application specified the operator proposed to use electric blasting. The Field Team's final report on the application indicated concurrence with the operator's proposal concerning the use of electric blasting. It appears, therefore, that it was the mutual intent of all parties concerned to include the costs of electric blasting in the costs allowable under the terms of the contract.

As a result of the foregoing analysis the disallowance of $56.50 which had been adjusted by the operator is reinstated in this audit report and such reinstatement is approved by the Executive Officer.

A tabulation of the acceptable costs of materials and supplies follows:

	Balance per previous audit	Period February 1 - June 30, 1953	Reinstatement of prior disallowance	Proceeds from liquidation (1)	Accepted Totals
Timber	$ 273.92	$ 160.00			$ 434.45
Explosives	209.40	300.00	$50.00		919.75
Pipe	407.03	30.00		$33.97	333.11
Truck	212.97			39.47	173.10
Sub Total	$1403.40	$504.31	$50.00	$93.44	$1930.44
Other Materials & Supplies					
Drill Steel	$ 339.93	$310.02		$ 48.42	$ 701.13
Gas & Oil	649.43	652.79			1302.27
Small Tools	222.10			44.97	220.13
Other	33.32	(2) 33.73		46.97	40.43
Total Other Materials & Supplies	$1103.20	$1107.14		$117.36	$2003.01
Total Operating Materials & Supplies	$2506.63	$1640.52	$50.00	$211.80	$3992.45

(1) Liquidation proposal of the operator approved by Executive Officer, OPS Field Team, Region IV, on February 17, 1954. This proposal was a lump sum bid totalling $900.07. Distribution to items of costs is based on engineer's tabulation.

(2) A duplicate charge for miscellaneous supplies purchased from Western Machinery Company claimed in February and also in March, 1953, in the amount of $7.50 is disallowed.

(4) Operating Equipment

(a) Rental

All charges for equipment rental for the period February 1 to June 30, 1953, were supported by invoices which were examined. Rental rates were in agreement with contract authorization. A tabulation of acceptable rental charges follows:

	Monthly Rate	Balance for previous audit	Period-Feb. 1 to June 30, 1953	Acceptable Total
1 - 105 CFM Compressor	$147.00	$590.00	$737.00	$1327.00
1 - Jaglie Drug Moist	100.00	400.00	300.00	700.00
Total		$990.00	$1037.00	$2027.00

(b) Purchases

The only charge for equipment purchases during the period February 1 to June 30, 1953, was for a Fairbanks Morse Duplex 3x2x4 Air Pump which cost $75.00. This purchase was supported by invoice and is authorized by the exploration contract.

The acceptable costs of machinery are tabulated below:

Truck	$1000.00	
Skip	77.32	
Mine Car	72.63	
Blower	271.51	
Sheave	25.00	
2-1/2" Pump	212.30	
Balance per previous audit	$1659.46	
Air Pump purchased during period Febr. 1 to June 30, 1953	75.00	
Total Machinery Purchases		$1734.46
Less Liquidation Proceeds		655.47
Acceptable Cost of Machinery Purchases		$1078.99

(5) Initial Rehabilitation and Repairs

None

(6) New Buildings and Improvements

There were no charges to this element of cost during the period February 1 to June 30, 1953. An analysis of the acceptable costs for new buildings and improvements follows:

Labor	$1335.00	
Supervision	419.66	
Payroll Taxes and Compensation Insurance	129.49	
Timber	367.89	
Supplies	374.76	
Total per previous audit		$3126.80
Less Liquidation Proceeds		100.00
Acceptable Cost of New Buildings & Improvements		$3026.80

(7) Miscellaneous

(a) Repairs to Equipment

All charges for repairs to equipment during the period February 1 to June 30, 1953, were supported by invoices which were examined for propriety and reasonableness.

The acceptable cost of repairs to equipment are as follows:

Truck Repairs		
Balance per previous audit	$62.29	
During period February 1 to June 30, 1953	79.49	
Total Truck Repairs		$141.78
Repairs to Rock Drill		11.83
Acceptable cost of Repairs to Equipment		$153.61

(b) Sampling and Analysis

All charges for sampling and analysis were supported by invoices which were examined. The audit disclosed two duplicate charges totalling 19 assays amounting to $76.00. These duplicate charges were disallowed. The audit also disclosed that 7 assays amounting to $28.00 were made in connection with a special geological report secured by the operator which was of no benefit to the exploration project. These excess assays are disallowed upon the recommendation of the Supervising Engineer and with the concurrence of the Executive Officer, DMEA Field Team, Region IV.

The acceptable sampling and analysis costs follow:

Balance per previous audit, 3 @ $3.00	$9.00
During the period February 1 to June 30, 1953, 16 @ $4.00	64.00
Acceptable cost for sampling and analysis	$73.00

(c) Payroll Taxes

Total charges for payroll taxes for the period August 27, 1952, to June 30, 1953, were confirmed by computation. The acceptable

cost for payroll taxes consists of 1½% of total accepted wages and salaries of $13,166.30, or $197.49. An over-charge of $4.52 is disallowed.

(d) Liability Insurance

Total charges for Workmen's Compensation Insurance were confirmed by computation. The acceptable cost for liability insurance consists of 3.339% of total acceptable wages and salaries of $13,166.30, or $446.21. An over-charge of $3.06 is disallowed.

(e) Accounting

All charges for accounting for the period February 1 to June 30, 1953, were supported by invoices which were examined. The exploration contract provided that the Engineer-Supervisor keep the necessary accounts. The Engineer-Supervisor's authorized rate of compensation was limited to $500.00. The Engineer-Supervisor voluntarily drew a salary at the rate of $400.00 per calendar month and arranged for a Public Accountant to keep the books for the project at a cost of $100.00. This arrangement had the concurrence of the Executive Officer, DMEA Field Team, Region IV.

The acceptable costs for accounting are as follows:

Balance per previous audit report	$400.00
Period February 1 to June 30, 1953	500.00
Total acceptable cost	$900.00

IV. CONCLUSIONS

The status of the "Allowable Maximums" under the contract on June 30, 1953 (effective date of "Termination by Agreement") was as follows:

Stage I	Allowable Maximum	Total Costs	Balance
Total Labor, Supervision, including Workmen's Compensation & Payroll Taxes	$16,842.80	$13,810.00	$3032.80
Supervision, including Accounting	3,750.00	3,600.00	150.00
Operating Equipment			
Rental			
Compressor	Rate per month - $400.00	Cost per month	-$147.50
Single Drum Hoist	" " " - $100.00	" " "	-$100.00
Purchase			
Truck	$1000.00	1,000.00	-0-

The totals to date shown on the operator's June, 1953, MF-104A report agree with June, 1953, MF-104 report.

The operator reported inability to secure any outside bids for the machinery and equipment, but did submit its own lump sum bid of $966.67.

Because of the remote location and the depressed condition of the market for used mining machinery and equipment the operator's liquidation proposal dated December 14, 1953, was approved by the Executive Officer, DMEA Field Team, Region IV, on February 17, 1954.

There were no unused materials, supplies or other property to be disposed of for the joint account of the operator and the Government other than that covered by waiver or liquidation.

This audit has disclosed that all costs as charged to this project, with the exception of the disallowances itemized under (3) Other Materials and Supplies; (7)-(b) Sampling and Analysis; (7)-(c) Payroll Taxes, and (7)-(d) Liability Insurance, of the preceding section of this report, are reasonable and proper under the terms of the contract, Amendments No. 1 and No. 2, Termination Agreement dated June 30, 1953, and Liquidation Proposal approved February 17, 1954.

The adjustments of Items of Costs, as shown on the June, 1953, MF-104, the disallowances, and approved amounts are summarized as follows:

	Totals to Date MF-104 6/30/53	Disallowed by Audit	Reinstatement of Prior Disallowances	Liquidation Settlement	Under Claim	Allowed by Audit
Independent Contracts						
None						
Labor & Supervision						
Labor	$9549.15				$ 17.15	$ 9566.30
Supervision	2700.00					2700.00
Technical Services	- - - -					
Materials & Supplies						
Timber	454.45					454.45
Explosives	363.23		$556.50			919.73
Pipe	437.03			$53.97		383.11
Track	212.97			39.37		173.10
Miscellaneous	2186.07	$7.50		117.36		2062.01
Operating Equipment						
Rental	2077.50					2077.50
Purchase	1734.46			655.47		1078.99
Depreciation	- - - -					
Initial Rehabilitation & Repairs	- - - ---					
New Buildings & Improvements	3126.00			100.00		3026.00

	Totals to Date MF-104 6/30/53	Dis-allowed by Audit	Reinstate-ment of Prior Dis-allowances	Liquid-ation Settle-ment	Under Claim	Allowed by Audit
Miscellaneous						
Repairs to Equipment	$ 153.01					$ 153.01
Sampling & Analysis	177.00	$104.00				73.00
Payroll Taxes	202.01	4.52				197.49
Liability Insurance	449.27	3.06				446.21
Accounting	900.00					900.00
TOTALS	$25224.45	$119.03	$56.50	$966.67	$17.15	$24212.35

At the conclusion of the audit, the findings were discussed with the Supervisor-Engineer, Mr. M. E. Krumlauf, and with the Executive Officer, DMEA Field Team, Region IV.

February 13, 1954.

Donald T. Finch

Donald T. Finch, Auditor

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

INTERIM AUDIT CERTIFICATE

Amea 2356

I have examined the records and transactions of:

Nikas Mining Company
(a partnership composed of Tom D. Callas, A. Nikas,)
(John Gekas, John Paulos, and Monte Seymour)
55 West Congress St.
Tucson, Arizona

WSM

pertaining to Exploration Contract Idm-E370, Docket No. 2356 including Amendment No. 1, covering a project of exploration for tungsten, for the period August 27, 1952 to January 31, 1953.

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

The audit disclosed the following facts in regard to the amount to be paid the Contractor:

Total Cost per MF-104	$15,870.42
Exceptions (per Audit Report)	489.73
Total Accepted Cost	$15,380.69

The contract calls for a 75 per cent participation of exploration expenses by the United States Government. Therefore, payment to the Contractor by the Government in the amount of Eleven thousand five hundred thirty-five dollars and 52/100

-$11,535.52-

is valid and proper.

This certificate is issued on the provision that the Regional Executive Officer, the Administrator, or other competent official has accepted or will accept the project as having otherwise met the terms of the contract.

Dated: March 4, 1953

T. H. Brading, Auditor

Interim Audit

I. INTRODUCTION

On February 23, 1953, an interim audit (covering the period August 27, 1952 to January 31, 1953) was made of the records and accounts of operations pertaining to Contract Idm-E370, Docket No. DMEA 2356 and Amendment No. 1 dated October 21, 1952 with the

Nikas Mining Company
(a partnership composed of Tom D. Callas, A. Nikas,)
(John Gekas, John Paulos, and Monte Seymour)
55 West Congress St.
Tucson, Arizona

covering a project of exploration for Tungsten.

The accounting records under this contract are located in the office of the company Auditor, Mr. Victor Tronolone, 239 N. Church Street, Tucson, Arizona. The mine is located in Pinal County, Arizona.

During the course of the audit, Mr. Tronolone, Auditor, and Mr. H. E. Krumlauf, General Manager, were consulted as required.

Their cooperation and assistance facilitated the audit.

Mr. J. W. Townsend, Mining Engineer, Denver Office, collaborated in the audit.

II. GENERAL INFORMATION ON RECORDS

The accounting records for the exploration project consist of a cash journal and general ledger, which are maintained under the supervision of Mr. Tronolone.

The original records covering the costs of this project are recorded on monthly work sheets, which form the basis for the preparation of the monthly MF-104 reports. Mr. H. E. Krumlauf, General Manager, maintains this record and prepares the monthly MF-104 reports. Therefore, this audit in general, involved a check of original records against the monthly work sheets, and a reconciliation of the work

sheets with the general ledger accounts. The general ledger was three months delinquent, therefore the January costs were reconciled with the general ledger posting media. All costs except for incidental small purchases and express charges, were recorded on an accrual basis.

III. SCOPE OF AUDIT AND FINDINGS

The audit was limited to ascertaining the accuracy, propriety and validity of the costs as shown in the "Totals to Date" column of Form MF-104, Operator's Monthly Report and Voucher for the month of January 1953. The extent of the audit and findings under each of the "Items of Cost" follow.

(1) Independent Contracts

Not applicable to this contract

(2) Labor and Supervision

All charges for labor were checked against the amounts recorded on the monthly work sheets. In order to verify labor costs charged to the project, entries were traced from cash disbursements journal to the work sheets and to the daily time book approved by the foreman. Rates were checked to contract and all extensions and footings for the month of December were proven. In December excess time was recorded on the payroll record as follows:

Rodriguez	- 4 hours at 1.50	$6.00
Callas	- 8 hours at 1.75	14.00
	Total	$20.00

Accordingly, the amount of $20.00 is disallowed.

The audit disclosed that the cost of labor as shown on the January MF-104, as compared to the costs properly chargeable and allowable was as follows:

Labor charged	$5044.00
Not Allowable	20.00
Allowable	$5024.00

Supervision

Charges for time of Mr. H. E. Krumlauff, Engineer-Supervisor, were traced to daily time sheets through monthly work sheets to cash disbursement record. The contract provides in addition to supervising operations, that the Engineer-Supervisor also shall keep the necessary accounts. This portion of his duties id delegated to the auditor. All charges for auditor's time were recorded as supervision. Necessary correction to reflect the charge for auditor was made in January and instructions regarding proration of supervisory salaries explained to Mr. Krumlauff. Costs as reflected in column "allowable by audit" on January 31, 1953, in the amount of $1281.25, are considered as proper and allowable under terms of the contract.

(3) Operating Material and Supplies

All charges under this category were traced to monthly work sheets. Original invoices were examined to determine propriety of the items charged. Cancelled checks covering payment of invoices were traced to cash journal.

The audit disclosed that cost of a blasting machine in the amount of $56.50 was included in charge to explosives. As this equipment was not specified in the contract, the amount of $56.50 is disallowed.

The total costs properly chargeable and allowable under this category were found to be:

Timber		$273.95
Explosives		509.40
Pipe		407.08
Track		212.97
Miscellaneous:		
Drill Steel	$339.93	
Gas & Oil	449.48	
Small tools	255.10	
Other	58.72	1103.23
Total		$2506.63

(4) Operating Equipment

All charges for rental of operating equipment were traced to monthly work sheets. Invoices covering charges were verified by examination, as were cancelled checks covering these invoices. Rates were verified by reference to contract.

The proper and allowable charges for rental of operating equipment are as follows:

	Monthly Rate	Period Oct. through January
1-105 CFM Diesel Engine Operated Compressor	$147.50	$590.00
1-Single Drum Hoist	100.00	400.00
Total		$990.00

Equipment purchases, all of which were authorized by contract, were verified by examination of vendors' invoices, and payment confirmed by examination of related cancelled checks.

The costs of these items, all of which are considered proper and allowable charges were:

Truck	$1,000.00
Skip	77.82
Mine car	72.63
Blower & attachments	271.51
Sheave	25.00
Pump	212.50
Total	$1,659.46

(5) Initial Rehabilitation and Repairs

Not applicable to this contract

(6) New Buildings and Improvements

All charges to New Buildings and Improvements were verified by examination of invoices and payrolls. Charges as listed on the MF-104 on January 31, 1953 were as follows:

Labor	$1835.00
Supervision	818.75
Payroll Taxes and Compensation Insurance	129.49
Lumber	367.89
Supplies	374.76
Total	$3525.89
Allowable Maximum under Exhibit A of Contract	3126.80
Disallowed (Supervision)	$ 399.09

(7) Miscellaneous

Costs of $62.29 covering repairs to truck were verified by examination of invoice.

Invoice for three Tungsten assays at $3.00 each was examined to confirm cost of Sampling and Analysis.

All charges for payroll taxes and workmen's compensation insurance were checked by computation at the rates shown by the company's files to be in effect. These rates were:

F. I. C. A.	1.5
Workmen's Compensation	3.3890

Since disallowances have been made for wages under this contract, the allowable costs for payroll taxes must be reduced accordingly as follows:

	Charged	Disallowed	Allowable
Payroll Taxes	25.24	.30	24.94
Liability Insurance	56.92	6.78	50.14

In addition, in December an error in extension in calculating liability insurance was made as follows:

Labor	$1217.00
Supervision	500.00
	$1717.00

	Charged	Contract Amount	Disallowed
$1717.00 at 3.3890	65.25	58.19	7.06

The allowable and proper charges under the terms of the contract, giving effect to above cited disallowances are:

Payroll Taxes	$100.57
Workmen's compensation Insurance	220.69

Accountant

Charges for $400.00 for services of auditor were included under supervision by the operator. Correction in distribution was made during audit.

IV. CONCLUSIONS AND RECOMMENDATIONS

Comparison of costs as reflected by MF-104A at January 31, 1953, giving effect to disallowances made, reflect a total expenditure of $15380.69 as against a total estimated allowable cost of $34600.00 with the following work remaining:

72' of drifting
60' of cross cutting

Based on the assumption that costs for completion of this work will be in line with past experience, it appears that the total allowable costs for Stage I will be less than allowable maximum.

This audit has disclosed that all costs, as charged to this project with the exception of the disallowances itemized under (2) Labor & Supervision, (3) Operating Material and Supplies (6) New Buildings and Improvements and (7) Miscellaneous, of the preceding section of this report, are reasonable and proper under the terms of the contract and Amendment No. 1.

The adjustments between Items of Costs, as shown on the January MF-104, the recommended disallowances, and approved amounts are summarized as follows:

	January 1953	Correct-ions	DISALLOWED Finance Officer	DISALLOWED Audit	Allow-able by Audit
(2)Labor & Supervision:					
Labor	$5044.00	$5044.00		$20.00	$5024.00
Supervision	1681.25	1281.25			1281.25
(3)Operating Mat.&Supp.					
Timber	273.95	273.95			273.95
Explosives	587.25	565.90		56.50	509.40
Pipe	254.42	407.08			407.08
Track	212.97	212.97			212.97
Tools	182.31				
Miscellaneous	1114.52	1103.23			1103.23
Operating Equipment:					
Rental	990.00	990.00			990.00
Purchases	1659.46	1659.46			1659.46
New Bldgs & Improve:	3525.89	3525.89	$399.09		3126.80
Miscellaneous:					
Repairs to Equip.		62.29			62.29
Sampling & Analysis	9.00	9.00			9.00
Payroll Taxes	100.87	100.87		.30	100.57
Liability Insurance	234.53	234.53		13.84	220.69
Accountant		400.00			400.00
	$15870.42	$15870.42	$399.09	$90.64	$15380.69

At the conclusion of the audit, the findings were discussed with the General Manager, Mr. H. E. Krumlauff. The company will prepare their next monthly MF-104 on the basis of the proper distribution of charged costs as shown in the second column of the above summary.

March 4, 1952

T. H. Brading, Auditor

EXHIBIT B

The audit also disclosed that the status as of January 31, 1953 of the "allowable maximums" under this contract was as follows:

Item	Allowable Maximum	Total Costs	Balance
(2)Engineer-Supervisor	$2500.00	$2100.91	$399.09
Total Labor, Supervision & Consultants	16842.80	6708.25	10134.55
(4)Operating Equipment Rented	2000.00	990.00	1010.00
Pick Up Truck	1000.00	1000.00	-

Since 108' of drifting out of an allowable 180' has been completed, 110' of shaft sinking allowable maximum has been completed; and while none of the 60' cross footing has been started, it appears that costs are being held within allowable maximum.

Docket Copy

TERMINATION OF WORK UNDER AN EXPLORATION PROJECT CONTRACT BY AGREEMENT

It is agreed this 30th day of June, 1953, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Nikas Mining Company, a partnership composed of Tom D. Callas, A. Nikas, John Nikas, John Paulos, and Monte Seymour, 55 West Congress Street, Tucson, Arizona, hereinafter called the "Operator," parties to that certain Exploration Project Contract No. Idm-E370, Docket No. DMEA-2356, dated July 18, 1952:

1. All exploration work under the said contract shall be and is hereby terminated as of the first date above written.

2. Any work prosecuted or costs incurred by the Operator after the date first above written shall be for the sole account of the Operator, except for (a) such necessary and reasonable costs and expenses as may be incurred in preserving and disposing of any facilities, buildings, fixtures, equipment, or other items, to the cost of which the Government has contributed and in which the Government has an equity, and (b) the costs of any reports, accounts, and winding-up and settlement actions provided for in the contract.

3. The undersigned Operator hereby releases and agrees to save harmless the Government from all claims and demands under or arising out of said Exploration Project Contract, except as herein expressly otherwise provided.

4. The Government's right to a percentage royalty on production, and the lien for its payment, and all provisions relevant thereto, are preserved with respect to all of the land described in the contract and any production therefrom, in the event that the Government subsequently makes its certification of discovery or development as provided in the Exploration Project Contract.

Witness the following signatures as of the day and year first above written.

THE UNITED STATES OF AMERICA

By Frank E. Johnson
Acting Administrator, Defense Minerals Exploration Administration

NIKAS MINING COMPANY

By A. Nikas
By Mike Cotsageorge
By John J. Felix

Acting Chairman

By Tom D. Callas
By

Docket Copy

EXPLORATION PROJECT CONTRACT
NIKAS MINING COMPANY
DOCKET NO. DMEA-2356

AMENDMENT NO. 2

It is agreed this 11th day of March, 1953, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and Nikas Mining Company, that effective February 15, 1953, Exploration Project Contract No. Idm-2370, Docket No. DMEA-2356, dated July 18, 1952, as amended, is further amended as follows:

In Exhibit "A" under Description of the Work, Stage I, add:

7. Extend the 60-foot, 5 x 7-foot drift (item 3) an additional 20 feet northwestward.

8. Extend the 120-foot, 5 x 7-foot drift (item 4) an additional 30 feet southeastward.

9. Crosscut an additional 40 feet, 5 x 7-feet in the clear, at locations to be selected by the operator and Field Team.

In Exhibit "A" under (2) Labor, Supervision, and Consultants, Stage I, delete:

1 - Engineer-supervisor[1] @ $35.00 per 8-hour working day but not to exceed $500.00 per month, 5 months $2,500.00*

and substitute:

1 - Engineer-supervisor[1] @ $35.00 per 8-hour working day but not to exceed $500.00 per month, 7½ months $3,750.00*

In Exhibit "A" under (4) Operating Equipment, To be rented, Stage I, delete:

1/ The engineer-supervisor shall direct the operation and shall be responsible for securing representative samples of the deposit, where warranted, and their subsequent handling. He also shall prepare and keep up-to-date the mine and geologic maps ordinarily necessary for an exploration operation. He shall also keep the necessary accounts.

1 - 210 cfm Diesel-engine operated compressor @ $400.00 per month*, 4 months $1,600.00

1 - Hoist, single drum, gasoline engine driven, 4,000 pound rope pull @ $100.00 per month*, 4 months 400.00 $2,000.00

and substitute:

1 - 210 cfm Diesel-engine operated compressor @ $400.00 per month*, 6½ months $2,600.00

1 - Hoist, single drum, gasoline engine driven, 4,000 pound rope pull @ $100.00 per month*, 6½ months 650.00 $3,250.00

This amendment shall not be construed to increase the estimated total cost of Stage I of the project, the estimated total cost of the project, or the aggregate total amount which the Government may be required to contribute.

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By C P Mittendorf
Administrator, Defense Minerals Exploration Administration

Robin Hoffland Chandler

NIKAS MINING COMPANY

By H E Krumlauf
H. E. Krumlauf, General Manager

DEPARTMENT OF THE INTERIOR
Defense Report Acknowledgment
MAR 0 0 1966

No. 1

AMENDMENT OF CONTRACT: No. Idm-E370

Contract Docket No. DMEA 2356, dated July 18, 1952, between the United States of America and Nikas Mining Company, a partnership, is hereby amended as follows; effective as of the date of said contract:

Referring to "EXHIBIT "A" attached to Exploration Project Contract Form MF-200, caption "Description of the work", heading "Stage I" item "1. (b)", delete the following:

"Construction of trestle to mine dump" and in lieu thereof substitute the following:

"Alteration of ore bin by constructing a division to accommodate waste."

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

Dated October 21, 1952

NIKAS MINING COMPANY

By H E Krumlauf
H. E. Krumlauff, Gen. Mgr.

UNITED STATES OF AMERICA

Jwo

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

OCT 1 1 1952
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DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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MINING DIVISION
REGION IV

September 25, 1952

Memorandum

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

From : L. A. Stewart for Chief, Arizona-New Mexico Br., Mining Div., Region IV

Subject : Nikas Mining Co., Pinal County, Ariz., DMEA Docket 2356, Contract Idm-E370

Enclosed are original and 5 copies of request for amendment to above contract and 1 signed and attested copy of Power of Attorney for Mr. H. E. Krumlauf.

From a discussion with Krumlauf, it appears that his suggested disposal of waste and ore by division of the present ore bin is technically more feasible than the original proposal of a trestle and will be less costly.

The necessity of renting one 105 c.f.m. compressor to start work may be essential. When more air capacity is desired the contracted 210-c.f.m. compressor might be available. If not, two 105's would serve the same purpose and rental of them would not cost more than rental of the larger machine. It would appear that an amendment would not be necessary for this item.

If the changes require amendments, I recommend that they be granted.

Lincoln A. Stewart

Lincoln A. Stewart, Mining Engineer
for Walter R. Storms, Chief
Arizona-New Mexico Branch
Mining Division, Region IV

CC W. H. King (6)
DMEA-2356
DF

LAStewart:frj

Sept. 24, 1952

Mr. W. R. Storms,
Chief, Arizona-New Mexico Branch,
Mining Division, Region 4,
U. S. Bureau of Mines,
University of Arizona,
Tucson, Arizona

Re: DMEA Docket 2356
Contract Idm-E370

Dear Mr. Storms:

Concerning part I-b on page I of the contract awarded to Nikas Mining Company which states: "Construction of trestle to mine dump". Rather than build the trestle, it will be less costly to divide the present ore bin into two parts, one part to handle ore found during the exploration program, and the other part to handle waste. The waste would then be trammed a short distance from the waste bin to the dump in a mine car.

A trestle, if constructed, would be 22 feet high at the mine end and much higher at the other end. Extra long or spliced timber would be necessary, and timber of this type is expensive and difficult to handle. The high trestle would be a hazard. The suggested change would permit the dumping of waste anywhere along the crest of the waste dump.

To date I have been unable to rent a 210 c.f.m. compressor. Five different concerns in the Tucson-Phoenix area have been contacted without success. All concerns have compressors of 105 c.f.m. capacity, and it will be necessary to start shaft sinking operations with one of the smaller units and either obtain a larger machine when one is available or add an additional small unit.

It is understood that neither of the above changes will result in an increase in the cost of the project.

If it is necessary to amend the contract to make the above changes, please consider this letter as a request for such an amendment.

I am enclosing a copy of a Power of Attorney which gives me the authority to act as the Company's agent.

Sincerely yours,

H. E. Krumlauf

H. E. Krumlauf, General Manager
Nikas Mining Company

HEK/1

SPECIAL POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS:

That TOM D. CALLAS, A. NIKAS, JOHN GEKAS, JOHN PAULOS and MONTE SEYMOUR, co-adventurers and co-owners of Nikas Mining Company, do make, constitute and hereby appoint H. E. KRUMLAUF, of Tucson, Arizona, as their true and lawful attorney-in-fact for them and in their name, place and stead, and do hereby constitute said H. E. Krumlauf as general manager of Nikas Mining Company, thereby empowering him to exercise the usual and ordinary duties as general manager of the affairs of said Company and the development of the "Morning Star" mining claim, located in Old Hat mining district, Pinal County, Arizona, in connection with the exploration and development of said mining property.

Said attorney-in-fact is expressly authorized to execute and deliver all reports, papers and documents to the United States government in connection with the exploration and development work done under the exploration loan from Defense Minerals Administration of the United States government, Department of Interior.

Said attorney-in-fact is further authorized to obligate the undersigned as co-adverturers in connection with the purchase of necessary supplies and equipment, the hiring and firing of employees and other kindred duties as general manager.

IN WITNESS WHEREOF, we have hereunto set our hands

on this 18 day of September, 1952.

Tom D. Callas

A. Nikas

John Gekas

John Paulos

Monte Seymour

STATE OF ARIZONA }
COUNTY OF PIMA } SS:

The foregoing instrument was executed and acknowledged before me, a notary public, this ____ day of September, 1952, by TOM D. CALLAS, A. NIKAS, JOHN GEKAS, JOHN PAULOS and MONTE SEYMOUR.

Notary Public

My commission expires:

MF-200
(June 1951)
(Revised Feb. 1952)

DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration
RECEIVED
AUG 4 1952

DOCKET NO. DMEA 2356

COMMODITY Tungsten

Idm-E370

DOCKET COPY

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

EXPLORATION PROJECT CONTRACT[1]

IT IS AGREED this 18th day of July, 1952, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] Nikas Mining Company, a partnership composed of Tom D. Callas, A. Nikas, John Gekas, John Paulos, and Monte Seymour
55 West Congress Street
Tucson, Arizona

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 Arizona, County of Pinal, described as follows:[3] Patented Morning Star lode claim in Section 17, T. 10 S, R. 16 E., Old Hat Mining District, recorded in Book 6, page 533, as indicated on the map attached hereto and made a part hereof, entitled "Nikas Mining Co., DMEA-2356 - Maudina and Morning Star Tungsten Mines, Pinal County, Arizona", the Operator represents and undertakes that the Operator is a lessee in possession and entitled to possession and the Owner's Consent to Lien and/or Landlord's Subordination Agreement are attached.

~~(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:~~

Any other land in which the Operator may hereinafter acquire an interest and on which the occurrence of minerals has been indicated or inferred by reason of any discovery or development hereinafter referred to shall be subject to all the provisions of this contract.

~~(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 -60- 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 twelve (12) mos. 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.

ARTICLE 4. *Performance of the work.*—(*a*) *Operator's responsibility.* The work shall be performed efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for workmens' compensation and employers' liability insurance, with suitable and adequate equipment, materials, and labor, to bring the project to completion within the time fixed. To the extent specified in Exhibit "A," attached hereto, the work may be performed by independent contractor or contractors; and work not specified in Exhibit "A" for performance by independent contractor may nevertheless be so performed upon amendment of Exhibit "A," as agreed to by the parties, to state the work to be so performed and the estimated unit costs thereof, as provided hereafter.

(*b*) *Independent contracts.*—Any independent contract for the performance of work shall be on a unit-price basis (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved), or on some basis that will indicate the amount due for work performed at any stage of the work to be performed under such independent contract. The Government shall not be nor be considered to be a party to any such independent contract, and the Government's right to terminate the exploration project contract under any of its provisions shall not in any manner be affected by reason of any such independent contract. If the reference in Exhibit "A" to any such independent contract states that the Government's approval thereof is required, the Government may refuse to participate in the cost thereof unless and until it has given its written approval of the independent contract.

(*c*) *Government may inspect.*—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 5. *Estimated costs of the project.*—A statement of the estimated cost of the project is set forth in Exhibit "A," attached hereto. Except insofar as any item of requirement or the estimated cost thereof set forth in Exhibit "A" is there or elsewhere designated as an "allowable maximum," such items of requirement and of related cost are estimates only, and may be exceeded to the extent that the Government may from time to time approve for the most economic and beneficial performance of the work within the limitation of the total aggregate estimate of costs. The Government's approval of any such excess over the estimate for an item of requirement or related cost will be signified by its approval and payment of any invoice or voucher for payment which expressly calls attention to such excess. Items expressly designated in Exhibit "A" or elsewhere as "allowable maximum," and the total aggregate estimated cost are limitations, and any excess therein will be for the sole account of the Operator in which the Government will not participate.

ARTICLE 6. *Allowable costs of the project.*—(*a*) The costs of the project in which the Government will participate are limited to the following:

(1) *Independent contracts.*—Payments to independent contractors under independent contracts listed in Exhibit "A." The estimated cost of any work to be performed under an independent contract is or shall be included in the estimate of costs in Exhibit "A" in terms of the estimated numbers of units of work to be performed, the estimated amount to be paid per unit, and the estimated total amount to be paid to the independent contractor, and such estimates shall be allowable maximums above which the Government will not contribute. Regardless of the provisions of any such independent contract, the Government will participate in the payments to the independent contractor only on account of work actually performed and that conforms with the provisions of the exploration project contract, and only to the extent that the Government deems the unit prices for the work under the independent contract to be reasonable and necessary. No such independent contract shall have the effect of increasing the estimated total cost of the exploration project contract nor the maximum amount which the Government will pay as provided in the exploration project contract.

(2) *Labor, supervision, consultants.*—Labor, supervision and technical services (including engineering and geological consultants), a schedule of which is included in the estimate of costs set forth in Exhibit "A." The requirements and related estimated costs for supervision and technical services are allowable maximums.

(3) *Operating materials and supplies.*—Necessary materials and supplies including items of equipment costing less than $50.00 each, and power, water, and fuel, a schedule of which is included in the estimate of costs in Exhibit "A."

(4) *Operating equipment.*—Any operating equipment to be rented or purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or the allowable depreciation, as the case may be, a schedule of which is included in Exhibit "A." Any items listed as owned and to be furnished by the Operator, and related [redacted] allowable depreciation, are allowable maximums.

(5) *Rehabilitation and repairs.*—Any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and to be devoted to the purposes of the exploration contract, a schedule of which is included in the estimate of costs set forth in Exhibit "A." These items are allowable maximums.

(6) *New buildings, improvements, installations.*—Any necessary buildings, fixed improvements, or installations to be purchased, installed, or constructed for the purposes of the exploration work, with the estimated cost of each, a schedule of which is included in the estimate of costs in Exhibit "A." All of these items are allowable maximums.

(7) *Miscellaneous.*—Repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance and payroll taxes.

(8) *Contingencies.*—Such other necessary, reasonable direct costs of performing the exploration work, within the limit of the total aggregate estimate of costs, whether or not included in any schedule of costs in Exhibit "A," as may be approved by the Government in the course of the work, as indicated by its approval and payment of invoices and vouchers.

[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) The Government's payments [illegible] will be based on actual, necessary costs (including contract unit prices) incurred not in excess of any "allowable maximum," and not in excess of the fixed percentage of the total aggregate estimated cost. Costs will be considered to be incurred only as they are or become due and payable.

(c) No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes) or any other indirect costs, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

ARTICLE 7. *Reports, accounts, audits.*—(a) *Progress reports.* The Operators shall provide the Government with monthly reports of work performed and costs (including contract unit prices) incurred 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 costs incurred 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.

(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 operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, 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 as provided in Article 12.

ARTICLE 8. *Payments by the Government.*—(a) The Government will pay 75 percent of the allowable costs incurred, as they accrue, in an aggregate total amount not in excess of $44,400.00, which is 75 percent of $59,200.00, 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 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.

(b) The Government may make any payment or payments direct to independent contractors and to suppliers, for the account of the Operator, rather than to the Operator.

ARTICLE 9. *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 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 10. *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 11. *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.

ARTICLE 12. *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. Upon the completion of the project or any termination of the contract the Operator shall dispose of any remaining materials, supplies, facilities, buildings, fixtures, and equipment in which the Government has an interest, for the joint account of the Operator and the Government in the proportion of their respective interests; shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; and shall pay to the Government its pro rata share of any money remaining.

ARTICLE 13. *Changes and added provisions.* The Operator's obligation to bring the project to completion continues only as long as the accumulated allowable costs of the project in which the Government will participate do not exceed the agreed total estimated cost of the project set forth in Article 8.

Executed in sextuplicate the day and year first above written.

NIKAS MINING COMPANY

By Tom D. Callas — Tom D. Callas
By A. Nikas — A. Nikas
By John Gekas — John Gekas
By John Paulos — John Paulos
By Monte Seymour (Monte Seymour)

THE UNITED STATES OF AMERICA

By C. O. Mittendorf
Acting Administrator, Defense Minerals Exploration Administration

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

____

[CORPORATE SEAL]

EXPLORATION PROJECT CONTRACT
NIKAS MINING COMPANY
MORNING STAR MINE
DOCKET NO. DMEA-2356

EXHIBIT "A"

Description of the Work

Stage I

Time Schedule: 0 - 5 months

1. The first work on this project shall consist of preparatory work necessary for the performance of the exploration project. It will include:

(a) Leveling off area for surface structures and headframe.

(b) Construction of trestle to mine dump.

(c) Construction of headframe.

(d) Construction of 10 x 14-foot hoist and storage building of frame construction.

(e) Construction of 10 x 10-foot compressor shed and storage building.

(f) Construction of 10 x 10-foot change room of frame construction.

(g) Construction of 10 x 10-foot powder house.

(h) Installation of equipment, track, and pipe lines.

2. Sink a 110-foot, 5 x 8-foot inclined shaft along the scheelite-mineralized hanging wall of the Mogul fault. The shaft collar will be located on the Mogul fault ore body (see Fig. 2).

3. Drive a 60-foot, 5 x 7-foot drift northwestward from the shaft along the mineralized zone at an inclined distance of 100 feet below the collar of the shaft.

4. Drive a 120-foot, 5 x 7-foot drift southeastward from the shaft along the mineralized zone at an inclined distance of 100 feet below the collar of the shaft.

5. Drive 2 crosscuts not to exceed a total of 60 feet from the above-noted drifts, one on each side of the shaft, to further explore the mineralization along the Mogul fault.

6. Sampling and assaying shall be carried on concurrently with the exploration work in the mineralized zone. Representative samples shall be taken at intervals mutually agreeable to the Operator and the Government. Samples will be divided into at least two parts, one to go the the field team and the other to the Operator.

Stage II

The work of Stage II is to be undertaken only after completion of Stage I and only upon the expressed approval of the Government, which approval is to be dependent upon the results of Stage I.

Time Schedule: 6 - 9 months

1. Sink the inclined shaft an additional 100 feet at its designated size.

2. Drive a 60-foot, 5 x 7-foot drift northwestward from the shaft along the mineralized zone at an inclined distance of 200 feet below the shaft collar.

3. Drive a 120-foot, 5 x 7-foot drift southeastward from the shaft along the mineralized zone at an inclined distance of 200 feet below the shaft collar.

4. Drive 2 crosscuts not to exceed a total of 60 feet from the above-noted drifts, one on each side of the shaft, to further explore the mineralized zone along the Mogul fault.

5. Sampling and assaying shall be carried on concurrently with the exploration work in a manner satisfactory to the Government.

The attached map indicates the area where the above work is to be performed.

Estimated Costs of the Project
(*Indicates allowable maximum)

(1) Independent Contracts

Stage I

None

Stage II

None

(2) Labor, Supervision, Consultants

Stage I

1 - Engineer-supervisor 1/ @ $35.00 per 8-hour working day but not to exceed $500.00 per month, 5 months		$2,500.00*
Labor for shaft sinking, miner-foreman, 110 shifts @ $18.40/shift; hoistman, 110 shifts @ $17.02/shift; topman, 110 shifts @ $13.80/shift; miner-helper, 110 shifts @ $14.26/shift 2/	6,982.80	
Labor for drifting and crosscutting, miner-foreman, 80 shifts @ $18.40/shift; hoistman, 80 shifts @ $17.02/shift; topman, 80 shifts @ $13.80/shift; miner-helper, 80 shifts @ $14.26/shift; muckers, 160 shifts @ $14.26/shift 2/	7,360.00	$16,842.80*

Stage II

1 - Engineer-supervisor 1/ @ $35.00 per 8-hour working day but not to exceed $500.00 per month, 4 months		$2,000.00*
Labor for shaft sinking, miner-foreman, 100 shifts @ $18.40/shift; hoistman, 100 shifts @ $17.02/shift; topman, 100 shifts @ $13.80/shift; miner-helper, 100 shifts @ $14.26/shift 2/	6,348.00	

1/ The engineer-supervisor shall direct the operation and shall be responsible for securing representative samples of the deposit, where warranted, and their subsequent handling. He also shall prepare and keep up-to-date the mine and geologic maps ordinarily necessary for an exploration operation. He shall also keep the necessary accounts.

2/ Includes provision for workmen's compensation and employer's liability insurance and payroll taxes at 15 percent. Rate calculated at 6-day week with 6th day at time and one-half.

Labor for drifting and crosscutting, miner-foreman, 80 shifts @ $18.40/shift; hoistman, 80 shifts @ $17.02/shift; topman, 80 shifts @ $13.80/shift; miner-helper, 80 shifts @ $14.26/shift; muckers, 160 shifts @ $14.26/shift 3/	7,360.00	$15,708.00*

(3) Operating Materials and Supplies

Stage I

Timber, explosives, detonators, drill steel, drill bits, carbide, lamps, nails, bolts, first aid supplies, etc. for 110-foot shaft @ $14.27/foot	$1,569.70	
Timber, explosives, detonators, drill steel, drill bits, carbide, lamps, nails, bolts, first aid supplies, etc. for 240 feet of drifting and crosscutting @ $7.38/foot	1,771.20	
Track complete - 400 feet @ $1.65/foot	660.00	
Pipe - 450 feet each of 2-inch @ $0.60 a foot and 1-inch @ $0.30 a foot	405.00	
Pipe fittings	120.00	
Tools, shovels, picks, hammers, wrenches, etc.	750.00	
Fuel and greases @ $250.00/month, 5 months	1,250.00	
Ventilation pipe, 12-inch, 400 feet @ $1.00/foot	400.00	6,925.90

3/ See footnote 2.

Stage II

Timber, explosives, detonators, drill steel, drill bits, carbide, lamps, nails, bolts, first aid supplies, etc. for 100 feet of shaft @ $14.27/foot	$1,427.00	
Timber, explosives, detonators, drill steel, drill bits, carbide, lamps, nails, bolts, first aid supplies, etc. for 240 feet of drifting and cross-cutting @ $7.38/foot	1,771.20	
Track complete - 300 feet @ $1.65/foot	495.00	
Pipe - 320 feet each of 2-inch @ $0.60 a foot and 1-inch @ $0.30 a foot	288.00	
Pipe fittings	100.00	
Tools, shovels, picks, hammers, wrenches, etc.	200.00	
Fuel and grease @ $250.00/month, 4 months	1,000.00	
Ventilation pipe, 12-inch, 150 feet @ $1.00/foot	150.00	$ 5,431.20

(4) Operating Equipment

To be rented:

Stage I

1 - 210 cfm Diesel-engine operated compressor @ $400.00/month*, 4 months	1,600.00	
1 - Hoist, single drum, gasoline engine driven, 4,000 pound rope pull @ $100.00 per month*, 4 months	400.00	2,000.00

Stage II

1 - 210 cfm Diesel-engine operated compressor @ $400.00 per month*, 4 months	1,600.00	

1 - Hoist, single drum, gasoline engine driven, 4,000 pound rope @ $100.00 per month*, 4 months	$ 400.00	$2,000.00

To be purchased:

Stage I

1 - Air receiver	$ 200.00	
Auxiliary hoist equipment: skip, wire rope, Bell signal system, sheave wheel, shaft rollers, etc.	500.00	
1 - Sinker-type rock drill with pneumatic leg, hoses, oiler, etc.	1,000.00	
1 - Mine car, one-ton capacity	200.00	
1 - Air-driven mine fan	300.00	
1 - Bit grinding machine with extra wheels, air driven	250.00	
1 - Air-driven water pump	350.00	
1 - Pick-up truck - used, good condition	1,000.00*	
1 - Water tank, 500 gallon, for drilling and camp use with small pump	300.00	4,100.00

Stage II

None

To be furnished by the Operator:

Stage I

1 - Jackhammer with hoses and complete set-up for mounting. Value estimated @ $300.00, depreciation @ $5.00/month*, 4 months	$ 20.00	
1 - Mine car, estimated value, $250.00. Depreciation @ $2.50 per month*, 4 months	10.00	30.00

Stage II

1 - Jackhammer with hoses and complete set-up for mounting. Value estimated @ $300.00, depreciation @ $5.00/month*, 4 months	$ 20.00	
1 - Mine car, estimated value $150.00. Depreciation @ $2.50 per month*, 4 months	10.00	$ 30.00

(5) Rehabilitation and Repairs

Stage I

None

Stage II

None

(6) New Buildings, Improvements, Installations

Stage I

Labor for preparatory work, described under item 1, (a) to (h), 20 shifts of 6 men @ $93.84/shift 4/	$1,876.80	
Lumber, timber, hardware for buildings, headframe, and trestle, described under item 1, (a) to (h)	1,250.00	$3,126.80

Stage II

None

(7) Miscellaneous

Stage I

Replacement parts for equipment @ $50.00 per month 5/, 4 months	$ 200.00	
Repairs to equipment @ $50.00 per month 5/, 4 months	200.00	
Assays, 100 @ $4.00 each	400.00	$ 800.00

4/ See footnote 2.

5/ The repair and maintenance items are to be charged against the project only as incurred and spent while the equipment is working on the project.

Stage II

Replacement parts for equipment @ $50.00 per month 6/, 4 months	$ 200.00	
Repairs to equipment @ $50.00 per month 6/, 4 months	200.00	
Assays, 100 @ $4.00 each	400.00	$ 800

(8) Contingencies

Stage I	774.50
Stage II	630.80
Total estimated cost, Stages I and II	$59,200.00*
Estimated Cost, Stage I	$34,600.00*
Estimated Cost, Stage II	24,600.00*
Total Estimated Cost for Project	$59,200.00*
Government participation @ 75 percent	$44,400.00*

6/ See footnote 5.

DMRA DOCKET #2356
DMEA - 2356

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of Pinal, State of Arizona, described in a certain Exploration Project Contract dated July 18, 1952, between Tom D. Callas, A. Nikas, John Gekas, John Paulos, and Monte Seymour, dba Nikas Mining Company, the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated January 3, 1952, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

The undersigned further agrees that if said leasehold interest should be surrendered or if said lease should terminate at any time prior to the expiration of the rights of the United States of America under said Exploration Project Contract, the undersigned shall assume and does hereby assume all of the obligations of the Lessee under said Exploration Project Contract to make repayment to the United States of America according to the terms of said contract; and

The undersigned agrees to commit no act, nor assert any claim under judicial process or otherwise that may contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract.

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

Dated this 20th day of February, 1952.

Elizabeth Lauderdale Wood

U. S. GOVERNMENT PRINTING OFFICE 16—64582-1

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 18 1952

Defense
FEB 26 1952

RECEIVED
JUN 16 4 42 PM '52
DEFENSE MATERIALS
PROCUREMENT AGENCY

Paulaus 26271

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 Arizona, County of Pinal, described as follows:1/

Patented Morning Star lode claim in Section 17, T. 10 S., R. 16 E., Old Dat Mining District recorded in Book 6, page 533.

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/ Nikas Mining Company, a partnership composed of Tom D. Callas, A. Nikas, John Geiza, John Tucker, and Monte Seymour, 55 East Congress Street, Tucson, Arizona

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 production3/ 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/$ 44,400.00, 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 14th day of July, 1952.

YOUNG MEN'S CHRISTIAN ASSOCIATION [Seal]
OF TUCSON, ARIZONA

[Seal]

By Ashby I. Lohse [Seal]
Recording Secretary

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.

JUL 16 1952

State of Arizona

County of

On this 14th day of July 1952 before me Clermont Loper the undersigned officer personally appeared Ashby Lohse who acknowledged himself to be the Recording Secretary of the Young Men's Christian Association of Tucson, Arizona, a corporation, and that he, as such YMCA Secretary, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as Recording Secretary.

IN WITNESS WHEREOF, I have hereunto set my hand and seal.

Clermont Loper (L.S.)
Notary Public

My com. expires Feb. 9, 1955.

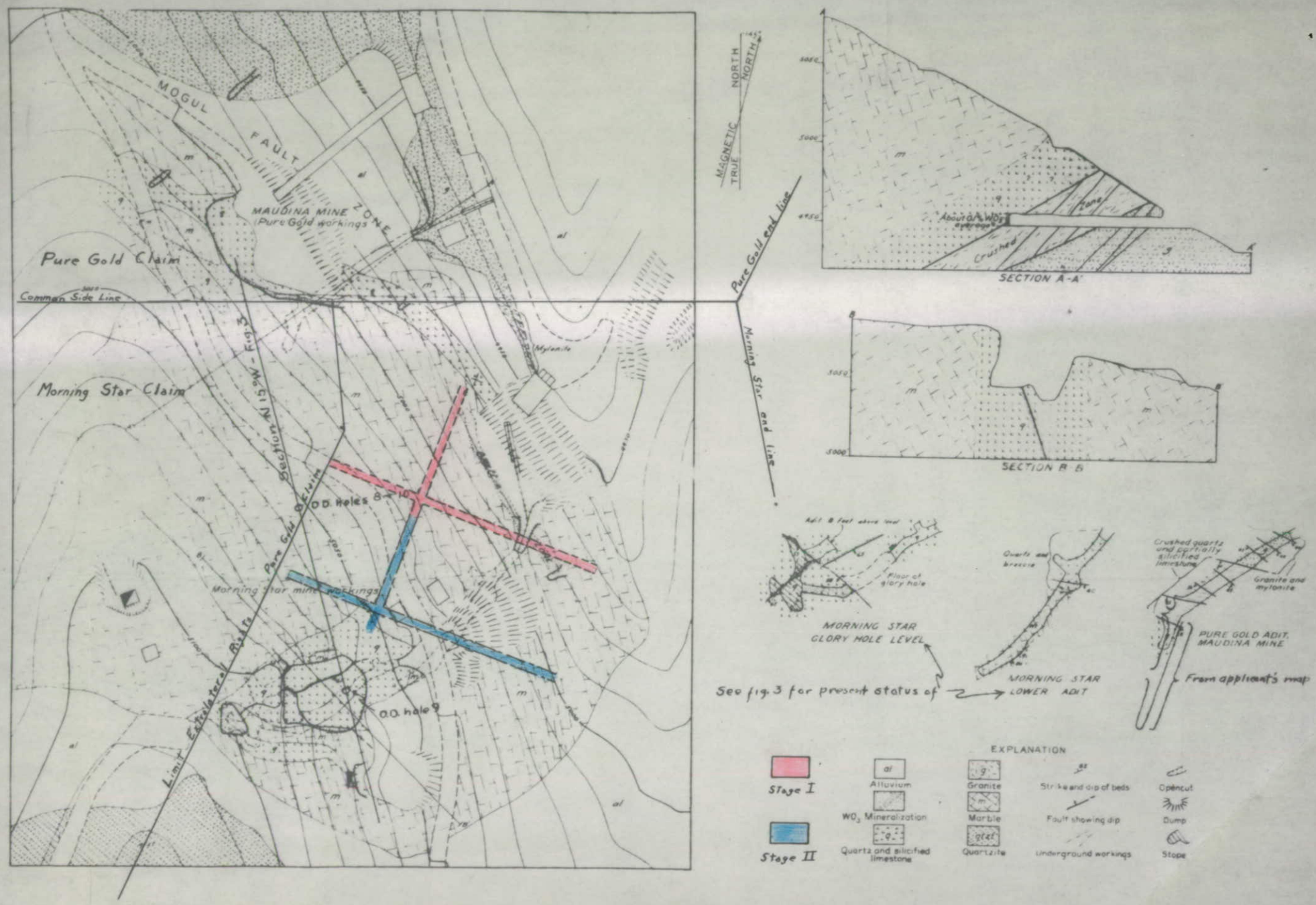


FIGURE 2

40 0 40 80 120 160 Feet

Contour interval 10 feet

Geology and topography by P.C. Bateman and M.P. Erickson
February 18 1944

G-44

NIKAS MINING CO., DMEA-2356

Fig. 2 – MAUDINA AND MORNING STAR TUNGSTEN MINES, PINAL COUNTY, ARIZONA

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

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

Not To Be Filled in by Applicant

Docket No. DMEA-2356
Metal or Mineral
Date Received 1-30-52
Amount $
Participation (Government %)

Name and address of applicant

NIKAS MINING COMPANY
55 W. Congress Street
Tucson, Arizona

Date January 28, 1952

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D.C. JAN 30 2 00 PM '52

If you have already filed MF-100, give date filed _____, type of assistance requested Exploration,

DMA Docket Number (if available) -

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four copies each, of the signed application form, General Technical Data Form MF-100, and answers to questions as specified, to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive office thereof, with your name and address on each sheet of the application and all accompanying papers. If you have previously filed MF-100, it is not necessary to file it again. However, you should indicate in space provided above the type of assistance previously applied for (loans, procurement contracts, etc.) and DMA Docket Number, if available. *When a question is inapplicable it should be so stated in the form.* Additional sheets should be attached in answering any questions or in supplying additional information. IF YOU CANNOT ANSWER A QUESTION, SO STATE.

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

   (*b*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application.

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

   NOTE: (1) If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*c*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

   (2) If applicant is not the owner of the property or if there are any liens or encumbrances against the property, copy of agreements of claimants, lienors, encumbrances, and lessors subordinating their interests in the property to the interest of the Government under the Exploration Project Contract will be required for attachment to the Contract.

2. (*a*) What metals or minerals do you expect to find?

   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.

The information requested in questions 3, 4, 5, 6, 7, 8, and 9 below should be answered specifically and in detail, as this information will be attached to and incorporated as part of the Exploration Project Contract, if such contract is entered into with you by the Government.

ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project.

   (*b*) State the time required to start the project and to complete it.

4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc.

5. Furnish an itemized list of existing facilities, buildings, installations, and fixtures with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition.

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item.

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each.

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above.

10. (*a*) How much are you prepared to invest in the proposed project?

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO-5)?

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

CERTIFICATION

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

[illegible] [illegible]
(Name of company)

By H E Kumbard
(Signature of authorized official)

January 28, 1952
(Date)

Consulting Mining Engineer
(Title)

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

U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

NIKAS MINING COMPANY
55 W. Congress Street
Tucson, Arizona

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
Data for M.F. - 103

1. (a) All work will be done on the Morning Star lode claim located in Twp. 10 S, R. 16 E, Section ____ in the Old Hat mining district, Pinal County, Arizona.

   (b) Copies of the lease agreement and assignment are attached hereto.

   (c) Legal description of property:

Name of Claim -	Patent Record Deeds of Mines Book 6, Page 553
Morning Star	

2. (a) Calcium tungstate (Scheelite)

   (b) The most complete geological report on this property was made by the United States Geological Survey. The title of this report is "The Maudina and Morning Star Mines, Pinal County, Arizona." The report was released on July 7, 1944.

   From this report and an examination of the property it seems logical to believe that the mineralizing solutions entered the area along the Mogul fault and formed ore bodies in the hanging wall of this fault, the more favorable areas being at or near the intersection of N-S trending fractures. Ore has been mined from these fractures in the upper part of the property but these fractures have not been explored at their intersections with the Mogul fault.

REGISTERED MINING ENGINEER
CERTIFICATE EXPIRES
HARRY E. KRUMLAUF
DEC. 31, 19
ARIZONA, U.S.A.

NIKAS MINING COMPANY
55 W. Congress Street
Tucson, Arizona

M. F. - 103 - Question 3

(a) An inclined shaft is to be sunk along the hanging wall of the Mogul fault system to an estimated depth of 260 feet. At intervals of 125 feet along the shaft levels will be established and drifts driven both east and west from the shaft along the fault contact for a distance of 150 feet. All favorable structure encountered in the drifting operation will be explored by raising or drifting. A mine yard must be leveled off at the shaft collar and a waste dump trestle must be constructed.

(b) Project can be started immediately and completed within one year.

REGISTERED MINING ENGINEER
CERTIFICATE EXPIRES
HARRY E.
DEC 31, 19
ARIZONA, U.S.A.

NIKAS MINING COMPANY
55 W. Congress Street
Tucson, Arizona

MF-103 - Question 5

There are no existing facilities, buildings or installations on the property that are suited to the proposed exploration program.

REGISTERED MINING ENGINEER
CERTIFICATE EXPIRES
HARRY E.
DEC. 31, 19
ARIZONA, U.S.A.

NIKAS MINING COMPANY
55 West Congress Street
Tucson, Arizona

MF-103 - Question 6

Surface Construction	Estimated Cost
Waste rock trestle ----------	$ 300.00
Frame structure for hoist and compressor house - 12' x 14' in size to cost $4.00 per square foot of floor space erected -----	672.00
Frame structure for shop, change room, office and warehouse - 12 x 50 in size - to cost $5.00 per square foot erected ---------	3,000.00
Toilet, shower and furniture -----	800.00
Powder house ----------	200.00
Oil storage shed ----------	150.00
	$ 5,122.00

NIKAS MINING COMPANY
55 West Congress Street
Tucson, Arizona

MF-103 - Question 7

(a) Rented - none
(b) Purchased

	Estimated Cost
1 Compressor - 315 C.F.M. diesel driven, skid mounted - delivered	$ 7,500.00
Air receiver, fuel tanks, etc. for compressor	350.00
1 hoist-single drum, gasoline engine driven, 4,000 pound rope pull - delivered	2,000.00
Auxiliary equipment for hoisting, as skip, wire rope, bell signal system, sheave wheel, shaft rollers, etc.	500.00
2 sinker type rock drills complete with pneumatic legs, columns, hoses, line oilers, etc. @ $550.00 ea.	1,100.00
1 drifter-hand crank - 3" size complete with accessories	650.00
1 stoper - 2-3/4" size complete with accessories	500.00
1 mucking machine, rebuilt but in new condition, complete	2,500.00
1 air driven pump	350.00
6 mine cars, one-ton capacity @ $200 ea.	1,200.00
1 air driven mine fan	300.00
1 bit grinding machine with extra wheels - air-driven - complete	250.00
1 pick-up truck to transport men and supplies - used but in good condition	1,000.00
1 water tank - 500 gallons - for camp and drilling - used.	150.00

REGISTERED MINING ENGINEER
CERTIFICATE EXPIRES
HARRY E. KOHLHAUF
DEC. 31, 19
ARIZONA, U.S.A.

NIKAS MINING COMPANY
55 West Congress Street
Tucson, Arizona

MF - 103 - Question 8

Shaft sinking - 2 compartment - 7'x10' rock section.

1. Labor distribution per shift for the first 125 feet:

Classification	Rate (incl.overtime)	Total
1 miner	$15.00 per day	$ 15.00
2 muckers	13.00 " "	26.00
1 hoistman	14.00 " "	14.00
1 topman	13.00 " "	13.00
1 foreman	16.00 " "	16.00
1/2 superintendent	20.00 " "	10.00
		$ 94.00

Add 15% for pay roll deductions to cover workmen's compensation, social security, unemployment compensation 14.10

Total payroll per shift $ 108.10

Assume an advance of 1.5 feet per shift in the shaft at a labor cost from above of $72.00 per shift for the first 125 feet. Total cost for this section of shaft ..... $ 9,000.00

2. Labor distribution for balance of shaft be as follows, since part of the cost can be charged to drifting, per shift:

1 miner	$ 15.00
2 muckers	26.00
1/2 hoistman	7.00
1/2 topman	6.50
1/2 foreman	8.00
1/4 superintendent	5.00
	$ 67.50

Add 15% for pay-roll deductions 10.12

Payroll per shift $ 77.62

NIKAS MINING COMPANY
55 West Congress Street
Tucson, Arizona

Cost per foot for this part at 1.5 feet advance per shift $51.75 and the last 135 feet will cost ..... $ 6986.00

Total labor cost for shaft sinking $15,986.00

3. Labor distribution for drifting will be as follows per shift:

Classification	Rate (includes overtime)	Total
1 miner	$ 15.00 per shift	$15.00
1 loading machine man	14.00 " "	14.00
2 muckers	13.00 " "	26.00
1/2 hoistman	14.00 " "	7.00
1/2 topman	13.00 " "	6.50
1/2 foreman	16.00 " "	8.00
1/4 superintendent	20.00 " "	5.00
		$ 81.50
Add 15% for payroll deductions		12.22
Payroll per shift		$ 93.72

Assume an average advance of 4 feet per shift at a cost of $23.43 per foot and a total cost for 600 ft. $14,058.00

4. Assume 200 feet of raising will be necessary at a cost per foot the same as for drifting. Total cost 4,686.00

$ 18,744.00

REGISTERED MINING ENGINEER
CERTIFICATE EXPIRES
HENRY C. MICHLAUF
DEC. 31, 19
ARIZONA, U.S.A.

NIKAS MINING COMPANY
55 West Congress Street
Tucson, Arizona

MF - 103 Question 8 (Cont.)

Summary of labor and supervisors for 2-shift operation:

Classification	Number	Rate per day*
Miners	4	$ 15.00
Muckers	8	13.00
Loading Mach. Operators	2	14.00
Hoistmen	2	14.00
Topmen	2	13.00
Foremen	2	16.00
Superintendent	1	20.00
Total	21	

*Includes overtime

NIKAS MINING COMPANY
55 W. Congress Street
Tucson, Arizona

REGISTERED MINING ENGINEER
CERTIFICATE EXPIRES
HARRY E. KRUMLAUF
DEC. 31, 19
ARIZONA, U.S.A.

MF - 103 - Question 9

Shaft. 2-compartment - rock section about 7' x 10' to be lagged on 3 sides if necessary. Shaft set to consist of a cap, sill, two posts and a divider. Rails to be fastened to stringers which in turn will be fastened to the sills.
Sets to be spaced at 5-foot intervals.
Timber per set, including blocking, if 8"x8" timber is used with 2-inch lagging.

Posts, cap, sill, divider and stringers =	260 b.f.
Lagging -	340 b.f.
Total	600 b.f.

600 ÷ 5 = 120 b.f. per foot of shaft

For 260' shaft will require	31,200 b.f.
Add for shaft stations, chutes, ties, etc.	5,000 b.f.
Total mine timber -	36,200 b.f.

Local price for Oregon fir is $140.00 per M but if purchased in carload lots the price is $90.00 per M, delivered in Tucson. Add $5.00 per M for handling and delivery charges.
For carload lot the timber cost = $ 3,430.00

Blasting supplies -
Shaft-use electric blasting -

15 lbs. of 40% semi-gelatin explosives per foot at 23½ ¢ per pound -	$ 3.52
Detonators, wire, etc. (est.)/foot	.75
	$ 4.27

For 260 ft. of shaft - $ 1,110.00

Drifts and raises - use electric blasting
5 x 7 drift using 15 holes and a 5-foot cut. Powder consumption of 8 lbs. per foot.

Cost per foot -	$ 1.88
Detonators, etc. (est.) " "	.50
Cost per foot	2.38

For 800 feet of drifting $ 1,904.00

NIKAS MINING COMPANY
55 West Congress Street
Tucson, Arizona

REGISTERED MINING ENGINEER
CERTIFICATE EXPIRES
HARRY E. KRUMLAUF
DEC. 31, 19
ARIZONA, U.S.A.

Question 9 (cont.)

Track supplies -

850 ft. of track for surface and underground using 12 lb. rail = 3.5 tons

350 ft. of track using 20-lb. rails for shaft and surface = 2.3 tons

Total rails 4.8 tons @ $155.00/ton	$ 744.00	
Splice bars, bolts, spikes & ties (est.)	300.00	
Total	$1,044.00	$ 1,044.00

Air and water pipe -

1200 ft. of 2" air pipe @ 60¢ per ft.	$ 720.00	
1200 ft. of 1" water pipe @ 30¢ " "	360.00	
Pipe fittings (est.)	200.00	
	$1,280.00	$ 1,280.00

General tools -

Includes shovels, picks, saws, wrenches, blacksmith tools, hammers, files, etc. 825.00

Ventilation supplies -

1000 ft. of 12" ventilation pipe with fittings estimated at $1 per foot - $ 1,000.00

Drilling supplies -

Assume 100 foot life of tungsten carbide bits. This exploration will require the drilling of about 20,000 feet of drill hole with 200 bits costing $13 per bit $ 2,600.00

Drill rods, threaded and shanked, will have an average cost of $7.50 each. Assuming an average breakage of one rod per 200 feet of drilling 100 rods will be required plus at least 10 rods - 825.00

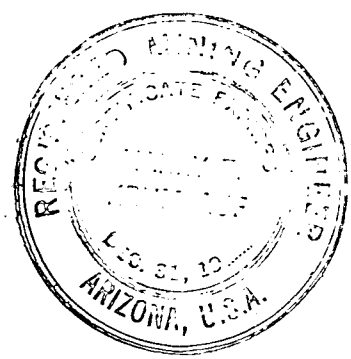
	$3,425.00	$ 3,425.00

NIKAS MINING COMPANY
55 West Congress Street
Tucson, Arizona

Question 9 (cont.)

Supplies -

Carbide, nails, spikes, bolts, water tubes, spud nuts, valves, bushings, etc. - total	$ 500.00
Engineering - Part time engineer at $200 to include expenses - 12 months	2,400.00
Assaying - local assaying charge for WO_3 at $4.00 each - allow $100.00 per month -	1,200.00
Accounting - allow $75 per month - 12 months	900.00
Power - diesel fuel, gasoline & oil - Allow $250 per month - 12 months	3,000.00
Trucking supplies and transportation of workmen - allow $250 per month	3,000.00
Equipment repairs and replacements - allow $100 per month - 12 months	1,200.00
First aid equipment and supplies	150.00
	$ 26,377.00



NIKAS MINING COMPANY
55 West Congress Street
Tucson, Arizon

MF - 103 - Summary of Costs

Question	Description	Cost
6 -	Surface construction	$ 5 122.00
7 -	Equipment	18 350.00
8 -	Labor for shaft sinking	15 986.00
	" " drifting	14 058.00
	" " raising	4 686.00
9 -	Supplies and material	26 377.00
		$ 84 579.00
	Add 10% for contingencies	8 458.00
	Total cost	$ 93 037.00

REGISTERED MINING ENGINEER
CERTIFICATE EXPIRES
HARRY E. KRUMLAUF
DEC. 31, 1952
ARIZONA, U.S.A.

H E Krumlauf

COPY COPY COPY COPY COPY

UNITED STATES VANADIUM COMPANY
Bishop, California

December 1, 1951

Mr. H. E. Krumlauf
2401 E. 6th Street
Tucson, Arizona

Dear Mr. Krumlauf:

In reply to your letter of November 27, I am herewith submitting a very brief summary of the results of our flotation research on the Nikas ore.

With the following reagent setup we were able to obtain a recovery of 81.7 percent and a flotation concentrate assaying 4.31% WO_3.

Soda ash	1.5 lbs/ton
Sodium Silicate	1.0 lbs/ton
Quebracho	0.2 lbs/ton
Soap	1.3 lbs/ton

The soap we use is a saponified tallow supplied by American Cyanamid Company under the trade name of reagent 7-12.

We found that soda ash in quantities greater than that shown above reduced both the concentrate grade and the recovery. High concentrate grades may be had, at the expense of recovery, by increasing the silicate consumption. All of our flotation work is conducted at a grind of 90% minus 48 mesh and a pulp density of 30% solids.

Obviously, the results of our work are not to be construed as either exhaustive or conclusive.

We sincerely hope that this bit of information may be of some assistance to you in the solution of your problem.

Very truly yours,

R. D. Carpenter
Chief Metallurgist

2526 E. Blacklidge Dr

Mr. Harry E. Krumlauf
2401 E. Sixth St.
Tucson, Arizona

Dear Mr. Krumlauf:

The scheelite of the North Star and Maudina mines is very fine grained and requires fine grinding. A petrographic slide of some of the finer grained material indicates that the fine scheelite was dispursed through the quartz and some of the grains of scheelite were down in the 200-325 mesh range. It would therefore be necessary to grind this ore to 100-mesh to affect a reasonable recovery.

Quite extensive work was carried on the Maudina ore adjacent to the North Star mine and it was found when the ore was ground to approximately 100-mesh the total recovery by table and flotation amounted to about 80% of the total WO_3 of which 35 to 48% was recovered by tabling with a grade of 60% WO_3 or better. The flotation concentrate grade was from 12 to 20% WO_3.

The tailing and middling products of a number of tests showed under the microscope particles of scheelite attached to quartz at 35 and 60-mesh sizes.

The tungsten concentrates contain lead in the form of galena and lead oxides and this would have to be further refined to produce a penalty free tungsten concentrate.

Very truly yours,

Geo. Roseveare,
Metallurgist

Form MF-100
(May 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA
FOR USE UNDER THE
DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. DMEA-2356

Date received 1-30-52

NIKAS MINING COMPANY
55 West Congress Street
Tucson, Arizona

Name and address of applicant

Date Jan 28, 1952

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D.C. 1 59 PM '52 JAN 30

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (5) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☐ Lessee.
   - ☐ Contractor.
5. Number of years in production One-half

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation: Common (e)	Number of Shares Held in Applicant Corporation: Preferred (f)	Life Insurance Carried for Benefit of Applicant: Amount (g)	Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h)
A. Nikas, Tucson	---	None	-	27%	None	None	-
J.J. Gokas, "	---	"	-	24%	"	"	-
T. Callas, Oracle	---	"	-	15%	"	"	
M. Seymour, Tucson	---	"	-	17%	"	"	
Unissued interest				17%			
	Total	None	x x x x x	100%	-	x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock None	$	$	$		
Preferred stock None	$	$	$		

*Indicate period covered.

10. Production:

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)	Schoelite	None	None	None	100
2. Quantity of product processed (specify unit of measure and type of process) Short tons	"	"	"	"	100
3. Quantity and grade of product sold or shipped (specify units of measure)	"	Table concentrates Flotation	"	69% 12%	WO_3 WO_3

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves.

NIKAS MINING COMPANY
55 W. Congress Street
Tucson, Arizona

January 9, 1952

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERAL ADMINISTRATION
GENERAL TECHNICAL DATA FOR FORM MF-100

1. Materials produced:

   (a) The chief product of the mine is scheelite (calcium tungstate)

   (b) No by products are produced.

2. The name of the mine is "Morning Star" and it is an underground operation at present. However, some past production came from open pits.

   (a) Linear feet of shafts - none
   (b) " " " drifts and crosscuts - 435
   (c) " " " adits - 190
   (d) Open-cut opening to lower adit - 70 feet

   The mine is not flooded and it is expected that exploration will encounter only a small quantity of water.

   The mine is now (January, 1952) producing at the rate of 100 tons per month.

3. (a) The mine is located about 45 miles by road northeast of Tucson, Arizona. Tucson is probably the most convenient shipping point although Winkelman is about the same distance from the mine.

   (b) Old Hat Mining District
   (c) Twp. 10 S., Range 16 E., Section ___
   (d) Pinal County, Arizona

Name of Claim	Patent Record Deed of Mines Book	Page
Morning Star	6	553

NIKAS MINING COMPANY
55 W. Congress Street
Tucson, Arizona

4. (a) The property is now being operated by the Nikas Mining Company.

   (b) Property being operated as lessee.

5. Number of years in production 1/2 (since July, 1951).

6. (a) The majority owners of the Nikas Mining Company have had many years of business experience in Tucson but have had no previous mining experience. However, one of the minority owners of the company has had many years of practical mining experience.

   (b) The manager of the property, Harry E. Krumlauf, is a consulting mining engineer with thirty-one years of mining experience. He is a graduate mining engineer and a registered mining engineer in the State of Arizona.

7. (a) (b) and (c).
   Most of the workings listed under 2, above, were done by former owners of the property. No record of earlier operations is available. Some information on the production and geology of this property and its neighboring mine is given in the U. S. G. S. report entitled "The Maudina and Morning Star Mines, Pinal County, Arizona." This report was released on July 7, 1944.

11. No change in the production rate is contemplated at present.

12. The United States Geological Survey published a report on this and the adjacent property entitled "The Maudina and Morning Star Mines, Pinal County, Arizona." This report was released on July 7, 1944. From this report and an examination of the property it seems reasonable to believe that the mineralizing solutions entered the area along the Mogul fault and formed ore bodies in the hanging wall of this fault, the hanging wall in the area of the mine being limestone. The more favorable areas for deposition being at or near the intersections of N. S. trending fractures and the Mogul fault. Considerable ore has been mined from these fissures near their outcrops but they have not been explored at depth near the Mogul fault.

NIKAS MINING COMPANY
55 West Congress Street
Tucson, Arizona

13. Access Road - 2 miles from mine to county highway on good truck road - 8 miles from truck road on good graded county road to Oracle, Arizona - 35 miles by paved road from Oracle to Tucson.

14. Some water from springs near the mine is available and can be used for drill water. Nearest water in quantity is on the San Pedro valley about 12 miles from mine.

15. Power - one 110 c.f.m. rented compressor is the only power equipment used at present. Electric power is available from a power line about one mile from the mine.

16. Labor.

    1 miner-foreman full time
    1 mucker full time
    1 " part time.

17. Equipment and facilities (all equipment is rented).

    2 mine cars
    1 ton mine rails
    1 ore bin
    1 stoper and 1 sinker complete with hoses, etc.
    Miscellaneous hand tools
    300 feet of pipe 1 inch and 2 inch

    There are no buildings on the property except a small ore bin.

18. None.

REGISTERED MINING ENGINEER
CERTIFICATE EXPIRES
HARRY E. KRUMLAUF
DEC. 31, 1952
ARIZONA, U.S.A.

H E Krumlauf

(*b*) If deposit is other than pla

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)	200	1.15% WO_3	$75.00	$50.00+	$ 10.00
Indicated (probable)	400	1.1+% "	75.00 1	"	"

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

CERTIFICATION

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

Nikas Mining Company
(Name of company)

By N E Krumlauf
(Signature of authorized official)

January 28, 1952
(Date)

Consulting Mining Engineer
(Title)

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

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

M I N I N G L E A S E

THIS AGREEMENT, entered into this 3rd day of January, 1952, by and between Elizabeth L. Wood, a widow, as life tenant, and the Young Men's Christian Association of Tucson, Arizona, a corp., parties of the first part, and Tom D. Callas, A. Nikas, John Gekas, John Paulos and Monte Seymour, dba Nikas Mining Company, a co-partnership, parties of the second part:

W I T N E S S E T H :

That the parties of the first part for and in consideration of the rents and royalties to be paid and covenants and conditions hereinafter specified to be kept and performed by the parties of the second part, do hereby demise and let unto the parties of the second part for the period of five years from the date hereof, the following described property situated in the Old Hat Mining District, Pinal County, Arizona, as described in the following instruments as recorded in the office of the County Recorder of said County:

NAME OF CLAIM	PATENT RECORDED DEEDS OF MINES BOOK	PAGE
MORNING STAR	6	553

This lease is given, however, on the following conditions:

That the said parties of the second part shall, beginning within thirty days from the date hereof, begin actual work and thereafter proceed with said work continuously during the life of this lease within the boundaries of said claims, unless prevented by accidents, strikes, acts of God, or other agencies beyond the control of the parties of the second part.

It is further understood and agreed that the parties of the second part shall cause all work upon said claims to be

done in a good and miner-like fashion, securely timbering and lagging all shafts, drifts, crosscuts, and other mine workings wherever necessary to preserve the same and shall keep all main passageways clear and free from debris, and shall at the expiration of this lease, whether by forfeiture or otherwise, return the said property to the said parties of the first part in as good condition as it now is or may be placed during said operations, reasonable wear and tear and damage caused by the elements and the use contemplated by this lease excepted.

It is further expressly understood and agreed that the parties of the second part shall pay to the parties of the first part or their order, a royalty of 10% of the net returns on all ores extracted from said property. The term "net returns" is hereby defined to mean the net returns to the parties of the second part from the sale of ores or concentrates after deducting transportation charges from the claim to the smelter and all deductions appearing on the smelter returns, and shall be payable at the Southern Arizona Bank & Trust Company, Tucson, Arizona.

The parties of the second part agree to secure Industrial Accident and other insurance in the manner provided by the laws of the State of Arizona and the United States of America, and to protect the property and interests of the first parties from all liability by reason of industrial accidents in the operations of said property under this agreement, and also to protect said property from all manner of liens for labor or materials used or purchased by the second parties in said operations, and it is mutually understood that the first parties shall in no event be liable for any indebtedness incurred by the parties of the second part in their operations under this agreement.

And the second parties further agree for and in behalf of the first parties to post at the entrance of any workings, shafts, tunnels or entrances to the mines, entrances to all

boarding houses, and other places required by law, the notices provided for by the laws of Arizona, generally known as "Notice of non-liability for labor or materials furnished" on or before the day the second parties, or anyone operating under them, begin operations of any kind on said mines and mining claims, or any thereof. The said notices shall be in due form of law and from time to time if the necessity for posting new notices shall arise, said second parties agree to post such notices. And the second parties agree to comply with the Laws of Workmen's Compensation in accordance with the laws of Arizona and to save the first parties hermless on account of any cause of action arising thereunder.

It is further agreed that the said parties of the first part shall at all reasonable times have the privilege of entering upon and examining said premises, and shall be given free and ready access thereto so long as the same does not interfere with mining operations being conducted on said premises.

On or before the first day of June of each year during the life of this lease, the second parties shall perform all assessment work necessary to hold title to the unpatented mining claims adjoining the Morning Star Claim, during the life hereof. It is expressly understood and agreed that all work so done and performed by the second parties shall be applied as assessment work for the benefit of said claims for the year in which said work is done and performed, and for the benefit of the first parties, and all assessment work so performed shall be completed by the 1st day of June of each year, in full compliance with the laws of the United States and the State of Arizona, and Affidavits evidencing the performance of such work as is necessary and required under the laws of the United States and of the State of Arizona shall be filed by the second parties and copies of the same forwarded to the first parties.

It is further agreed and understood by and between the parties hereto that the said parties of the second part shall have the right to install in or upon said premises, mining machinery and equipment of any and every character whatsoever and mining tools and have full use of the property in every way as may be necessary to its mining operations and at the termination or expiration of this lease said parties of the second part shall have the right to remove all mining machinery, equipment, and tools within 90 days thereof, but the same shall become the property of or be forfeited to the said parties of the first part, if not removed within said 90 day period.

The said second parties shall not assign, transfer, lease or otherwise dispose of this lease, or any right, title or interest given to him hereunder without the written consent of the first parties; and nothing is to be removed from said property, with the exception of ores and minerals, without the written consent of the first parties.

The privilege of grazing cattle on the lands occupied by the aforesaid mines and mining claims is hereby reserved by first parties, and it is hereby agreed by the second parties that they will permit no other livestock to graze or be at liberty upon said premises, but that all burros, mules and/or other livestock used by second parties or kept by them on said premises shall be confined to and fed in a corral; and all fencing shall be kept in repair and all gates kept closed that said claims and adjoining property of first parties shall be protected.

It is further understood and agreed that time is the essence of this agreement and that in case of breach by the second parties of any covenants, agreements, or conditions hereinbefore specified, unless such breach occurs through causes beyond the control of the second party as enumerated above, the first parties shall have the right at their option to declare this lease null

and void and may re-enter and take possession of said property providing, however, that the first parties shall first give written notice of such breach to the second parties and will grant a 30 day period for the second parties to correct same before declaring this lease null and void.

It is further agreed and understood that during the full period of this lease said second parties shall pay all real estate and personal property taxes that may henceforth become due upon the above described premises beginning first with the taxes assessed for the year 1952.

It is further agreed by and between the parties that if the second parties fully and faithfully perform their obligations under this agreement and shall give notice in writing not less than six months prior to the date of the expiration of this lease to first parties, second parties shall have, as a further benefit in consideration of their agreements herein, the right to an extension of this lease for an additional period of five years.

The terms of this agreement shall extend to and be binding upon the heirs, successors, and assigns of the parties hereto, and be interpreted in the same manner.

IN WITNESS WHEREOF, the first parties have hereunto caused these presents to be executed and said corporation's corporate seal affixed by its officers thereunto duly authorized, and the parties of the second part have hereunto set their hands and seals the day and the year first above written.

ELIZABETH L. WOOD
ELIZABETH L. WOOD

YOUNG MEN'S CHRISTIAN ASSOCIATION
OF TUCSON, ARIZONA, A CORPORATION

By DELBERT L. SECRIST
D. L. SECRIST, Its President

By ASHBY I. LOHSE
ASHBY I. LOHSE, Its Secretary

PARTIES OF THE FIRST PART

TOM D. CALLAS
TOM D. CALLAS

A. NIKAS
A. NIKAS

JOHN GEKAS
JOHN GEKAS

JOHN PAULOS
JOHN PAULOS

MONTE SEYMOUR
MONTE SEYMOUR

PARTIES OF THE SECOND PART

STATE OF WASHINGTON)
Pacific : ss.
County of ~~Gewlitz~~)

This instrument was acknowledged before me, the undersigned Notary Public, this 18th day of January, 1952, by ELIZABETH L. WOOD, a widow.

(NOTARIAL SEAL

HERMAN A. COLT
Notary Public

My commission expires:
Oct. 31 - 1953

STATE OF ARIZONA)
: ss.
County of Pima)

This instrument was acknowledged before me, the under-

signed Notary Public, this 3rd day of January, 1952, by TOM D. CALLAS, A. NIKAS, JOHN GEKAS, JOHN PAULOS and MONTE SEYMOUR, dba NIKAS MINING COMPANY, a co-partnership.

(NOTARIAL SEAL)

WILLIAM S. DUNIPACE
Notary Public

My commission expires:

10 May 1954

STATE OF ARIZONA
County of Pima } ss.

Before me, a Notary Public in and for said County and State, personally appeared D. L. Secrist and Ashby I. Lohse, known to me to be the persons whose names are subscribed to the foregoing instrument as president and secretary respectively of the Young Men's Christian Association of Tucson, Arizona, the corporation described in said instrument and acknowledged to me as such officers that they executed the same for said corporation, for the purpose and consideration therein expressed as the free act and deed of such corporation and by them and by said corporation voluntarily executed.

CLERMONT LOPER
Notary Public

My commission expires:

My com. expires Feb. 9, 1955.

(SEAL)

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA

IN AND FOR THE COUNTY OF PIMA

FILED
1946 JUN 19 PM 12 47
BELLE D. HALL
CLERK SUPERIOR COURT
BY Grayce I. Gibson DEPUTY

L. M. FORCEY, WALTER S. TUBACH, WILLIAM IVERSON, LESTER H. MURMAN, HUBER G. WILSON and LOUISE A. WILSON, his wife, GEORGE H. VEEH and FLORENCE M. VEEH, his wife, and FRANK P. BORCHARD and MYRTLE F. BORCHARD, his wife, co-partners doing business under the name and style of Morning Star Mining Company, and ELIZABETH L. WOOD, a widow, Plaintiffs and Counterdefendants, -vs- EDWARD H. MOLSON, doing business under the name and style of MODINA TUNGSTEN MINE, Defendant and Counterclaimant.	No. 25215 JUDGMENT AND DECREE

This cause came on regularly to be heard before the Court sitting without a jury on the 7th to 12th days of May, 1945, inclusive; plaintiffs and counterdefendants appeared in person and by their attorneys, Messrs. Ellinwood & Ross, George R. Darnell and C. R. McFall; defendant and counterclaimant appeared in person and by his attorneys, Messrs. Fennemore, Craig, Allen & Bledsoe and Tom K. Richey; and the Court having heard the testimony and having examined the proofs offered by the respective parties, and briefs of the respective parties having been filed, and the matter having been fully argued to the Court on the 28th day of February, 1946; the Court, being fully advised in the premises, finds as follows:

1. That the defendant and counterclaimant is the owner of the Pure Gold patented lode mining claim in the Old Hat Mining District, Pinal County, Arizona;

2. That the Pure Gold Lode Mining Claim and the Morning Star Lode Mining Claim are contiguous to each other, the southerly side line of the Pure Gold Lode Mining Claim being common to the northerly side line of the Morning Star Lode Mining Claim;

3. That the location of the Morning Star Lode Mining Claim is senior to the location of the Pure Gold Lode Mining Claim;

4. That within the Pure Gold Lode Mining Claim is a vein other than the discovery vein bearing valuable mineral, the apex of which lies within the boundary lines of the Pure Gold Lode Mining Claim;

5. That said vein has a well-defined foot wall and a well-defined hanging wall;

6. That the apex of the said vein is not bisected by the common side line;

7. That the apex of the said vein upon its strike traverses a portion of the length of the Pure Gold Lode Mining Claim and crosses the common side line into the Morning Star Lode Mining Claim;

8. That the strike of the said vein is from the northwest to the southeast;

9. That the said vein dips upon its downward course from the northeast to the southwest;

10. That the foot wall of the said vein upon its strike crosses the common side line between the Pure Gold Lode Mining Claim and the Morning Star Lode Mining Claim at a point 218.62 feet west of the number 4 corner of the Pure Gold Lode Mining Claim;

11. That the hanging wall of the said vein upon its strike crosses the common side line between the Pure Gold Lode Mining Claim and the Morning Star Lode Mining Claim at a point 267.24 feet west of the number 4 corner of the Pure Gold Lode Mining Claim;

WHEREFORE, IT IS HEREBY ORDERED, ADJUDGED AND DECREED:

1. That plaintiffs and counterdefendants take nothing by their complaint;

2. That the title to and estate in said vein in its course downward within the area hereinafter described be and the same is hereby determined, quieted and established in defendant and counterclaimant, Edward H. Molson, and that defendant and counterclaimant have the exclusive right of possession, ownership and enjoyment of said vein throughout its entire depth within the limits hereinafter set forth, so long as said vein continues its dip into the earth, without interference by plaintiffs and counterdefendants, or any of them. Plaintiffs and counterdefendants, and each of them, and all persons claiming through or under them, are hereby enjoined, restrained, barred and forever estopped from having or asserting any claim, right, title or interest in or to said vein adverse to the defendant and counterclaimant so long as said vein continues on its downward course and so long as the extralateral operations of defendant and counterclaimant are within the limits hereinafter set forth;

3. That the rights of the defendant and counterclaimant to possess, enjoy and mine said vein extra-laterally on its downward dip shall be limited on the west by a vertical plane the course of which shall be North 25° 36' East extended southerly from the westerly end line plane of the Pure Gold Lode Mining Claim;

4. That the said rights of the defendant and counterclaimant shall be limited on the east by two intersecting vertical planes as follows: beginning at a point 267.24 feet west of the number 4 corner of the Pure Gold Lode Mining Claim, the first plane shall be drawn parallel to the end line planes of the Morning Star Lode Mining Claim upon a course North 10° West until said plane intersects with the second plane which shall be drawn parallel to the end line planes of the Pure Gold Lode Mining Claim from a point 218.62 feet west of the number 4 corner of the Pure Gold Lode Mining Claim upon a course North 25° 36' East. The extra-lateral rights of the defendant and counterclaimant shall not extend in an easterly direction beyond the two planes herein described;

5. That plaintiffs and counterdefendants and defendant and counterclaimant shall bear their respective costs of suit.

DONE in Open Court this 18th day of June, 1946.

C. C. Faires
JUDGE

APPROVED as to form:

Ellinwood & Ross, George R. Darnell
and C. R. McFall

By George R. Darnell, C. R. McFall
Attorneys for Plaintiffs and
Counterdefendants.

STATE OF ARIZONA,)
)
) ss.
COUNTY OF PIMA.)

I, GRAYCE I. GIBSON, CLERK OF THE SUPERIOR COURT OF THE STATE OF ARIZONA, IN AND FOR THE COUNTY OF PIMA, DO HEREBY CERTIFY THAT I HAVE COMPARED THE FOREGOING COPY OF JUDGMENT AND DECREE

IN CASE NO. 25215, ENTITLED L. M. Forcey et al, Plaintiffs and Counterdefendants, -vs- Edward H. Molson, doing business under the name and style of Modina Tungsten Mine, Defendant and Counterclaimant.

WITH THE ORIGINAL RECORD OF THE SAME REMAINING IN THIS OFFICE, AND THAT THE SAME IS A TRUE AND CORRECT TRANSCRIPT THEREFROM.

WITNESS MY HAND AND THE SEAL OF SAID COURT AFFIXED THIS 22nd DAY OF March, 19 52.

Grayce I. Gibson
CLERK.

BY Pattie B. Robbins
DEPUTY CLERK.

APPOINTMENT OF MANAGER
AND
POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS:

That TOM D. CALLAS, A. NIKAS, JOHN GEKAS, MONTE SEYMOUR and JOHN PAULOS, being all of the co-adventurers in that certain joint venture known as NIKAS MINING COMPANY, hereinafter called first parties, do by these presents appoint HARRY E. KRÜMLAUF, of Tucson, Arizona, as General Manager and Consulting Engineer in connection with the operation by said co-adventurers of the Morning Star Mine situate in the Old Hat Mining District, Pinal County, Arizona, according to the patented claim of record in the office of the county Recorder of Pinal County, Arizona, in Book 6 of Deeds of Mines at page 553.

The said first parties do further, by these presents, make, constitute and appoint the said Harry E. Krümlauf the true and lawful agent and attorney of them jointly and severally and each of them for the purpose of signing all applications, submitting all applications and supplemental applications, executing and submitting all proposals and subsequent proposals and for the purposes of executing and delivering all other papers, forms or documents and doing all acts which are, or may be, required in connection with the application of said co-adventurers for a development loan from Defense Minerals Exploration Administration, an instrumentality of the United States Government.

And the said first parties do further, by these

presents, jointly and severally, ratify and confirm in all respects all of the acts of each and all of them and all of the acts which have been taken by the said Harry E. Krumlauf in connection with the loan aforesaid.

IN WITNESS WHEREOF, the first parties have executed these presents this 22nd day of March, 1952.

Tom D. Callas
Tom D. Callas

A. Nikas
A. Nikas

John Gekas
John Gekas

Monte Seymour
Monte Seymour

John Paulos
John Paulos

STATE OF ARIZONA)
) SS.
COUNTY OF PIMA)

The foregoing instrument was executed and acknowledged before me, a notary public, this 22nd day of March, 1952, by TOM D. CALLAS, A. NIKAS, JOHN GEKAS, MONTE SEYMOUR and JOHN PAULOS, who are personally known to me.

Norma Eickhoff
Notary Public

My Commission expires:
May 7, 1955

AFFIDAVIT

STATE OF ARIZONA)
COUNTY OF PIMA) SS.

JOHN GEKAS, being first duly sworn upon his oath, deposes and says:

That he is the same John Gekas who on the 2nd day of July, 1951 entered into "Joint Venture Mining Agreement" by and between Tom D. Callas, A. Nikas and John Gekas, representing himself and John Paulos, and Monte Seymour, as owners, and H. E. Krumlauf, G. H. Roseveare and L. V. Robertson, as consultants. That at the time of the execution of that agreement and the negotiations preceding said agreement and in the execution of the agreement the undersigned was acting in behalf of himself and John Paulos. That at all of said times the undersigned and said John Paulos were co-partners in connection with the said venture and that all of the acts of the undersigned were done for and on behalf of said co-partnership. That the undersigned and John Paulos are partners in connection with their interest in the said venture and that as co-partners each of them owns an equal interest therein.

John Gekas

Subscribed and sworn to before me this 21st day of March, 1952.

Jerome Eckhart
Notary Public

My Commission expires:
May 7, 1955

LARGE FORMAT DOCUMENTS AT END OF FILE

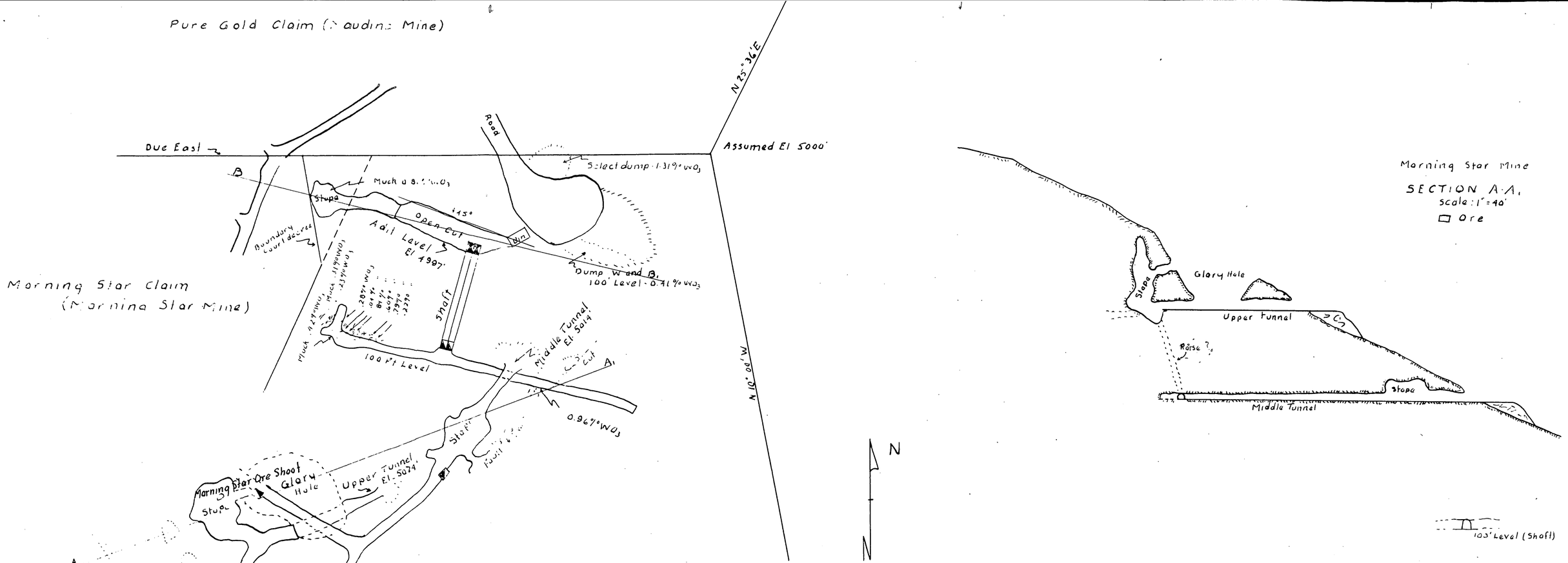
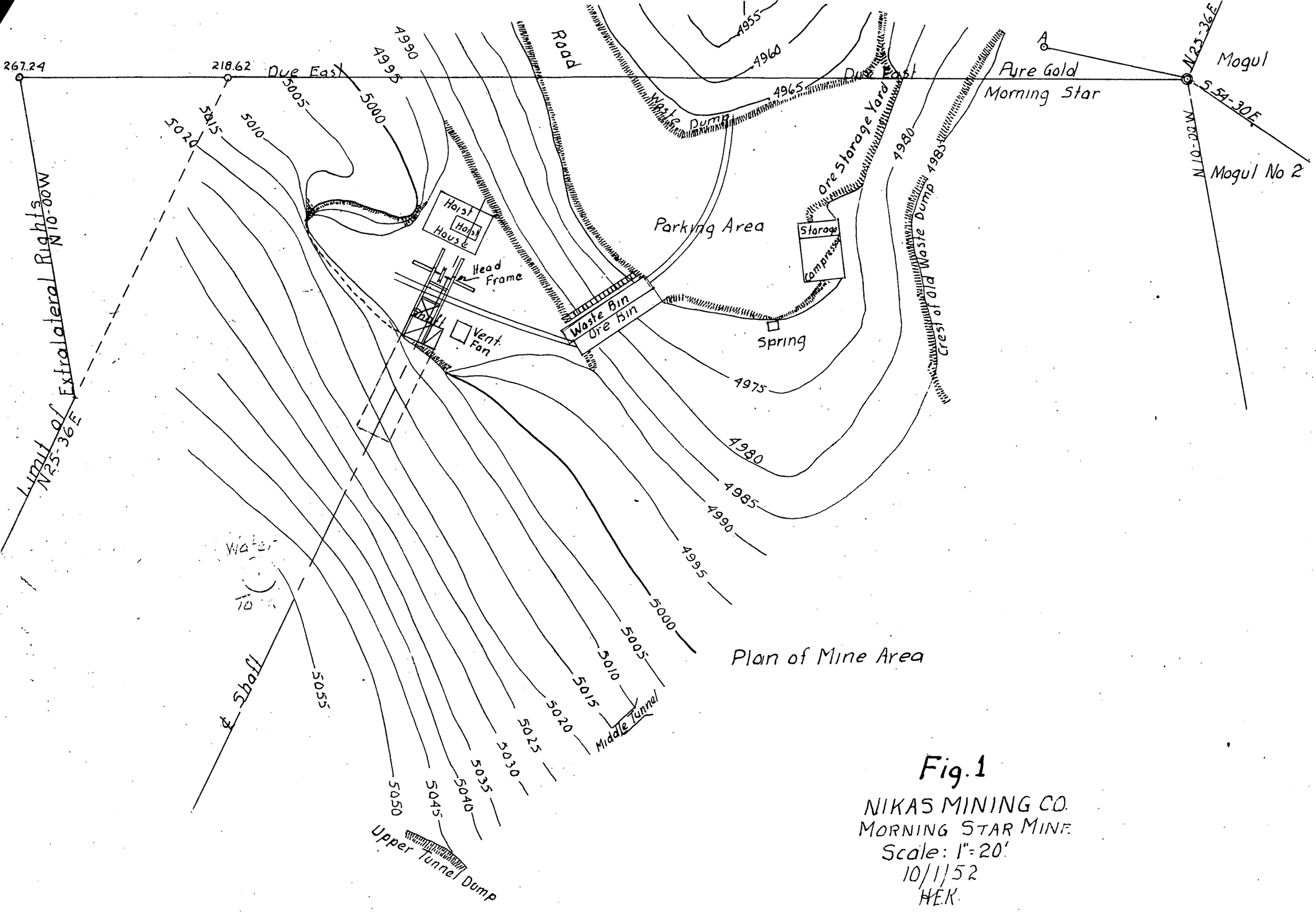


Fig 4
SKETCH

MORNING STAR MINE
Old Hot Mining District
Pinal Co., Arizona
scale: 1" = 40'
by T P Lane Mar. 4 1953

DMEA - 2356

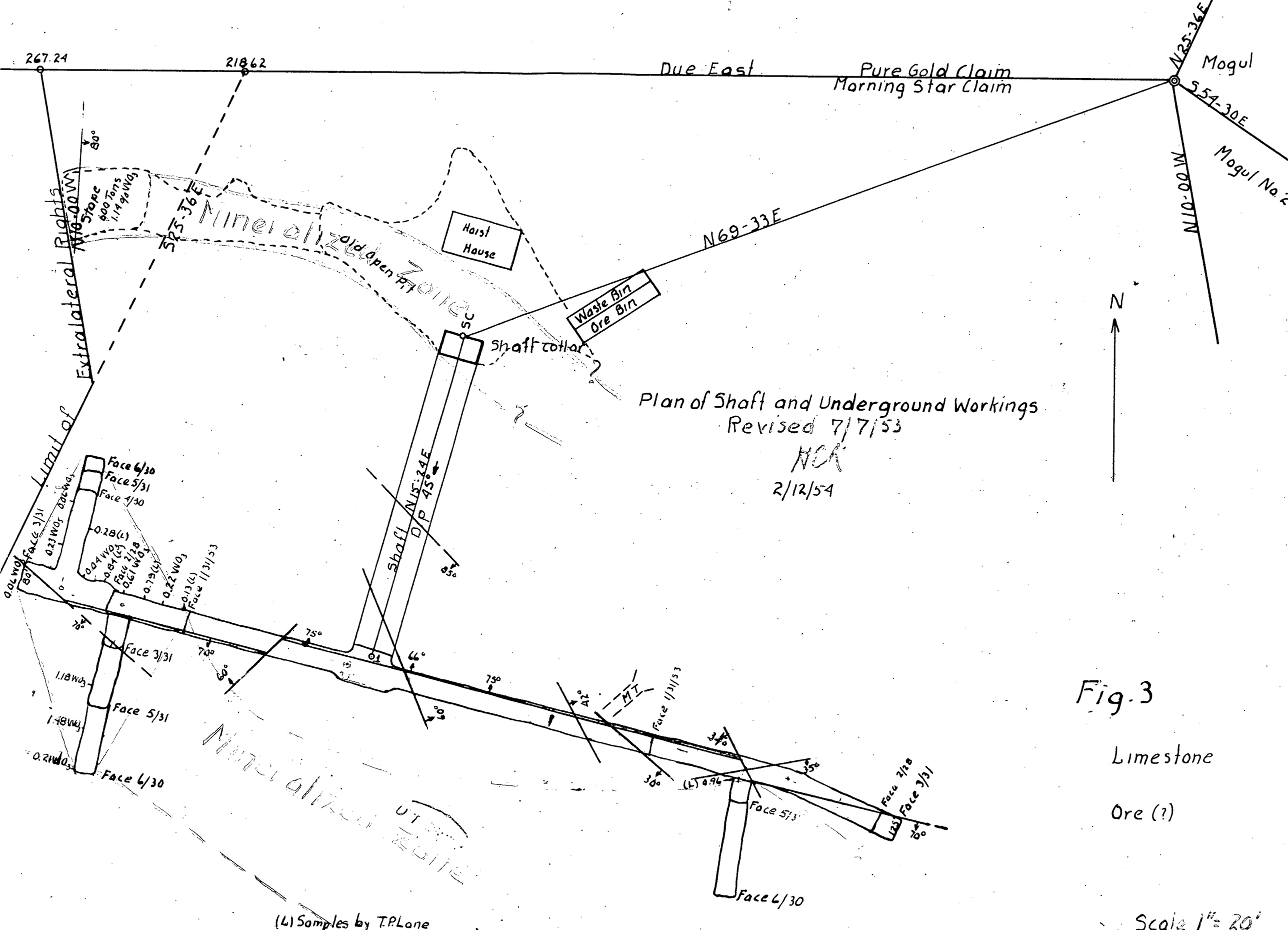


Plan of Mine Area

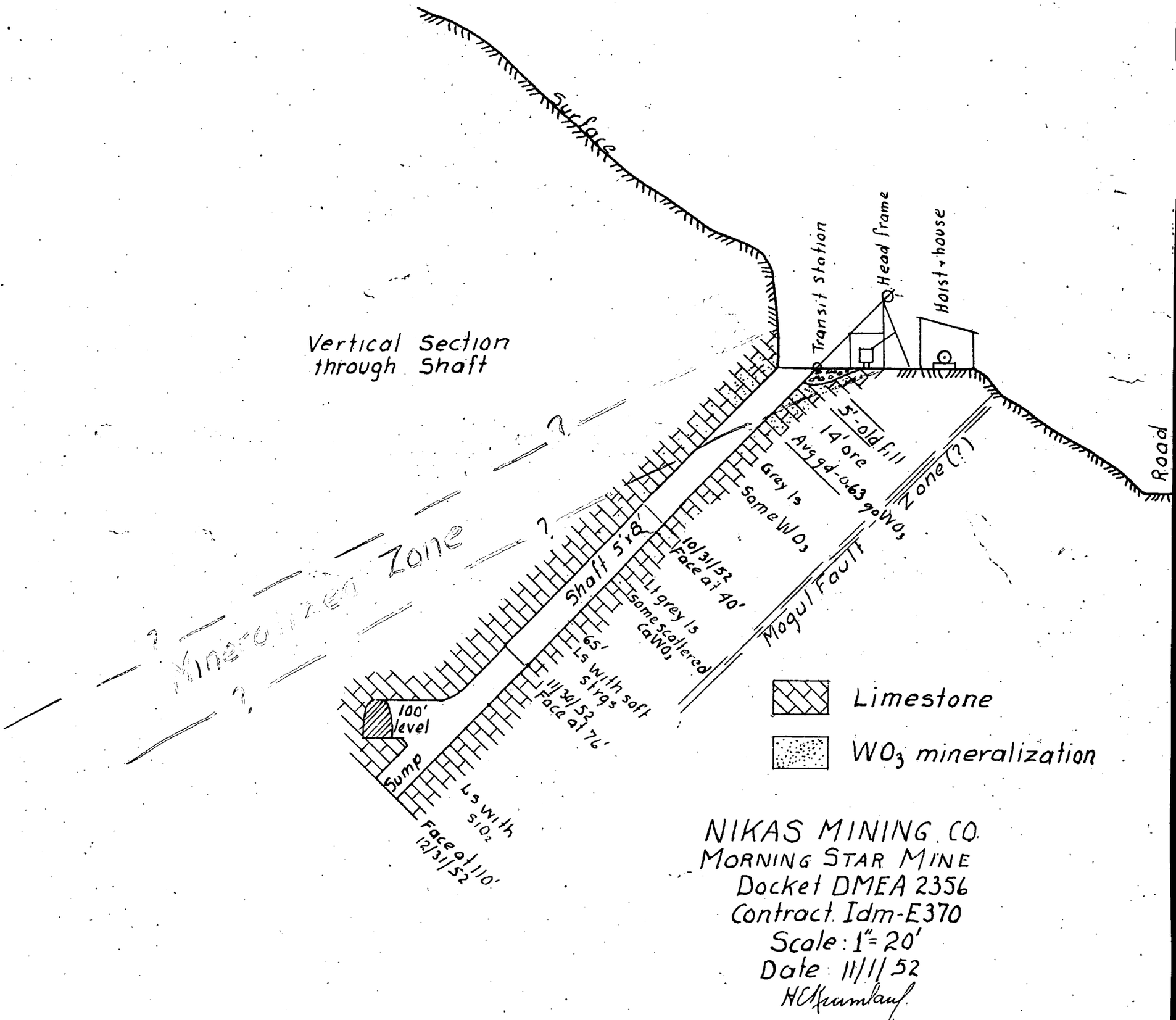
Fig. 1

NIKAS MINING CO.
MORNING STAR MINE
Scale: 1" = 20'
10/1/52
H.E.K.

DnEA - 2356


267.24
218.62
Due East
Pure Gold Claim
Morning Star Claim
Mogul
N25-36E
S54-30E
Mogul No. 2
N10-00W
N69-33E
Limit of Extralateral Rights
N10-00W
Stope
600 Tons
1.14% WO3
S25-36E
Mineralized Zone
Old Open Pit
Hoist House
Waste Bin
Ore Bin
SC
Shaft collar
Shaft N15-24E
D/P 45°
Plan of Shaft and Underground Workings
Revised 7/7/53
NCK
2/12/54
N
Face 6/30
Face 5/31
Face 4/30
Face 3/31
Face 2/28
Face 1/31/53
0.28(L)
0.23 WO3
0.04 WO3
0.84(L)
0.61 WO3
0.79(L)
0.22 WO3
0.13(L)
0.02 WO3
1.18 WO3
1.48 WO3
0.21 WO3
(L) 0.96
(L) 0.25
MT
Mineralized Zone
(L) Samples by T.P. Lone
Fig. 3
Limestone
Ore (?)
Scale 1" = 20'

DMEA-2356



NIKAS MINING CO.
MORNING STAR MINE
Docket DMEA 2356
Contract Idm-E370
Scale: 1" = 20'
Date: 11/1/52
H C Krumlauf

Fig. 2

DMEA-2356

DOCKET
Surnamed:
Martin
Rutledge
Herbran
Guild
Forrader

February 24, 1954

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division

Subject: Docket No. DMEA 2356 - Tungsten
Nikas Mining Company
Morning Star Mine
Pinal County, Arizona
Contract No. Idm-E370

Operator:
Nikas Mining Company, a partnership composed of Tom D. Callas, A. Nikas, John Gekas, John Paulos, and Monte Seymour
55 West Congress Street
Tucson, Arizona

Operator's property rights:
Lessee of patented Morning Star lode claim in Section 17, T. 10 S., R. 16 E., Old Hat Mining District, recorded in Book 6, page 533, patent recorded deeds of mines for Pinal County, Arizona. Lease dated January 3, 1952, between Elizabeth L. Wood, Oracle, Arizona, and the Young Men's Christian Association of Tucson, Arizona, and the Nikas Mining Company for five (5) years plus right to renew for five (5) years.

Contract: Dated July 18, 1952.

(a) Work authorized:

Stage I

1. Leveling off area for surface structures and headframe.
2. Construction of trestle to mine dump.
3. Construction of headframe.
4. Construction of 10 x 14-foot hoist and storage building of frame construction.
5. Construction of 10 x 10-foot compressor shed and storage building.
6. Construction of 10 x 10-foot change room of frame construction.
7. Construction of 10 x 10-foot powder house.

R.C.S.
3.5.54

8. Installation of equipment, track, and pipe lines.
9. Sink a 110-foot, 5 x 8-foot inclined shaft.
10. Drive a 60-foot, 5 x 7-foot drift northwestward.
11. Drive a 120-foot, 5 x 7-foot drift southeastward.
12. Drive two crosscuts not to exceed a total of 60 feet.

COST $34,600.00

Stage II

1. Sink shaft an additional 100 feet.
2. Drive northwestward 60 feet, 5 x 7-foot drift.
3. Drive southeastward 120 feet, 5 x 7-foot drift.
4. Drive two crosscuts not to exceed a total of 60 feet.

COST $24,600.00

TOTAL ESTIMATED COST OF PROJECT $59,200.00
GOVERNMENT'S PARTICIPATION @ 75% $44,400.00

(b) Amendments:

1. Substitution of "alteration of ore bin by constructing a division to accommodate waste" in lieu of "Construction of trestle to mine dump." No increase in funds.

2. Addition of work under Stage I:
   a. Extend the northwestward drift 20 feet.
   b. Extend the southeastward drift 30 feet.
   c. Crosscut an additional 40 feet.

   No increase in funds.

(c) Work Completed:

Items 1 through 6, inclusive, and item 8 under Stage I.

Plus additional work items:

110 feet shaft	$8,810.48
205 feet drift	6,651.30
88 feet crosscut	4,901.41
Equipment purchased	1,734.46
Buildings	3,126.80
	$25,224.45
Government's share	$18,918.34 (subject to audit)

(d) Date Completed:

Work terminated by agreement June 30, 1953, after substantial completion of Stage I of contract.

(e) No audit. Awaiting disposal of equipment in which Government has an equity.

(f) Certification of discovery being issued.

Comments:

Work under the subject contract was terminated by agreement when it was evident that the Operator did not wish to complete the program. Stage I, as amended, had been substantially completed. The Operator's reasons for termination may be based on the following:

(a) Disagreement among the several members of the operating company,
(b) Relatively high cost of the operation and the apparent unwillingness of the Operator to continue financing it, and
(c) The Operator's belief that enough ore had been proved by the exploration to justify construction of a small mill near the mine.

The project was relatively successful, though several of the unit costs were somewhat high. This may largely be explained by the general inefficiency of the operation and the length of time taken to do the work. Lack of cooperation between the Nikas Mining Company and its manager, Mr. H. E. Krumlauf, was the main contributing factor. It was reported that the mine foreman, who also is one of the partners, had to put up a "peace bond."

The exploration program was designed to investigate deposits of scheelite in silicified limestone breccia on the hanging wall of the prominent Mogul fault. Started in ore, the shaft passed into unmineralized silicified limestone at a depth of 14 feet. From 80 to about 100 feet the shaft penetrated intensely shattered and altered, gouge-like material, which is thought to be one of the principal planes of movement on the Mogul fault. The 100-foot level station was cut in the heavy ground of the Mogul fault. Approximately 130 feet of the 205 feet of drifting was also done in the fault zone, which greatly increased the operating problems and costs. Under proper management, a crosscut would first have been driven to the hanging wall of the fault which would have allowed the drifting to be carried out as proposed in the silicified and mineralized zone.

The exploration completed has revealed an area of mineralization on the west side of the mine near the property line in sufficient detail to warrant tonnage estimates. However, the sampling could have been more complete. The following estimates of reserves have been made:

	INDICATED		INFERRED		TOTAL	
Made by	tons	grade	tons	grade	tons	grade
Operator	7,000	0.726	5,000	0.605	12,000	0.676
USGS 6/16/53	7,200	0.75	3,800	0.75	11,000	0.75
USBM 7/16/53	6,000	0.5	1,500	0.5	7,500	0.5
USBM 11/26/53	4,169	1.12	3,896	1.10	8,065	1.11

Note: Indicated ore above the 100-foot level; inferred ore below the 100-foot level. Approximately 800 tons of the indicated ore has since been mined.

A termination of contract will be executed after the certification is effective.

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

cc: Docket
Code 400
Oper. Comm.
Adm. Read. File

FARutledge/ls
2/24/54

Yes Audited

Yes Certified

ANALYSIS SHEET - DMEA PROJECT

Analysis as of ~~12.14.1954~~
Incl. Voucher for

Yes Actual Cost

Agreed Unit Costs

Name Nikas Mining Company

Docket No. ~~DMEA-2356~~

State Arizona

Commodity Tungsten

Idm-E No. ~~370~~

OPERATION	AUTHORIZED Units	AUTHORIZED Cost	COMPLETED Units	COMPLETED Cost	NET COST
Drifting & Crosscutting	~~480'~~	~~22,020.15~~	~~294'~~	~~9,607.64~~	12,385.07 42.13ft
Raising	210'	23,955.05	110'	6,826.92	8,800.48 80.00ft
Shafts					
Winzes					
Drilling (Specify)					
Surface Excavation		~~876.80~~			
Underground Excavation					
Roads and Trails					
Operating Equipment Purchased		~~4,100.00~~		~~1,078.99~~	
Surface Rehabilitation & Repairs					
Underground Rehabilitation					
New Building, Improvements, etc.		3,348.00		3,026.80	3,026.80
Other (Specify)		4,900.00		3,672.00	
Totals		~~59,200.00~~		~~24,212.35~~	24,212.35

2 Amendments.

Prepared by TLC

71626

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

224 New Customhouse
Denver 2, Colorado

February 17, 1954

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA 2356 (Tungsten), Contract Idm-E370, Nikas Mining Co.'s Morning Star Tungsten Mine, Old Hat Mining District, Pinal County, Arizona

In conjunction with the recommendations for preparation of a Certification of Discovery or Development forwarded to you by our memorandum of October 8, 1953, we are enclosing for your information a copy of a letter dated February 12, 1954 from the Chief, Mining and Methods Branch, Mining Division, Region IV, Tucson, Arizona.

W. H. King

W. H. King

Enclosure

UNITED STATES
DEPARTMENT OF THE INTERIOR

COPY

Southwest Experiment Station
Box 4097
University Station

Tucson, Arizona

February 12, 1954

Memorandum

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

From: Chief, Mining Methods Branch, Mining Div., Region IV

Subject: Contract Idm-E370, Docket DMEA 2356, Nikas Mining Co.'s Morning Star Tungsten Mine, Old Hat Mining District, Pinal County, Arizona

Donald F. Finch has completed the audit of the above company's accounts and H. E. Krumlauf, the company's consulting engineer, is working on his final report. It should be finished and mailed to you early next week.

As this company seems to have "blown up" and as royalty should be paid the Government on ore milled last year from the contract project area, I would suggest that you again remind Washington that a certification of discovery should be issued. After the operator's final report has been made, the auditor's report approved, and the final payment made to the company, I doubt that any royalties can be collected.

You forwarded a recommendation to Mittendorf on October 8, 1953 concerning a certification of discovery.

/s/ Walter R. Storms

CC W. H. King
DMEA-2356
DF

WRStorms;frj

IN REPLY REFER TO:

Dorlcat

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

December 22, 1953

W 59

Memorandum

To: W.S. Martin, DMEA

From: T.P. Thayer, USGS

Subject: DMEA-2356 Tungsten Final report on contract
Nikas Mining Company
55 W. Congress Street
Tucson, Arizona

There seems to be general agreement that the project resulted in discovery of tungsten ore equivalent to 8000 to 10,000 short ton units of WO_3, part of which has already been mined. Under such circumstances, I recommend that a discovery be certified on an ore body in the hanging wall of the Mogul fault.

T.P. Thayer

T.P. Thayer

400

DOCKET
SURNAME

Rutledge
Martin
Talbot
Rutin
Hoffland
Farraher
Hedges
Selfridge
H Johnson

APR 12 1954

Mrs. Elizabeth L. Wood
Oracle, Arizona

Re: Docket No. DMEA 2356 - Tungsten
Mikas Mining Company
Morning Star mine
Pinal County, Arizona
Contract No. Ich-E370

Dear Mrs. Wood:

Reference is made to the above-referenced contract. A copy of the "Certification of Discovery or Development" under this exploration project contract was sent to you by letter dated March 4, 1954. The second paragraph of this letter stated that "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 $18,918.34 (subject to adjustment on final audit) is paid or until July 18, 1962, whichever occurs first."

The Government's equity in installations and equipment procured under the subject contract has now been disposed of and a final audit made by the Government. This is to advise you that the final accepted cost to the Government of the work completed is $18,159.26.

Sincerely yours,

C. O. Mittendorf (fw)

Administrator

FARutledge:fec
4-6-54
cc to: Docket
Code 400
Adm. Reading File
Operating Comm.
FT. Reg. IV
R. W. Geehan, USBM
T. P. Thayer, USGS

R.C.S.

400
DOCKET
SURNAME
Rutledge
Martin
Talbot
Rubin
Hoffman
Farrar
Hedges
Selfridge
Johnson

APR 12 1954

Miles Mining Company
55 West Congress Street
Tucson, Arizona

Re: Docket No. DMEA 2356 - Tungsten
Miles Mining Company
Morning Star mine
Pinal County, Arizona
Contract No. Ida-2370

Gentlemen:

Reference is made to the above-referenced contract. A "Certification of Discovery or Development" under this exploration project contract was sent to you by letter dated March 4, 1954. The second paragraph of this letter stated that "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 $18,918.34 (subject to adjustment on final audit) is paid or until July 18, 1962, whichever occurs first."

The Government's equity in installations and equipment procured under the subject contract has now been disposed of and a final audit made by the Government. This is to advise you that the final accepted cost to the Government of the work completed is $18,159.86.

Sincerely yours,

C. O. Mittenderf (for)

Administrator

FARutledge:foc
4-6-54
cc to: Docket
Code 400
Adm. Reading File
Operating Comm.
FT. Reg. IV
R. W. Geehan, USBM
T. P. Thayer, USGS

R.C.J.

DOCKET
SURNAME
Rutledge
Martin
Talbert
Rutledge
Hoffman
Jarrett
Hedger
Selfridge
Johnson

APR 12 1954

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

Re: Docket No. MPA 2356 - Tungsten
Mines Mining Company
Morning Star mine
Pinal County, Arizona
Contract No. [illegible]

Dear Mr. Gunkel:

Reference is made to the above-referenced contract. A copy of the "Certification of Discovery or Development" under this exploration project contract was sent to your office by letter dated March 4, 1954. This letter gave the total cost of the work completed as $[illegible], of which the Government's share at 75 percent was $[illegible] (subject to final audit).

The Government's equity in installations and equipment procured under the subject contract has been disposed of and a final audit made by the Government. The final accepted cost of the work completed is $[illegible], of which the Government's share at 75 percent was $[illegible].

Sincerely yours,

G. O. Mittendorf (for)

Administrator

PMutledge:fcc
4-6-54
cc to: Docket
Code 400
Adm. Reading File
Operating Comm.
FY. Reg. IV
Code 400 - Mr. Martin
Code 800 - Mr. Chambers
Code 110 - Mr. Johnson
T. F. Thayer - USGS
J. H. Madgus, USBM
Finance Office
R. W. Gaston, USBM
P. W. Guild, USGS

R.C.S.

DOCKET
SURNAME
Rutledge
Martin
Talbert
Porter
Hoffman
Lamarche
Hedges
Rutledge
Johnson

APR 12 1954

Young Men's Christian Association
Tucson, Arizona

Re: Docket No. DMEA 2356 - Tungsten
Nimos Mining Company
Morning Star mine
Pinal County, Arizona
Contract No. Idm-5370

Gentlemen:

Reference is made to the above-referenced contract. A copy of the "Certification of Discovery or Development" under this exploration project contract was sent to you by letter dated March 4, 1954. The second paragraph of this letter stated that "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 $28,918.34 (subject to adjustment on final audit) is paid or until July 18, 1962, whichever covers first."

The Government's equity in installations and equipment procured under the subject contract has now been disposed of and a final audit made by the Government. This is to advise you that the final accepted cost to the Government of the work completed is $18,159.26.

Sincerely yours,

C. O. Mittendorf

Administrator

FARutledge:fcc
4-6-54
cc to: Adm. Reading File
Docket
Code 400
Operating Comm.
FT. Reg. IV
R. W. Geehan, USBM
T. P. Thayer, USGS

R.C.B.

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

224 New Customhouse
Denver 2, Colorado

March 23, 1954

Memorandum

To: Secretary to the Operating Committee, DMEA

From: DMEA Field Team, Region IV

Subject: Docket DMEA 2356 (Tungsten), Contract Idm-E370, Nikas Mining Company, Morning Star Mine, Pinal County, Arizona

Enclosed are the original and one copy of the operator's final report relative to work completed under the subject contract. The original and three copies each of the final engineering report by the Bureau of Mines and the final geologic report by the U.S. Geological Survey were forwarded to the Chairman of the Operating Committee by our memorandum of December 14, 1953.

The project was terminated by mutual agreement as of June 30, 1953. Final payment to the operator was processed by this office March 23, 1954, in conformance with the final report of review by the Contract Administration and Audit Division dated February 18, 1954, which was released to this office March 8, 1954. Final payment to the operator was deferred pending resolution of matters relative to royalties due the Government on past production. The operator authorized the deduction of the amount of royalties due the Government from monies due them on final settlement of their account. A schedule of our computations relative to the amount of royalties due the Government is attached.

The project work consisted of surface preparatory work, 110 feet of shaft sinking, 205 feet of drifting and 88 feet of crosscutting at a total accepted cost of $24,212.35, in which the Government participated to the extent of 75 percent or the amount of $18,159.26.

The exploration work resulted in a discovery or development of tungsten ore on which a certification was issued March 3, 1954.

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

E. N. Hanchmann
for A. H. Koschmann

Operators Final Report

Enclosures

SCHEDULE OF ROYALTY COMPUTATIONS SHOWING
AMOUNT DUE THE GOVERNMENT FROM PRODUCTION

Docket No. DMEA-2356, Contract No. Idm-E370
Nikas Mining Company, Pinal County, Arizona

Lot No. and Date of Shipment	Smelter Value	Allowable Deductions	Net Value	Tons	Value Per Ton	Royalty Rate	Royalty Due
9-10 Oct. 5, 1953	$4298.00	-	$4298.00	15.7635	$ 272.66	5.0%	$214.90
10-1 10-2 Oct. 7, 1953	723.35	-	723.35	2.1635	334.34	5.0%	36.17
Oct. 13, 1953	613.68	$17.76	595.92	0.1525	3907.67	5.0%	29.80
Oct. 21, 1953	3849.64	43.15	3806.49	1.0153	3749.13	5.0%	190.32
			Total Royalties due the Government:				$471.19

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

SOUTHWEST EXPERIMENT STATION
Box 4097
UNIVERSITY STATION

Mining Division
Date Recd.
FEB 25 1954
BUREAU OF MINES
Denver, Colorado

TUCSON, ARIZONA

February 23, 1954

Register

Memorandum

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

From : Chief, Mining Methods Br., Mining Div., Region IV

Subject : Operator's Final Report, Contract Idm-E370, Docket DMEA-2356, Nikas Mining Co.'s Morning Star Tungsten Mine, Old Hat Mining District, Pinal County, Ariz.

Enclosed are original and 4 copies of the operator's final report for Contract Idm-E370. This report seems adequate.

Walter R. Storms

Walter R. Storms

CC W. H. King (6)
DMEA-2356
DF

WRStorms:frj

gH

NIKAS MINING COMPANY
55 W. Congress Street
Tucson, Arizona

U. S. BUREAU OF MINES
MINING DIVISION
FEB 23 1954
TUCSON, ARIZONA

February 12, 1954

Re: Docket DMEA 2356
Contract Idm-E 370

FINAL REPORT ON THE MORNING STAR EXPLORATION

The above contract was received by the operators on August 25, 1952 and Stage I was started immediately.

Preparatory Work

During the period from August 25 to October 15 preparatory work as described below was completed:

a. The area was leveled for surface structures and headframe. See Fig. 1.

b. A suitable headframe and shaft collar were constructed.

c. A 10' x 14' hoist and storage building was constructed.

d. A frame structure 10' x 10' in size was built to house the compressor.

e. As allowed in Amendment No. 1, an ore bin was divided into two parts, one for ore and one for waste and a track was laid to a waste dump area.

f. Surface track and pipe were installed.

g. An old powder house on the adjacent property was cleaned out and prepared for use.

h. A water tank was installed.

i. Equipment was installed.

j. The area was surveyed and mapped.

Shaft Sinking:

On October 16, 1953, shaft sinking was started and by January 10, 1954, the shaft had been completed for a depth of 110 feet and a shaft station had been cut at the 100-foot level. See Fig. 2.

Drifting and cross-cutting:

This phase of the program was started early in January, 1953 and by March 1 all drifting allowed in the original contract had been completed. However, an Amendment No. 2 to allow additional drifting and cross-cutting on the 100-foot level was granted and notification received on March 9.

By June 30, 1953, 205 feet of drifting and 88 feet of crosscutting had been completed as shown on the map. Fig. 3.

Geology:

The surface geology of the Morning Star prospect is described in the United States Geological Survey publication entitled "The Maudina and Morning Star Mines, Pinal County, Arizona," that was released on July 7, 1944. This report shows that the Morning Star and adjacent Pure Gold properties are located in a block of limestone in the hanging wall of the Mogul fault. The limestone is badly faulted as shown on the accompanying map, Fig. 3. Mineralizing solutions, passing up along the Mogul fault, entered the limestone block through the various faults. The ore deposit is of the pyrometasomatic type.

It seems that the most favorable places for deposition of WO_3 mineral were along the N-S trending fractures and considerable ore was mined from these fault-fissures near their outcrops. This exploration was designed to explore the mineralized area at depth but because of the inability of the partners in this venture to agree about financial and other matters the exploration work was not completed and the extent of mineralization on the 100-foot level is not definitely known. However Fig. 3 shows the possible extent of mineralization on the 100-foot level and indicates that some additional cross-cutting will be necessary to determine the extent of this mineralization.

Ore Reserves:

A trapezoid of the mineralized area as shown on the west side of the mine, Fig. 3., contains 1640 square feet with a weighted average assay

of 0.605% WO_3. If this trapezoid is combined with the stope area near the surface, Fig. 3, to form a prism this prism would contain approximately 7000 tons of ore averaging 0.726% WO_3, the tonnage factor use being 15 cu. ft. No assays are available on the ore removed from the old open pit and its extension to the stope, but if this contained material of commercial grade, and it probably did, the tonnage would be more than doubled.

Assuming that the mineralized area of the above mentioned trapezoid extended downward only 60 feet there is an inferred quantity of material containing 0.605% WO_3. There is enough difference in the color of the better grade of ore and the nearly barren material to permit improvement of the grade by hand-picking and removing some ten percent or more of the barren or very low grade material that is included in the mineralized zone. This, of course, would reduce the tonnage available but would increase the value of the shipping ore.

Summary of ore reserves:

Indicated at 0.726% WO_3	----------	7,000	tons
Inferred at 0.605% "	----------	5,000	"
		12,000	"
Inferred between level and old open pit at 0.726 (?)% WO_3		5,000	"
	Total from exploration	17,000	"

From the report of T. P. Lane the Morning Star shoot contains

Assured at 0.85% WO_3	----------	1,800	"
Probable " 0.85" "	----------	6,000	"
Possible " 0.85" "	----------	10,000	"
	By T. P. Lane ----	17,800	"

As shown on Fig. 4 the Morning Star ore shoot was not explored in this program.

Conclusion:

The exploration, although incomplete, was successful in proving a substantial tonnage of ore. It has also indicated that a much greater tonnage of ore may be proven by some additional exploration.

It is my opinion that if this property were operated by capable and well financed operators it would prove to be a very profitable one.

Sincerely yours,

H E Krumlauf

Harry E. Krumlauf

FILE COPY
SURNAME:

Chambers

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

MAR 4 1954

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

Re: DMEA-2356, Idm-E370
Nikas Mining Company
Pinal County, Arizona

Dear Mr. Finch:

I reviewed your audit of the above-cited project account and find it acceptable with a possible exception of the statement under part IV, Conclusions, of your audit report.

In stating the balances under Rental and Purchase you have a balance of $1,000.00 left in the Purchase Truck account. I believe the balance should be "0" and the total cost $1,000.00. I am correcting the copies in the Washington office and suggest that you do the same on the copies you are holding after which the report and certificate may be released in the usual manner.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Chief
Contract Administration
and Audit Division

JLChambers/wb
March 4, 1954

Copy to: Docket
Admr. Reading File
Mr. Chambers

R.C.G. 3-4-54

Rutledge
Martin
Geheer
Chambers
Guild
Rutm
Hoffmeed
Hedges
Lafferty
Selfridge
Johnson

[redacted] 4 1954

Nikas Mining Company
55 West Congress Street
Tucson, Arizona

Re: Docket No. DMEA 2356 - Tungsten
Morning Star Mine
Pinal County, Arizona
Contract No. Idm-E370

Gentlemen:

Transmitted herewith is a "Certification of Discovery or Development" under Contract No. Idm-E370 on the property described in the Contract.

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 $18,918.34 (subject to adjustment on final audit) is paid or until July 18, 1962, whichever occurs first.

Payments should be made to Mr. W. H. King, Executive Officer, DMEA Field Team, Region IV, 224 New Customhouse Building, Denver 2, Colorado. Checks should be payable to the Treasurer of the United States. The purchaser should be advised to deduct the royalties from the amount due on each shipment and forward the check direct 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 the products sold, the name of the purchaser, and the price and charges certified to be correct by the purchaser.

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

Sincerely yours,

[redacted]

Administrator

cc: DOCKET
FT, REG. IV
OPER. COMM.
ADM. READ. FILE
CODE 400 - Mr. Martin
CODE 800 - Mr. Chambers

cc: P.W.GUILD,USGS
R.W.GEEHAN,USGS
T.P.THAYER,USGS
J.H.HEDGES,USGS
CODE 110--Mr. Johnson

Enclosure

FARutledge/ls
2/26/54

R.C.J. 3-5-54

DOCKET

Rutledge
Martin
Geehan
Chambers
Guild
Ruhm
Hollund
Selfridge
Mittendorf

400

MAR 4 1954

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

Re: Docket No. DMEA 2356 - Tungsten
Nikas Mining Company
Morning Star mine
Pinal County, Arizona
Contract No. Idm-E370

Dear Mr. King:

Enclosed is a copy of a "Certification of Discovery or Development" on the above-noted property.

Your attention is called to the items of equipment and installations in which the Government has an equity. It would be appreciated if suitable arrangement is made for their disposal so that this contract can be closed out.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (SWB)

Enclosure

APPROVED:

J. H. Hedges

Member, Bureau of Mines (SWB)

D. M. Larrabee

Member, Geological Survey (SWB)

FARutledge/ls 2/25/54

Copy to: DOCKET
FT, REG. IV
ADM. READING FILE
OPER. COMMITTEE
CODE 400 - Mr. Martin
CODE 800 - Mr. Chambers
CODE 110 - Mr. Johnson
J. H. HEDGES - USBM
R. W. GEEHAN, USBM
T. P. THAYER, USGS
P. W. GUILD, USGS

R.C.H. 3-5-54

DOCKET COPY

Rutledge
Martin
Kuhon
Clegg
Guild
Rufin
Hoffman
Rutledge
Farrar
Selfridge

400

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

MAR 4 1954

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

Re: Docket No. DMEA-2356, Tungsten
Nikas Mining Company
Morning Star Mine
Pinal County, Arizona
Contract No. Idm-E370

Dear Mr. Gumbel:

Enclosed is a copy of a "Certification of Discovery or Development" for the above-noted project.

Contract No. Idm-E370 was executed July 18, 1952, to cover a two-stage exploration program. Expenditures up to $59,200.00 were authorized, of which the Government's share at 75 percent was $44,400.00. The project was terminated by mutual consent after Stage I of the program was substantially completed. The cost of the work completed was $25,224.45, of which the Government's share at 75 percent was $18,918.34 (subject to final audit).

The exploration program was designed to investigate deposits of scheelite in silicified limestone breccia on the hanging wall of the prominent Mogul fault. Started in ore, the shaft passed into unmineralized silicified limestone at a depth of 14 feet. From 80 to about 100 feet the shaft penetrated intensely shattered and altered, gouge-like material, which is thought to be one of the principal planes of movement on the Mogul fault. The 100-foot level station was cut in the heavy ground of the Mogul fault. Approximately 130 feet of the 205 feet of drifting on the 100-foot level was also done in the fault zone, which greatly increased the operating problems and costs.

The exploration completed has revealed an area of mineralization on the west side of the mine near the property line in sufficient detail to warrant tonnage estimates. The following estimates of reserves have been made:

R.C. 3.5.54

	INDICATED		INFERRED		TOTAL	
Estimate by	tons	grade	tons	grade	tons	grade
Operator	7,000	0.726	5,000	0.605	12,000	0.676
USGS 6/16/53	7,200	0.75	3,800	0.75	11,000	0.75
USBM 7/16/53	6,000	0.5	1,500	0.5	7,500	0.5
USBM 11/26/53	4,169	1.12	3,896	1.10	8,065	1.11

Note: Indicated ore above the 100-foot level; Inferred ore below the 100-foot level. Approximately 800 tons of the Indicated ore has now been mined.

Sincerely yours,

C. O. Mittendorf

Administrator

Copy to: DOCKET
FT, REG. IV
OPER. COMM.
ADM. READ. FILE
CODE 400 - Mr. Martin
CODE 800 - Mr. Chambers
CODE 110 - Mr. Johnson
J. H. HEDGES, USBM
T. P. THAYER, USGS
P. W. GUILD, USGS
R. W. GEEHAN, USBM

FARutledge/ls
2/26/54

DOCKET COPY
Surname:
Rutledge
Martin
Geehan
Olmsted
Guild
Rubin
Hoffman
Hedges
Jarrett
Selfridge
Hopkins

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

MAR 4 1954

Mrs. Elizabeth L. Wood
Oracle, Arizona

Re: Docket No. DMEA 2356 - Tungsten
Nikas Mining Company
Morning Star Mine
Pinal County, Arizona
Contract No. Idm-E370

Dear Mrs. Wood:

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 Nikas Mining Company by Elizabeth L. Wood and the Young Men's Christian Association of Tucson, Arizona, a Corporation, on January 3, 1952, and is the same property referred to in the "Landlord's Subordination Agreement" executed by you on February 20, 1952.

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 $18,918.34 (subject to adjustment on final audit) is paid or until July 18, 1962, whichever occurs first.

Sincerely yours,

C. O. Mittendorf (fw)

Administrator

Enclosure

Copy to: DOCKET
FIELD TEAM, REG. IV
ADM. READ. FILE
OPER. COMMITTEE
CODE 400 - Mr. Martin
CODE 800 - Mr. Chambers
CODE 110 - Mr. Johnson

Copy to: P.W.GUILD, USGS
T. P. THAYER, USGS
J. H. HEDGES, USBM
R. W. GEEHAN, USBM

FARutledge/ls
2/23/54

R. C. 3/3/54

400

Rutledge
Martin
Geehan
Chambers
Guild
Rubin
Hoffhund
Hedges
Lazarski
Selfridge

MAR 4 1954

Young Men's Christian Association
Tucson, Arizona

Re: Docket No. 2356 - Tungsten
Nikma Mining Company
Morning Star Mine
Pinal County, Arizona
Contract No. I4m-E370

Dear Sirs:

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 Nikma Mining Company by Elizabeth L. Wood and the Young Men's Christian Association of Tucson, Arizona, a Corporation, on January 3, 1952, and is the same property referred to in the "Owner's Consent to Lien" executed July 14, 1952, by The Young Men's Christian Association of Tucson, Arizona.

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 $18,918.34 (subject to adjustment on final audit) is paid or until July 18, 1962, whichever occurs first.

Sincerely yours,

C. O. Mittendorf (fw)

Administrator

Enclosure

Copy to: DOCKET
FIELD TEAM, REG. IV
ADM. READ. FILE
OPER. COMMITTEE
~~FINANCE OFFICER~~
CODE 400 - Mr. Martin
CODE 800 - Mr. Chambers
CODE 110 - Mr. Johnson

Copy to: J. H. HEDGES, US BM
R. W. GEEHAN, USBM
T. P. THAYER, USGS
P. W. GUILD, USGS

FARutledge/ls
2/23/54

R.C. Lind
3-5-54

C
O
P
Y

HARRY E. KRUMLAUF
Consulting Mining Engineer
Tucson, Arizona

December 18, 1953.

Mr. W. H. King
Executive Officer, D.M.E.A.
Field Team, Region IV
224 New Customhouse
Denver 2, Colorado

Re: Docket DMEA 2356
Contract Idm-E370

Dear Mr. King:

Since June 30 I have not been employed by the Nikas Mining Company and apparently all communications sent to me at the Company's official address have not been delivered as I did not receive your telegram of October 21 or your letter of July 28. I, therefore, apologize for my letter of November 25 concerning communications unanswered by you.

The Nikas Mining Company, except to complete the settlement with the Government and to pay some outstanding bills, is no longer in existence and the property and supplies are not needed by it. Because of the decline in lead-zinc mining and exploration in this area there is very little interest in used mining equipment at the present time. I have therefore been unable to obtain additional bids. However, I have been authorized by the owners of the company to submit a bid for the property and material in the hope that it will expedite the settlement. You will therefore find enclosed five copies of each bid together with fifteen copies of the inventory of property and material.

I suggest that future correspondence be sent to me at the above address.

Sincerely,

/s/ H. E. Krumlauf

HARRY E. KRUMLAUF
Consulting Mining Engineer
Tucson, Arizona

December 16, 1953.

Mr. W. H. King
Executive Officer, D.M.E.A.
Field Team, Region IV
224 New Customhouse
Denver 2, Colorado

Re: Docket DMEA 2356
Contract Ida-4370

Dear Mr. King:

Since June 30 I have not been employed by the Pikes Mining Company and apparently all communications sent to me at the Company's official address have not been delivered as I did not receive your telegram of October 21 or your letter of July 28. I, therefore, apologize for my letter of November 25 concerning communications unanswered by you.

The Pikes Mining Company, except to complete the settlement with the Government and to pay some outstanding bills, is no longer in existence and the property and supplies are not needed by it. Because of the decline in lead-zinc mining and exploration in this area there is very little interest in used mining equipment at the present time. I have therefore been unable to obtain additional bids. However, I have been authorized by the owners of the company to submit a bid for the property and material in the hope that it will expedite the settlement. You will therefore find enclosed five copies of each bid together with fifteen copies of the inventory of property and material.

I suggest that future correspondence be sent to me at the above address.

Sincerely,

/s/ H. E. Krumlauf

HARRY E. KRUMLAUF
CONSULTING MINING ENGINEER
TUCSON, ARIZONA

December 14, 1953

Mr. W. H. King
Executive Officer
D.M.E.A. Field Team, Region IV
224 New Customhouse
Denver 2, Colorado

Dear Mr. King:

Re: Docket DMEA 2356
Contract Idm-E 370

I am authorized by the owners of the Nikas Mining Company to offer seven hundred and twenty-five dollars ($725.00) for all materials, supplies and equipment jointly owned by the Government and the Company.

Sincerely yours,

H. E. Krumlauf
Consulting Mining
Engineer

NIKAS MINING COMPANY
55 W. Congress Street
Tucson, Arizona

Equipment

	Date Purchased	Item	Vendor	Cost
1	9/4/52	1949 GMC 3/4 ton, stake, truck	Bogard	$ 1000.00
1	9/25/52	Used 16 cu.ft. mine car	St.Anthony	70.00
1	9/25/52	Used 1 ton mine skip	"	75.00
1	9/16/52	42" sheave wheel (used)		25.00
1	10/25/52	Used Sturtevant No. 5-10" blower with new Briggs & Stratton 3 H.P. air cooled engine. Mounted on steel frame	Barretts	239.72
1	12/31/52	Used 2½" Byron Jackson Sump Pump	St. Anthony	212.50
1	11/30/52	Used small 2 cyl. air driven pump		75.00
1	9/8/52	New 1 ton differential chain block	Steinfeld's	36.52
				$ 1733.74

NIKASMINING COMPANY
55 W. Congress St.
Tucson, Arizona

Pipe

Quantity	Item	Vendor	Cost
440 feet	Used 2" victaulic pipe	St. Anthony	98.68
400 "	" 1" pipe	T.D. Callas	60.00
280 "	" 3/4" pipe	St. Anthony	42.47
100 "	" 3/4" pipe	H. E. Wood	15.00
			216.15

NIKAS MINING COMPANY
55 W. Congress St.
Tucson, Arizona

Pipe Fittings

Quantity	Item	Vendor	Cost
46	Used 2" victaulic pipe couplings	St. Anthony	42.47
1	2" Globe value (new)	"	12.91
2	1" gate valves (new)	"	11.15
25 lbs.	Miscellaneous pipe fittings	H.E.Wood	15.00
5	Misc. fittings (new)		4.55
			86.08

NIKAS MINING COMPANY
55 W. Congress St.
Tucson, Arizona

Mine Rail

Quantity	Item	Vendor	Cost
66 feet	16 lb. mine rail	St. Anthony	19.00
1015 "	12 " " "	"	170.84
			189.84

About 750 feet in place in track on the surface, in the shaft and underground.

NIKAS MINING COMPANY
55 W. Congress St.
Tucson, Arizona

Miscellaneous

Amount	Item	Vendor	Cost
120'	10" 24g ventilation pipe (new)	Old Pueblo Sheet	120.00
2	10" 24g elbows "	" " "	30.00
20"	2" walar hose for pump	Barrett	19.50
5'	1½" flexible steel tube	"	3.00
1	12" bell gong (new)	Steinfeld's	15.37
			187.87

Drilling Supplies

2	New 1 5/8" MCA Timken carbide bit	Steinfeld's	27.70
2	Used 1 5/8 " " " "	"	10.00
2	" 1½ " " " "	"	10.00
2	" 6 ft drill rods @ 4.00 each	"	8.00
2	" 4 " " " 3.00 "	"	6.00
3	" 2 " " " 2.00 "	"	6.00
50'	1/2 " 2-brake Gates water hose, new	"	19.00
3	Sections machine hose - 1"	H. E. Wood	15.00
			101.70

NIKAS MINING COMPANY
55 W. Congress St.
Tucson, Arizona

Small Tools

Amount	Item	Vendor	Cost
1 #	111½ Arrow hammer	Steinfeld's	1.51
1 #	E 16 c Eastwing "	"	2.97
1 S	100 square	"	5.72
1 #	347 24" level	"	2.42
1 set	BBR Augur bits	"	5.12
1	11/16 " " bit	"	.77
1 #	965N -10" bit brace	"	3.11
1	bit extender	"	3.35
1	#60 1" wood chisel	"	2.18
1	30" wrecking bar	"	.77
1	A 110 Crescent wrench (10")	"	1.69
1	A C 115 Crestoloy " (15")	"	4.71
1	M 12 Mineralight	Ariz.Met. Lab.	34.50
2	#251 drum faucets	Steinfeld's	3.38
4	5 lb. picks	St. Anthony	6.00
1	24" pipe wrench	" "	6.50
1	14" " "	" "	2.64
4	long handled shovels	" "	14.31
2	D handle "	" "	6.27
2	Rafting axes	" "	7.32
1	18" Alum level (45 degrees)	Corbett's	4.59
1	7/8" cold chisel	Steinfeld's	.77
14	lbs. 3/4" Manila rope	St. Anthony	8.06
1	Galvanometer (for blasting)		21.25
		$	149.91

NIKAS MINING COMPANY
55 W. Congress St.
Tucson, Ariz.

Surface Buildings

Quantity	Item	Vendor	Cost
1096	linear ft. 2 x 4	Corbett	99.96
1150	board feet of lumber white fir	"	159.00
1408	8 x 8 & 6 x 8 Douglas fir	St. Anthony	59.84
5	Window sash 2 x 2 - 1 3/8	Corbett	20.25
			$ 339.15

COPY

BOB BARRETT

P.O.Box 2804,Tucson,Ariz.

August 4, 1953

Nikas Mining Company
55 W. Congress St.
Tucson, Arizona

Dear Sirs:

Our offer for the attached list of equipment and materials as is and where is and free of all encumbrances is ($665.00) Six Hundred and Sixty Five Dollars cash.

BOB BARRETT

NIKAS MINING COMPANY
55 W. Congress Street
Tucson, Arizona

Equipment

	Date Purchased	Item	Vendor	Cost
1	9/4/52	1949 GMC 3/4 ton, stake, truck	Bogard	$ 1000.00
1	9/25/52	Used 16 cu.ft. mine car	St.Anthony	70.00
1	9/25/52	Used 1 ton mine skip	"	75.00
1	9/16/52	42" sheave wheel (used)		25.00
1	10/25/52	Used Sturtevant No. 5-10" blower with new Briggs & Stratton 3 H.P. air cooled engine. Mounted on steel frame	Barretts	239.72
1	12/31/52	Used 2½" Byron Jackson Sump Pump	St. Anthony	212.50
1	11/30/52	Used small 2 cyl. air driven pump		75.00
1	9/8/52	New 1 ton differential chain block	Steinfeld's	36.52
				$ 1733.74

NIKASMINING COMPANY
55 W. Congress St.
Tucson, Arizona

Pipe

Quantity	Item	Vendor	Cost
440 feet	Used 2" victaulic pipe	St. Anthony	98.68
400 "	" 1" pipe	T.D. Callas	60.00
280 "	" 3/4" pipe	St. Anthony	42.47
100 "	" 3/4" pipe	H. E. Wood	15.00
			216.15

NIKAS MINING COMPANY
55 W. Congress St.
Tucson, Arizona

Pipe Fittings

Quantity	Item	Vendor	Cost
46	Used 2" victaulic pipe couplings	St. Anthony	42.47
1	2" Globe value (new)	"	12.91
2	1" gate valves (new)	"	11.15
25 lbs.	Miscellaneous pipe fittings	H.E.Wood	15.00
5	Misc. fittings (new)		4.55
			86.08

NIKAS MINING COMPANY
55 W. Congress St.
Tucson, Arizona

Mine Rail

Quantity	Item	Vendor	Cost
66 feet	16 lb. mine rail	St. Anthony	19.00
1015 "	12 " " "	"	170.84
			189.84

About 750 feet in place in track on the surface, in the shaft and underground.

NIKAS MINING COMPANY
55 W. Congress St.
Tucson, Arizona

Miscellaneous

Amount	Item	Vendor	Cost
120'	10" 24g ventilation pipe (new)	Old Pueblo Sheet	120.00
2	10" 24g elbows "	" " "	30.00
20"	2" walar hose for pump	Barrett	19.50
5'	1½" flexible steel tube	"	3.00
1	12" bell gong (new)	Steinfeld's	15.37
			187.87

Drilling Supplies

2	New 1 5/8" MCA Timken carbide bit	Steinfeld's	27.70
2	Used 1 5/8 " " " "	"	10.00
2	" 1½ " " " "	"	10.00
2	" 6 ft drill rods @ 4.00 each	"	8.00
2	" 4 " " " 3.00 "	"	6.00
3	" 2 " " " 2.00 "	"	6.00
50'	1/2 " 2-brake Gates water hose, new	"	19.00
3	Sections machine hose - 1"	H. E. Wood	15.00
			101.70

NIKAS MINING COMPANY
55 W. Congress St.
Tucson, Arizona

Small Tools

Amount	Item	Vendor	Cost
1 #	111½ Arrow hammer	Steinfeld's	1.51
1 #	E 16 c Eastwing "	"	2.97
1 S	100 square	"	5.72
1 #	347 24" level	"	2.42
1 set	BBR Augur bits	"	5.12
1	11/16 " " bit	"	.77
1	# 965N -10" bit brace	"	3.11
1	bit extender	"	3.35
1	#60 1" wood chisel	"	2.18
1	30" wrecking bar	"	.77
1	A 110 Crescent wrench (10")	"	1.69
1	A C 115 Crestoloy " (15")	"	4.71
1	M 12 Mineralight	Ariz.Met. Lab.	34.50
2	#251 drum faucets	Steinfeld's	3.38
4	5 lb. picks	St. Anthony	6.00
1	24" pipe wrench	" "	6.50
1	14" " "	" "	2.64
4	long handled shovels	" "	14.31
2	D handle "	" "	6.27
2	Rafting axes	" "	7.32
1	18" Alum level (45 degrees)	Corbett's	4.59
1	7/8" cold chisel	Steinfeld's	.77
14	lbs. 3/4" Manila rope	St. Anthony	8.06
1	Galvanometer (for blasting)		21.25
			$ 149.91

NIKAS MINING COMPANY
55 W. Congress St.
Tucson, Ariz.

Surface Buildings

Quantity	Item	Vendor	Cost
1096	linear ft. 2 x 4	Corbett	99.96
1150	board feet of lumber white fir	"	159.00
1408	8 x 8 & 6 x 8 Douglas fir	St. Anthony	59.84
5	Window sash 2 x 2 - 1 3/8	Corbett	20.25
			$ 339.15

COPY

ARIZONA HIDE & METAL COMPANY
P.O.Box 824
Tucson, Arizona

August 3, 1953

Nikas Mining Company
55 West Congress St.
Tucson, Arizona

Gentlemen:

We acknowledge receipt of your invitation for bid on mine equipment and material on stated pages 1 (1) to seven (7).

Of this we wish that you accept our bid of $400.00 for the 1949 - GMC 3/4 ton stake Truck, mentioned on page one.

Since most of this material on bid is installed, and of no value to us; nevertheless for what can be removed we offer $275.00, for the balance of this material.

Thus, we offer our overall bid of $675.00 and trust that it is met with approval.

Very truly yours,

ARIZONA HIDE & METAL COMPANY

C.N.Pappadeas,Pres.

NIKAS MINING COMPANY
55 W. Congress St.
Tucson, Arizona

Equipment

	Date Purchased	Item	Vendor	Cost
1	9/4/52	1949 GMC 3/4 ton, stake, truck	Bogard	$ 1000.00
1	9/25/52	Used 16 cu. ft. mine car	St. Anthony	70.00
1	9/25/52	Used 1 ton mine skip	"	75.00
1	9/16/52	42" sheave wheel (used)		25.00
1	10/25/52	Used Sturtevant No. 5-10" blower with new Briggs & Stratton 3 H.P. air cooled engine. Mounted on steel frame	Barretts	239.72
1	12/31/52	Used 2½" Byron Jackson Sump Pump	St. Anthony	212.50
1	11/30/52	Used small 2 cyl. air driven pump		75.00
1	9/8/52	New 1 ton differential chain block	Steinfeld's	36.52
				$ 1733.74

NIKAS MINING COMPANY
55 W. Congress St.
Tucson, Arizona

Pipe

Quantity	Item	Vendor	Cost
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			86.08

NIKAS MINING COMPANY
55 W. Congress St.
Tucson, Arizona

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1015 "	12 " " "	"	170.84
			189.84

About 750 feet in place in track on the surface, in the shaft and underground.

NIKAS MINING COMPANY
55 W. Congress St.
Tucson, Arizona

Miscellaneous

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2	10" 24g elbows "	" " "	30.00
20'	2" walar hose for pump	Barrett	19.50
5'	1½" flexible steel tube	"	3.00
1	12" bell gong (new)	Steinfeld's	15.37
			187.87

Drilling Supplies

2	New 1 5/8" MCA Timken carbide bit	Steinfeld's	27.70
2	Used 1 5/8 " " " "	"	10.00
2	" 1⅛" " " " "	"	10.00
2	" 6 ft. drill rods @ 4.00 each	"	8.00
2	" 4 ft. " " @ 3.00 each	"	6.00
3	" 2 ft. " " @ 2.00 "	"	6.00
50'	1/2" 2-brake Gates water hose, new	"	19.00
3	Sections machine hose - 1"	H. R. Wood	15.00
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NIKAS MINING COMPANY
55 W. Congress St.
Tucson, Arizona

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Amount	Item	Vendor	Cost
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1#	E 16 c Eastwing "	"	2.97
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1	11/16 " " bit	"	.77
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1	#60 1" wood chisel	"	2.18
1	30" wrecking bar	"	.77
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1	AC 115 Crestoloy " (15")	"	4.71
1	M 12 Mineralight	Ariz.Met.Lab.	34.50
2	#251 drum faucets	Steinfeld's	3.38
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1	24" pipe wrench	" "	6.50
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4	Long handled shovels	" "	14.31
2	D handle "	" "	6.27
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1	18" Alum level (45 degrees)	Corbett's	4.59
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14	lbs. 3/4" Manila rope	St. Anthony	8.06
1	Galvanometer (for blasting)		21.25
			$ 149.91

NIKAS MINING COMPANY
55 W. Congress St.
Tucson, Arizona

Surface Buildings

Quantity	Item	Vendor	Cost
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1408	8 x 8 & 6 x 8 Douglas fir	St. Anthony	59.84
5	Window sash 2 x 3 - 1 3/8	Corbett	20.25
			339.15

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

DEC 18 1953

224 New Customhouse
Denver 2, Colorado

December 14, 1953

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject; Docket No. DMEA 2356 (Tungsten), Contract Idm-E370, Nikas Mining Company, Morning Star Mine, Pinal County, Arizona

In compliance with your teletype of December 10 1953 we are enclosing the following reports relevant to work under the subject contract:

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

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

The stated costs of the project are subject to audit and liquidation of the Government's interest in property acquired under the contract; otherwise the Field Team, Region IV concurs in the engineer's and geologist's reports and accepts them as final reports of the work accomplished.

We are unable to supply the information as to when the Operator's report will be available for forwarding to you. However, it and other data will be forwarded to you as soon as available.

W. H. King

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE

(date)

FINAL REPORT

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
Denver Federal Center
Denver 2, Colorado

DEC 13 1953

December 7, 1953

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 2356, Contract Idm-E370, Morning Star Mine, (Tungsten), Nikas Mining Company, Pinal County, Arizona

Enclosed are 9 copies of the final geologic report by John N. Faick of the U. S. Geological Survey covering the above docket.

It has been recommended that certification of discovery be made.

E. M. Shoemaker
for A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (9)

Reviewed by
DMEA OPERATING COMMITTEE

(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 4126, University Station
Tucson 5, Arizona

IN REPLY REFER TO:

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 18 1953

December 2, 1953

Memorandum

To: A. H. Koschmann

From: J. N. Faick

Subject: Completion report, DMEA 2356 (Contract E-370), Morning Star Mine (Tungsten), Nikas Mining Company, Operator, Pinal County, Arizona

Enclosed are the original and 8 copies of the above report by J. N. Faick.

The report recommends that certification be made.

J. N. Faick

J. N. Faick

Reviewed by
DMEA OPERATING COMMITTEE

(date)

DEC 1953
RECEIVED
U.S. Geological Survey
Mineral Deposits Branch
Denver

DEFENSE MINERALS EXPLORATION
ADMINISTRATION

FINAL GEOLOGICAL REPORT

DMEA DOCKET NO. 2356

CONTRACT NO. Idm-E370

NIKAS MINING COMPANY, OPERATOR

MORNING STAR MINE
(TUNGSTEN)
PINAL COUNTY, ARIZONA

by

JOHN N. FAICK

GEOLOGIST, U. S. GEOLOGICAL SURVEY

NOVEMBER 1953

Reviewed by
DMEA OPERATING COMMITTEE

(date)

FINAL GEOLOGICAL REPORT

MORNING STAR MINE

(TUNGSTEN)

NIKAS MINING COMPANY, OPERATOR

PINAL COUNTY, ARIZONA

CONTENTS

	Page
INTRODUCTION	1
GEOLOGY	2
EXPLORATION	4
ORE RESERVES	6
CONCLUSIONS AND RECOMMENDATIONS	7

ILLUSTRATIONS

Figure 1	LOCATION MAP	See Engineering Report
Figure 2	CLAIM MAP	See Engineering Report
Figure 3	ASSAY MAP	See Engineering Report
Figure 4	ORE RESERVES	See Engineering Report
Figure 5	MINE WORKINGS	See Engineering Report
Figure 6	GEOLOGIC MAP, 100-LEVEL	Following Page 2
Figure 7	GEOLOGIC SECTION	Following Page 2

INTRODUCTION

The Nikas Mining Company's Morning Star Mine, Pinal County, Arizona, was explored with assistance from the Defense Minerals Exploration Administration as Docket DMEA 2356, Contract Idm-E370. The contract was signed July 18, 1952, the work was started August 27, 1952, and the work was terminated June 30, 1953. The contract provided for exploration of the property in 2 stages, but only Stage I was completed, and no work was done under Stage II.

Although the work resulted in the discovery of ore and the results of the project were about as good as could be expected, termination of the contract was requested by the operating company. Although not specifically stated by the operators, the principal reasons for requesting termination of this contract are as follows:

1. Disagreement among the several members of the operating company.

2. Relatively high cost of the operation and the apparent unwillingness of the operators to continue financing it.

3. The operator's belief that enough ore had been proved by the exploration to justify construction of a small mill near the mine.

GEOLOGY

At the Morning Star Mine[1], and the adjacent Mandina Mine, deposits of scheelite occur in silicified limestone breccia localized along the Mogul fault and its related structures. The principle geologic feature in this area is the Mogul fault (See Fig. 6 and 7) which trends north of west across the northern part of the Santa Catalina Range. The dip of the fault ranges from about 20 to 60 degrees southwest. The fault brings Paleozoic and pre-Cambrian sedimentary and metamorphic rocks on the south into contact with pre-Cambrian granite on the north. The fault includes many planes of movement over a wide area; the principle zone of breccia occupies a zone from about 20 to 50 feet thick on the hanging wall side of the fault.

Scheelite occurs disseminated and in narrow stringers and in thin quartz-scheelite veinlets in silicified limestone breccia. Calcite, which fluoresces pink to red, is closely associated with the scheelite but is a slightly later stage of mineralization. Most of the scheelite is fine-grained, mostly grains about $\frac{1}{4}$ inch or less in maximum dimension, and most of it is soft or friable. In a few places fine-grained scheelite is disseminated in quartz and when observed with a fluorescent light the scheelite imparts its characteristic blue-white fluorescence to the quartz host, this giving the false impression that there is much more scheelite than is actually present.

---

[1] Bateman, P.C. and Ericson, M.P. Mandina and Morning Star Tungsten Mines, Pinal County, Arizona; Strategic Minerals Investigation, U.S.G.S. Open File Report, Tucson, Arizona, 1944.

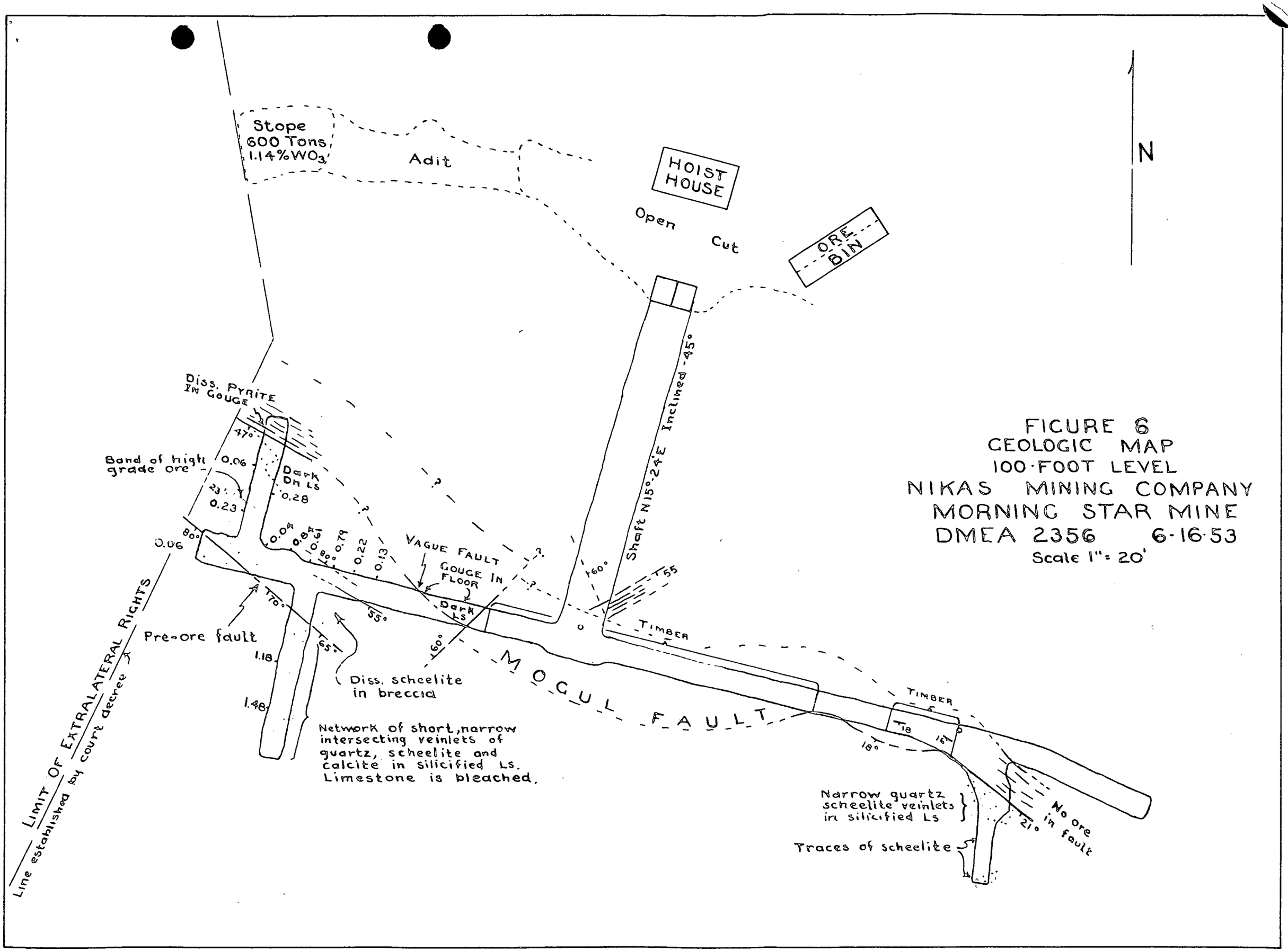


FIGURE 6
GEOLOGIC MAP
100-FOOT LEVEL
NIKAS MINING COMPANY
MORNING STAR MINE
DMEA 2356 6-16-53
Scale 1" = 20'

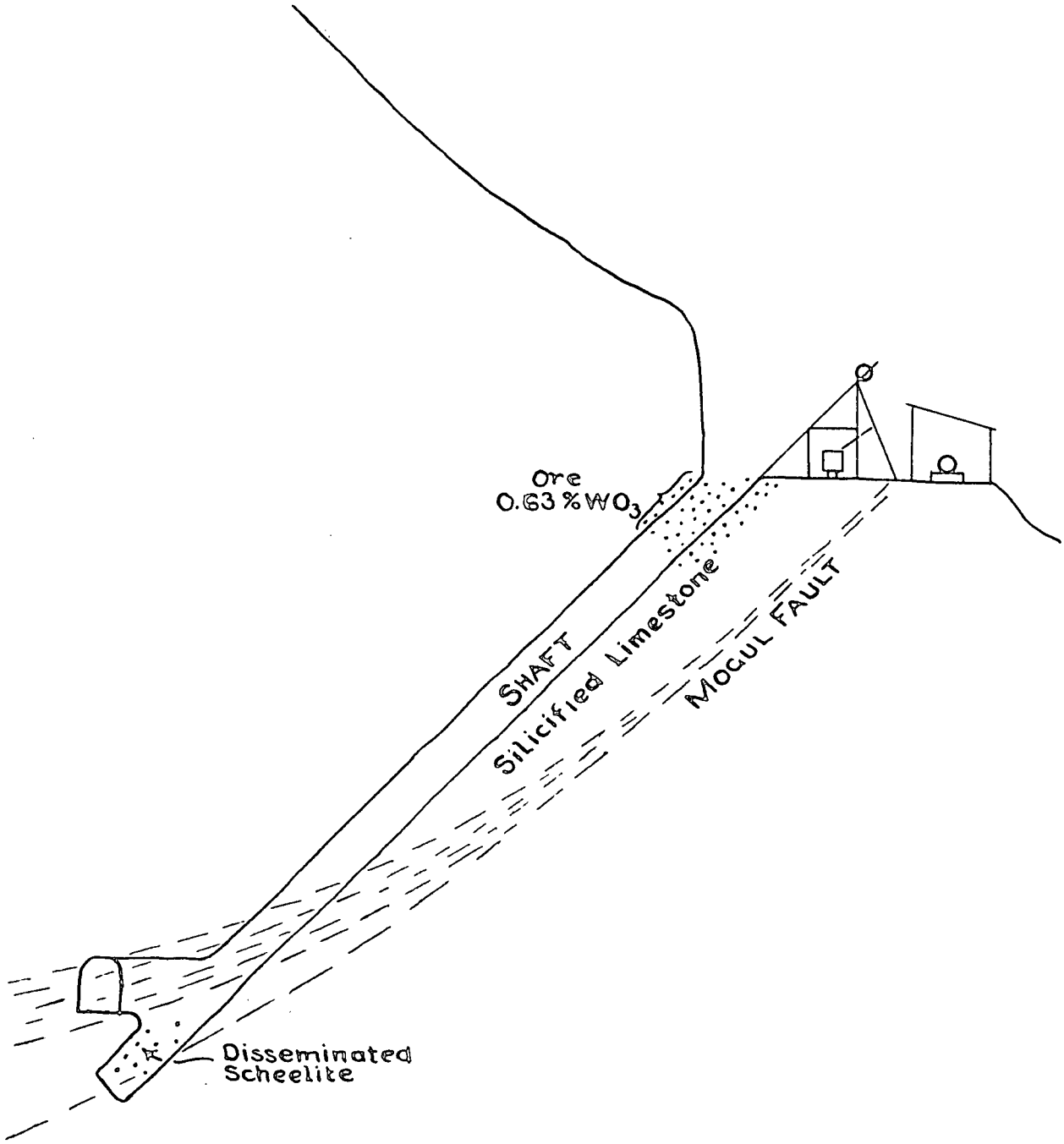


FIGURE 7
VERTICAL SECTION THROUGH SHAFT
NIKAS MINING COMPANY
MORNING STAR MINE
DMEA 2356 6-16-53
Scale 1" = 20'

Scheelite trends to be concentrated along or in subsidiary faults and fracture zones in the silicified limestone in the hanging wall of the Mogul fault. These concentrations form irregular shoots of ore material.

One noteworthy ore body was found by the work done under this contract with DMEA. Significant amounts of scheelite are exposed near the west end of the 100-foot level (see Fig. 6) and scheelite ore extends along the drift from 25 to 35 feet northwest of the shaft. The ore body was also exposed in crosscuts extending about 15 feet north of the drift and about 20 south of the drift. This ore body is probably the extension of the ore shoot which was mined in a small stope near the surface above the adit level, and an ore connection probably exists between this stope and 100 level. The boundary of this ore shoot is not definitely established; therefore, its size is unknown. On the 100-foot level the ore body is about 65 feet long in a north-south direction, and is from 15 to 20 feet wide. The ore body is not fully exposed, and it is probable that ore may extend a considerable distance southeast of the presently exposed faces.

Localization of the ore body is partly controlled by steep southeasterly trending fractures and faults that developed in this hanging wall of the Mogul fault as a result of adjustments along this fault;

Appreciable amounts of scheelite are known to exist only in the hanging wall of the Mogul fault, and there is a small amount of scheelite in the foot wall. Where the inclined shaft (See Fig. 7) crossed the Mogul fault, or one of its principle planes of movement, scheelite was found disseminated in the foot wall of this fault. The brecciated and altered material, in which the scheelite occurs, is exposed in the lower 10 feet of the shaft, which is used as a sump. This writer estimates the material exposed in the walls of the sump contains about 0.3 percent tungsten.

EXPLORATION

Stage I of the original exploration program consisted of erecting a headframe, constructing a combination hoist and storage building, a compressor shed, a charge room and a powder magazine. The actual exploration consisted of sinking a 45-degree inclined shaft a distance of 110 feet, then drifting and crosscutting on the 100 level.

The purpose of the work was to explore the hanging wall of the prominent Mogul fault, in which scheelite was known to be localized in significant amounts in some places. The shaft was started in low-grade ore and passed from this to unmineralized, silicified limestone at a depth of 14 feet. At a depth of from about 80 feet to about 100 feet the shaft penetrated intensely shattered and altered, gouge-like material, which is thought to be one of the principle planes of movement on the Mogul fault. The shaft passed through the fault into the foot wall of it, and this foot wall is slightly brecciated, altered and mineralized.

Exploration on the 100-foot level consisted of drifting west-northwest along the fault zone a distance of 83 feet from the shaft, and drifting east-southeast along the fault a distance of 129 feet. Drifting was supplemented by 3 short crosscuts, representing a total driving distance of 92 feet.

Unfortunately the 100-foot level station was cut in the heavy ground of the Mogul fault and about 130 feet of the drift was driven in similar heavy ground along the fault. This greatly increased the operating problems and costs incident to the exploration project and also reduced the optimum value of the project because the fault is barren and ore is not known to occur in it. Cutting of the 100 level station in the heavy ground of the fault zone could not have been avoided under terms of the contract because exact ground conditions could not be predicted in advance of sinking. The Mogul fault flattened with depth and entered the projected position of the shaft at the 100 level. After the shaft had been completed, it would have been easy to crosscut to the hanging wall of the fault and drift in the silicified and mineralized hanging wall. That this was not done is due to the failure of the operators to recognize the nature of the Mogul fault or to properly interpret the relationship of the ore zone to geologic structure.

The exploration project is considered successful because it proved the presence of several thousand tons of minable scheelite ore. Opportunities for making additional discoveries along the Mogul fault are excellent, both along the strike extension of it or at depths greater than those previously explored.

In the Morning Star mine it would be advisable to crosscut into the hanging wall of the fault from the 100 level drift, and it would be advisable to drift east-southeast from the crosscut near the east end of the 100 level. Additional exploration northwest of the present 100 level is prevented because of property ownership; however, there is no reason why the mineralized zone shouldn't be explored east-southeast from the present workings. As the shaft penetrated a mineralized zone below a prominent element of the Mogul fault, it is advisable to do some exploration work in the foot wall as well as in the hanging wall zone.

ORE RESERVES

Several estimates of the ore reserves have been made at different times during the project. The estimates recently made, which are probably the most reliable are as follows:

Made by	Indicated	Grade	Inferred	Grade	Total Tons
Engineer for Operator	7,000	0.726	5,000	0.605	12,000
U.S.G.S. 6/16/53	7,200	0.75	3,800	0.75	11,000
U.S.B.M. 7/16/53	2,000	0.4	8,000	0.4	10,000
U.S.B.M. 11/26/53	8,100	1.11			8,100

It is to be noted that these estimates are all of the same order of magnitude but that the estimated grade of ore varies considerably. That the estimates are not more nearly the same is due to insufficient exploration and sampling. This writer believes that the estimate by the operator's engineer is the most accurate; however, about 800 tons of this ore has been mined, therefore, the remaining reserves are placed at about 11,200 tons of ore containing about 0.7 percent WO_3.

CONCLUSIONS AND RECOMMENDATIONS

Sinking of the shaft and driving of drifts and crosscuts on the 100-foot level of the Morning Star mine resulted in discovery of significant amounts of scheelite. Production, which resulted from this contract with DMEA, is from 800 to 900 tons of ore which contained about 0.7 percent WO_3. This ore yielded about 2060 pounds of table concentrate containing 63 percent WO_3, and 17.5 tons of flotation concentrate which contained about 7.96 percent WO_3.

As this project resulted in the discovery of commercial grade ore, certification of the project as a discovery has been recommended.

Although this project was successful, it would have obtained better results at a lower cost if the project work had been done under more competent direct supervision, and if there had been less disagreement among the operators.

The opportunities for making additional discoveries of ore are good, and it is recommended that future efforts to explore the deposit be encouraged.

Mining Division
Date Rec'd.
DEC 4 - 1953
BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

SOUTHWEST EXPERIMENT STATION
Box 4097
UNIVERSITY STATION
TUCSON, ARIZONA

MINING DIVISION
REGION IV

December 2, 1953

Memorandum

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

From : Chief, Mining Methods Br., Mining Div., Region IV

Subject : Final engineering report on Contract Idm-E370, Docket DMEA-2356, Nikas Mining Co.'s Morning Star Tungsten Mine, Old Hat Mining District, Pinal County, Ariz.

Enclosed are original and 8 copies of the final engineering report for Contract Idm-E370 by John H. Soule' of the Bureau of Mines. This report has my approval.

Walter R. Storms

Walter R. Storms

CC W. H. King (8)
DMEA-2356
DF

WRStorms:frj

Reviewed by
DMEA OPERATING COMMITTEE
(date)

[illegible] OF THE INTERIOR
[illegible] ADMINISTRATION
[illegible]
[illegible] 1953

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

FINAL ENGINEERING REPORT

DMEA-2356, Contract Idm-E370

The Nikas Mining Co.'s Morning Star Tungsten Mine

Old Hat Mining District

Pinal County, Arizona

John H. Soule', Mining Engineer
U. S. Bureau of Mines

December 1953

Reviewed by
DMEA OPERATING COMMITTEE

_____
(date)

DMEA-2356, CONTRACT Idm-E370
NIKAS MINING CO.'S MORNING STAR TUNGSTEN MINE
OLD HAT MINING DISTRICT
PINAL COUNTY, ARIZONA

CONTENTS

Final Engineering report	Page
Summary and conclusions	1
Introduction	3
Location, topography and physical features	4
History and production	5
Ownership and extent	6
Description of the deposits	7
Minable ore reserves	7
Description of the work completed	9
Expenditures	11
Equipment purchases	14
Conclusions	15

ILLUSTRATIONS

Figure		Following page
1	Location map, Morning Star (Nikas) Tungsten Mine, Pinal County, Ariz.	4
2	Claim map, Morning Star Tungsten Mine	6
3	Ore reserves, Morning Star Tungsten Mine	7
4	Assay Map, 100 level, Morning Star Tungsten Mine	8
5	Mine Workings, Morning Star Tungsten Mine	10

SUMMARY AND CONCLUSIONS

The Nikas Mining Co., lessee and operator of the Morning Star tungsten mine in the Old Hat Mining District of Pinal County, Ariz., applied for Government assistance to explore the mine. The application was docketed as DMEA-2356. The property was examined by a Defense Minerals Exploration Administration field team and it was recommended that Government assistance be granted the operators. A contract, Idm-E370, was duly executed and signed by the interested parties and work was started on the project. The terms of the contract authorized the expenditure of $59,200.00 of which 75 percent, or $44,400.00 was to be contributed by the Government.

The Morning Star tungsten mine is situated in the southern part of Pinal County, Ariz., about 7.5 miles by road south of the town of Oracle, Ariz. Tucson, Ariz., about 45 miles by road south of the mine, is the nearest center where most supplies and equipment may be obtained.

The climate is generally mild, usually at altitudes of 5,000 feet, and vegetation is fairly abundant. There are no living accommodations at the mine.

The mine first was operated in 1913 and several attempts at operation have been made since that time. About 1,840 units of tungsten trioxide in concentrates, and 3,416 units of tungsten trioxide in ore, which was sent to stockpiles, have been produced from the mine. The most recent shipment of about 800 tons was derived from ore discovered by the Defense Minerals Exploration Administration project. No royalty to the Government has been paid on this ore.

The property consists of one patented lode mining claim which is owned by Elizabeth L. Wood of Oracle, Ariz. and the Young Men's Christian Association of Tucson, Ariz. The claim is leased by the Nikas Mining Co., a partnership comprised of Tucson business men.

The tungsten mineral, scheelite, occurs in a silicified limestone in a large fault zone. Work done by the exploration authorized by the Defense Minerals Exploration Administration contract disclosed about 8,100 tons of tungsten ore containing 1.11 percent WO_3. This discovery has been certified.

The initial work done on the project consisted of surface preparatinn, machinery installation, and building erection. An inclined shaft then was sunk to a depth of 110 feet and drifting was done on the 100-foot level from the shaft. This drifting totalled 205 feet, 80 feet westerly and 125 feet easterly. Eighty-eight feet of crosscutting in 3 crosscuts was done from these drifts.

The approximate amount spent on the project, neglecting possible disallowances for non-valid charges and neglecting any possible return from the sale of equipment in which the Government has an interest, was $25,224.45. This resulted in unit costs of $80.10 per foot of shaft sinking, $32.45 per foot of drifting, and $55.70 per foot of crosscutting. The shaft sinking and crosscutting costs seem high. The operation of the project was not an efficient one,

Approximate equipment purchases totaled about $2,653.60 and this material has not been sold as yet (November 1953). The Government's interest in this equipment totals about $1,990.20.

From the data derived from the project work, it is concluded that the project was a success from an ore finding point of view, that additional exploratory work is justified, that management of the project in general was inefficient, and that the project costs may be lessened slightly by the sale of community equipment.

INTRODUCTION

The Nikas Mining Co., lessee and operator of the Morning Star tungsten mine, in southeastern Pinal County, Ariz., applied for Government assistance to explore the property. The application was docketed as DMEA-2356 and was sent to the field for an examination of the property. This examination was made in March 1952 by T. M. Romslo of the Bureau of Mines. C. S. Bromfield of the Geological Survey mapped the underground workings about the same time. Upon the results of these examinations, it was recommended that Government assistance be granted the operators.

A contract, Idm-E370, was executed and duly signed by the parties concerned. The contract total was $59,200.00, of which 75 percent, or $44,400.00 was to be supplied by the Government. The project work was started on August 27, 1952 and the first stage of the project was completed by July 1, 1953. Because of reported financial difficulties, the company decided not to complete the project and requested a termination of the contract which was to have expired on July 18, 1953. The termination agreement was approved and was dated June 30, 1953,

LOCATION, TOPOGRAPHY AND PHYSICAL FEATURES

The Morning Star tungsten mine is situated in the northeast quarter of sec. 20, T. 10 S., R. 16 E. in the Old Hat Mining District of Pinal County, Ariz. as shown on figure 1. The mine is reached by going to Oracle, Ariz. on State Highway 77, some 36.5 miles north of Tucson, Ariz., thence 5.5 miles southeasterly on the Mt. Lemmon (Soldier Camp) road. At the 5.5 mile point, turn right or westerly from this road for 1.5 miles and then 0.5 miles southerly to the mine at the end of the road.

The mine is located at the northern end of the Santa Catalina Mountains is an area of semi-rugged topography. The altitude at the mine is nearly 5,000 feet. The drainage is northeasterly. There are no permanent streams although a few springs and mine workings contain small amounts of water. Sufficient water for a small mill probably could be developed from wells.

Vegetation is fairly abundant although none is suitable for use as mine timber. Such timber is available in the higher reaches of the Santa Catalina Mountains, some 30 to 40 miles south of the mine. The vegetation near the mine consists largely of scrub oak, manzanita, cacti, and various shrubs and grasses.

Summers usually are pleasant, but winters may be cold with freezing weather although it is usually not prolonged. Extreme temperatures have varied from 108° F. in the summer to 2° F. in the winter. The mean temperatures vary from about 95° F. in the summer to about 35° F. in the winter. Rainfall averages nearly 20 inches per year. About one-half of this falls as summer thunder showers.

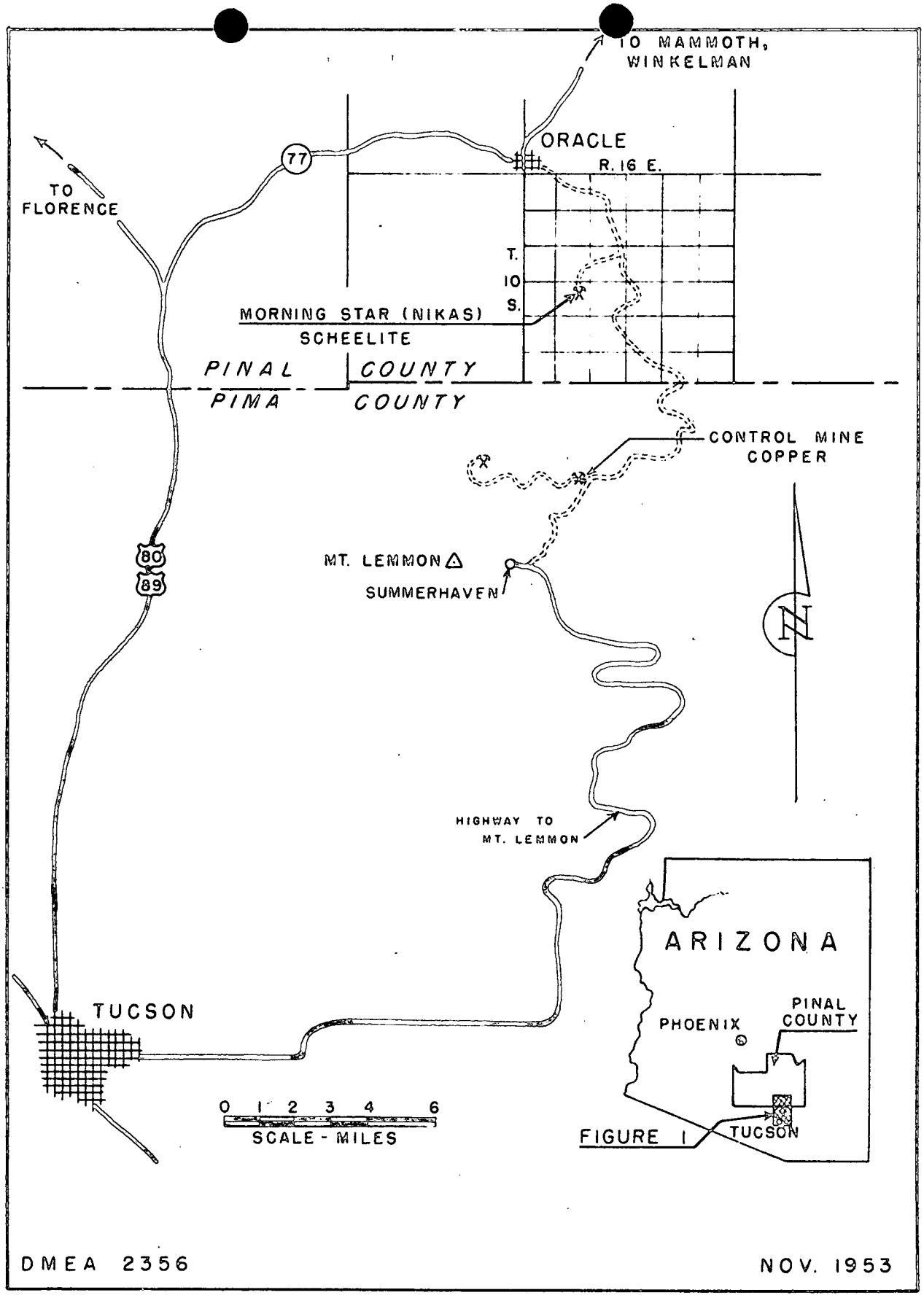


FIGURE 1. - LOCATION MAP - MORNING STAR (NIKAS) TUNGSTEN MINE
PINAL COUNTY, ARIZONA

There are no living accommodations at the mine, but limited accommodations may be available at Oracle although the present boom due to the San Manuel project may minimize these. Tucson, some 44 miles to the south, has ample living accommodations. Telephone and postal services, and minor supplies are obtainable at Oracle, while all other supplies and services are obtainable no nearer than Tucson. Electric power is available at Oracle.

HISTORY AND PRODUCTION

The Morning Star mine first was operated in 1913 by E. J. Ewing who mined several hundred tons of ore which he treated in a small mill near the mine. L. Wood and the Rivera brothers operated the mine from 1940 until 1944, when the Morning Star Mining Co. acquired the property. It operated until 1945. The Nikas Mining Co. leased the property in October 1951 and sporadic operations resulted. During the latter part of 1952 and early part of 1953, this company explored the mine through Government assistance in the form of a Defense Minerals Exploration Administration contract. A little ore was mined, which was milled near Apache Junction during the period of operation by the Nikas Mining Co.

In 1913, 335 units of tungsten trioxide reportedly were produced from ores mined. From 1940 to 1944, 1,165 units of tungsten trioxide reportedly were produced from the ores. In 1944, 3,416 units in 3,216 tons of ore was sold to the Metals Reserve Corp. In 1951 and 1952, the Nikas Mining Co. mined a reported 568 tons of ore from which was recovered about 200 units of tungsten trioxide. This indicates a very low grade of ore or extremely low mill recovery, probably largely the latter. In 1953, this same company mined about 800 tons of ore from the project workings

from which about 140 units of tungsten trioxide was recovered. Insufficient control over both the mining and milling operations indicates that the ores were of unknown grade and that the mill losses were high. Approximately 1 ton of concentrates containing a reported 63 percent WO_3, and 17.5 tons of concentrates containing nearly 8 percent WO_3 were obtained from the last 800 tons of ore mined. To date, no royalty payments to the Government have been made.

It seems that production from the Morning Star Mine totals about 1,840 units of tungsten trioxide from concentrates, and that 3,416 units were contained in ores sent to stockpiles. This production is exceeded by the production from the adjoining Maudina mine, which is on the same geological structure.

OWNERSHIP AND EXTENT

The Morning Star property consists of one patented lode claim as shown on figure 2. The claim is owned by Elizabeth L. Wood of Oracle, Ariz. and the Young Men's Christian Association of Tucson, Ariz. The area of the claim is limited by court decree when extra-lateral rights were awarded the adjoining Pure Gold claim. The limits of the rights are shown on figure 2, which leaves very little of the predominant mineralized structure to the Morning Star claim.

The claim is leased by the Nikas Mining Co., a partnership that was composed of T. D. Callas, A. Nikas, John Paulos, John Gekas and Monte Seymour of 55 West Congress Street, Tucson, Ariz., when the Defense Minerals Exploration contract was signed. Since the execution of the contract, the share of Monte Seymour reportedly has been purchased by John Paulos and Mike Cotgageorge.

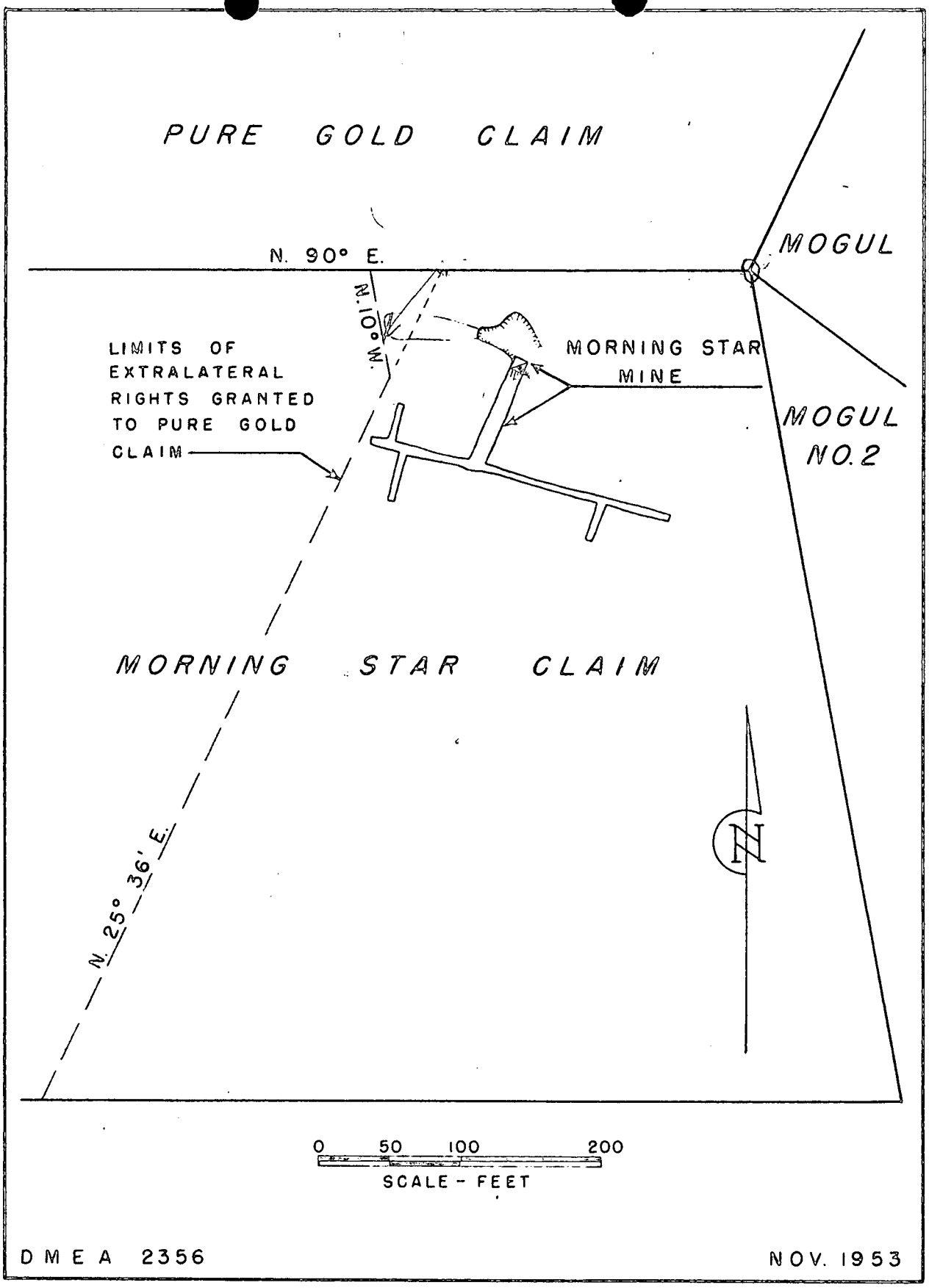


FIGURE 2. - CLAIM MAP - MORNING STAR TUNGSTEN MINE

DESCRIPTION OF THE DEPOSITS

The ore bodies in the Morning Star tungsten mine are found in or near a large fault zone between limestones and granite. Parts of the limestone in the fault zone have been silicified, and intensely faulted and fractured. The fault zone strikes a little north of west and dips southerly at about 45°. The tungsten mineral, scheelite, occurs irregularly distributed in the silicified limestone. Small amounts of galena were noted, seemingly associated with the scheelite.

MINABLE ORE RESERVES

Ore reserves in the Morning Star mine are difficult to calculate because of the lack of some data, the questionable nature of part of the remainder, and because of the irregularity of the mineralized bodies. On the 0-foot level where the shaft was collared, only reported production figures are available. In applying these figures to the horizontal area mined, no account is taken of sorting and selective mining. These data are used without alteration although it is felt that they would tend to give a somewhat higher grade figure than would be the actual case.

More systematic sampling could have been done on the 100-foot level. However, enough sampling was done to get a fair idea of the extent of the ore body. It seems that the long axes of the oreshoots as shown on the 0-foot and 100-foot levels are at right angles, as noted on figure 3. In lieu of better information, this condition is accepted. Additional exploration would be necessary to more completely outline the ore bodies.

Indicated ore reserves are based upon a grade cutoff of 0.5 percent WO_3 and a tonnage factor of 12.5 cubic feet per ton. The areas 1 and 2 on the 0-foot level, shown on figure 3, were measured and the reported

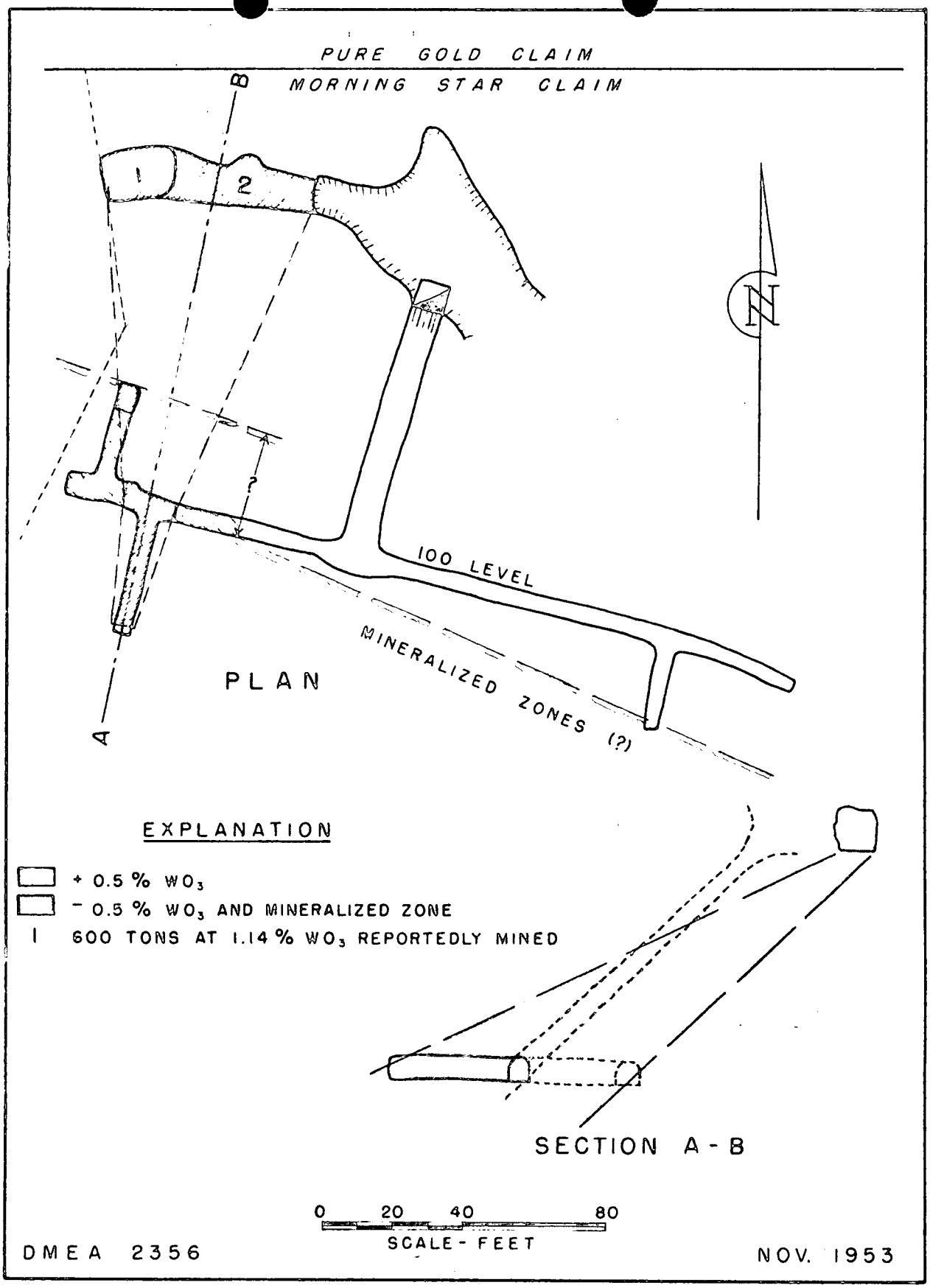


FIGURE 3. - ORE RESERVES - MORNING STAR TUNGSTEN MINE

production grade of 1.14 percent WO_3 assigned to the area. The areas measured a total of 740 square feet.

On the 100-foot level, all samples shown on figure 4 that contained over 0.5 percent WO_3 were averaged by the length of the sample interval to obtain an average grade of 1.10 percent WO_3. The area influenced by these samples and shown on figure 3 was measured to obtain an area of 1,113 square feet. This area and its grade were averaged with that obtained on the 0-foot level to obtain an average grade of the material between the levels of 1.12 percent WO_3. The 2 areas were averaged and then multiplied by the vertical distance between the levels of 67 feet to obtain a volume of 62,109 cubic feet. This reduced to tons equals 4,969 tons of ore containing an average of 1.12 percent WO_3.

The 1,113 square foot area measured on the 100-foot level was extended downward for 50 feet on the dip, or 37 feet vertically. There, 3,896 tons of material containing an average of 1.10 percent WO_3 are indicated. Therefore, indicated reserves total 8,900 tons of ore containing 1.10 percent WO_3. The 8,900 tons is a round figure and from this should be deducted about 800 tons of ore from above the 100-foot level, recently mined and milled. There are no reliable estimates of the grade of this recently mined material. Ore reserve estimates are shown in the following table:

TABLE I. - Ore reserves (indicated).

Location	Tons	Percent WO_3
0- to 100-foot level	4,169	1.12
100- to 150-foot level	3,896	1.10
Total and average	8,065	1.11

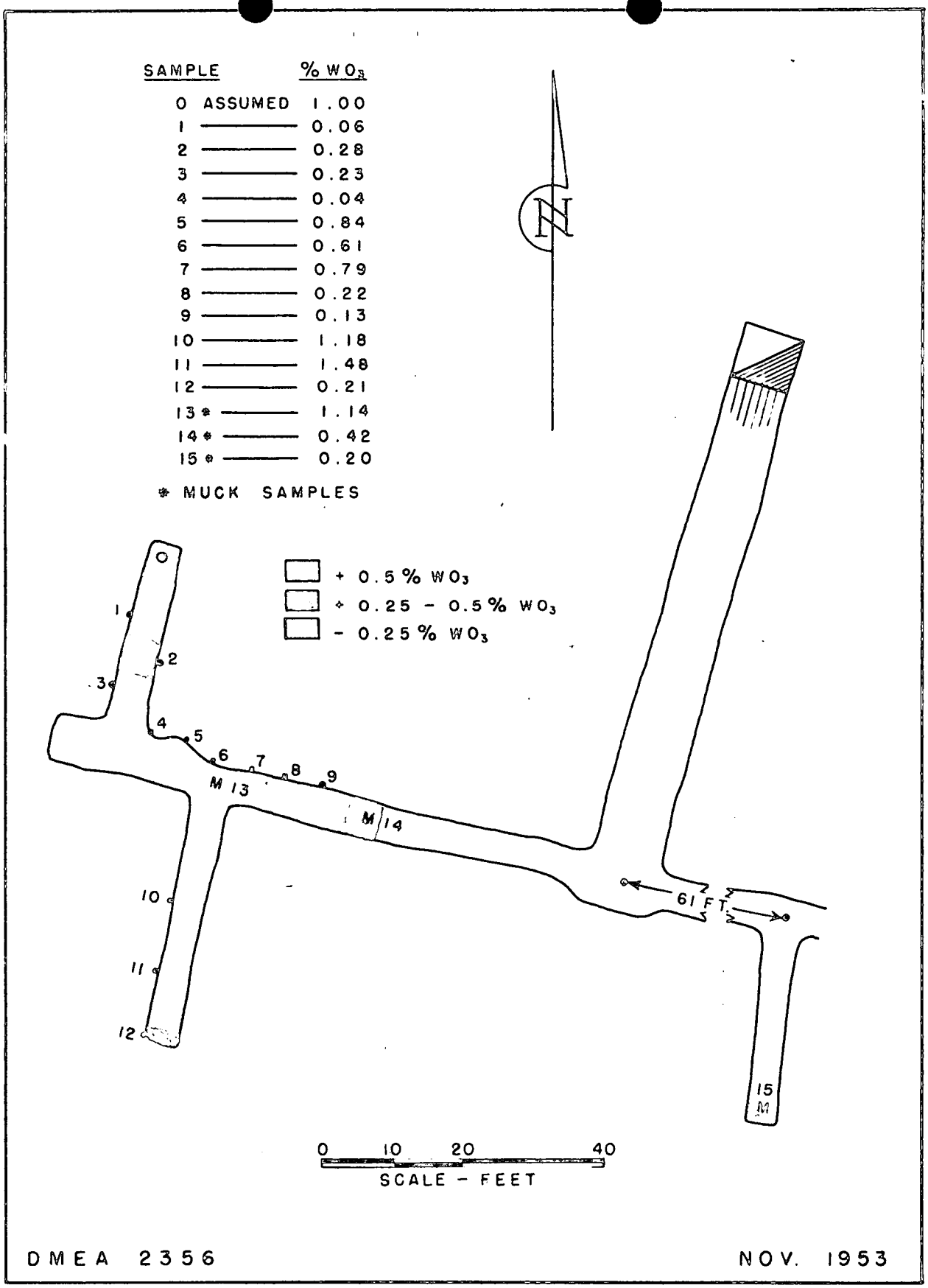


FIGURE 4.- ASSAY MAP, 100 LEVEL - MORNING STAR TUNGSTEN MINE

Measured reserves are not significant and there are too little data upon which to compute inferred ore reserves. It undoubtedly is true that other oreshoots occur in the mineralized zone. For this reason, additional exploration work on the Morning Star mine is justified. At present, it seems that a continuation of the original proposal with slight modification would be the best way to explore the deposits. One modification would be the allowance of a greater percentage of crosscutting.

A certification has been made of the discovery of tungsten ores in the Morning Star mine.

A certification has been made of the discovery of tungsten ores in the Morning Star mine.

DESCRIPTION OF THE WORK COMPLETED

The work allowed by the first stage of the contract consisted of surface preparatory work, which would permit the installation of the mine plant and would include the installation of the necessary buildings and equipment. Amendment No. 1 to the contract allowed the partitioning of the present ore bin instead of building a trestle as originally planned. Mining was to consist of sinking a 5- by 8-foot inclined shaft along the hanging wall of the vein, driving a 60-foot 5- by 7-foot drift to the northwest on the 100-foot level and a 120-foot 5- by 7-foot drift on this same level to the southeast. Two crosscuts not to exceed 60 feet were to be driven from the above drifts, one on each side of the shaft. Amendment No. 2 to the contract allowed the extension of the west drift from 60 to 80 feet, the east drift from 120 to 150 feet, and allowed additional crosscutting from 60 to 100 feet. Sampling and assaying were allowed as part of the work.

Stage 2 of the contract provided for a 100-foot extension of the shaft with drifting and crosscutting the same as allowed in stage 1 of the contract. However, no work was done on stage 2.

Work on the project reportedly was started on August 27, 1952 and consisted of leveling the site for, and erecting a compressor and storage building, and the headframe. Supplies and equipment were hauled to the mine and installed. Shaft sinking was started in October 1952 and was completed to the specified depth of 110 feet in December 1952. Drifting was started in January 1953 and was completed, 80 feet westerly and 125 feet easterly, during May 1953. The drift easterly lacks 25 feet of reaching the allowable 150 feet stated in the contract. Crosscutting was started in March 1953 and completed during June 1953. Only 88 feet of the 100 feet of crosscutting allowed by the terms of the contract were completed. The work done on the project is summarized in the following table and is shown on figure 5:

TABLE II. - Work accomplished.

Work Item	Contract Specification	Amount completed
Leveling Area	Allowed	Completed
Constructing trestle	Amended to split bin	Completed
Headframe construction	Allowed	Completed
10-by 14-foot hoist house	Allowed	Completed
10-by 10-foot compressor house	Allowed	Completed
10- by 10-foot change room	Allowed	Not done
10- by 10-foot powder house	Allowed	Not done
Installation of equipment	Allowed	Completed
Shaft sinking	110 feet	110 feet
Drift easterly	150 feet	125 feet
Drift westerly	80 feet	80 feet
Crosscutting	100 feet	88 feet
Sampling and assaying	Allowed	Incomplete

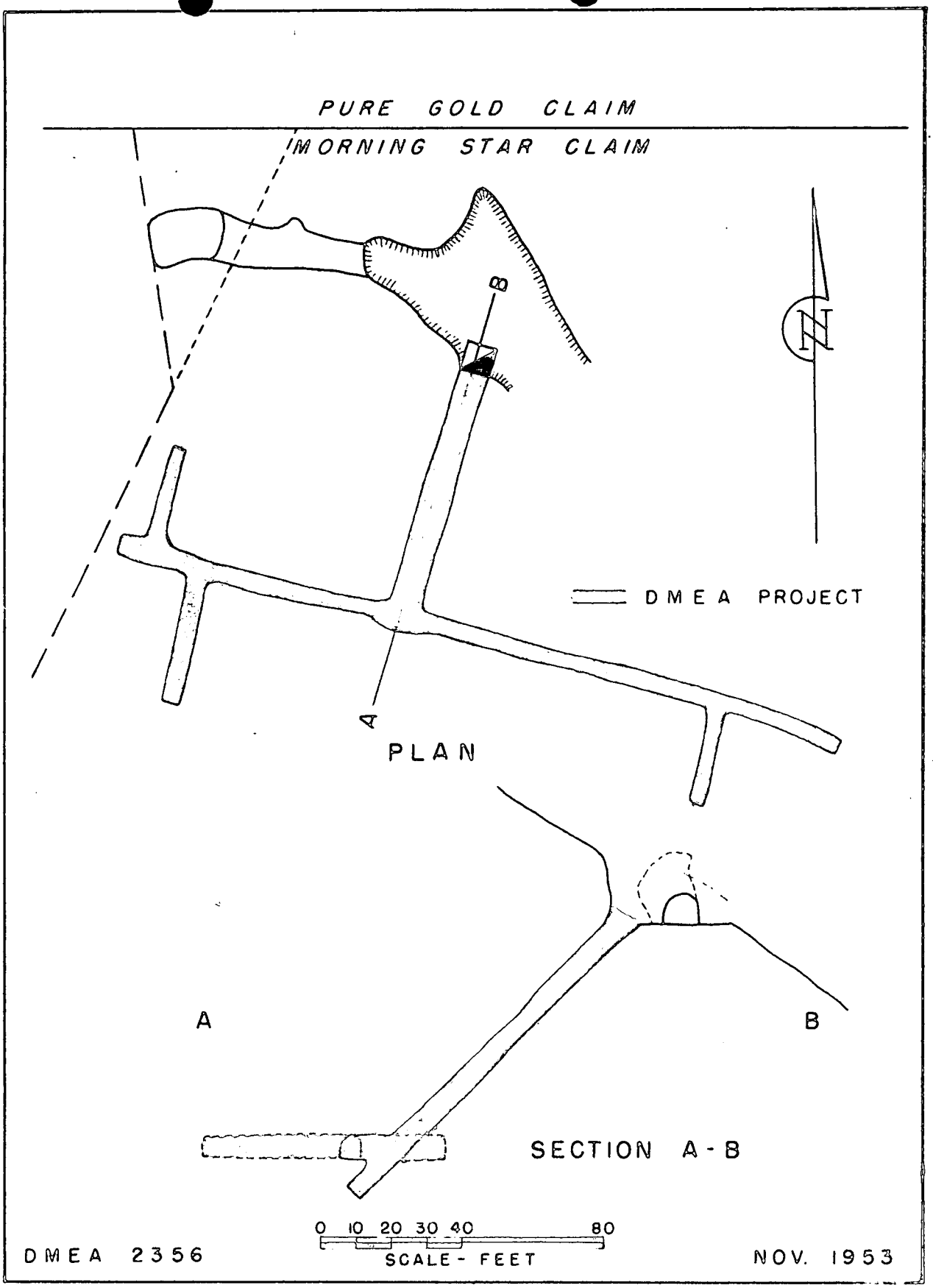


FIGURE 5. - MINE WORKINGS - MORNING STAR TUNGSTEN MINE

EXPENDITURES

The estimated costs for the project as outlined in the contract totalled $59,200.00 of which 75 percent, or $44,400.00 was to be contributed by the Government. The details of the estimated costs are shown in the following table.

TABLE III. - Estimated contract costs.

Item	Estimated Costs Stage I	Stage II
Supervision	$2,500.00 to $3,750.00 by Amend.	$2,000.00
Shaft labor	6,982.80	6,348.00
Drifting and crosscutting labor	7,360.00	7,360.00
Shaft supplies	1,569.70	1,427.00
Drifting, crosscutting supplies	1,771.20	1,771.20
Track, complete	660.00	495.00
Pipe	405.00	288.00
Pipe fittings	120.00	100.00
Tools	750.00	200.00
Fuels and greases	1,250.00	1,000.00
Vent pipe	400.00	150.00
Compressor rental	1,600.00 to 2,600.00 by Amend.	1,600.00
Hoist rental	400.00 to 650.00 by Amend.	400.00
Air receiver	200.00	
Auxiliary hoist equipment	500.00	
Rock drill with accessories	1,000.00	
Mine car	200.00	
Blower	300.00	
Bit grinder	250.00	
Water pump	350.00	
Pickup truck	1,000.00	
Water tank	300.00	
Jackhammer depreciation	20.00	20.00
Mine car depreciation	10.00	10.00
Labor for new buildings	1,876.80	
Materials for new buildings	1,250.00	
Repair parts	200.00	200.00
Equipment repairs	200.00	200.00
Assays	400.00	400.00
Contingencies	774.50	630.80
Totals	$34,600.00	$24,600.00
Total of both stages		$59,200.00

The costs incurred on the project are indeterminate at the present time in the Tucson office for the following reasons: First, documentation has been waived and there is no knowledge of the distribution of the

various charges; Second, an on-the-site audit is necessary to determine the validity of the charges; Third, equipment in which the Government has an interest has not as yet been disposed of and the amounts from the probable sale are not known. However, the costs as submitted by the operator on Form MF-104 are used in the following table to show the comparison of the estimated and the approximate costs incurred on the project. Only Stage I is shown below, as Stage II was not done.

TABLE IV. - Cost comparison.

Item	Contract Estimation	Project Cost
Supervision	$3,750.00	$3,600.00
Total labor	14,342.80	9,549.15
Operating materials and supplies	5,740.90	3,504.60
Track	660.00	212.97
Pipe and fittings	525.00	437.08
Equipment rental	3,250.00	2,077.50
Equipment purchase	4,100.00	1,734.46
Equipment depreciation	30.00	
Repairs to equipment	400.00	153.61
Sampling and analyses	400.00	177.00
Payroll taxes and insurance	1/	651.28 1/
Contingencies	774.50	
New buildings, labor and supplies	3,126.80	3,126.80
Totals	$37,100.00	$25,224.45
Less overage	2,500.00 2/	
	$34,600.00	$25,224.45

1/ Not noted in contract but is allowable charge.
2/ Estimates allowed increase byamendment but total increase is not allowed.

No cost item exceeded the estimate, therefore no allowable maximum was exceeded. According to the terms of the contract, $400.00 was allowed for assays. A total of $177.00 was charged to this item, but only a few (about 15) assays have been reported. This item can be corrected during the forthcoming audit.

Summarizing, the approximate project costs are $25,224.45 and the allowable for Stage I of the contract is $34,600.00. It must be remembered that not all of the work proposed to be done during Stage I was completed. Also, no credit was given to possible proceeds to be derived from the sale of equipment in which the Government has an interest.

Unit costs for the project are subject to the same limitations as the incurred costs. However, from Form MF-104A we note that unit costs are given and these are accepted as approximate. The following table shows the unit costs as noted on Form MF-104A.

TABLE V. - Unit costs.

Item	Quantity	Cost (Total)	Cost (Unit)
Shaft sinking	110 feet	$8,810.48	$80.10 per foot
Drifting	205 feet	6,651.30	32.45 per foot
Crosscutting	88 feet	4,901.41	55.70 per foot
Equipment	—	1,734.46	—
Buildings	Job	3,126.80	3,126.80 per job
Total		$25,224.45	

A study of the above unit costs seems to indicate that only the unit costs for drifting are reasonable. The unit costs for shaft sinking and crosscutting are somewhat high. This may largely be explained by the general inefficiency of the operation and the length of time taken to do the work which was completed. The mine foreman, one of the lessees, claimed to be an old-time miner, but he seemed to be unreceptive to technical suggestions. The manager seemed a qualified technical man, but he seemed to receive but little cooperation from the foreman or the partners.

EQUIPMENT PURCHASES

A total of $4,100.00 was allowed for the purchase of equipment. Only $1,734.46 of the allowable sum was expended. The details are shown in the following table.

TABLE VI. - Equipment purchases.

Item	Estimated Cost	Actual Cost	Description
Air receiver	$200.00	None	
Auxiliary hoist equipment	500.00	None	
Rock drill	1,000.00	None	
Mine car	200.00	72.63	End dump, 3/4 ton.
Blower (fan)	300.00	271.51	10 in. New 3 HP B&S Engine
Bit sharpener	250.00	None	
Pickup truck	1,000.00	$1,000.00	GMC,FC102,40945, A228203855
Water tank	300.00	None	
Pump	350.00	212.50	BJ, 2 1/2 in.
Pump, allowed with water tank		75.00	FM Duplex. 3 by2 by 4
Skip		77.82	3/4 ton
Sheave		25.00	
Totals	$4,100.00	$1,734.46	

In addition to the above items listed in the contract, the following items were purchased for use on the project:

TABLE VII. - Additional Equipment and Material.

Item	Description	Cost
10-in. gong	With 150 ft. cord	$24.37
Differential chain hoist	1 ton	36.52
Galvanometer	- - -	21.68
Mineralite	Type M 12	36.52
Pipe	2 in. and 3/4 in.	437.08
Rail	12 and 16 lb.	212.97
Ventpipe	10 in., 120 ft. plus 2 ells	150.00
Total		$919.14

From the above 2 tables, it seems that the total spent on equipment in which the Government has an interest is $2,653.60. The Government's interest totals $1,990.20. Additions or subtractions may be in order when the accounts are audited and the equipment sold.

CONCLUSIONS

The following conclusions are based upon the results obtained from the exploration of the Morning Star tungsten mine, done with Government assistance, Docket DMEA-2356, Contract Idm-E370:

1. The project must be considered successful from an ore-finding point of view. About 8,100 tons of scheelite-bearing ore containing 1.2 percent tungsten trioxide is indicated by the project work.

2. It seems reasonable to expect that further exploratory work will increase these reserves. Should future participation by the Government be requested in additional exploration of the deposits, it would be recommended that the Government should so participate. However, any future work should be more competently supervised.

3. The approximate total cost of the project was $25,224.45. The efficiency of the operation was poor and the unit costs in general were a little high. The lack of proper supervision by the operator seems to have been the cause of the inefficiency.

4. Equipment in which the Government has an interested had not been sold in November 1953. The Government's interest is approximately $1,990.20. Reclamation of part of the Government's interest, plus an auditing of the company books to determine the validity of the expenditures, could reduce the cost of the project.

5. Some ore from the project has been mined and milled, and the salable products sold. Through November 1953, no royalties on this ore had been paid to the Government.

FILE COPY
SURNAME:

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

Martin
Selfridge
Kilpatrick
McCullough

Agency: [illegible]
Originator: [illegible] Martin Ext: 5235 Room: 3539

Appropriation: 14 [illegible].970 - Working Fund - [illegible]A
Date: December 10, 1953

To: [illegible] King, Executive Officer, [illegible] Field Team, Region 4, Denver, Colorado

Hourtt December 8, Nikas Mining Company, Docket [illegible] 2356, Contract Idm-[illegible]370. Please forward Engineer's and Geologist's reports now and advise if Field Team's report when available will concur with reports of Engineer and Geologist. Advise further when you estimate Examiner's report will be available.

George C. Selfridge
(By ESF)

G. C. Selfridge
Chairman, Operating Committee

CC: CONFIRMATION - FT, Reg. 4
Docket
Audits Divn., Bur. Mines
Code 400
Oper. Comm.
Adm. Read. File
T. P. Thayer, USGS
R. W. Geehan, USBM

WSMartin/ls
12/9/53

SENT
DEC 10 1953
Clerical Service Section

R.C.H. 12-11-53

Mr. George C. Selfridge
12-9-53
8:00 AM.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 9 - 1953

BUR MINES DN 235 12-8-53 4-27 PM

GEORGE C. SELFRIDGE

REFERENCE DOCKET 2356, CONTRACT IDM-E370, NIKAS MINING COMPANY, YOUR LLXXXX LETTER OF DECEMBER 7,1953 REQUESTING FORWARDING OF OPERATOR S AND FIELD TEAM S FINAL REPORTS FOR YOUR REVIEW PRIOR TO DECEMBER 30. OPERATOR S FINAL REPORT HAS NOT BEEN RECEIVED AND DOUBTFUL IF IT WILL BE RECEIVED BEFORE THAT DATE. WE CAN FORWARD ENGINEER S AND GEOLOGIST S REPORTS AT ONCE. FINAL PAYMENT OF ACCOUNT HAS BEEN DEFERRED PENDING RECEIPT OF OPERATOR S PROPOSAL IN LIQUIDATION OF PROPERT Y AND FINAL AUDIT. PLEASE TELETYPE ADVICE IF YOU DESIRE ENGINEER S AND GEOLOIXXXX GEOLOGIST S REPORTS.

W H KING

Denver, Colo.

DEC 9 8 22 AM '55
BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

FILE COPY
SURNAME:

140

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

Rewritten by

Martin
Chapman
Martin
Chapman
J. E. Johnson
Matheney

AIR MAIL DEC 7 - 1953

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

Re: Docket No. DMEA-2356 (Tungsten)
Nikas Mining Company
Pinal County, Arizona
Contract No. Idm-E370

Dear Mr. King:

The above-captioned contract was terminated as of June 30, 1953, by mutual agreement after the start but before completion of the work. Your letter of October 8, 1953, recommended a Certification of Discovery, but before issuing such certification, we would appreciate receiving the final reports of the Operator and of the Field Team. Please forward these to us for review prior to December 30, 1953.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (24)

LScott/AEKane/ema 12-3-53
Copy to: Docket
Adm. R. File
Op. Comm.
Mr. Thayer
Mr. Hedges
A. E. Kane
J. L. Hofflund
Chron.
Pending
~~Mr. Martin~~ not rec'd in COD

Approved:

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

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

R.C.4. 12-7-53

FILE COPY
SURNAME:

Martin Chapman

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

AIR MAIL

Mr. J. L. King, Executive Officer
DMA Region IV Field Team
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMA 2356 - Tungsten
Mikes Mining Company
Morning Star Mines
Pinal County, Arizona
Contract No. Idm-3370

Dear Mr. King:

The above-captioned contract, scheduled to expire on July 13, 1953, was terminated as of June 30, 1953, by mutual agreement after start but before completion of the work. Your letter of October 6, 1953, recommended a Certification of Discovery, but before issuing such certification, we should appreciate receiving the final reports of the Operator and of the Field Team if these can be forwarded to us for review prior to December 30, 1953, the date by which the Certification of Discovery must be issued.

Sincerely yours,

Chairman, Operating Committee

APPROVED:

Member, Bureau of Mines

Member, Geological Survey

cc: Docket
FT, Reg. 4
Code 400
Oper. Comm.
Adm. Read. File
R. W. Geehan, USBM
T. P. Thayer, USGS

LScott 12/2/53

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

224 New Customhouse
Denver 2, Colorado

October 30, 1953

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA 2356 (Tungsten), Contract Idm-E370, Nikas Mining Company, Pinal County, Arizona

Enclosed are the Government, Division, and Docket copies of "Termination of Work Under an Exploration Project Contract by Agreement" which was prepared in Washington and executed by you for the Government and forwarded to this office for execution by the partners by your memorandum of October 14, 1953.

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

Data relevant to a certification of discovery was forwarded to you by our memorandum of October 8, 1953.

W H King
W. H. King

Enclosures

Case
1 of 2

140

FILE COPY
SURNAME:

Rutledge
Martin
Chambers
Selfridge
FEJohnson
Arkana
Martin
Selfridge

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

OCT 1 4 1953

Rewritten by:

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

Re: Docket No. DMEA-2356
(Tungsten)
Nikas Mining Company
Pinal County, Arizona
Contract No. Idm-E370

Dear Mr. King:

Reference is made to the subject docket and the Field Team's recommendations that a discovery be certified and the above-referenced contract be terminated.

Mr. Krumlauf was asked by our letter of September 9, 1953, to submit a formal application to the Defense Minerals Exploration Administration for either termination or recession of the subject contract. Enclosed is a copy of Mr. Krumlauf's letter of September 24, 1953, which may be considered an official request for termination of work under the contract.

We are, therefore, enclosing the original and five copies of "Termination of Work Under an Exploration Project Contract By Agreement," signed by the Administrator for the Government.

If the terms and conditions of this agreement are satisfactory to you and the Operator, all six copies should be executed and the usual distribution made. However, as there seems to be some dissension among the five partners, the agreement should not be delivered until it has been signed by at least three of the partners. If you cannot obtain these signatures, you are authorized to send a notice of termination under the provisions of the contract, but if the work has been suspended and a Certificate of Discovery or Development is to be recommended by you, this notice of termination should not be sent until it can be accompanied by the certificate.

The Field Team should call the Operator's attention to Article 7(b) of the contract which states:

"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."

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Enclosures

Approved:

J. H. Hedges

Member, Bureau of Mines (JHH)

T. P. Thayer

Member, Geological Survey (TPT)

FARutledge:AEK:ep 10-12-53

Copy to: Mails & Files
Admr. Reading File
Operating Committee
Mr. R. W. Geehan, B/M
Mary Miller, USGS
Mr. Martin
Mr. Hofflund
Mr. Kane
Chron.
Pending

HHH 10-14-53

FILE COPY
SURNAME:

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

Rutledge
Martin

Rewritten by

10-12-53

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

Re: Docket No. DMEA-2356 - Tungsten
Nikas Mining Company
Pinal County, Arizona
Contract No. Idm-E370

Dear Mr. King:

Reference is made to the subject docket and the Field Team's recommendations that a discovery be certified and the above-referenced contract be terminated.

Mr. Krumlauf was asked by our letter of September 9, 1953, to submit a formal application to the Defense Minerals Exploration Administration for either termination or recession of the subject contract. Enclosed is a copy of Mr. Krumlauf's letter of September 24, 1953, which may be considered an official request for termination of work under the contract.

We are, therefore, enclosing the original and five copies of "Termination of Work Under an Exploration Project Contract by Agreement," signed by the Administrator for the Government.

If the terms and conditions of this agreement are satisfactory to you and the Operator, all six copies should be executed and the usual distribution made.

The Field Team should call the Operator's attention to Article 7(b) of the contract which states:

> "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."

Upon receipt of the final reports on the referenced exploration project from the Operator and the Field Team, a certification of discovery will be considered and probably made.

Sincerely yours,

George C. Selfridge

(JHB)

Chairman, Operating Committee

Enclosure

Approved:

J. H. Hedges

(JHB)

Member, Bureau of Mines

A. R. Kinkel, Jr.

(JHB)

Member, Geological Survey

FARutledge/ls/10-7-53
Rewritten by AEKane/ema 10-7-53
cc: Mails & Files
Adm. R. File
W. S. Martin
Op. Comm.
Mr. Thayer
Mr. Hedges
A. E. Kane
J. L. Hofflund
Chron.
Pending

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : A. E. Kane

DATE: October 9, 1953

FROM : J. L. Hofflund

SUBJECT: Nikas Mining Company, Docket No. DMEA-2356 (Tungsten)

The Administrator points out to me that we are terminating this contract in reliance upon a letter dated September 24 from H. E. Krumlauf, consulting mining engineer, to the Administrator, in which he says: "Therefore, you may consider this letter an official request for the termination of the contract." However, the Administrator says that the five partners who comprise this operator-partnership appear to be in dispute, that Krumlauf is apparently at outs with at least some of the partners; and that we do not really know which if any of the partners want to terminate the contract or have authorized Krumlauf to apply for termination.

I do not know how much, if any, of these facts, if they are facts, appear from the record in the docket.

At any rate, I think that we should not accept any termination agreement, under the foregoing supposed circumstances, without the signatures of at least a majority of the partners, i.e., three partners. I think that the proposed letter for the signature of the Operating Committee to Mr. King should indicate that anything less than three signatures will not be acceptable to the Government, and that in the absence of an agreement for termination acceptable to the Government, we should give a notice of termination under the provisions of the contract.

If the work is in suspension, I suppose there is no hurry about terminating. If this is the case, it seems to me it would be preferable to work up the certificate of discovery or development to be signed and delivered to the operator under the same date as the termination agreement or notice of termination.

Please check these matters and determine the course of action.

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

224 New Customhouse
Denver 2, Colorado

October 8, 1953

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Certification of Discovery - Contract Idm-E370, Docket DMEA 2356, Nikas Mining Co.'s Morning Star Tungsten Mine, Old Hat Mining District, Pinal County, Ariz.

Enclosed are four copies of a recommendation of Certification of Discovery covering Contract Idm-E370.

W. H. King

W. H. King

Enclosures

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 12 1953

MINING DIVISION
REGION IV

Memorandum

October 6, 1953

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

From : Chief, Mining Methods Br., Mining Div., Region IV

Subject : Certification of Discovery, Contract Idm-E370, Docket DMEA-2356, Nikas Mining Co.'s MOrning Star Tungsten Mine, Old Hat Mining District, Pinal County, Ariz.

As requested in your recent memorandum, the following is a brief statement describing work under Contract Idm-E370 and recommending that a certification of discovery be issued; also enclosed is Certification of Discovery.

Contract Idm-E370 was signed on July 18, 1952 for the purpose of exploring the Morning Star tungsten deposit by shaft sinking and drifting. Work started under the contract on August 27, 1952 and Stage I was completed in June 1953. Stage I consisted of erecting a headframe, constructing a hoist and storage building, a compressor shed, a change room and a powder magazine, sinking the inclined shaft a distance of 110 feet, then drifting and cross-cutting on the 100-foot level. At the end of Stage I, the operator decided not to do any further work under Stage II of the contract.

A substantial body of scheelite ore was discovered in the 100-foot level west drift. The operator's engineer estimated 7,000 tons of indicated ore with a grade of 0.726 percent WO_3 and 5,000 tons of inferred ore with a grade of 0.605 percent WO_3. In July 1953, a Bureau of Mines engineer estimated a reserve of 6,000 tons of indicated ore and 1,500 tons of inferred ore, all with a grade of 0.5 percent WO_3. On September 24, 1953, another Bureau of Mines engineer estimated that slightly over 800 tons of ore had been stoped from above this 100-foot level ore body, thus leaving approximately 6,700 tons of indicated and inferred ore (using the Bureau of Mines original ore estimate), having a grade of approximately 0.7 percent WO_3.

CC W. H. King (5)
DMEA-2356
DF

WRStorms:frj

The 800 tons of ore, that was mined from above the 100-foot level, was shipped to a mill near Apache Junction, Ariz., as explained by W. R. Hardwick in his Interim Report of September 25, 1953. The grade of this ore was not accurately determined but it seemed to have been approximately 0.7 percent WO_3.

As tungsten ore was discovered by work under this contract, I recommend that a Certification of Discovery be issued.

Walter R. Storms

Walter R. Storms

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 12 1953

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

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

To: Nikas Mining Co.
55 West Congress St.
Tucson, Arizona

Pursuant to the provisions of Exploration Project Contract No. Idm-E370, dated July 18, 1952 (Docket DMEA-2356), hereinafter called the "contract" between you and the United States of America, hereinafter called the "Government", to establish and fix the Government's percentage royalty on production and its lien thereon and on the land described in the contract, the Government considers and therefore certifies that discovery or development from which production may be made, has resulted from the exploration work.

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

Up until June 30, 1953, a substantial amount of tungsten ore had been discovered by work under the contract on the 100-foot level, and it was estimated that this ore body consisted of several thousand tons of tungsten ore, both between the 100-foot level and the surface, and below this level. The Morning Star claim, listed in the contract where royalty must be paid if ore is mined, is located in the Old Hat Mining District in the southeastern corner of Pinal County, Arizona, in section 17, Township 10 South, Range 16 East.

Dated _____

The United States of America

By_____
Administrator, Defense Minerals
Exploration Administration

400

FILE COPY
SURNAME:

Rutledge
Martin

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

October 6, 1953

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Termination of contract by agreement
Docket No. DMEA 2356 - Tungsten
Nikas Mining Company
Morning Star mine
Pinal County, Arizona
Exploration Contract No. Idm-E370

The subject contract, executed July 18, 1952, was set up in two stages. Stage I has now been completed and the Operator has requested termination of the contract because sufficient funds are not available to complete the contract and also construct a mill which will be required for production.

Stage I of the contract provided for sinking the inclined shaft an additional 110 feet, drifting 60 feet northwestward and 120 feet southeastward on the 200-foot level, and crosscutting not in excess of 60 feet from the above drifts. This work was increased by Amendment No. 2, but without an increase of funds, as follows:

(a) Extend the 60-foot drift an additional 20 feet
(b) Extend the 120-foot drift an additional 30 feet
(c) Crosscut an additional 40 feet.

The total estimated cost of Stage I was $34,600.00.

New buildings, etc.	$ 3,126.80
Equipment purchases	4,100.00
Exploration	27,373.20

Stage II of the contract provided for sinking the shaft an additional 100 feet, 180 feet of drifting, and 60 feet of crosscutting at an estimated cost of $24,600.00. Total cost of the contract was $59,200.00.

The target of the exploration program was the tungsten mineralization occurring in quartz and silicified limestone at the hanging wall of the Mogul fault. Mining by opencut and stope had

exposed such a mineralized zone of silicified limestone with a strike length of 120 feet. The ore zone of the Mogul fault deposits has been proven persistent along its dip for at least 250 feet.

By June 30, 1953, when the project was recessed by the Operator, the work under Stage I, as amended, had been substantially completed. A resume of the work completed and the costs follows:

Operating equipment purchased	$1,734.46
New buildings, etc.	3,126.80
Shaft sinking, 110 feet @ $80.10/ft.	8,810.48
Drifting, 205 ft. @ $32.45/ft.	6,651.30
Crosscutting, 88 ft. @ $55.70/ft.	4,901.41
	$25,224.45

The work was carried out in a competent manner and the costs were less than those estimated.

The exploration has revealed an area of mineralization on the west side of the mine near the property line. Reserves have been estimated by the Operator as follow:

7,000 tons of 0.726 percent WO_3 indicated above the 200-foot level.

5,000 tons of 0.605 percent WO_3 inferred to a depth of 100 feet below the 200-foot level.

The exploration has produced sufficient information to warrant the certification of a discovery. As the Operator does not have sufficient funds to complete the project and also construct the mill that will be required if the property is to produce, it is recommended that the subject contract be terminated by mutual consent and that a discovery be certified.

APPROVED

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

CC: DOCKET
ADM. READ. FILE
CODE 400
CODE 800
OPERATING COMM.

FARutledge/ls
10/6/53

10-14-53

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

224 New Customhouse
Denver 2, Colorado

October 1, 1953

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA 2356 (Tungsten), Contract Idm-E370, Nikas Mining Company, Pinal County, Arizona

Enclosed are four copies of an interim report on Contract Idm-E370 by W. R. Hardwick, Mining Engineer, U.S. Bureau of Mines.

A certification will be recommended.

W. H. King

W. H. King

Enclosures

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT - 5 1953

MINING DIVISION
REGION IV

September 28, 1953

Memorandum

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

From : Chief, Mining Methods Br., Mining Division, Region IV

Subject : Interim Report, Contract Idm-E370, Docket DMEA-2356, Nikas Mining Co.'s Morning Star Tungsten Mine, Old Hat Mining District, Pinal County, Ariz.

Enclosed are original and 6 copies of an interim report on Contract Idm-E370 by W. R. Hardwick of the Bureau of Mines. Since this visit was made, H. E. Krumlauf, Consulting engineer for the Nikas Mining Co., has sent a letter to DMEA in Washington, in answer to one from the Administrator, stating that no further DMEA exploration work under this contract is planned by the company.

Walter R. Storms

Walter R. Storms

CC W. H. King (6)
DMEA-2356
DF

WRStorms:frj

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
REGION 20
OCT - 6 1953

MINING DIVISION
REGION IV

September 25, 1953

Memorandum

To : Walter R. Storms, Chief, Mining Methods Br., Mining Div., Region IV, Tucson, Ariz.

From : William R. Hardwick, Mining Engineer, Tucson, Ariz.

Subject : Interim Report, Docket DMEA-2356, Contract Idm-E370, Nikas Mining Co., Morning Star Tungsten Mine, Old Hat Mining Dist., Pinal County, Arizona

The Morning Star Mine was visited on September 24, 1953. There was no one at the property on my first visit. Tom Callas, foreman for the operator, later in the day was contacted in Oracle so he accompanied the undersigned engineer to the property and through the mine.

Tom Callas was requested to explain what the company planned to do in the future and he stated that at a meeting of the partners a week before it was decided to continue mining and shipping ore to the mill at Apache Junction. However, later in the week A. Nikas, one of the partners, had come to the mine and told him to stop work. Callas stated that there was considerable disagreement among the partners and that one of them, John Paulos, might buy two of the others out and continue the operation. Callas stated that in this case he believed that the partners would continue the exploratinn project.

The status of the project was discussed with H. E. Krumlauf, consulting mining engineer for the operator, and Mr. Krumlauf stated that it was his belief that a loss would result from the mill test as a result of bad management. Mr. Krumlauf stated that he believed there was little possibility that present management would be successful.

In July, the Nikas Mining Co. leased a mill, that is located at Apache Junction, Ariz., for the purpose of running a large scale mill test on the ore from the Morning Star mine. No records were available but Tom Callas stated that 800 tons of ore had been mined and hauled to this mill. Mr. Krumlauf stated that 750 tons of ore had been milled and that more than 800 tons had been hauled to the mill. The grade of this ore apparently was not accurately determined.

CC W. H. King (Orig. & 6)
DMEA-2356
DF

WRHardwick:frj

Tom Callas stated that he estimated, by use of a mineral light, that the tungsten content was more than one percent. Mr. Geo. Roseveare of the Arizona Bureau of Mines stated that he believed regular samples were not taken but that at three different times he had taken mill head samples which ran 0.9, 0.4, and 0.6 percent tunsten. The average of these samples would be 0.7 percent tungsten. Mr.A. Nikas stated on September 3, 1953 that the heads of the mill averaged 0.91 percent tungsten.

Mr. Krumlauf stated that on or about September 18, the company had sold one ton of 61 percent WO_3 concentrate, and 17.5 tons of flotation concentrate which ran about 8.0 percent WO_3. Final returns for this shipment were not available.

On September 24, 1953 the area which had been stoped out above the 100-foot level was measured and the volume excavated was approximately 10,234 cu. ft. or 818 tons (using 12.5 cu. ft. per ton of ore). This was ore discovered by exploration work under the DMEA contract.

William R. Hardwick

William R. Hardwick
Mining Engineer, Mining Methods Br.,
Mining Division, Region IV

HARRY E. KRUMLAUF
CONSULTING MINING ENGINEER
TUCSON, ARIZONA

1323 E. 5th Street

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 28 1953

September 24, 1953

Mr. C. O. Mittendorf
Administrator
Defense Minerals Exploration Adm.
U. S. Department of the Interior
Washington 25, D. C.

WSM

Re: Docket No. D.M.E.A.-2356 (Tungsten)
Morning Star Mine
Pinal County, Arizona
Contract No. Idm-E 370

Dear Mr. Mittendorf:

One of the reasons for asking for a recess from the above contract, as stated in a letter to Mr. W. H. King and dated July 14 was to permit the mining of a test mill sample of ore to be concentrated in a custom mill. Subsequently a test sample of about 750 tons was shipped 100 miles to a custom mill near Apache Junction, Arizona. Although final settlement has not been received for the concentrates from the mill sample, it appears that a loss was sustained from this operation.

I had no part in the mining or milling of this mill sample since my services with the company were suspended when the DMEA contract was recessed. It is my belief, however, that the loss on the mill sample was due in part to the following reasons:

1. Improper, costly and unintelligent mining with no attempt to maintain grade.

2. The cost of the long haul from mine to mill.

3. A "patch work" mill with a flow sheet that was not entirely suited to the concentration of this ore.

4. No metallurgist in charge of the mill and very little control over its operation.

I agree that additional exploration work should be done and have recommended that an extension of time for this purpose be requested by the company. I believe that substantial additional tonnages of ore can be proven or indicated by additional exploration.

Funds are available for the additional exploration but the owners do not

Made 4
Copy retained 400

have the funds necessary to construct a mill. The mining can be placed under more competent direction but the cost of shipping to a custom mill is prohibitive. Under the circumstances the owners cannot continue with the contract and request that it be discontinued. Therefore, you may consider this letter an official request for the termination of the contract. If, however, the Government wishes to continue this operation it will be necessary to furnish financial assistance for the construction of a concentration plant.

It is my personal belief that if this operation were under competent management and a mill with a proper flowsheet were erected closer to the mine this operation should be very profitable.

Yours sincerely,

H E Krumlauf

H. E. Krumlauf
Consulting Mining Engineer

FILE COPY
SURNAME:

140

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

Rewritten by:

Rutledge
Selfridge
McKane
Martin

SEP 9 - 1953

Mr. H. E. Krumlauf
Nikas Mining Company
55 West Congress Street
Tucson, Arizona

Re: Docket No. DMEA-2356 (Tungsten)
Morning Star Mine
Pinal County, Arizona
Contract No. Idm-E370

Dear Mr. Krumlauf:

Reference is made to the subject contract, the completion date of which is July 18, 1953.

It is our understanding that Stage I has been completed but that no work other than that outlined in the June report has been performed. Consequently, the Government has the right to terminate the contract for failure to prosecute operations pursuant to the terms of the contract. We have been advised that the Nikas Mining Company now desires termination of the contract as of June 30, 1953.

The exploration program to date has been moderately successful and the Government believes that the completion of Stage II would be desirable. Therefore, if your Company is still interested in completing the contract, an extension of time for this purpose should be requested, taking into consideration the period during which the project has been recessed. If your Company is not so interested, please notify the Government officially of your decision. If we do not receive from you by October 10, 1953, a request for such an extension of time, the Government will consider that you do not wish it and will terminate this contract for the reason above assigned.

Sincerely yours,

G. O. Mittendorf (fw)

Administrator

FARutledge:AEK:ep

Copy to: Mails & Files
Admr. Reading File
DMEA Field Team, Reg. IV (2)
Mr. R. W. Geehan, B/M
Mary Miller, USGS
Mr. Martin (2)
Mr. Hofflund
Mr. Kane
Chron.
Pending

9-9-53

400

FILE COPY
SURNAME:

Rutledge
Selfridge

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

received in
by Mr Connally's
Office

Mr. H. E. Krumlauf
Nikas Mining Company
55 West Congress Street
Tucson, Arizona

Re: Docket No. DMEA 2356 - Tungsten
Morning Star Mine
Pinal County, Arizona
Contract No. Idm-E370

Dear Mr. Krumlauf:

Reference is made to the subject contract the completion date of which is July 18, 1953.

It is our understanding that no work under the contract has been done since that outlined in the June report, and that only Stage I has been completed. We have also been advised that the Company now desires termination of the subject contract as of June 30, 1953, but that it will not put this request in writing. Because the work under Stage II remains to be done and no extension of time has been requested in which to complete the contract, the Government may terminate the contract for failure to prosecute operations pursuant to the terms of the contract.

However, the exploration program to date has been moderately successful, and the Government believes that completion of the work under Stage II would be desirable. Therefore, if the Nikas Mining Company is interested in completing the contract, an extension of time in which to complete the contract should be requested. The current delay in the program, between Stages I and II, will be allowed under the previously-requested recess, but sufficient time for this delay should be considered if an extension is requested.

If the Company is not interested in completing the contract, we shall appreciate receiving official notification of this decision. However, if we do not receive by October 10, 1953, a request for extension of the time in which to complete the referenced contract, the Government will be forced to terminate the subject contract.

Sincerely yours,

Administrator

FARutledge:foc 9-3-53
cc: Docket
Code 400
Adm. Reading File
FT. Reg. 4
R. W. Geehan, USBM
Mary Miller, USGS

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

224 New Customhouse
Denver 2, Colorado

August 25, 1953

Memorandum

To: C.O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA-2356 (Tungsten), Contract Idm-E370, Nikas Mining Company, Morning Star Mine, Pinal County, Arizona

Reference is made to your letter of August 20, 1953, relative to the status of work under the subject contract.

We have been informed by telegram from the Tucson office of the Bureau of Mines that no work has been performed since June 30, 1953.

The following is quoted from a memorandum to this office by W.R. Storms dated July 21, 1953: "I talked to H.E. Krumlauf of this company on July 17, and told him that he should ask for a time extension for Contract Idm-E370 as the contract expired on July 18. He said that certain events had happened since he asked for a recess so the company did not want a recess nor an extension. I will try and get a letter from him confirming this statement."

Subsequent to the above information we were advised by Storms by telephone that the company definitely wished to terminate the contract as of June 30; however, attempts to obtain the statement in writing from the company have been unsuccessful.

As indicated in Soule's report of July 16, 1953, ore has been produced as a result of the DMEA exploration work, therefore a Certification of Discovery or Development can be executed. Therefore, we recommend that the contract be terminated as of its expiration date.

Processing of the Operator's Form MF-104, Monthly Report and Voucher, for the months of April, May and June, has been deferred pending an on-site audit of the company's accounts and receipt of the operator's proposal in the settlement of the Government's interest in jointly owned property.

As payment of the account may be held up for some time we are enclosing the following material which is part of a Washington office copy of the operator's report for the month of June 1953:

1. Form MF-104A.

2. Operator's narrative report with attached map.

3. Engineer's narrative report and memorandum of transmittal from the Chief, Mining Methods Branch, Mining Division, Region IV.

Form MF-104 will be forwarded when the report has been processed for reimbursement to the operator.

W. H. King

W. H. King

Enclosures

FILE COPY
SURNAME: 918

400

Rutledge
Martin
Matthews

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

AUG 20 1953

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

Re: Docket No. DMEA 2356 - Tungsten
Nikas Mining Company
Morning Star mine
Pinal County, Arizona
Contract No. Idm-E370

Dear Mr. King:

Reference is made to the subject docket and the data contained in J. H. Soule's report of July 16, 1953, and W. R. Storms' memorandum of July 17, 1953.

Please advise us whether the Operator has asked for an extension of time or made any recent proposal regarding the exploration program at the Morning Star mine. Your comments and recommendation on this matter will be appreciated.

Sincerely yours,

W. S. Martin
857

ACTING Chairman, Operating Committee

APPROVED:

C. H. Johnson
857
Member, Bureau of Mines

Don Larrabee
Cy 857
Member, Geological Survey

FARutledge:foc 8-17-53

cc: Docket
Code 400
FT. Reg. 4
Operating Comm.
Adm. Reading File
Mr. Geehan, USBM
Mary Miller, USGS

HHA 8-20-53

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

224 New Customhouse
Denver 2, Colorado

July 27, 1953

Memorandum

To: Secretary to the Operating Committee
Defense Minerals Exploration Administration

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA 2356 (Tungsten), Contract Idm-E370, Nikas Mining Company, Pinal County, Arizona

Enclosed for your information are three sets of data consisting of the following:

Memorandum Report from J. H. Soule, Mining Engineer, U. S. Bureau of Mines dated July 16, 1953, and transmittal thereof from the Chief, Mining Methods Branch, Mining Division, Region IV, dated July 17, 1953 relative to work under the subject contract.

W. H. King

W. H. King

Enclosures

MINING DIVISION
REGION IV

July 17, 1953

Memorandum

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

From : Chief, Mining Methods Br., Mining Div., Region IV

Subject : Interim Report on Contract Idm-5370, Docket DMEA-2356, Nikas Mining Co., Pinal County, Ariz.

Enclosed are original and 6 copies of an interim report on the above property by J. H. Soule' of the Bureau of Mines.

This company's contract expires tomorrow although only Stage 1 has been completed. The company has asked for a recess but to date has not asked for a time extension. There seems to be some interval dissension as the mine foreman, who also is part owner of the property, has had to put up a "peace bond" as he evidently had trouble with H. E. Krumlauf, the consulting engineer.

Walter R. Storms

Walter R. Storms

CC W. H. King (6)
DMEA-2356
DF

WRStorms:frj

MINING DIVISION
REGION IV

July 16, 1953

Memorandum

To : Walter R. Storms, Chief, Mining Methods Br., Mining Div., Region IV, Tucson, Ariz.

From : J. H. Soule', Mining Engineer, Tucson, Arizona

Subject : Interim Report, Docket DMEA-2356, Contract Idm-E370, Nikas Mining Co., Morning Star Tungsten Mine, Old Hat Mining District, Pinal County, Arizona.

The operator of the subject mine has applied for a recess in the operations to permit metallurgical testing of the ore and to evaluate the potentialities of the property, the results of which may lead to their undertaking or not undertaking Stage II of the project. However, the important point to be brought out is that the contract was dated July 18, 1952 and the project was to have been completed (both stages) in 12 months. This time now lacks 2 days of being fulfilled. No extension of time limit was applied for and it may be that the application for a recess would be out of order.

The Morning Star mine was visited on July 24, 1953 by T. M. Romalo and J. H. Soule' of the Bureau of Mines. At the time of the visit, none of the drifts and crosscuts on the 100-foot level had exceeded the limits imposed by the terms of the contract. The drift to the southeast was 125 feet deep (from previous measurement). The contract allowed 150 feet of southeasterly drifting, 120 feet by contract and 30 feet by amendment. A crosscut was driven southwesterly from this drift and it was 25 feet deep.

The drift to the northwest was 80 feet deep and this total was allowed by the terms of the contract, 60 feet by contract and 20 feet by amendment. A drift was driven northeasterly from this drift and it was 28 feet deep. The contract allowed a total of 60 feet of crosscutting, one from each drift. Another crosscut was driven southwesterly from this drift and was 35 feet deep. This crosscut was allowed by the terms of an amendment to the contract in which 40 feet was allowed.

CC W. H. King (Orig. & 6)
DMEA-2356
DF

JHSoule:frj

This concludes Stage I of the contract Idm-E370 and at the present time, a small amount of mining is being done with the ore being sent to a mill to determine the metallurgical characteristics of the ore. Preliminary ore estimates total about 10,000 tons of indicated and inferred ore containing an estimated 0.4 percent WO_3.

John H Soule

J. H. Soule', Mining Engineer
Mining Methods Branch
Mining Division, Region IV

MINING DIVISION
REGION IV

July 23, 1953

Memorandum

To : Walter R. Storms, Chief, Mining Methods Br., Mining Div., Region IV

From : J. H. Soule', Mining Engineer, Tucson, Arizona

Subject : Progress Report for June 1953, Docket DMKA-2356, Contract Idm-2370, Nikas Mining Co., Morning Star Tungsten Mine, Old Hat Mining District, Pinal County, Arizona.

The Morning Star tungsten mine was visited on July 14, 1953 to inspect the progress made on the subject project for the month of June 1953. The visit was made by J. H. Soule', of the Bureau of Mines. He was accompanied by Tom Callas, miner-foreman for the operator.

No drifting reportedly was done on the project during the month and 20 feet of advance was reported in the crosscut south from the east drift. As 5 feet of advance was reported for May and the crosscut measured 25 feet, the 20 feet of advance for June is approved. Low grade scheelite mineralization was noted in the crosscut.

The north crosscut from the west drift reportedly was advanced 2 feet. As 26 feet of advance was reported for April and May and as the crosscut measured 28 feet at the time of the visit, the 2 feet of advance for June is approved. The crosscut south from this same drift reportedly was advanced 13 feet. The total advance at the time of the visit was measured as 35 feet and as 22 feet previously was reported for March and May, the 13-foot June advance is approved.

As no additional advance was made during July and the time limit imposed by the terms of the contract expired on July 18, 1953, an interpretation of the wording of the contract is desirable. The

CC W. H. King (Orig. & 6)
DMKA-2356
DF

JHSoule':frj

contract states, "Drive a 60-foot, - - -: Drive a 120-foot, - - -" and Amendment No. 2 to the contract states, "Extend the West Drift 20 feet; Extend the East Drift 30 feet". A literal interpretation of the wording in the contract and its amendment No. 2 means that the East drift was to be driven 150 feet and the West drift was to be driven 80 feet. Only the 80 feet of drift to the west met these requirements, the drift to the east only being 125 feet deep. The same type of wording applies to the crosscuts which were not driven to the extent stated in the contract and Amendment No. 2. Does the wording of the contract mean that the stated units of work must be performed?

A nice body of scheelite ore was encountered in the west drift and its 2 crosscuts. Ore reserves calculated by the engineer for the operator shows 7,000 tons of ore indicated by the exploration and 5,000 tons inferred. Using the same basic data, the ore reserves were recalculated by the Bureau of Mines engineer. An area of 1,640 square feet of mineralization was shown on the lower level and 480 feet on the top level, the arithmetical average of the two is 1,060 square feet. As the above areas were horizontal in extent, the volume of the prism was found by applying the vertical distance between the two levels, or 70.7 feet. This gives the prism a volume of 74,942 cubic feet and by applying a tonnage factor of 12.5, the prism contains nearly 6,000 tons of ore. This ore would be indicated. Inferred reserves were calculated by extending the ore one-half the distance between the levels, or 35 feet, below the lower level to the apex of an inverted oblique pyramid. This pyramid contains 19,133 cubic feet of volume or slightly over 1,500 tons, using a tonnage factor of 12.5. Thus, total indicated and inferred ore reserves are 7,500 tons.

Grade estimates by the operator's engineer are 0.726 percent WO_3 for the indicated ore and 0.605 percent WO_3 for the inferred ore. These results were based on channel samples from the lower level and from an average of the ore mined in the top level. The sample results were weighted. However, grab samples taken by an engineer of the Bureau of Mines and from preliminary results on ore mined seem to indicate that the above grade estimates are a little high. Pending more accurate information, the reporting engineer estimates the grade to be 0.5 percent WO_3 for the 7,500 tons of indicated and inferred ore.

Because of the waiving of documentation on this project, the details of the costs are not known. Judging from the 35 feet of advance reported for the month and the $2,351.41 expended during the month, the unit cost of$67.18 seems somewhat excessive. Also it is noted that a

total of $900.00 for an accountant has been charged to the project. This charge is questioned as footnote 1 on page 3 of the contract and footnote 1 on the first page of Amendment No. 2, in defining the duties of the engineer-supervisor specifically state "He also shall keep the necessary accounts." or "He shall also keep the necessary accounts.". Agreement is noted between the totals on Forms MF-104 and MF-104A.

It seems as if the Nikas Mining Co. plans no further work on the project although the second stage as outlined in the contract, with important modifications, seems justified. In view of the above and because of the expiration of the contract, it is recommended that payment of the accompanying voucher, Form MF-104, be withheld pending an audit of the project accounts, settlement of, and liquidation of jointly owned equipment and excess supplies.

John H. Soule

John H. Soule', Mining Engineer
Mining Methods Branch
Mining Division, Region IV

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

400

224 New Customhouse
Denver 2, Colorado

April 27, 1953

APR 30 1953

WSM

Mr. Jay L. Chambers, Chief
Contract Administration and Audit Division
Defense Minerals Exploration Administration
Interior Building
Washington 25, D. C.

Re: DMEA 2356, Idm-E370
Nikas Mining Company

Dear Mr. Chambers:

Receipt is acknowledged of your letter of April 24 regarding the subject matter.

In line with your instructions, the amount of $56.50 which had been disallowed for the purchase of a blasting machine, will be reinstated on our next audit.

Very truly yours,

T. H. Brading
Auditor

FILE COPY
SURNAME:

800
Talbert
Chandler

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

APR 24 1953

Mr. Thomas W. Breding
DMEA Auditor
224 New Customhouse Building
Denver 2, Colorado

Subj: DMEA-2356, Ida-E370
Nikos Mining Company

Dear Mr. Breding:

Further reference is made to the interim Audit Report and Certificate dated March 4, 1953, covering the subject project, and particularly to your exception of $56.50 for the costs of a blasting machine, which was the subject my previous letter of March 13, 1953 and your reply of March 17, 1953.

The Iron and Ferro-Alloys Division of this Administration, in reviewing your Audit Report, has questioned the propriety of this exception and has recommended by memorandum of April 23, 1953 (copy attached) that "the purchase of said blasting machine be allowed as a necessary item for use in the electric blasting required by the Arizona Mine Safety Rules of the State Mine Inspector." It would appear, therefore, that the cost of this blasting machine may be construed as being within the category of "such other necessary, reasonable direct costs of performing the exploration work", since it is the policy of the Administration to contribute to such direct costs of exploration that result from the requirements of state laws or regulations.

Furthermore, in this particular case, the application specified that the Operator proposed to use electric blasting on the shaft, drifts and raises and indicated blasting supplies (including explosives, detonators, wire, etc.) at an estimated cost of $4.27 per foot for the shaft and $2.38 per foot for the drifts and raises. The Field Team's final report on this application indicated concurrence with these estimated unit costs. Neither the application nor the final report furnished itemized estimated costs for the various blasting supplies. Therefore, it appears that it was the mutual intent of all parties concerned to include the costs of electric blasting in the costs allowable under the terms of the contract.

It also appears that, if the cost of this blasting machine had been less than $50.00, there would have been no question of its allowance as an item of costs under Operating Material and Supplies. It should be understood that this dividing line of $50.00 between Supplies and Equipment is an arbitrary one, being established primarily for

accounting purposes to avoid records on voluminous items of an equipment nature but of inconsequential value.

It is suggested, therefore, that your exception be rescinded and that your next Audit Report and Certificate on this project reflect the reinstatement of the cost of the blasting machine as an allowable cost of the project.

Sincerely yours,

(Signed) J. L. Chambers

Joy L. Chambers, Chief
Contract Administration
and Audit Division

Attachment

EDTalbert/wb
April 24, 1953

Copy to: Docket
Admr. Reading File
Mr. Martin
Mr. Chambers

4/24/53

FILE COPY
SURNAME:

Rutledge
Martin

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

W. S. in R. & R.

Contract Administration and Audit Division, DMEA
Iron and Ferro-Alloys Division, DMEA

April 23, 1953

Disallowance of blasting machine by auditor
Docket No. DMEA 2356 - Tungsten
Nikas Mining Company
Morning Star Mine
Pinal County, Arizona
Contract No. Idm-E-370

Reference is made to the subject contract and to the disallowance by the auditor (report dated March 4, 1953) of a blasting machine listed on the February 1953 cost report.

We recommend that the purchase of said blasting machine be allowed as a necessary item for use in the electric blasting required by the Arizona Mine Safety Rules of the State Mine Inspector.

W. S. Martin

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

FARutledge/ls
4/22/53
Copy to: Docket
Admr. Read. File
Code 400

Mr. Martin: (Paragraph 2 something like this) on second thought, I don't believe we should mention this item under the heading supplies, because of the cost.)

" We recommend that, in order to authorize the blasting machine as an allowable cost of the project and execute you prepare an amendment to include the blasting machine under the heading <u>Operating Equipment</u>, <u>Equipment to be purchased</u>."

March 13

Air Mail

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

Re: Docket No. DMEA 2356 - Tungsten
Nikne Mining Company
Morning Star Mine
Pinal County, Arizona
Contract No. Idm-M370

Dear Mr. King:

Reference is made to the subject contract and to the disallowance by the auditor of a blasting machine listed on the February 1953 cost report.

We recommend that you prepare an amendment, if one has not already been prepared, allowing the purchase of said blasting machine. It is our belief that this necessary incidental should be approved, although the cost was slightly over the $50.00 limitation for equipment items, as an item of supplies for the electric blasting required by the Arizona Mine Safety Rules of the State Mine Inspector.

Sincerely yours,

Chairman, Operating Committee

APPROVED:

FARutledge/ls 4/20/53

cc: Docket
Adm. Reading File
Field Team, Reg. 4
Code 400
Oper. Committee
D. M. Lemmon, USGS
R. W. Geehan, USBM

Member, Bureau of Mines

Member, Geological Survey

Docket No DMEA 2356 - Tungsten
Nikos Mining Company
E-370

New Buildings + Improvements

Contract

Labor	1876.80
Supplies	1250.00
	3,126.80

		Total
Aug - Sept.	$ 2,368.60	
Oct.	1,132.54	3501.14
Nov.	24.75	3525.89
Dec.		3,126.80

Docket No. DMEA 2356- Tungsten
Nikas Mining Company
E 37.0

Operating Equipment Purchased

Aug - Sept	$1150.45	
Oct.	271.51	$1421.96
Nov.	25.00	1446.96
Dec.	212.50	1659.46

Docket No. DMEA 2356- Tungsten
Nikas Mining Company
E370

Shaft

	feet			
Aug-Sept.	0		396.98	
Oct.	40.0		2593.28	2990.26
Nov.	36.0		2383.57	5373.83
Dec.	34.0	110.0	2185.09	7558.92
Jan.	0.0	110.0	866.65	8425.57
March.	0.0	110.0	475.55	8901.12

Docket No. DMEA 2356 - Tungsten
Nikos Mining Company
E370

Drift

	feet		
Oct.		188.28	
Dec.		137.86	$326.14
Jan.	108	1933.36	2259.50
Feb.	72	2168.51	4428.01
March	25	1289.12	5717.13

Docket No. DMEA 2356 - Tungsten
Nikos Mining Company
E 370

	Consult		
March	7	2 43.76	2 43.76

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

224 New Customhouse
Denver 2, Colorado

March 26, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 30 1953

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Amendment No. 2 to Contract Idm-E370, Docket DMEA 2356, Nikas Mining Company

Enclosed are the original and two copies of Amendment No. 2 to Contract Idm-E370. Copies of this amendment have been given to the operator, the Fiscal Officer, Region IV, and a copy has been retained for our files.

W. H. King
W. H. King

Enclosures

cal
3/30

FILE COPY
SURNAME:

Talbert
Chambers

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

MAR 13 1953

Mr. Thomas H. Brading
DMEA Auditor
224 New Customhouse Building
Denver 2, Colorado

Re: DMEA-2356, Idm-E370
Silkas Mining Company

Dear Mr. Brading:

Reference is made to the Interim Audit Report and Certificate, covering the referenced project, transmitted by your letter of March 5, 1953. This report and certificate is approved and normal distribution of the other copies may be effected.

More information, however, would be appreciated as to the reason for the disallowance of $56.50 covering the cost of a blasting machine. It is my understanding that a blasting machine is a type of detonator and the estimates for Operating Materials and Supplies, as stated in Exhibit "A" of the contract, included costs of "detonators". Furthermore, neither the items nor the estimated costs of Operating Equipment to be purchased were designated as "allowable machines" in the Exhibit "A". It appears, therefore, that the cost of the blasting machine may be allowable cost of the project provided that it was required for the economic and beneficial performance of the work and has the Executive Officer's approval.

It is suggested that you discuss this matter with Mr. King. If he approves this item as an allowable cost of the project, it may be reinstated during your next audit of the project.

In the future please differentiate on the Audit Certificate between the prior exceptions by the certifying officer and those resulting from the audit.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Chief
Contract Administration
and Audit Division

S.N.
3/12/53

EDTalbert/wb
March 12, 1953

Copy to: Docket
Mails & Files
Mr. Chambers

FILE COPY
SURNAME:

Rutledge
Martin
Selfridge
Eggman

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

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

MAR 1 2 1953

Re: Docket No. DMEA 2356 - Tungsten
Nikas Mining Company
Morning Star Mine
Pinal County, Arizona
Contract No. Idm-E-370

J. C. 3/12/53

Dear Mr. King:

We are enclosing the original and five copies of Amendment No. 2 to the above referenced contract signed by the Administrator for the Government.

If the terms and conditions of this amendment are satisfactory to you and the Operator, all six copies should be signed and the usual distribution made.

If any part of this 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 subject amendment are to be returned to this office, together with the proposed changes for consideration.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Enclosure

Approved:

J. H. Hedges

Member, Bureau of Mines

D. M. Lemmon

Member, Geological Survey

CC: Docket
Field Team, Region 4
Code 400
Admn. Read. File
Operating Committee
R. W. Geehan, USBM
D. M. Lemmon, USGS

FARutledge/hhb
3/10/53

FILE COPY
SURNAME:

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

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

MAR 3 1953

Re: Docket No. DMEA-2356 - Tungsten
Nikas Mining Company
Morning Star Mine
Pinal County, Arizona

J.C. 3/3/53

Dear Mr. King:

Reference is made to your memorandum of February 3, 1953 in regard to items (2) and (6) of the above-cited contract.

Your interpretation that Supervision and Consultants under item (2) and New Buildings, Improvements, Installations, etc., under item (6) are "allowable maximums" by terms of the contract itself, is correct.

By starring the total amount allowed in Exhibit "A" for Labor, Supervision and Consultants, a maximum is established for Labor provided the entire amount allocated to Supervision and Consultants is used for that purpose. However, if less money is used for Supervision and Consultants, more money can be used for Labor. In addition, Labor in Stage I is broken down into two sections. More money can be used for one section if less money is used in the other.

Exhibit "A" of the subject contract was drawn up using as a basis the information supplied in the Field Team report on the property dated May, 1952. The estimated time for Stage I is five months. This includes one month for the preparatory surface work and four months for the underground work.

The identifiable labor and supplies and materials relating to the preparatory work were separated from those relating to the underground work and incorporated in item (6). However, the item for Supervision was not prorated, therefore, item (2) contains the Supervision for both the surface preparatory work and the underground

work. Under the contract the amount of $2,500, the "allowable maximum" for Supervision in Stage I, would be reduced by the amount chargeable to item (6).

Shortly, we shall issue instructions regarding the arrangement of estimated costs in reports and the writing of contracts which include Rehabilitation and Repairs and New Buildings, etc. We hope that the new instructions will eliminate the present auditing and other difficulties that we are experiencing with executed contracts.

Nevertheless, all Operators who have contracts with provisions for Rehabilitation and/or New Buildings, etc., should keep separate and so report all costs pertaining to these two items.

Sincerely yours,

C. O. Mittendorf

Administrator

JLChambers/wb 2/19/53
GCSelfridge/pa 2/26/53

Copy to: Docket
Admr. Reading File
Administrator
Mr. Chambers
Mr. Martin
Mr. Brading

FILE COPY
SURNAME:

800

Chamber

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

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

Re: Nikos Mining Company
Docket DMEA-2356
Contract IDM-137C (Tungsten)

Dear Mr. King:

Reference is made to your memorandum of February 3, 1953, in regard to Items (2) and (6) of the above-cited contract.

Your interpretation that Supervision and Consultants under Item (2) and New Buildings, Improvements, Installations, etc., under Item (6) are "allowable maximums" by terms of the contract itself, is correct.

By storing the total amount allowed in Exhibit "A" for Labor, Supervision and Consultants, a maximum is established for Labor provided the entire amount allocated to Supervision and Consultants is used for that purpose. However, if less money is used for Supervision and Consultants more money can be used for Labor. In addition, Labor in Stage I is broken down into two sections. More money can be used for one section if less money is used in the other.

Unless otherwise stipulated in Exhibit "A", Item (5) Rehabilitation and Repairs and Item (6) New Buildings, Improvements, Installations, carry their own supervision and labor allocations. In the above cited contract, however, provision was made both for labor and supervision in Item (2). Therefore, no labor and supervision can be charged to Item (6) which would exceed the amounts for these items allowed in Item (2). It is admitted that in the contract under discussion this point was not very clear in Exhibit "A".

Sincerely yours,

Administrator

JIChambers/wb
February 19, 1953

Copy to: Docket
Admr. Reading File
Administrator
Mr. Chambers
Mr. Martin
Mr. Prading

FILE COPY
SURNAME:

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

Rutledge
Martin
Selburg
Johnson

BW

MAR 2 1953

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

Re: Docket No. DMEA 2356 - Tungsten
Nikas Mining Company
Morning Star Mine
Pinal County, Arizona
Contract No. Idm-E370

F.C. 3/2/53

Dear Mr. King:

Reference is made to the subject docket and the Operator's request of February 12, 1953, for additional exploration work on the 100-foot level. The additional work was requested on the basis that the total cost should not exceed the maximum amount allowed in the contract for Stage I.

The additional exploration requested was shown on a map attached to the Operator's letter of February 12, 1953, and consisted of the following: 90 feet of drift and 40 feet of crosscut. The ore zone west of the shaft was to be explored by extending the drift 20 feet, with 30 feet of additional crosscut, and 20 feet of drifting from the crosscuts at both 25 feet north and 25 feet south of the West drift. Parallel drifts at an interval of 25 feet would be classified as development and would, therefore, not be allowed under the Defense Minerals Exploration Program.

The East drift also was to be extended 30 feet and an additional 10 feet of crosscut was to be allowed by the proposed amendment.

We believe that requests for additional work under Defense Minerals Exploration Administration contracts should be substantiated in most instances by geologic data supported by assays. In the present case no assays were submitted and the geologic data included only the words "ore zone" and the indicated position of the fault zone.

However, on your recommendation and because the actual costs to date have been kept well within the estimated costs and funds are available under Stage I for additional exploration, a modified amendment has been approved as follows:

(1) Extend the West drift 20 feet.

(2) Extend the East drift 30 feet.

(3) Add to the contract an additional 40 feet of crosscutting at locations to be selected by the Operator and Field Team.

Please instruct the Operator that he may undertake the above work and that formal approval will follow.

Sincerely yours,

George C. Selfridge

(JHB)

Chairman, Operating Committee

Approved:

J. H. Hedges (JHB)

Member, Bureau of Mines

T. P. Thayer (JHB)

Member, Geological Survey

Copy to: Docket
Field Team, Region 4
Admn. Read. File
Code 400
Oper. Committee
D. M. Lemmon, USGS
R. W. Geehan, USBM

FARutledge/ls
2/26/53

FILE COPY
SURNAME:

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

Chief Counsel, DMEA

March 2, 1953

Rutledge
Martin

Iron and Ferro-Alloys Division, DMEA

Review and preparation of amendment
Docket No. DMEA 2356 - Tungsten
Nikas Mining Company
Morning Star Mine
Pinal County, Arizona
Contract No. Idm-E370

n.s. - R. v R.

SW

Transmitted herewith is the rough draft of a proposed amendment to the amended contract for your use in preparing Amendment No. 2 in final form.

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

Attachment

FARutledge/ls
3/2/53

cc: Docket
Code 400
Admn. Read. File

EXPLORATION PROJECT CONTRACT
NIKAS MINING COMPANY
DOCKET NO. DMEA 2356

AMENDMENT No. 2

It is agreed this _____ day of _____, 1953, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and Nikas Mining Company, each acting in consideration of the agreement of the other to the terms hereinafter set forth, that effective February 15, 1953, the Exploration Project Contract No. Idm-E370, dated July 18, 1952, between the parties hereto, as amended, be further modified and amended as follows:

In Exhibit "A" under Description of the Work, Stage I, add:

7. Extend the 60-foot, 5 x 7-foot drift an additional 20 feet northwestward.

8. Extend the 120-foot, 5 x 7-foot drift an additional 30 feet southeastward.

9. Crosscut an additional 40 feet at locations to be selected by the Operator and Field Team. Size of crosscuts to be approximately 5 x 7 feet in the clear.

In Exhibit "A" under (2) Labor, Supervision, and Consultants, Stage I, delete:

1 - Engineer-supervisor 1/ @ $35.00 per 8-hour working day but not to exceed $500.00 per month, 5 months $2,500.00*

and substitute:

1 - Engineer-supervisor 1/ @ $35.00 per 8-hour working day but not to exceed $500.00 per month, 7½ months $3,750.00*

In Exhibit "A" under (4) Operating Equipment, To be rented, Stage I, delete:

1 - 210 cfm Diesel-engine operated compressor @ $400.00 per month*, 4 months $1,600.00

1 - Hoist, single drum, gasoline engine driven, 4,000 pound rope pull @ $100.00 per month*, 4 months 400.00 $2,000.00

and substitute:

1 - 210 cfm Diesel-engine operated compressor @ $400.00 per month*, 6½ months		$2,600.00
1 - Hoist, single drum, gasoline engine driven, 4,000 pound rope pull @ $100.00 per month*, 6½ months	650.00	$3,250.00

This amendment shall not be construed to increase the estimated total cost of Stage I of the project, the aggregate total amount which the Government may be obligated to pay, or the percentage of costs which the Government may be obligated to pay under the provisions of Article 8 of the contract form. The additional funds required for the items approved under this amendment are available from the unexpended funds remaining from those specified under the original contract. These funds were not expended because operating costs were lower than those estimated when the contract was prepared.

THE UNITED STATES OF AMERICA

By _____
Administrator, Defense Minerals
Exploration Administration

NIKAS MINING COMPANY

By _____
H. E. Krumlauff, General Manager

Docket

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

224 New Customhouse
Denver 2, Colorado

Air Mail

February 17, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 18 1953

Memorandum

To: C. O. Mittendorf

From: Field Team, Region IV

Subject: Docket DMEA-2356, Contract Idm-E370, Nikas Mining Co., Pinal County, Arizona

Enclosed are two copies of a request for an amendment submitted by the Nikas Mining Co. We recommend that the contract be amended to allow the additional work requested by the Operator and to provide for an additional two and one-half months rental of the compressor and hoist and two and one-half months additional supervision. This request is being forwarded to your office for processing because it is not within the authority delegated to Region IV to increase allowable maximums. Prompt action on this amendment would be appreciated because the work under Stage I of the contract is almost completed.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

Enclosures

Copy retained 500

NIKAS MINING COMPANY
55 W. Congress Street
Tucson, Arizona

February 12, 1953

Mr. W. R. Storms
Chief, Arizona-New Mexico Branch
Mining Division, Region 4
U. S. Bureau of Mines
Box 4097, University Station
Tucson, Arizona

Re: Docket DMEA 2356
Contract Idm-E 370

Dear Mr. Storms:

The above contract states that 120 feet of drifting and 30 feet of cross-cutting are to be done on the east side of the shaft at the 100-foot level together with 60 feet of drifting and 30 feet of cross cutting on the west side of the shaft. Conditions at this time indicate that additional footage of drifting and cross-cutting would be desirable to delimit one ore zone and explore another. I, therefore, request that the above contract be amended to permit the following:

1. Extension of the west drift an additional 20 feet together with an addition 70 feet of crosscuts and drifts to explore the ore zone. (See enclosed sketch).

2. Extend the east drift an additional 30 feet, and to drive an additional 10 feet of crosscut if the ore zone is encountered (see sketch).

In order to complete Stage 1 of the contract and do the additional amount of work listed above I request that the contract be amended to permit the following:

1. Rent the compressor for an additional 2½ month maximum at a cost of $147.50 per month.

2. Rent the hoist for an additional 2½ months maximum at a cost of $100.00 per month.

3. Extend the time for supervision for 2½ months maximum at a cost of $500.00 per month.

If the above amendments cannot be granted I request the following amendments

1. The west drift be driven an additional 20 feet.

2. The length of the east drift be reduced 20 feet.

3. The entire 60 feet of cross-cutting be done in the ore zone on the west side.

4. To rent the compressor for an additional 1½ months on the above mentioned terms.

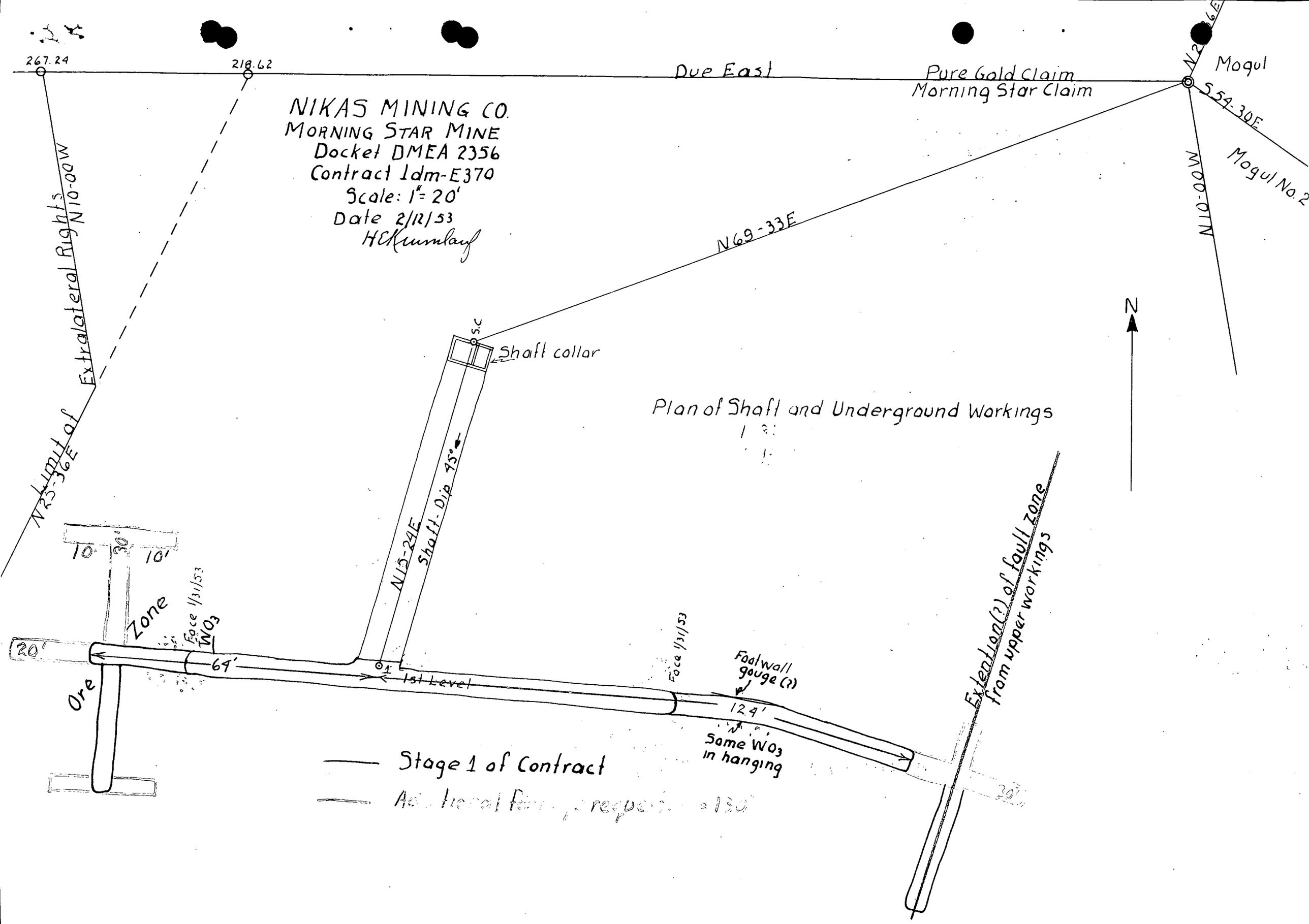
5. To rent the hoist for an additional 1½ months on the above terms.

6. Extend the period of supervision 1½ months at $500.00 per month.

The above amendments to be granted on the basis that the total cost shall not exceed the maximum amount allowed in the contract for Stage 1 .

Sincerely yours,

H. R. Krumlauf
Consultant for the
Nikas Mining Company


NIKAS MINING CO.
MORNING STAR MINE
Docket DMEA 2356
Contract Idm-E370
Scale: 1" = 20'
Date 2/12/53
HCKumlauf
267.24
218.62
Due East
Pure Gold Claim
Morning Star Claim
Mogul
S 54-30E
Mogul No. 2
N 10-00W
N 69-33E
Extralateral Rights
N 25-36E
Shaft collar
S.C.
Plan of Shaft and Underground Workings
N
N 15-24E
Shaft Dip 45°
10'
30'
10'
20'
Zone
Face 1/31/53
WO3
64'
1st Level
Ore
Face 1/31/53
Footwall gouge (?)
124'
Some WO3 in hanging
Extention(?) of fault zone from upper workings
30'
Stage 1 of Contract

FILE COPY
SURNAME:

Chambers
F. Johnson

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

M. S. in R. & R.

D. M. E. A.

3461 Jay L. Chambers 2612

143983.97 Mining Fund, 1952
February 13, 1953

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

Omea 2356

Re your telephone conversation with Chambers 2-11-53, Contract 1370, Nikar Mining Company. Chambers says his previous interpretation was general, but under specific terms of this contract supervision was allowed under Item (2) for New Buildings, etc., under Item (6). No supervision expense was allowed under Item (6). This particular project contract did not follow our general rule in regard to supervision for Item (6).

FRANK E. JOHNSON
Frank E. Johnson
Deputy Administrator

JLChambers/wb
February 13, 1953

Copy to: Docket
Adm. Contract File
Business Audit
Mr. Johnson
Mr. Martin
Mr. Chambers

SENT
FEB 13 1953

Clerical Service Section

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

224 New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 5 1953

February 3, 1953

Memorandum

To: C. O. Mittendorf, Administrator, Defense Minerals Exploration Administrator

WSM

From: Executive Officer, Field Team, Region IV

Subject: DMEA Docket 2356 (Tungsten) Contract Idm-E370, Nikas Mining Co., Pinal County, Arizona

In view of the ambiguities of the contract we are requesting clarification of the following items in the contract.

Stage I

Item (2) Labor, Supervision, Consultants
Item (6) New Buildings, Improvements, Installations

With reference to Item (6), it is stated on the reverse side of Form MF-104 that work under Item (6) includes labor, supervision, technical services, materials, etc.

Item (2) Supervision is designated as an allowable maximum in the amount of $2500.00. Item (2) Labor is not designated as an allowable maximum in the usual manner, however in effect it is an allowable maximum as the total amount for supervision and labor is designated as an allowable maximum.

It appears that if the allowable maximum for supervision, in the amount of $2500.00 is reduced by the amount chargable within the designated allowable maximum of $3126.80, authorized under Item (6) then in effect the Operator would be prohibited from expending the total amount authorized under the contract by the amount for supervision charged to the work under Item (6).

The amount of $3,126.80 authorized under Item (6) is not designated as an "allowable maximum" in the usual manner, however, Article 6, Item (6) of Exploration Project Contract Form MF-200 states that the estimated cost of such work is an "allowable maximum."

The labor incident to work under Item (6) is included in the amount of $3,126.80 as a separate item, and in addition to the labor included under Item (2). As the labor under Item (2) is in effect an allowable maximum and the labor under Item (6) variable within the amount estimated for Labor and

material under Item (6) it is very difficult to audit the payrolls to maintain a control on the allowable maximum. Also, when labor rates are scheduled, as under Items (2) and (6), inclusive of payroll tax and overtime it presents a most difficult problem involving the necessity for extensive tabulations and computations to ascertain that the wage rates have not been exceeded, that is, if it is intended that the established rates are to be considered as the maximum.

It appears that the contract should be amended to exclude supervision costs from the allowable maximum costs under Item (6), or else the total estimated cost of the work be excluded from the allowable maximum stipulation.

It is contemplated that an on-site audit of the project accounts will be in progress during the week of February 16-21, therefore it is imperative that we receive clarification of the matters noted prior to that time.

John F. Shaw for
W. H. King

FILE COPY
SURNAME:

Rutledge
Martin
Selfridge

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

JAN 2 9 1953

BW

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

Re: Docket No. DMEA 2356 - Tungsten
Nikas Mining Company
Morning Star Mine
Pinal County, Arizona
Contract No. Idm-E370

J.C. 1/29/53

Dear Mr. King:

Reference is made to the subject docket and your letter of January 19, 1953, regarding ownership of the claim on which exploration under the referenced contract is currently in progress.

You were correct in your letter to Mr. Molson dated January 19, 1953, that the exploration project was on the Morning Star claim. This may clearly be seen by reference to Article 2 of the signed contract, Idm-E370, which states: "Patented Morning Star lode claim in Section 17, T. 10 S., R. 16 E., Old Nat Mining District, recorded in Book 6, page 533, as indicated on the map attached hereto and made a part hereof, entitled 'Nikas Mining Co., DMEA-2356 - Maudina and Morning Star Tungsten Mines, Pinal County, Arizona,' * * * *." The Operator did not, therefore, state that he was entitled to possession of the Maudina claim as you inferred in your letter of January 19, 1953, to Mr. Mittendorf.

A copy of the above map is enclosed for your information. The Maudina claim was shown because of its extralateral rights on the Morning Star claim. As indicated, the workings under the referenced exploration contract were to be stopped short of the plane representing the limits of these rights.

A copy of the Landlord's Subordination Agreement signed by Elizabeth Lambert Wood, February 20, 1952, is also enclosed. A copy of this form should already be attached to your copy of the contract, but may have been overlooked inasmuch as the older and shorter Form MT-202 was used.

Sincerely yours,

George C. Selfridge (2HB)

Chairman, Operating Committee

Enclosures

Approved:

J. H. Hedges (2HB)

Member, Bureau of Mines

A. R. Kinkel, Jr. (2HB)

Member, Geological Survey

FARutledge/ls
1/26/53

cc: Docket
Field Team, Region IV
Code 400
Oper. Committee
Admn. Read. File
D. M. Lemmon, USGS
R. W. Geehan, USBM

FILE COPY
SURNAME:
800

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

Talbert
Chambers

JAN 26 1953 BW.

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

Re: Docket DMEA-2356
Contract Idm-2370
Nikas Mining Company

Dear Mr. King:

Reference is made to your letter of January 15, 1953, in reply to a letter dated January 8, 1953, from the Chief, Contract Administration and Audit Division, relative to the costs as reflected on the October MF-104 for the subject project.

Your letter requests clarification on the point as to whether it is the Field Team's responsibility to check "allowable maximums" in those cases where documentation requirements have been waived in accordance with Circular 19.

It is true that the waiver of documentation may eliminate the possibility of checking some "allowable maximums", particularly with respect to sub-items of costs designated as such. However, in cases similar to the subject project, where the items designated in the contract and Exhibit "A" as "allowable maximums" correspond to, and are reported as, line items on the Form MF-104 the administrative examination should include a check of the pertinent items.

Your explanation of the over-breakage on the shaft has been noted and, based upon your recommendation, no exception will be taken to the costs of the shaft sinking in this instance.

Sincerely yours,

C. O. Mittendorf (fw)
Administrator

BW. 1-26-53

EDTalbert/wb
January 23, 1953

Copy to: Docket
Admr. Reading File
Administrator
Mr. Martin
Mr. Brading
Mr. Chambers

Docket

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 21 1953

224 New Customhouse
Denver 2, Colorado

January 19, 1953

AIRMAIL

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 2356, Contract Idm-E370, Nikas Mining Company

Enclosed are two copies of a letter from E. H. Molson which states that his company owns the Maudina claim.

Article 2 of Contract Form MF-200 lists the Maudina and Morning Star Tungsten Mines. The map attached to the exploration project contract indicates that all the work is being done on the Morning Star claim. However, it appears that the operator misrepresented the facts when he stated he was entitled to possession of the Maudina. Page 3 of the final report on Docket DMEA 2356 states that the Morning Star is owned by Elizabeth L. Wood, Oracle, Arizona, and the Young Men's Christian Association of Tucson, Arizona. Our copy of the contract contains Owner's Consent to Lien Form MF-203 signed by the Young Men's Christian Association of Tucson, but we do not have an Owner's Consent to Lien signed by Elizabeth L. Wood. It is possible that there is a change in ownership since the final report was written, however we do not have that information in this office.

MSM: Yes, we do — it is part of the Landlord's Subordination Agreement form. LS.

We are writing Mr. Molson and stating that all the work authorized under the exploration project contract is on the Morning Star claim. We are referring the enclosed letter to you for whatever action you may consider necessary inasmuch as the contract was prepared in the Washington office.

W. H. King

W. H. King

Enclosures

Copy retained 400

C O P Y

MOLSON & CO.
Graphite Division
3135 Quimby Street
San Diego 6, California

January 12, 1953

Mr. Robert B. Bradford,
Regional Director,
General Services Administration,
49 4th St.,
San Francisco 3,
California.

Sir:

I note in the December issue of Pay Dirt that the Maudina and Morningstar mines located near Oracle, Arizona, were the subject of an exploratory loan for tungsten to the Nikas Mining Co.

The Maudina is our property and we have no knowledge of such a transaction. The two properties have a common side line. Please advise us.

Very truly yours,

MOLSON & CO.

/s/ E. H. Molson

E. H. Molson

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

224 New Customhouse
Denver 2, Colorado

January 19, 1953

Mr. E. H. Molson
Molson & Company
2135 Quimby Street
San Diego 6, California

Dear Mr. Molson:

Your letter dated January 12, 1953 to Mr. Robert B. Bradford, Regional Director, General Services Administration, San Francisco, California, has been referred to this office for reply.

The work authorized under the exploration project contract between the Government and the Nikas Mining Company is on the Morning Star claim. No work has been authorized on the Pure Gold claim which we believe is the property referred to by you as the Maudina mine.

Very truly yours,

W. H. King

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

JFS:jp
cc Contract Idm-E370
Chron
Robert B. Bradford
H. C. Miller
C. O. Mittendorf (2)

Docket

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

224 New Customhouse
Denver 2, Colorado

January 15, 1953

Memorandum

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 19 1953

To: C. O. Mittendorf, Administrator

From: Executive Officer, Field Team, Region IV

Subject: Docket DMEA 2356, Contract Idm-E370, Nikas Mining Company

Enclosed are two copies of a letter dated January 8, 1953 from the Chief of the Contract Administration and Audit Division.

Also enclosed are two copies of our reply to this letter.

W. H. King

W. H. King

Enclosures

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

224 New Customhouse
Denver 2, Colorado

January 15, 1953

Memorandum

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 20 1953

To: Jay L. Chambers, Chief
Contract Administration & Audit Division

From: Executive Officer, Field Team, Region IV

Subject: Contract Idm-E370, Docket DMEA 2356, Nikas Mining Company

Reference is made to your letter dated January 8, 1953 regarding Docket DMEA 2356, Contract Idm-E370, Nikas Mining Company.

Documentation was waived on this contract. Article 3, DMEA Circular 19 states: "The Executive Officer may waive the requirment for documentary support of the monthly invoice, except for purchases of equipment." Consequently, exceeding the maximum allowable cost for New Buildings, Improvements, etc. in the amount of $374.34 was inadvertently overlooked. However, article 6 of Circular 19 states: "Of course, auditing may also be required as a prerequisite to payment of any project for which the Executive Officer or the Finance Officer has doubts as to the authenticity, reasonableness or propriety of the costs claimed." This could be interpreted to mean that this office should also check for allowable maximums when documentation is waived. We would appreciate clarification of this point. Contract Idm-E370 contains a number of items that are specified as allowable maximums, and the contract is difficult to administer. This contract has been placed in line for an interim audit. We appreciate your calling this overpayment to our attention, and we will deduct it from the next payment.

Regarding the size of the shaft, our understanding is that the shaft is not timbered except for stulls and skids on the footwall. It is difficult and sometimes impossible to maintain a shaft the exact size stipulated. If a vein or plane of weakness runs through the shaft, the shaft will break wider or longer than it has been drilled. Also, it is sometimes easier to work in a shaft that is larger than the specified size, and the shaftmen may increase the size of the shaft if not closely supervised. We believe that the increased size of the shaft is due to a combination of the above circumstances. The Bureau engineer's narrative report states that the over-breakage was called to the supervisor's attention, and "he <u>had</u> noted the over-breakage and <u>had</u> instructed the shaftman to cut down the size in the future."

Copy retained 400

The implication is that the superintendent was already aware that the shaft was too large, and had taken steps to reduce the size. We believe that an operator cannot always retain an untimbered opening the exact size specified without increasing the cost of the operation, and that all the charges should be allowed in this instance.

W. H. King

W. H. King

JFS:es

cc; Mittendorf (2)
Contract
Storms
Townsend
Chron.
Koschmann (2)

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 1 1953

224 New Customhouse
Denver 2, Colorado

January 9, 1953

Memorandum

To: Secretary to the Operating Committee
Defense Minerals Exploration Administration

From: Executive Officer, Field Team, Region IV

Subject: Form MF-104, DMEA Docket 2356, Contract Idm-E370 (Tungsten)
Nikas Mining Co's. Morning Star Mine, Pinal County, Arizona

Enclosed are two copies of the Operator's Monthly Progress Report Form MF-104, and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data for the period of November, 1952, pertaining to DMEA Docket 2356, Contract Idm-E370, Nikas Mining Co's. Morning Star Mine, Pinal County, Arizona

W. H. King
W. H. King

Enclosures

FILE COPY
SURNAME:
800

Talbert
Rutledge
Selfridge
Chamber

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

JAN 8 1953

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

Re: Docket DMEA-2356
Contract Idm-E370
Nikas Mining Company

Dear Mr. King:

In reviewing the October, 1952 Form MF-104 for the referenced exploration project it has been noted that the approved totals to date for item (6) New Bldgs., Improvements, etc., amount to $3,501.14. This is $374.34 in excess of the amount of $3,126.80 shown for this item in the estimates of costs listed in Exhibit "A" of the contract.

By the terms of Article 6 of the contract the amounts listed under this item on Exhibit "A" are "allowable maximums".

It also appears from the engineer's report attached to the MF-104 that the shaft has been sunk with a cross section of approximately 6 by 10 feet rather than the 5 by 8 feet specified in Exhibit "A" of the contract. If this is a fact the question arises as to whether or not an equitable deduction from the costs of the shaft-sinking is in order.

Your comments on these two points would be appreciated.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Chief
Contract Administration
and Audit Division

1-8-53

EDTalbert/wb
January 8, 1953

Copy to: Admr. Reading File
Docket
Mr. Selfridge
Mr. Brading
Mr. Chambers

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

224 New Customhouse
Denver 2, Colorado

WASHINGTON 25, D. C.

December 17, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 2 1952

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, Field Team, Region IV

Subject: Form MF-104, DMEA Docket 2356, Contract Idm-E370 (Tungsten)
Nikas Mining Co's. Morning Star Mine, Pinal County, Arizona

Enclosed are two copies of the Operator's Monthly Progress Report MF-104 and 104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data for the month of October, 1952, pertaining to DMEA Docket 2356, Contract Idm-E370, Nikas Mining Co.

John F. Shaw for
W. H. King

Enclosures

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

224 New Customhouse
Denver 2, Colorado

December 11, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 15 1952

Mr. H. E. Krumlauf
Nikas Mining Co.
53 W. Congress Street
Tucson, Arizona

Re: Docket DMEA-2356
Contract Idm-E370

Dear Mr. Krumlauf:

Consistent with authority delegated the Executive Officer, DMEA Field Team, Region IV, we hereby waive the requirement for you to provide documentary support of Form MF-104 (Revised-April 1952) Operator's Monthly Report and Voucher, beginning with the month of October, 1952, except for support of equipment purchases for which the individual costs exceed $50.00 as explained on the reverse side of Form MF-104 (Revised).

In lieu of documentary support of the monthly voucher, an auditor from the Contract Administration and Audit Division will make interim audits of the accounts pertaining to the exploration project and will make a final audit on completion or termination of the contract, before the final voucher is processed for reimbursement.

This waiver does not forego the requirement for a concise but complete narrative that must accompany the original and each copy of the Monthly Report.

Very truly yours,

W. H. King

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

JWT:oc
cc: Operating Committee (2)
Contract Admin. & Audit Div.
Fiscal Officer, Region IV
THBrading
WRStorms
JWTownsend
Contract
Chron.
AHKoschmann (2)

Docket Copy

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 27 1952

224 New Customhouse
Denver 2, Colorado

October 21, 1952

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Amendment No. 1 to Contract Idm-E370, DMEA Docket 2356, Nikas Mining Company (Tungsten)

Enclosed are the original and two copies of Amendment No. 1 to Contract Idm-E370. Copies of this amendment have been given to the operator, the Fiscal Officer, Region IV, and a copy has been retained for our files.

Also enclosed are ~~two~~ 3 copies of a letter from the operator requesting this amendment, three copies of a memorandum from the Bureau Engineer recommending this amendment, and two copies of a Power of Attorney authorizing Mr. Krumlauf to act for the company.

W. H. King
W. H. King

Enclosures

RECEIVED
OCT 31 1952
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

cor 10.27

Cleared Wes 10/28

MINING DIVISION
REGION IV

September 25, 1952

Memorandum

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

From : L. A. Stewart for Chief, Arizona-New Mexico Br., Mining Div., Region IV

Subject : Nikas Mining Co., Pinal County, Ariz., DMEA Docket 2356, Contract Idm-E370

Enclosed are original and 5 copies of request for amendment to above contract and 1 signed and attested copy of Power of Attorney for Mr. M. E. Krumlauf.

From a discussion with Krumlauf, it appears that his suggested disposal of waste and ore by division of the present ore bin is technically more feasible than the original proposal of a trestle and will be less costly.

The necessity of renting one 105 c.f.m. compressor to start work may be essential. When more air capacity is desired the contracted 210-c.f.m. compressor might be available. If not, two 105's would serve the same purpose and rental of them would not cost more than rental of the larger machine. It would appear that an amendment would not be necessary for this item.

If the changes require amendments, I recommend that they be granted.

Lincoln A. Stewart

Lincoln A. Stewart, Mining Engineer
for Walter R. Storms, Chief
Arizona-New Mexico Branch
Mining Division, Region IV

CC W. H. King (6)
DMEA-2356
DF

LAStewart:frj

Sept. 24, 1952

Mr. W. R. Storms,
Chief, Arizona-New Mexico Branch,
Mining Division, Region 4,
U. S. Bureau of Mines,
University of Arizona,
Tucson, Arizona

Re: DMEA Docket 2356
Contract Idm-E370

Dear Mr. Storms:

Concerning part I-b on page I of the contract awarded to Nikas Mining Company which states: 'Construction of trestle to mine dump". Rather than build the trestle, it will be less costly to divide the present ore bin into two parts, one part to handle ore found during the exploration program, and the other part to handle waste. The waste would then be trammed a short distance from the waste bin to the dump in a mine car.

A trestle, if constructed, would be 22 feet high at the mine end and much higher at the other end. Extra long or spliced timber would be necessary, and timber of this type is expensive and difficult to handle. The high trestle would be a hazard. The suggested change would permit the dumping of waste anywhere along the crest of the waste dump.

To date I have been unable to rent a 210 c.f.m. compressor. Five different concerns in the Tucson-Phoenix area have been contacted without success. All concerns have compressors of 105 c.f.m. capacity, and it will be necessary to start shaft sinking operations with one of the smaller units and either obtain a larger machine when one is available or add an additional small unit.

It is understood that neither of the above changes will result in an increase in the cost of the project.

If it is necessary to amend the contract to make the above changes, please consider this letter as a request for such an amendment. No.

I am enclosing a copy of a Power of Attorney which gives me the authority to act as the Company's agent.

Sincerely yours,

H. E. Krumlauf, General Manager
Nikas Mining Company

HEK/1

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

224 New Customhouse
Denver 2, Colorado

August 29, 1952

Memorandum

To: Secretary to the Operating Committee
Defense Minerals Exploration Administration

From: Executive Officer, Field Team, Region IV

Subject: Contract No. Idm-E370, Docket DMEA 2356 (Tungsten)
Nikas Mining Company

Enclosed are the original and two copies of Contract No. Idm-E370. Copies of this contract have been given to the operator, the Fiscal Officer, Region IV, and a copy has been retained for our files.

W. H. King

W. H. King

Enclosures

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

224 New Customhouse
Denver 2, Colorado

August 28, 1952

Memorandum

To: W. R. Storms

From: Executive Officer, DMEA Field Team, Region IV

Subject: Contract Idm-E370, Docket Number DMEA-2356, (Tungsten), Nikas Mining Company

Enclosed is a copy of a letter from Mr. H. E. Krumlauf, General Manager, Nikas Mining Company, stating that he started working on August 27, 1952.

W. H. King

W. H. King

Enclosure

JFS:fwe

cc: Sec. Oper. Comm.
Contract
Koschmann (2)
Chron

HARRY E. KRUMLAUF
Consulting Mining Engineer
Tucson, Arizona

August 26, 1952

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

COPY

Reference to:

Docket D.M.E.A. 2356

Contract I d m - E - 370

Nikas Mining Company

55 West Congress St.,

Tucson, Arizona

Subject:

The above contract has been signed as directed and all copies have been returned to

Mr. W. R. Storms.

Work will be started at the mine tomorrow, August 27, and it is hoped that this will be the beginning of a successful operation.

Sincerely yours,

H. E. Krumlauf
General Manager
Nikas Mining Co.

FILE COPY
SURNAME:

Selfridge
Muttendorf

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

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

AUG 1 5 1952

Re: Docket No. DMEA 2356 - Tungsten
Nikas Mining Company
Morning Star Mine
Pinal County, Arizona
Contract No. Icm-t-370

Dear Mr. King:

This will acknowledge receipt of your letter of July 31, 1952, commenting on the proposed contract with Nikas Mining Company and returning six copies of the contract.

We assume that you discussed this contract with the Operator in order to obtain his views and to avoid unnecessary delay before returning it to this office.

The contract was prepared substantially along the lines recommended by the Field Team except for the major changes mentioned in our letter of July 18, 1952. These were made only after conferring with the Field Team in Tucson. The estimated costs, except for items of Operating Materials and Supplies, Equipment to be Rented and Equipment to be Purchased, were indicated as "allowable maximums" as it was felt that we had been liberal in our estimates as to time and costs. The establishment of "allowable maximums" is for the purpose of giving the Field Teams better control over expenditures and to force the Operator to conduct more efficient and economical operations. They also afford the Field Teams the benefit of referring to Washington difficult decisions where the Operator is pressing for a change that they might not fully approve. However, since you have recommended that the "allowable maximums" be removed whenever possible, we have revised the contract accordingly.

With respect to your recommendations that work under Item "1" be deleted from the first part of the Exhibit and be incorporated under Article (6), the costs for this work are readily identified under Articles (2) and (3) as indicated. We have not deleted the work under Item "1" from the first part of Exhibit "A" as it describes the work to be done under the contract approximately in the order it will be done.

However, we removed the items under Articles (2) and (3) relating to the preliminary work and placed them under Article (6).

As to a break-down of costs for labor, supplies and equipment to conform with the "allowable maximums," the Operator should be requested to furnish such tabulation of costs, cumulative month by month, with his MF-104 reports. In many cases the operators are doing this as they maintain such records for their own information. Your office will, of course, need to establish records showing the "allowable maximums" to check against the monthly progress reports, so that these items will not be exceeded.

The columns titled "Authorized by Contract" on Form MF-104A were designed for work paid for on a unit cost basis and not on an actual cost basis, so normally would not be used when work is paid for on the latter basis.

The revised contract is forwarded herewith. Please have it executed by the Operator and distributed in the usual manner.

Sincerely yours,

CE 8/15/52

(signed) FRANK E. JOHNSON (JHB)

Chairman, Operating Committee

Enclosures

Approved:

C. N. Johnson (JHB)
Member, Bureau of Mines

D. M. Lemmon (JHB)
Member, Geological Survey

FEJohnson/GCSelfridge/bih/ls

cc: Docket
Adm. Read. File
Op. Committee
Region IV
Mr. Thayer
Mr. Hedges
Mr. Selfridge
Mr. F.E.Johnson

FILE COPY
SURNAME:

[redacted] [redacted] Mittendorf

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

Defense Minerals Exploration Admn.
DMEA 3923.970 Working Fund,
DMEA

Selfridge

August 13, 1952

DMEA 2356

Mr. H. E. Krumlauf
Wilma Mining Company
55 West Congress Street
Tucson, Arizona

Contract mailed Region IV July 18 and returned here for revision.

Will be remailed August 14. Sincerely regret delay.

C. O. Mittendorf (Kw) P.N. 8-14-52

Acting Administrator
Defense Minerals Exploration
Administration

GCSelfridge'lm
8/13/52

cc: Admn. Reading File
Docket
R. W. Geehan, USBM
D. M. Lemmon, USGS
Field Team Reg. IV
Audits
G. C. Selfridge

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

WESTERN UNION

1201

W. P. MARSHALL, PRESIDENT

SYMBOLS

DL=Day Letter

NL=Night Letter

LT=Int'l Letter Telegram

VLT=Int'l Victory Ltr.

The filing time shown in the text of this message and day letters is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

PA023 LB482

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L TSA624 NL PD=TUCSON ARIZ 12=

FRANK E JOHNSON, ACTING ADMINISTRATOR=

DEFENSE MINERALS EXPLORATION ADMINISTRATION DEPT

OF THE INTERIOR WASHDC=

CONTRACT FOR APPROVED EXPLORATION LOAN #2356 HAS NOT BEEN

RECEIVED. PLEASE ADVISE ME CONCERNING IT=

H E KRUMLAUF GEN MGR NIKAS MINING CO 55

WEST CONGRESS=

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 13 1952

AUG 3 8 49 AM '52

BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

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

AUG 4 1952

224 New Customhouse
Denver 2, Colorado

July 31, 1952

Memorandum

To: C. O. Mittendorf, Acting Administrator
Defense Minerals Exploration Administration

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 2356, Contract Idm-E370 (Tungsten), Nikas Mining Company, Morning Star Mine, Pinal County, Arizona - Analysis of the contract as written and recommendations for revision of the contract

Enclosed are six copies of the subject contract with our comments.

Stage II work is contingent on results of Stage I work. In all probability the results of Stage I work will necessitate a revision of the work scheduled under Stage II. A revision of the costs incident to a revision of the work scheduled would not be within the authority delegated to Region IV, as the estimated costs are all indicated as allowable maximums.

In the event it becomes necessary to extend the completion time for performing the work, it will be necessary to amend the entire exhibit, because the allowable maximums for equipment depreciation and other costs are set up on the basis of the original time allowed to complete the work.

Administration of the contract is made difficult by reason of the allowable maximum stipulation for all costs, because there is no provision on the MF-104 Report to show a breakdown of costs between the various categories of work, and there is no provision on Form MF-104A for a breakdown of costs between labor, supplies, equipment charges or other costs. The only way a control of allowable maximum costs can be maintained would be to require the operator to supply the breakdown, cumulative month by month, or for him to submit a monthly breakdown and we would tabulate and maintain the cumulative total. Region IV office does not have sufficient personnel to perform the additional work involved in maintaining a tabulated control of the allowable maximums.

Reference is made to page 7, item (6), New Buildings, Improvements, Installations.

The Exhibit states, "None except as indicated in (2) and (3)." This will be confusing to the operator as there is nothing to indicate that all costs pertaining to work on Stage I, "item 1 (a) to (h) incl.",

must be reported under item (6) on Form MF-104.

The estimated costs of performing the various categories of work under Stages I and II are not broken down so that it is possible to set up the approved costs on Form MF-104A. Supervision, part of the supplies, operating equipment to be rented or depreciated, and repairs and replacement parts are not apportioned to the various categories of work. Separate MF-104 Reports for each Stage will be necessary to permit a control of allowable maximum costs.

Recommendations pertaining to revisement of Exhibit "A" are as follows:

1. That work under item "1" be deleted from the first part of the Exhibit and be incorporated under article (6).

2. That the allowable maximum stipulation be removed from total costs wherever possible, especially Labor and Operating Equipment, and only be stipulated on the basic rates.

3. That Supervision, Supplies, Operating Equipment, and repairs and replacement parts be apportioned to the various work categories so that approved costs for each type of work may be recorded in the "Authorized Costs" column of Form MF-104A.

4. That Form MF-104A be revised to reflect directly such costs as are stipulated as allowable maximum, or that contracts be prepared in a manner to conform to the basis of reporting as required on the present Form MF-104.

W. H. King

W. H. King

Docket 400
FILE COPY
SURNAME:

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

JUL 18 1952

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

Re: Docket No. DMEA 2356 - Tungsten
Nikas Mining Company
Morning Star Mine
Pinal County, Arizona

Dear Mr. King:

We are enclosing the original and five copies of the above referenced exploration contract signed by this office for the Government, together with Exhibit "A" (8 pages), two subordination agreements, an affidavit, and one map.

If the terms and conditions of this contract are satisfactory to you and the Operator, all six copies should be signed by a duly authorized official of the Company. The "Operator's Copy" is to be given to the Operator; the "Field Team's Copy" retained by your office; and the remaining four copies returned to this office.

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

Please note that the following major changes have been made in the contract as originally outlined by the field team:

1. The item of 100 feet for crosscuts and raises under each stage has been decreased to a maximum of 60 feet for two crosscuts only. No raises are to be allowed as the driving of raises with such a short distance between levels is development rather than exploration.

2. Under Stage II, the shaft is to be sunk an additional 100 feet rather than 110 making the total inclined depth of the shaft 210 feet.

3. Under Stage I, labor for preparatory work, 20 shifts of 6 men @ $93.84/shift increased from $91.08 a shift since no combination of workers could be assembled at given rate. Rate of $93.84 would allow for: 1 miner-foreman @ $16.00, 2 carpenters @ $14.80, and 3 laborers @ $12.00, plus 15 per cent for taxes and insurance.

4. Depreciation for use of stoper owned by the Operator was eliminated since no raises are included in the Contract.

5. The major items of equipment, compressor and mine hoist have been set up on a rental basis as per telephone conversation with T. M. Remslo of the field team on June 4. If the Operator is unable to rent these items and can show proof, an amendment can be prepared to allow for their purchase.

6. No allowance was made for drill steel or drill bits by the field team. These are now included under item for operating materials and supplies - timber, explosives, etc. for both drifting, crosscutting, and shaft sinking.

7. Ventilation pipe was added under item for supplies.

8. Item for replacement parts was reduced to $50.00 a month.

9. Only purchase of one sinker-type rock drill with pneumatic leg was allowed.

The above changes have decreased the amount of the contract from $67,388.00 to $59,200.00.

Please note the restricting clause on employment of the engineer-supervisor. As originally submitted, the applicant requested $500.00 per month for supervision by Mr. Krumlauf, who is also a school teacher. The $500.00 was allowed as a maximum based upon actual 8 hour working days.

Under Article 2 of the contract, an additional phrase has been added to the description of the property to cover the possibility of the Nikma Mining Company being able to acquire a lease on the adjoining property during the life of this contract.

Under Article 3, the starting date has been left blank and is to be filled in when the contract is signed by the applicant.

Sincerely yours,

7/18/52

(signed) FRANK E. JOHNSON

Chairman, Operating Committee
Defense Minerals Exploration
Administration

Enclosures

Approved:

J. H. Hedges

Member, Bureau of Mines

T. P. Thayer

Member, Geological Survey

FARutledge'lm
7/2/52

cc: Admn. Reading File
Docket
R. W. Seehan, USBM
D. M. Lemmon, USGS
Field Team Reg. IV
Operating Committee
G. C. Selfridge
F. A. Rutledge

FILE COPY
SURNAME:

Selfridge
FE Johnson

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

G. C. Selfridge - Extension 5284

Dept. of the Interior

Defense Minerals Exploration
Administration

DMEA 2356

STRAIGHT WIRE

JULY 15, 1952

MR. H. E. KRUMLAUF
NIKAS MINING COMPANY
55 WEST CONGRESS STREET
TUCSON, ARIZONA

HAVE YOU SECURED SIGNATURE ON NEW CONSENT TO LIEN FORMS SENT YOU

JULY 2? APPROVED CONTRACT HELD HERE PENDING RECEIPT THESE FORMS.

(signed) FRANK E. JOHNSON (for)

FRANK E. JOHNSON
ACTING ADMINISTRATOR, D.M.E.A.

S.N.
7-16-52

GCSelfridge:ls 7/15/52

cc: Docket
Admn. Reading File
Field Team, Reg. 4
R. W. Geehan, USBM

cc: G. C. Selfridge
D. M. Lemmon, USGS
Confirmation - sent

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 Arizona, County of Pima, described as follows:1/

Patented Mining Claim [illegible] claim in Section [illegible], T. [illegible] S., R. [illegible] E., [illegible] Maricopa [illegible] recorded in Book [illegible], Page [illegible].

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/ Mikes Mining Company, a partnership, composed of Tom [illegible] Collins, A. Mikes, John Gekas, John Paulos, and Merle Seymour, 55 West Congress Street, Tucson, Arizona

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 production3/ 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/$ 40,000.00, 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 14th day of July, 195 2.

Mikes Mining Company [Seal]
Tucson, Ariz.

[Seal]

By Ashby L. Lohse [Seal]
Partner, Corporate

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.

DEPARTMENT OF THE INTERIOR
Defense Liberties Administration
RECEIVED
JUL 16 1952

State of Arizona

County of

On this 14th day of July 1952 before me Clermont Loper the undersigned officer personally appeared Ashby Lohse who acknowledged himself to be the Recording Secretary of the Young Men's Christian Association of Tucson, Arizona, a corporation, and that he, as such YMCA Secretary, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as Recording Secretary.

IN WITNESS WHEREOF, I have hereunto set my hand and seal.

Clermont Loper (L.S.)
Notary Public

My com. expires Feb. 9, 1955.

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : Operating Committee, DMEA

DATE: July 2, 1952

FROM : Iron and Ferro-Alloy Division, DMEA

SUBJECT: Approval of Exploration Contract
Docket No. DMEA 2356 - Tungsten
Nikas Mining Company
Morning Star Mine
Pinal County, Arizona

The attached contract is now in satisfactory legal form with the exception of the attachment of the Owner's Consent to Lien signed by the YMCA of Tucson, Arizona. The appropriate forms were sent to the applicant and returned incorrectly signed, thus necessitating the sending of a second set.

If the contract is approved and signed, please return it to the Division for attachment of the Owner's Consent to Lien form. When this is received, the docket and contract will then be sent to Mr. Adams for mailing.

G. C. Selfridge

G. C. Selfridge, Chief
Iron and Ferro-Alloy Division

Attachment

FILE COPY
SURNAME:

Selfridge
Mittendorf

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

JUL 2 - 1952

Hon. Carl Hayden
United States Senate
Washington 25, D. C.

My dear Senator Hayden:

This is to acknowledge receipt of your inquiry of June 27, 1952, regarding the status of Docket No. DMEA 2356, Nikas Mining Company.

We have prepared a contract to explore the property of the Nikas Mining Company but are holding it here in Washington awaiting receipt of a subordination agreement from the applicant. As soon as we receive the agreement, we shall send the contract to the Field Team for final execution.

Sincerely yours,

7/2/52

C. O. Mittendorf (for)

Acting Administrator
Defense Minerals Exploration
Administration

GCSelfridge:ls 6/30/52

CC: Docket # 2356
Admn. Reading File
G. C. Selfridge

KENNETH MC KELLAR, TENN., CHAIRMAN
CARL HAYDEN, ARIZ.
RICHARD B. RUSSELL, GA.
PAT MC CARRAN, NEV.
JOSEPH C. O'MAHONEY, WYO.
DENNIS CHAVEZ, N. MEX.
BURNET R. MAYBANK, S. C.
ALLEN J. ELLENDER, LA.
LISTER HILL, ALA.
HARLEY M. KILGORE, W. VA.
JOHN L. MC CLELLAN, ARK.
A. WILLIS ROBERTSON, VA.
STYLES BRIDGES, N. H.
HOMER FERGUSON, MICH.
GUY CORDON, OREG.
LEVERETT SALTONSTALL, MASS.
MILTON R. YOUNG, N. DAK.
WILLIAM F. KNOWLAND, CALIF.
EDWARD J. THYE, MINN.
ZALES N. ECTON, MONT.
JOSEPH R. MC CARTHY, WIS.

EVERARD H. SMITH, CLERK
THOMAS J. SCOTT, ASST. CLERK

United States Senate

COMMITTEE ON APPROPRIATIONS

June 27, 1952

6/12 - draft to Legal.

Mr. C. O. Mittendorf
Acting Administrator
Defense Minerals Exploration
Administration
Department of the Interior
Washington 25, D. C.

Dear Mr. Mittendorf:

Referring to your courteous letter of May 26, copy attached for identification, I shall appreciate your advising me of the status of Docket No. DMEA 2356.

Yours very sincerely,

Carl Hayden

U. S. S.

enclosure returned to Senator

P. S. Please address reply to me; sending me original and one copy. Kindly return enclosures.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 30 1952

400

FILE COPY
SURNAME:

Selfridge

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

JUL 2 1952

Air Mail

Mr. H. E. Krumlauf
Consulting Engineer for
Nikas Mining Company
55 West Congress Street
Tucson, Arizona

Re: Docket No. DMEA 2356 -
Tungsten
Nikas Mining Company
Morning Star Mine
Pinal County, Arizona

Dear Mr. Krumlauf:

We regret to inform you that we cannot use the Owner's Consent to Lien form and the affidavit recently sent us because of the way in which they were signed. We are returning the documents herewith and, in addition, new forms to be executed in the manner indicated.

We appreciate the prompt return of the first forms and assure you that the contract will be submitted for final approval in Washington just as soon as we receive six copies of the executed new forms.

Sincerely yours,

C. O. Mittendorf (fw)

7-2-52

Acting Administrator
Defense Minerals Exploration
Administration

Enclosures

GCSelfridge:ls
7/2/52

CC: Docket
Admn. ReadingFile
Field Team, Reg. 4
R. W. Geehan, USBM
D. M. Lemmon, USGS
G. C. Selfridge, DMEA

FILE COPY 400
SURNAME:

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

Rutledge
Selfridge
Abbott

Air Mail

JUN 25 1952

Mr. H. H. Krumlauf
Consulting Engineer for
Nikma Mining Company
55 West Congress Street
Tucson, Arizona

Re: Docket No. DMEA 2356 - Tungsten
Nikma Mining Company
Morning Star Mine
Pinal County, Arizona

Dear Mr. Krumlauf:

Reference is made to your wire of June 21, 1952. The Landlord's Subordination Agreement was not received in our Division office until June 18 after the letter of inquiry had already been sent.

In reviewing the docket, the Legal Department has decided that an Owner's Consent to Lien signed by the Young Men's Christian Association of Tucson, Arizona, also will be required.

Please have the enclosed Owner's Consent to Lien executed with the signature of the officer signing the instrument duly acknowledged on the form attached. Return the original and five copies of each as soon as possible in order that we may complete the processing of your application.

Sincerely yours,

George C. Selfridge

cc 6/25/52

G. C. Selfridge, Chief
Iron and Ferro-Alloy Division

Enclosures

FARutledge:lm
6/24/52

cc: Admn. Reading File
Docket
R. W. Geehan, USBM
D. M. Lemmon, USGS
Field Team Reg. IV
G. C. Selfridge
F. A. Rutledge

Sol

FILE COPY
SURNAME:

aekane

UNITED STATES 140
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

June 25, 1952

Memorandum

To: Acting Administrator

Through: G. C. Selfridge

From: Chief Counsel

Subject: Nikas Mining Company, Docket No. DMEA-2356 N S R+R

There is attached, in satisfactory legal form for execution, a contract covering the above-described project, subject to the attachment of the Owner's Consent to Lien signed by the YMCA of Tucson, Arizona.

J. L. Hofflund

J. L. Hofflund
Chief Counsel

Attachments

AEKane/bjl

Copy to: Mails & Files
J. L. Hofflund
A. E. Kane
G. C. Selfridge
Chron.

FILE COPY
SURNAME:

AEKane

UNITED STATES 140
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

June 23, 1952

Memorandum

To: G. C. Selfridge N.S. in R. + R.

From: Chief Counsel

Subject: Nikas Mining Company — Docket No. DMEA-2356

The contract in this case is being prepared, but in addition to the Landlord's Subordination Agreement signed by Elizabeth L. Wood there will have to be attached thereto an Owner's Consent to Lien signed by the Young Men's Christian Association of Tucson, Arizona. It is therefore suggested that the attached Owner's Consent to Lien be sent out to the field attorney for the signature of the YMCA with the further instruction that the signature of the officer signing the instrument should be duly acknowledged on the form attached.

J. L. Hofflund

J. L. Hofflund
Chief Counsel

Attachments
AEKane/bjl

Copy to: Mails & Files
J. L. Hofflund
A. E. Kane
Chron.

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

WESTERN UNION

1201

W. P. MARSHALL, PRESIDENT

SYMBOLS

DL=Day Letter

NL=Night Letter

LT=Int'l Letter Telegram

VLT=Int'l Victory Ltr.

(47)

The filing time shown in the date line on telegrams and day letters is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

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C O MITTENDORF. ACTING ADMINISTRATOR DEFENSE MINERALS EXPLORATION=U S DEPARTMENT OF THE INTERIOR WASHDC=

LANDLORDS SUBORDINATION AGREEMENTS RECEIVED BY INTERIOR DEPARTMENT ON JUNE THIRTEENTH 1952 REGISTERED RECEIPT 48338 SIGNED BY MOFFITT PLEASE REPLY=

NIKAS MINING CO H E KRUMLAUS=

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 23 1952

DME A2356

6/18 forms made

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

JUN 23 7 16 AM '52

BUREAU
MAIL
WASHINGT

1952 JUN 21 PM 2

DLY

FILE COPY 400
SURNAME:

Rutledge
Selfridge.

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

JUN 1 7 1952

Mr. H. E. Krumlauf
Consulting Engineer for
Wilms Mining Company
55 West Congress Street
Tucson, Arizona

Re: Docket No. DMEA 2356 - Tungsten
Wilms Mining Company
Morning Star Mine
Pinal County, Arizona

Dear Mr. Krumlauf:

Reference is made to the Landlord's Subordination Agreements which were forwarded to you with our letter of May 26, 1952, for completion as indicated. Please return these forms as soon as possible since they are needed to complete the processing of your application.

If for any reason you are unable to return the subordination agreements at this time, it would be appreciated if you would notify us when they could be expected.

Sincerely yours,

C. O. Mittendorf (fw) cc 6/18/52

Acting Administrator
Defense Minerals Exploration
Administration

FARutledge'lm
6/17/52

cc: Admn. Reading File
Docket
R. W. Geehan, USBM
D. M. Lemmon, USGS
Field Team Reg. IV
G. C. Selfridge
F. A. Rutledge

FILE COPY 400
SURNAME:

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

Rutledge
Selfridge

John L. Hoffland, Chief Counsel, DMEA June 12, 1952

Iron and Ferro-Alloy Division, DMEA

Review and preparation of Exploration Project Contract
Docket No. DMEA 2356 - Tungsten
Nikas Mining Company
Morning Star Mine
Pinal County, Arizona

Transmitted herewith is the subject docket, together with a rough draft of a proposed exploration project contract for your use in preparing the contract in final form.

Landlord's Subordination Agreements were received that were incomplete and six copies of the agreement were mailed May 26, 1952, with complete instructions. These will be added to the contract when received.

Please note the following addition under Article 2: "and any other property contiguous thereto which the Operator may later acquire". This has been discussed with Mr. Rubin and it is possible that changes may be required.

George C. Selfridge

G. C. Selfridge, Chief
Iron and Ferro-Alloy Division

Attachments

FARutledge'lm
6/12/52

cc: Admn. Reading File
Docket
G. C. Selfridge
F. A. Rutledge

IN REPLY REFER TO:

G-MD-DML

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 10 1952

June 5, 1952

Memorandum

To: George C. Selfridge, DMEA

From: D. M. Lemmon, USGS

Subject: Field Report DMEA 2356 - Tungsten
Nikkas Mining Co.
Morning Star mine
Pinal County, Arizona

The Morning Star mine was examined March 18 and 25, 1952 by T. M. Romalo of the Bureau of Mines. His report, dated May 1952, recommends approval of a two-stage project costing $67,388.

The recommended proposal consists largely of mine development (220 feet inclined shaft, with 180 feet of drift on the 100 level and 180 feet on the 200 level and 100 feet of raises and crosscuts on each level.) The total cost, although reduced a third below that of the original application, is still too high for the expectable target. Some reduction can be made by decreasing the capital expenditures for equipment (substituting rentals) and by eliminating 200 feet of raises and crosscuts. If the proposed 360 feet of drift be labeled "drift and crosscut", the footage allowed will probably permit any necessary crosscuts. Raises are not necessary for the exploration.

I concur with the favorable recommendation of the Field Team, but suggest that DMEA make any cuts in cost that appear feasible.

D M Lemmon
D. M. Lemmon

Copy retained 400

I R 315 Diesel 9 liters/hr

19 gallon/shift

180 shifts @ 19 gallon = 3420 gallon

@ 18¢ = $\frac{615.6}{9 \text{ month}}$ = $151.40 /month

for diesel fuel

$98.60 for gasoline for transportation / men on equipment from Oracle and occasional trips to town.

Oracle 34 miles from Tucson

mine 7.5 miles from Oracle

DMEA 2356 - Tungsten
Nikas Mining Co.
Morning Star Mine
Pinal County, Arizona

Morning Star claim (patented) Book 6 Page 553
Old Hat Mining District
Pinal County, Arizona

Owners
Elizabeth L. Wood, life tenant, Oracle, Ariz
YWCA, Tucson, Arizona

Mining Lease 5 years plus 5 years renewable, 10% royalty
Lon D. Callon
A. Nikas
John Bekas
John Pavelos
Monte Seymour
} dba Nikas Mining Company

Lease signed Jan. 3, 1952

Mining lease mentions adjoining unpatented claims not covered by application.

Adjoining Pure Gold Claim on north has extralateral rights. Judgment and decree No 25215 dated June 19, 1947 places east end line of Pure Gold claim 60 feet from proposed shaft at 130-foot level and 75 feet from proposed shaft at 260-foot level. East end line of Morning Star is 270 and 340 feet away

on the respective levels. Block under application triangular in shape and averages 350 feet in width in area to be explored.

Exploration will be carried up to Pure Gold east claim line. Nitro Mining Company now trying to lease Pure Gold claim.

Milling by Nitro Mining Company of 568 tons @ 1.23 % WO_3 produced slightly over 200 units of WO_3 or a recovery of about 38 %

Mogul fault dips 30 to 60° to the south

$500.00 a month for part time supervision

Owners have
mounted jackhammer
stoper
air + water hoses for each shift
100 feet each of 2- & 1-inch pipe

Two stage
I 110-foot shaft
60 foot drift to west
120 foot drift to east
100 feet crosscuts or raises
II 100-foot main shaft
60 foot drift to 200-foot level west
120 " " " " " " east
100 feet crosscuts or raises

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

224 New Customhouse
Denver 2, Colorado

May 28, 1952

DEPARTMENT OF THE INTERIOR
Bureau of Land Management
JUN 2 1952

Memorandum

To: C. O. Mittendorf

From: Executive Officer, Field Team, Region IV

Subject: Docket DMEA 2356 (Tungsten), Morning Star Lode Claim, Pinal County, Arizona

The final report recommending approval of exploration assistance, Docket DMEA 2356, Morning Star Lode Claim, was forwarded May 21. Your letter and the report probably crossed in the mails.

Recd in 400 on 6/2/52

W. H. King

W. H. King

FILE COPY
SURNAME:

Selfridge.

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

MAY 26 1952

Mr. H. E. Krumlauf
Consulting Engineer for
Nikas Mining Company
55 West Congress Street
Tucson, Arizona

Re: Docket No. DMEA 2356 - Tungsten
Morning Star Lode Claim
Pinal County, Arizona

Dear Mr. Krumlauf:

Returned herewith are the four incompleted copies of the Landlord's Subordination Agreement which you forwarded to us with your letter of February 19, 1952. Will you please return six copies of the Agreement completed as shown on the enclosed sample. The date of signing by the lessor should also be inserted.

Recently we have received several congressional inquiries regarding the status of the Company's application for exploration assistance. Review of our docket shows that the Field Team was awaiting additional information from the Company before submitting its report. We trust that this information has been supplied.

Sincerely yours,

5/26

C. O. Mittendorf (for)

Acting Administrator
Defense Minerals Exploration
Administration

Enclosure

GCSelfridge:ls 5/20/52
cc: Docket DMEA 2356
Admn. Reading File
G. C. Selfridge
Field Team, Region 4
D. M. Lemmon, USGS
R. W. Geehan, USBM

400

FILE COPY
SURNAME:

Selfridge.

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

MAY 26 1952

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

Re: Docket No. DMEA 2356 - Tungsten
Morning Star Lode Claim
Pinal County, Arizona

Dear Mr. King:

Recently we have had several congressional inquiries regarding the status of the subject application. Review of our files shows that Region IV's monthly report for March 20 to April 20, 1952, indicated that the examiners will probably recommend exploration assistance when additional information is received from the applicant. Have you received this information?

We have received copies of the Landlord's Subordination Agreement but have returned them to the Company because of incompleteness and insufficiency of numbers.

Please advise us of the status of the field report at your earliest convenience.

Sincerely yours,

C. O. Mittendorf (fw)

Acting Administrator
Defense Minerals Exploration
Administration

GCSelfridge:ls
5/23/52

cc: Docket
Admn. Reading File
Field Team, Region 4
G. C. Selfridge
D. M. Lemmon, USGS
R. W. Geehan, USBM

400

FILE COPY
SURNAME:

Selfridge

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

MAY 26 1952

Hon. Ernest W. McFarland
United States Senate
Washington 25, D. C.

Attention: Mr. F. A. Kissinger

My dear Senator McFarland:

This is in reply to a telephone inquiry from your office on May 23, 1952, regarding the status of Docket No. DMEA 2356, Nikas Mining Company, Morning Star mine, Pinal County, Arizona.

The Field Team examined the property earlier this year and recently advised us that the report was being held in abeyance awaiting additional information from the applicant. We shall immediately check with the Field Team and as soon as the report is received shall continue with the processing of the application.

If we can be of further assistance in this matter, please let us know.

Sincerely yours,

C. O. Mittendorf (for) 5/26

Acting Administrator
Defense Minerals Exploration
Administration

GCSelfridge:ls 5/23/52

CC: Docket No. DMEA 2356
Admn. Reading File
G. C. Selfridge
Field Team, Reg. 4
D. M. Lemmon, USGS
R. W. Geehan, USBM

FILE COPY
SURNAME:

Selfridge

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

MAY 26 1952

Hon. Carl Hayden
United States Senate
Washington 25, D. C.

My dear Senator Hayden:

This is in reply to your inquiry of May 21, 1952, regarding the status of Docket No. DMEA 2356, Kikas Mining Company, Morning Star Mine, Pinal County, Arizona.

The Field Team examined the property earlier this year and recently advised us that the report was being held in abeyance awaiting additional information from the applicant. We shall immediately check with the Field Team and as soon as the report is received shall continue with the processing of the application.

We are returning Mr. [illegible]'s letter herewith. If we can be of further assistance in this matter, please let us know.

Sincerely yours,

C. O. Mittendorf (for) 5/26

Acting Administrator
Defense Minerals Exploration
Administration

Enclosure

GCSelfridge:ls 5/20/52

CC: Docket DMEA 2356
Admn. Reading File
G. C. Selfridge
Field Team, Region 4
D. M. Lemmon, USGS
R. W. Geehan, USBM

KENNETH MC KELLAR, TENN., CHAIRMAN
CARL HAYDEN, ARIZ.
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ZALES N. ECTON, MONT.
JOSEPH R. MC CARTHY, WIS.

EVERARD H. SMITH, CLERK
THOMAS J. SCOTT, ASST. CLERK

United States Senate

COMMITTEE ON APPROPRIATIONS

May 21, 1952

Mr. C. O. Mittendorf
Acting Administrator
Defense Minerals Exploration
Administration
Department of the Interior
Washington 25, D. C.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 22 1952

Dear Mr. Mittendorf:

I attach a letter I have received from Mr. Tom Callar, P. O. Box 123, Oracle, Arizona, regarding the status of the application submitted to your Agency by the Morning Star Mine, Docket number D.M.E.A. 2356X. (Nitrates Mining)

Your consideration of this matter and any information which will be of assistance to me in making a reply will be greatly appreciated.

Yours very sincerely,

Carl Hayden
U. S. S.

P. S. Please address reply to me; sending me original and one copy. Kindly return enclosures.

C
O
P
Y

May 19, 1952

Dear Senator Hayden:

I'm Tom Callas from Oracle, Arizona. Also Pete Arenaty - Son-in-law from Florence, Arizona. We met in Nogales, Arizona, a couple years ago.

Senator, I am a partner in the Morning Star Mine in Oracle and I believe we have the best tungsten property in the State. We have applied for a loan from the Government, Docket #DMEA 2356X. The U. S. Engineers have approved here locally and now I understand the papers are back in Washington, D. C. You would be doing me a big favor if you would look into it.

I remain

Your friend,

/s/ Tom Callas

Box 123

Oracle, Arizona

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

754 New Customhouse
Denver 2, Colorado

May 21, 1952

Memorandum

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

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 2356, (Tungsten) Nikas Mining Co., Morning Star Mine, Pinal County, Arizona

Enclosed are the original and three copies of the final report pertaining to the above application.

The proposed exploration would test a zone where conditions are favorable for the development of significant reserves of tungsten ore.

We recommend that this exploration project be approved.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

Mining Division
Region IV

May 21, 1952

Memorandum

To: Field Team, Region IV

From: Acting Chief, Mining Division, Region IV

Subject: Final Report, DMEA Docket 2356, (Tungsten) Nikas Mining Co., Morning Star Mine, Pinal County, Arizona

Enclosed are nine copies of the engineering report by T. M. Romslo of the Bureau of Mines on the Morning Star Tungsten Mine.

The proposed exploratory work is in a favorable zone at the Mogul fault and could be completed in 9 months at an estimated cost of $67,388.00.

The field examiner recommends that this proposed exploration project be approved.

We concur in this recommendation.

W. L. King

W. L. King

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 26 1952

Reviewed by
DMEA OPERATING COMMITTEE

6-2-52
(date)

Mining Division
Date Rec'd.

MAY 1 1952

BUREAU OF MINES
Denver, Colorado

May 14, 1952

Memorandum

To : . L. King, Denver, Colo.

From : Chief, Arizona-New Mexico Branch

Subject : Final Report, DMEA Docket 2356, Kimas Mining Co's. Morning Star Tungsten Mine, Pinal County, Ariz.

Enclosed is a report on the above property by I. W. Romslo of the Bureau of Mines. Although C. S. Tromfield of the Geological Survey mapped the geology of the underground works, a separate report will not be submitted by the Survey.

There seems to be a good chance of discovering more tungsten ore by the proposed exploratory project, Romslo recommends that the loan be made. I concur with his recommendations.

Attached is brochure; also attached is power-of-attorney for Harry E. Krualauf to act for the owners, affidavit regarding ownership, and court judgment regarding extralateral rights.

Walter R. Storms

Walter R. Storms

CC: A. H. King (3)
C. A. Wilkerson
DMEA-
DE

WRStormsrals

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA-2356, Niles Mining Co's.

Morning Star Anderson Mine

Pinal County, Ariz.

J. N. Homsle, Mining Engineer
U. S. Bureau of Mines

May 195[illegible]

On-Site Exam Report

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

By T. M. Donald[1]

The Morning Star tungsten mine, Pima County, Ariz. was examined under docket DMEA-2356, to determine if the Government would be justified in participating in an exploratory program proposed by the Nikas Mining Co.

The applicant estimated the proposed work could be completed in one year at a cost of $93,037. A revised program, submitted during the investigations, called for a 2-stage project to be completed at an estimated cost of $67,361, provided favorable findings were developed by initial explorations, costing an estimated $43,300.

The Morning Star mine was operated intermittently from 1913 to January 1952, and has produced about 5,000 tons of ore containing plus 1 percent WO_3. The adjoining Pure Gold property yielded 6,284 tons containing 6,003 units of WO_3 to 1945.

On the Morning Star and Pure Gold claims, a small block of limestone is surrounded by quartzite, except on one side where it is in fault-contact with granite.

The ore occurs as scheelite in silicified limestone breccia. The Glory Hole deposit, at the Morning Star claim, appears to be essentially mined out after having produced about 4,000 tons of ore containing plus 1 percent WO_3. The other deposits of

---

1/ Mining Engineer, U. S. Bureau of Mines

major production occur along the Mogul fault on both properties.

Two deposits at the Mogul fault of the Morning Star claim have yielded about 100 tons of plus 1 percent ore per foot of depth. Scheelite mineralization, partly of ore-grade, persists at the deposit which was worked by a stope. The open-pit of the other deposit probably is bottomed in ore. Diamond drilling has shown that the ore zone of the Mogul fault is persistent along its dip for at least 250 feet.

The proposed exploratory program involves the purchase and installation of equipment, the construction of surface structures, the sinking of a 220-foot inclined shaft, and the driving of 560 feet of laterals and raises. Under the first stage, the shaft would be sunk 110 feet, and laterals and raises would be driven for a total of 240 feet on the 100-foot level. If the findings of this work were favorable, the remaining work would be undertaken. The entire program could be completed in about 9 months.

Governmental participation in the program is justified for the following reasons:

1. The proposed explorations are properly designed to test a zone where conditions are favorable for the development of significant reserves of tungsten ore;

2. The company intends to build a mill and operate the property if adequate ore reserves are developed;

3. Development of this property probably would lead to the exploration of the adjacent property where the possibilities of developing ore also are favorable;

4. A tungsten mill in the district would be an incentive to development of other nearby properties;

5. The Nikas Mining Co. can be expected to finance its share of the project cost ($16,847);

6. Competent supervision and prosecution of the work can be expected.

The exploratory program is recommended for approval.

[illegible]-2356, NIMAR MINING CO'S.
MORNING STAR TUNGSTEN MINE
PINAL COUNTY, ARIZ.

Engineering Report

By T. H. Romslo
Mining Engineer
U. S. Bureau of Mines

May 195[illegible]

[illegible]A-[illegible], NIKAS MINING CO'S
MORNING STAR TUNGSTEN MINE
PINAL COUNTY, ARIZ.

CONTENTS

Engineering report — Page

Introduction 1
Acknowledgment 1
Location and accessibility 2
Physical features and climate ... 2
Property and ownership 3
History and production 4
Geology 5
Description of the deposits 6
Ore reserves 11
Present status 12
Economic possibilities 13
Proposed exploratory program 15
Estimated cost of project 17
Proposed financing 20
Conclusions 22
Recommendations 24

ILLUSTRATIONS

Figure — Following page

1 Location map 2
2 Standing and Morning Star Tungsten mines 6
3 Section and plan map ..... [illegible]
4 Proposed explorations 7

INTRODUCTION

The Morning Star Tungsten mine, Pinal County, Ariz. was examined in connection with an application for Governmental aid by H. E. Krumlauf for the Nikas Mining Co., Tucson, Ariz. The examination was carried out by the Defense Minerals Exploration Administration, under docket DMEA-2356, as part of its program authorized by the Defense Production Act of 1950, as amended.

The applicant requested financial participation by the Government in an exploratory program designed to establish reserves of tungsten ore, the program to be completed in 1 year at an estimated cost of $93,037. A revised program, submitted during the investigations, called for a 2-stage project to be completed at an estimated cost of $67,3[illegible], provided favorable findings were developed by initial explorations. The initial work was to cost an estimated $[illegible].

A preliminary examination of the property was made by T. K. Ronalo, Bureau of Mines, accompanied by H. E. Krumlauf on March [illegible], 1952. The examination was completed March 25 by Ronalo. C. S. Bromfield, Geological Survey, mapped the geology of the underground workings. T. Collins, one of the partners of the Nikas Mining Co., accompanied the examiner.

ACKNOWLEDGMENT

The writer wishes to thank J. Frank Henderson, Phoenix, Ariz., for furnishing data obtained from explorations conducted by the Mt. Lemmon Mining Co. in 1949.

LOCATION AND ACCESSIBILITY

The Morning Star property is about 3.5 miles south of Oracle, Ariz., a village on State Highway 77 (Figure 1). It may be reached from Oracle by traveling southeasterly for 5.5 miles on the Oracle-Lost Soldier Camp road, thence 1.5 miles westerly on the Camp Bonita road, and thence 0.5 miles south to the mine. The 0.5 mile road to the mine is of graded dirt construction and contains short stretches of 15 to 20 percent ascending grades. The other roads are maintained by the county. They are of the graded-dirt type and contain no excessive grades.

Oracle is 34 miles north of Tucson via U. S. Highway 89 and State Highway 77.

Other nearby tungsten mines are the Pure Gold and Bonita, about 200- and 1,000-feet north of the Morning Star, respectively.

PHYSICAL FEATURES AND CLIMATE

The property is in the northern part of the Santa Catalina Mountains. It is on the western flank of a northward trending canyon in a area of fairly rugged topography. The altitude at the mine is about 5,200 feet.

Vegetation consists mainly of scrub-oak, manzanita, and native grasses.

Drainage is northerly to the San Pedro valley. There are no permanent streams in the vicinity. Water for a small mine operation is available from nearby springs.

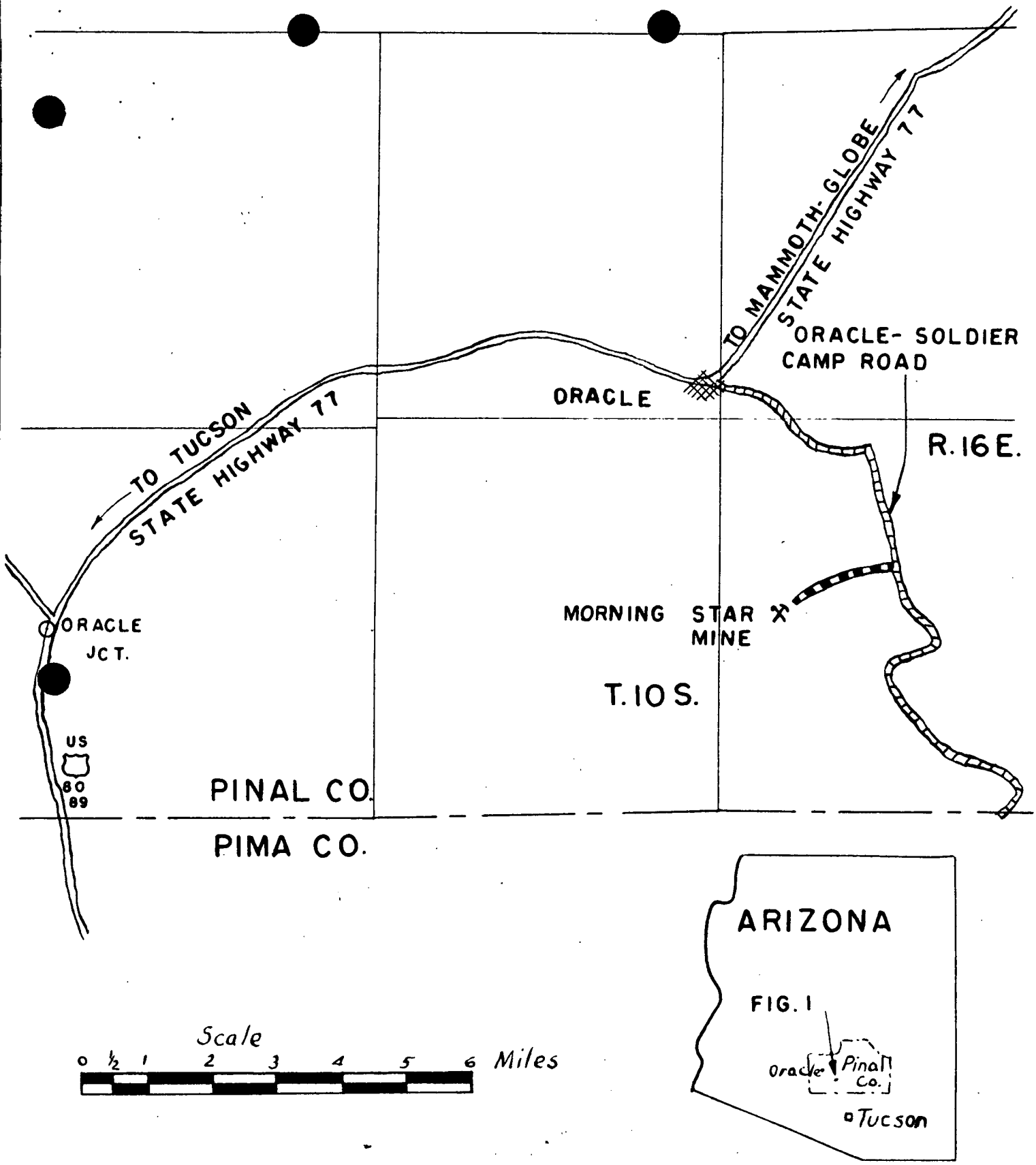

FIG. 1 ~ LOCATION MAP, MORNING STAR TUNGSTEN MINE- NIKAS MINING CO., DMEA-2356

The climate is typical of the intermediate altitudes of southern Arizona. Summers are pleasant and the winters are mild. Freezing weather is normally confined to a few 2 to 3 day periods. Snowfalls, heavy enough to interrupt mining operations, are rare.

PROPERTY AND OWNERSHIP

The property consists of one patented lode mining claim, the Morning Star, in sec. 17, T. 10 S., R. 16 E., Old Hat mining district, Pinal County, Ariz. It is owned by Elizabeth L. Wood, Oracle, Ariz. and the Young Men's Christian Association of Tucson, Ariz. The rights to a vein that crosses the common side-line of the Morning Star and the Pure Gold claims was established by the Superior Court of Arizona in Judgment and Decree No. 2[illegible]15. The court decided that the owners of the Pure Gold claim were entitled to the extralateral rights of the vein in an easterly direction to vertical planes drawn through the boundary lines shown on Figure 4. Copies of the Courts Judgment and Decree are being forwarded with this report and will become a part of docket DILA-2356.

Assignments by the owners of the Morning Star claim are confined to a lease agreement with the Milas Mining Company, a partnership, of Tucson, Ariz. The partners of the company, as shown in the agreement, are Tom D. Gallas, A. Milas, John Gekas, John Paulos and Monte Seymor. The lease agreement is for a period of 5 years from January 3, 1952 and calls for

royalty payments of 10 percent of the smelter value of ore produced from the property.

Ownership of the Nikas Mining Co. as shown on Form MT-1GC of docket DMEA-215%, is as follows:

Name	Address	Interest (percent)
A. Nikas	Tucson	27
E. J. Gekas	Tucson	27
T. J. Gallas	Oracle	15
N. Saylor	Tucson	17

The remaining interest of 17 percent is unassigned. An affidavit, showing that John Paulos is half owner of the interest assigned to E. J. Gekas, will be forwarded with this report and will be made a part of the above mentioned docket.

The company is presently trying to acquire an adjoining claim, the Pure Gold, under a lease agreement calling for payments of customary royalties on production.

HISTORY AND PRODUCTION[1]

The Morning Star claim first was worked in 1913 by E. N. Ewing, who treated several hundred tons of ore in a nearby gravity mill. The next period of operation was from 1940 to 1943, when it was worked by Lambert Wood and the Rivera brothers, probably as the Fortune Mining Co., under a lease with one of the present owners. Ore produced during that period also was

[1] Wilson, Eldred D., Tungsten Deposits of Arizona, Ariz. Bur. of Mines Bull. 143; Mauding and Morning Star Tungsten Mines, Pinal County, Ariz., Strategic Minerals Investigation, U.S.G.S.; Memorandum of Feb. 7, 1952 by D. M. Lemon, U.S.G.S. To George S. Selfridge, DMEA (Part of docket DMEA-215%).

milled in a nearby gravity-type concentrator. The lease was acquired in January 1944 by the Morning Star Mining Co., which continued operations until 1945. Three holes were diamond-drilled on the property in conjunction with an exploratory program at the Pure Gold claim during 1949. The Nikas Mining Co. operated the mine from October 1951 to January 1952 under a lease agreement with the present owners as lessors and Tom D. Callas, as lessee. A new lease agreement was made between the owners and the Nikas Mining Co. on January 3, 1952.

Production was reported to be 335 units in 1913, and 1,165 units during 1940-1944. In 1944, an additional 3,416 tons of ore containing 3,416 units was shipped to the Metals Reserve Co. Production during 1951 and 1952 was reported as 566 tons containing 1.23 percent WO_3. This ore was concentrated at a gravity-flotation mill near Apache Junction, Ariz. The products, a table concentrate from which lead and iron sulfides and some iron oxide had been removed by flotation, and a straight flotation concentrate, were shipped to the United States Vanadium Co., Upper Scheelite, Calif. The cleaned table concentrate contained 68- to 69-percent WO_3, and the flotation concentrates averaged about 42 percent WO_3. Incomplete records indicate that total mill recovery was slightly over 200 units of WO_3, or about 30 percent.

The Pure Gold deposit, an extension of the Mogul fault deposit, produced a recorded 6,234 tons containing [illegible] units

of WO_3. [illegible] open-cut from which this ore was produced is inaccessible [illegible] present. At the Bonita mine, an ore-body 4- to 50-feet wide and 50 feet long was stoped to a depth of 175 feet from the surface. This deposit yielded 3,000 units of WO_3 as scheelite.

GEOLOGY[2]

The principal geologic feature of the area is the Mogul fault (fi[illegible]). The fault brings Paleozoic and pre-Cambrian sedimentary and metamorphic rocks on the south against pre-Cambrian Uncle granite on the north. It trends north of west and dips 30 to 60 degrees to the south. The fault includes many planes of movement over a wide area.

On the Morning Star and the adjacent Pure Gold property, a block of limestone is surrounded by quartzite except on its south side where it is in fault-contact (the Mogul fault) with granite. Banding of the limestone, unrecognizable at most places, appears to strike N. 20° W. and dip 75° [illegible] on a ridge southwest of the Pure Gold workings. The contact of limestone and quartzite is not exposed.

DESCRIPTION OF THE DEPOSITS

General

Tungsten ore has been produced from mine workings at 3 places on the Morning Star claim. These workings are the

---

2/ Op. cit., U.S.G.S., Strategic Minerals Investigation.

Fig

2

glory hole and adjacent stope that have produced 3,500 to 4,000 units of WO_3; the open-cut and stope at the Mogul fault with a production of 1,500 to 2,000 units; and the stope and glory hole of the Lower adit that have yielded probably not more than a few hundred units. Hereafter in this report, the 3 productive zones will be referred to as the Glory hole deposit, the Mogul fault deposits, and the Lower adit deposit.

Glory Hole Deposit

The following description is from the report by the Geological Survey:[3]

"Scheelite in the glory hole and stopes is erratically distributed in an irregular, elongate body of silicified limestone that trends northeast. Large crystals of scheelite are concentrated along two faults which strike at right angles to each other, cutting the silicified limestone (Morning Star glory hole level, fig. 2). The northwest-trending fault, along which some post mineral movement took place, offsets the southwest-trending fault about 10 feet. Under ultraviolet light, the ore along the faults appears in places to contain as much as 10 percent of WO_3 across widths of from 0.5 to 4.0 feet although in most places the grade is not over 1 percent WO_3. In the remainder of the silicified zone, scheelite is sparsely dis-seminated."

3/ Op. cit., U.S.G.S., Strategic Minerals Investigation.

The Glory hole is about 40 feet in diameter at the surface and narrows to a section approximately 40 feet long and 5 feet wide at the floor of the Glory hole level. The stope adjacent to the Glory hole averages about 15 feet long and 5 feet wide and extends from about 15 feet below to approximately 35 feet above the Glory hole level. The floor and walls of the workings are composed of quartz and silicified limestone and the intersecting faults, described by the Geological Survey, are traceable. Sampling of the workings showed that significant amounts of scheelite are confined to 4 pillars, each containing about 5 tons, with an estimated 1 to 2 percent WO_3. The bottom of the workings is filled with rock debris.

Some exploration for the downward extension of the deposit has been carried out from the Lower adit (figure 3). A favorable zone, based on the indicated rake of the deposit, has not been tested. The southern part of these workings, part of which are vertically below the Glory hole, has penetrated unsilicified limestone. This limestone is cut by faults with northeasterly and northwesterly trends. No scheelite was observed in these workings. Diamond drill hole 9 penetrated a narrow zone of scheelite mineralization several feet below the bottom of the Glory hole.

Mogul Fault Deposits

The deposits occur in quartz and silicified limestone at the hanging wall of the Mogul fault. This fault dips south at

Fig

3

about 45 degrees. Mining by open-cut and stope has exposed a zone of silicified limestone with a strike-length of about 120 feet. The extension of this zone on the Pure Gold claim was mined by open-cut. Production from the Pure Gold claim up to 194[illegible] was 6,2[illegible]4 tons containing [illegible], [illegible]03 units of WO_3, and concentrates containing [illegible] units. At present, the open-cut is filled with large blocks of rock that have sloughed from the south wall. The floor of the open-cut was in ore when operations ceased, according to unconfirmed reports.

The open-cut on the Morning Star claim, according to Mr. Callen, reached an average depth of about 6 feet below the floor of the adjacent stope (figure 4). He said that good scheelite values were exposed in the floor and south wall but the open-cut became dangerous to work and was filled to facilitate mining the presently stoped section of the deposit. At present, significant amounts of scheelite can be observed only in the west 40 feet of the stope. This section of the stope, about 15 feet wide and 10 feet thick, yielded 5[illegible] tons of ore containing 1.23 percent WO_3. The following 3 samples were taken in the stope by the writer.

Sample No.	Description	Percent WO_3
11483	25 pounds, from 10-ton pile of broken ore.	1.00
11484	15 pounds, chipped from [illegible]-foot vertical channel.	0.4[illegible]
11485	Same as above	0.7[illegible]

Fig

4

Under ultraviolet light, scheelite was observed in all faces of the west 40 feet of the stope. Its occurrence is erratic except on the south wall, the down-dip side of the zone, where scheelite is present in probably 90 percent of a 40- by [illegible]-foot area. The degree of mineralization ranges widely at the face, from an estimated 0.2 to [illegible].5 percent WO_3 for areas of 10 to 20 square feet. A high-grade zone, sampled by the applicant, contained [illegible].5 percent WO_3. It is estimated the entire face contains 0.3 to 0.5 percent WO_3 and that selective mining will yield 10 to 15 tons of 0.7 to 1.0 WO_3 per foot of [illegible]. The scheelite content appears to be highest near the bottom of the zone where it extends into the floor of the stope.

Geologic structure at this deposit appears to be similar to that of the Pure Gold property (Figure 3a).

Lower Adit Deposit

The deposit has been worked from several feet below the adit to the surface. The section worked below the adit, about 5 feet wide by 15 feet long, is filled with waste-rock. Above the adit, the working averages about 15 feet in diameter. The walls and floor are in silicified limestone and contain minor amounts of scheelite at widely scattered places. Ore produced from the deposit, possibly 300 tons, probably was concentrated along the adits.

A zone of silicified limestone breccia, about 5 feet wide by 6 feet long, is exposed at a pit near the portal of the adit. It is cut by a northeasterly crenulling fault of steep dip. Scheelite occurs erratically along the fault. The 5-foot zone of silicified limestone extends northwesterly for about [illegible] feet and contains minor amounts of scheelite at widely scattered places. It can be considered as part of the Mogul fault ore zone.

ORE RESERVES

Measured ore reserves are confined to the 2 pillars of the Glory Hole deposit, and the pile of broken ore at the Mogul fault deposit, a total of about 15 tons containing an estimated [illegible] to 1.5 percent WO_3.

The indicated reserves are at the stope of the Mogul fault deposit. They consist of a 10-foot extension of the sampled zone, and ore that can be scaled from the other faces of the stope, an estimated total of 400 tons containing about 1 percent WO_3.

The inferred reserves are confined to an extension of the Mogul fault ore zone. These reserves, on the basis of production records, would amount to 100 tons of 1 percent ore per foot of depth. Diamond drilling indicates that conditions are favorable for ore mineralization to a depth of at least 250 feet, measured along the dip of the fault.

PRESENT STATUS

General

T. [illegible] Callas, one of the partners of the Nikas Mining Co., resides in Oracle and is acting as caretaker of the property.

Structures on the property are confined to a 50-ton ore bin and an underground powder-magazine. Equipment and supplies consist of a mounted jackhammer, a stoper, air and water hoses for each drill, about 100 feet of installed track, and about 100 feet each of 2-inch and 1-inch pipe.

Mine Development

The principal mine workings are shown on figures 3 and 4. The raises are the only inaccessible workings. Locations of diamond drill holes are shown on figure 2.

Metallurgical Studies

Geo. Rosevaare, Metallurgist for the Arizona Bureau of Mines, conducted milling tests on ore from the Pure Gold claim. The results of the tests indicate that 35 to 40 percent of the scheelite could be recovered by tabling, and that by tabling and flotation about 60 percent of the scheelite would be recovered. The table concentrate would assay 65 percent WO_3 or higher, and the flotation concentrate, 1[illegible] to 1[illegible] percent WO_3. The table concentrate contains some lead carbonate. An 80- to 100-mesh grind of the ore is necessary to free the scheelite.

Rosevaare estimated that a 25 to 30-ton mill, without power plant, would cost about $40,000, and the estimated milling cost would be $7.50 a ton.

Mill Construction

A [illegible]ive site for a mill has been selected by H. E. Krumlauf. It is about 15 miles north of Tucson. U. S. Highway [illegible] within one-fourth mile of the site. The property is [illegible]sed by an electric power line. It is at Canon del Oro [illegible] sufficient water for a mill probably can be developed at low cost. Preliminary estimates indicate that the total cost of acquiring a mill-site, developing water, and constructing the mill would be about [illegible]00,000. Krumlauf said the company has indicated it will provide capital for a mill if adequate ore reserves are developed.

ECONOMIC POSSIBILITIES

The applicant stated in Form KF-100 that ore containing 1.1 to 1.5 percent WO_3 had gross and recoverable values of $75.00 and [illegible]0.00 a ton, respectively, and the estimated cost of production was $10.00 a ton. Estimates prepared by the writer show that the applicant's indicated operating profit of $40.00 a ton is not realistic. They indicate ore containing 1 percent WO_3 has a value of $37.50 and that with production costs of $27.00, the operating profit would be $10.50 a ton. The estimates for production costs provide for royalty payments to both the Government and the lessor, and indicate that approximately 25,000 tons of ore would be required for repayment of the requested Governmental exploratory loan. The estimates also indicate that ore containing

as low as 1.70 percent WO_3 could be exploited at an operating profit.

An alternate method of marketing would be to ship the ore to a mill now under construction at Hillside, Ariz. The applicant said that the ore could be hauled to the mill for $15.00 a ton but that he had been unable to obtain schedules on ore payments and milling charges. The writer, in order to determine the feasibility of this operation, has assumed that ore payments and milling charges probably will be similar to those given in the following estimates. On this basis, ore containing 1 percent WO_3 could not be exploited profitably.

No consideration is given to concentration of the ore at the custom mill near Apache Junction, Ariz. because of poor milling practice there.

Value of Ore

Ore containing 1 percent WO_3 is valued at $37.50 a ton, based on a 40 percent recovery of the scheelite in a table and in a flotation concentrate, and on the following concentrate prices received by the Silma Mining Co., in 1950 and 1951. Table concentrate containing 65 percent WO_3 brought $57.50 per unit of WO_3, and the flotation concentrates with an average of about 55 percent WO_3 were paid for at $37.50 a unit.

Estimated Costs

The mining costs are based on the assumption that developed ore will occur in deposits similar to those mined. Timber

costs should be low, as the ground stands well.

	Cost per ton
Mining and development	$ 10.00
Trucking ore to proposed mill	3.00
Milling	7.50
Royalties; Government, $1.99, and lessor, $3.59	5.42
Marketing	1.00
Total Operating Costs	$ 26.92

PROPOSED EXPLORATORY PROGRAM

General

The applicant's revised exploratory program consists of a 2-stage project, the second stage to be carried out in event favorable findings are developed by the explorations of the first stage.

Present plans call for the project to be supervised by Harry E. Krumlauf, general manager and consulting engineer for the Nihan Mining Co. Krumlauf is a registered mining engineer of Arizona and is employed as a professor of mining by the University of Arizona. He has offered to supervise the project and do all the engineering, purchasing, and bookkeeping for $500.00 per month. In event any of this work is hired-out, Krumlauf will pay for it out of his salary.

First Stage

Preliminary work

1. Level off area for surface structures (figure 4).

Preliminary Work (Con't.)

4. Construct:

(a) Trestle to mine dump.

(b) Headframe

(c) 10 x 14-foot hoist and storage building of frame construction.

(d) 10 x 10 foot compressor shed.

(e) 10 x 10 foot change room of frame construction.

3. Install equipment, track and pipelines.

Exploration Work

An inclined shaft is to be sunk along the hanging wall of the Mogul fault to a depth of 110 feet, the lower 10 feet to be used as a sump (figure 4). At an inclined distance of 100 feet in the shaft, a level is to be established, a drift is to be driven westward 60 feet, and another drift is to be driven easterly 120 feet. An additional 100 feet of crosscuts and raises is requested for exploring and partially developing favorable zones. This work is designed to test for an extension with depth of the ore zone at the Mogul fault, and the ore zones of the Lower adit.

Second Stage

The proposed explorations of this stage are designed to test for downward extension of ore-bearing zones encountered by first-stage work at the Mogul fault deposit. This work is to consist of deepening the shaft an additional 110 feet,

establishing a level at an inclined distance of 200 feet from the surface, then drifting westward 60 feet, drifting eastward 110 feet, and 100 feet of crosscuts and raises from the drift.

ESTIMATED COST OF PROJECT

Time Schedule

First Stage	Months
Preliminary work, (6 men, 1-shift daily for 20 days)	1
Sinking 110 feet of 5 x 8-foot shaft at a rate of 1 foot per shift, 2-shifts daily, with a hoistman, topman, miner-foreman and miner's helper - 110 shifts in 55 days or —	2
Driving 280 feet of laterals and raises at a rate of 3 feet per shift, 2 shifts daily, with hoistman, topman, miner-foreman, miner's helper and 2 muckers - 97 shifts in 47 days —	2
Total time for first stage	5 months
Second Stage	
Same as first stage, exclusive of preliminary work.	4 months

Labor Rates

Classes of labor to be used with their pay rates are as follows:

Classification	Hourly Rate (incl. overtime)	Shift
Miner-foreman	$2.00	$16.00
Miner	1.55	14.00
Miner's helper	1.55	12.40
Muckers	1.55	12.40
Hoistman	1.75	14.00
Topman	1.50	12.00
Carpenter	1.75	14.00
Laborers	1.50	12.00

(Labor costs per shift, in the following estimates, include Federal and State taxes, estimated at 15 percent).

Cost of First Stage

Supervision

5 months @ $500.00 per month ..... $ 2,500.00

Labor

1. Preliminary work: 20 shifts
   $91.03 ..... $1,821.60
2. Shaft sinking; 110 shifts
   $63.48 ..... 6,982.80
3. Drifting, crosscutting and raising, 94 shifts @
   $92.00 ..... 8,640.00

Total labor 17,445.40

Equipment

To be rented — none

To be furnished by applicant;

1 - Jackhammer with hoses and complete set-up for mounting. Value estimated at $ 300.
1 - Stoper with hoses, estimated value $300.
1 - Mine car, estimated value, $150.

The allowance for depreciation of this equipment based on a 60-month life is as follows:

Jackhammer, 4 months @ $5.00 per month $20.00
Mine car, 4 months @ $2.50 per month 10.00
Stoper, 2 months @ $5.00 per month 10.00

Total allowance for applicant's equipment 40.00

To be purchased:

	Costs (transportation included)
1 - [illegible] cfm. diesel-engine operated compressor	$ 7,500.00
1 - air receiver	200.00

To be purchased: (Con't.)

	Costs (transportation included)
1 - Hoist, single drum, gasoline engine driven, [illegible],000 pound rope pull	$ 2,000.00
Auxiliary hoist equipment: skip, wire rope, bell signal system, sheave wheel, shaft rollers, etc...	500.00
2 - Jackhammer-type rock drills with pneumatic legs, hoses, oilers, etc.	2,000.00
1 - Mine car, one ton capacity..	200.00
1 - Air-driven mine fan	300.00
1 - Bit grinding machine with extra wheels, air-driven ...	250.00
1 - Air-driven water pump	350.00
1 - Pick-up truck - to transport men and supplies - used, good condition	1,000.00
1 - Water tank - 300 gallon - for drilling and camp use, with small pump	300.00
Total equipment to be purchased	$14,600.00

Supplies and Materials

Small timber, 110 ft. @ $7.00 per ft.	$ 770.00
Drift and raise timber, 280 ft. @ $2.00 per ft.	560.00
Lumber and timber for buildings, bunkhouse, and trestle	1,005.00
Track complete, 400 ft. @ $1.65 per ft.	660.00
Pipe, 450 ft. each of 2-in. @ $.90 and 1-in. @ $.30	405.00
Pipe fittings	120.00
Explosives with detonators: Drift, 110 ft. @ $4.27 per ft.	469.70
Drifts and raises: 280 ft. @ $2.15 per ft.	602.00
Tools, shovels, picks, hammers, wrenches, etc.	750.00
Carbide, lamps, nails, bolts, First-aid supplies, etc.	250.00
Fuel, oil and greases at $250 per mo.	1,250.00
Replacement parts @ $100 per mo..	500.00
Add approximately 10 percent for contingencies	779.50
Total materials and supplies	$ [illegible],145.00

Other

Service charges on repairs to equipment, $50 per month ..... [illegible]
Assay, 100 @ $4.00 each ..... [illegible]

Total of other costs ..... [illegible]

Total estimated cost of first stage ..... $43,[illegible]

Cost of Second Stage

Amortization

4 months @ $500.00 ..... $ 2,000.00

Labor

1. Shaft sinking, 110 shifts @ $63.40 ..... [illegible]
2. Drifting, cross-cutting and raising, 94 shifts @ [illegible].00 ..... [illegible]

Total labor 15,630.00

Equipment

Furnished by applicant - Same as stage 1 ..... 40.00

Supplies and Materials

Shaft timber, 110 ft. @ $7.00 per ft.	770.00
Drift and raise timber, 200 ft. @ [illegible].00 per ft.	560.00
Track complete, 350 ft. @ $1.[illegible]	577.50
Pipe, [illegible] ft. ea. of 2-in. @ $.[illegible] and 1-in. @ $.30	315.00
Pipe fittings	100.00
Explosives with detonators: Shaft 110 ft. @ $4.27 per ft.	469.70
Laterals and raises, 200 ft. @ $2.33 per ft.	466.40
Tools, shovels, picks, hammers, wrenches, etc.	200.00
Carbide, lamps, nails, belts, First-Aid supplies, etc.	150.00

Supplies and materials (con't.)

Metal and grenades @ $450 per month	$1,000.00	
Replacement parts @ $100 per month	400.00	
Add approximately 10 percent for contingencies	[illegible]	
Total materials and supplies		$ 5,749.00

Other

Service charges on repairs to equipment, $50 per mo...	$ 600.00	
Misc., 100 @ $4.00 ea.	[illegible]	
Total other costs		600.00
Total costs of second stage		$84,359.00

Recapitulation of Costs

First Stage

Supervision	[illegible]
Labor	[illegible]
Equipment to be furnished	[illegible]
to be purchased	[illegible]
Supplies and materials	[illegible]
Other	[illegible]
Total first stage	$43,315.00

Second Stage

Supervision	[illegible]
Labor	[illegible]
Equipment to be furnished	[illegible]
Supplies and materials	[illegible]
Other	[illegible]
Total second stage	[illegible]
Total for project	[illegible]

PROPOSED FINANCING

The applicant has proposed that the cost of the project, estimated at $67,338.00, be financed in accordance with regulations governing Governmental aid on explorations for tungsten ore. On this basis, the Government's and applicants shares would be $50,541.00, and $16,847.00, respectively.

CONCLUSIONS

Significant amounts of scheelite are confined to silicified limestone breccia at the Morning Star claim and the adjacent Pure Gold claim.

Approximately 12,000 tons of ore containing plus 1 percent WO_3 has been produced from the 2 properties, neither of which are presently active.

The Glory Hole deposit at the Morning Star appears to be essentially mined-out, after producing about 4,000 tons of plus 1 percent ore.

The other deposits of major production occur along the Mogul fault on both properties. The deposits of the Pure Gold have yielded about 6,500 tons of ore, and approximately 1,500 tons of ore has been produced from 2 deposits on the Morning Star claim.

The 2 deposits at the Mogul fault of the Morning Star claim have been mined to an average depth of about 15 feet and have yielded about 100 tons of plus 1 percent ore per

foot of depth. Scheelite mineralization, partly of ore-grade, persists in one of the deposits, and the open-cut of the other deposit, presently inaccessible, probably is bottomed in ore.

The ore zone of the Mogul fault deposits is persistent along its dip for at least 450 feet.

The proposed exploratory work is properly designed to explore the favorable zone at the Mogul fault and to test for extension of the potential ore zone at the Lower adit.

If adequate ore reserves are developed, the applicant intends to construct a mill near the property and to explore the Pure Gold claim, provided it can be acquired for operation on a royalty basis. Explorations for a possible extension of the Glory hole deposit also probably will be undertaken.

Ore containing as low as 0.7 percent WO_3 probably can be exploited profitably and 1 percent ore should show an operating profit of about $10.00 a ton.

The exploratory program probably can be completed in 9 months at an estimated cost of $67,343.00. The Nixon Mining Co. can be expected to finance its share of the project cost, or $16,[illegible]. It also is reasonable to assume that the work will be supervised and prosecuted in a competent manner.

Governmental participation in the program is justified for the following reasons:

1. Conditions are favorable for the development of significant reserves of tungsten ore;

2. The company intends to build a mill and operate the property if adequate ore reserves are developed;

3. Development of the property probably will result in exploration of the adjacent property where the possibilities of developing ore are about the same as at the Morning Star mine;

4. A tungsten mill in the district will be an incentive to development of other nearby properties.

RECOMMENDATION

Approval is recommended for Governmental participation with the Wilson Mining Co. in a proposed exploratory project at the Morning Star Tungsten mine, which can be completed in about 9 months at an estimated cost of $67,300.00

Excerpt from Monthly Report, Region IV, March 21 to April 20, 1952

DMEA 2356 - Nikas Mining Company's Morning Star Tungsten Mine,
Pinal County, Arizona

The examiners will probably recommend exploration assistance when additional information is received from the applicant.

HARRY E. KRUMLAUF
CONSULTING MINING ENGINEER
TUCSON, ARIZONA

February 19, 1952

DEFENSE MINERALS ADMINISTRATION
U. S. DEPARTMENT OF THE INTERIOR
Washington 25, D. C.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 25 1952

SUBJECT: Application for exploration loan
Nikas Mining Company
55 W. Congress Street
Tucson, Arizona

D.M.P.A. Docket Number: 2-356

Dear Sirs:

Please find enclosed four signed copies of the Landlord's Subordination Agreement to be included with the report sent you and filed under the above docket number.

Sincerely yours,

H E Krumlauf

H. E. Krumlauf
Consulting Engineer for
Nikas Mining Company

DMPA Docket #2-356
DMEA-2356

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of Pinal, State of Arizona, described in a certain Exploration Project Contract dated July 18, 1952, between Tom D. Callas, A. Nikas, John Gekas, John Paulos, and Monte Seymour, dba Nikas Mining Company, the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated January 3, 1952, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

The undersigned further agrees that if said leasehold interest should be surrendered or if said lease should terminate at any time prior to the expiration of the rights of the United States of America under said Exploration Project Contract, the undersigned shall assume and does hereby assume all of the obligations of the Lessee under said Exploration Project Contract to make repayment to the United States of America according to the terms of said contract; and

The undersigned agrees to commit no act, nor assert any claim under judicial process or otherwise that may contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract.

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

Dated this 20th day of February, 1952.

Elizabeth Lambert Wood

U. S. GOVERNMENT PRINTING OFFICE 16—64582-1

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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JUN 18 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
FEB 20 1952

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JUN 16 4 42 PM '52
DEFENSE MATERIALS
PROCUREMENT AGENCY

2-18-52 400

FILE COPY
SURNAME:

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

FEB 13 1952

Nikas Mining Company
H. E. Krumlauf, Manager
55 W. Congress Street
Tucson, Arizona

Re: Docket No. DMEA 2356X - Tungsten
Morning Star Lode Claim
Pinal County, Arizona

Dear Mr. Krumlauf:

Your application for assistance in exploring the Morning Star Lode claim, Docket No. DMEA 2356, Pinal County, Arizona, has been referred to Mr. J. H. Hast, Jr., Executive Officer, DMEA Field Team, Region IV, U.S. Bureau of Mines, 224 New Customhouse Building, Denver 2, Colorado, for a field examination.

The Regional Office will contact you at an early date in regard to your project. Any assistance that you can offer the field team during the examination will be appreciated.

Sincerely yours,

C. O. Mittendorf (fw) 2/18/52

Acting Administrator
Defense Minerals Exploration
Administration

GGGentry'lm
2/12/52

cc: Admn. Reading File
Docket
R. W. Geehan, USBM
D. M. Lemmon, USGS
Field Team Reg. IV
G. C. Selfridge
G. G. Gentry

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

Selfridge

REGIONAL DIRECTOR'S OFFICE
REGION IV
FEB 20 1952
BUREAU OF MINES
DENVER, COLORADO

Mr. J. H. East, Jr.
Executive Officer, Region IV
224 New Customhouse Building
Denver 2, Colorado

Gaskin
Gahan
WRS

Dear Sir:

We attach "Review of Application for Exploration Assistance" on:

Applicant Nikas Mining Company

Docket No. 2356

Commodity Tungsten

Amount $ 93,037.00

Please expedite consideration of the application with particular reference to the points raised in the attached "Review".

Sincerely yours,

Frank E. Johnson
Chairman, Operating Committee
Defense Minerals Exploration
Administration

APPROVED:

R. R. Hedges
Member, Bureau of Mines

T. P. Thayer
Member, Geological Survey

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

FEB 18 1952

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Executive Officer, Region IV
224 New Customhouse Building
Denver 2, Colorado

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Sincerely yours,

(signed) FRANK E. JOHNSON

Chairman, Operating Committee
Defense Minerals Exploration
Administration

APPROVE :

J. H. Hedges
Member, Bureau of Mines

J. P. Thayer
Member, Geological Survey

Defense Minerals Administration

Review of Application for Exploration Assistance

Docket No. DMEA 2356

Commodity Tungsten

Total Amount $93,037.00

Govt. Participation 75%

1. Name and Address of Applicant Nikas Mining Company, H. E. Krumlauf, Manager
55 W. Congress Street, Tucson, Arizona

2. Location of Property Morning Star Lode Claim
T10S; R16E; Section 17; Old Hat Mining District
Pinal County, Arizona

3. Mineral or metal Tungsten Is it listed in Section 9 of MO-5?

If not, application will be rejected.

4. Geologic probability of discovery—based on data in application (question #16, 17, 18, 20 and 22)*

Mines or Survey reports, etc., do you rate chances:

a) Good

b) Poor

c) None

d) Don't know—needs field examination Needs field examination

e) Is there an alternative and favorable project? Unknown
(If so, attach an explanation)

5. Is the applicant's right to the property clearly stated? Require Landlord's Subordination Agreement.
(question 5, 6, 7)* Forms mailed to applicant on 2/7/52.

6. If applicant is a lessee, is a copy of the lease attached? Yes

Does the lease have sufficient time to run to cover a future

productive period? Yes

*question numbers are those of MF-103

7. Are subordination agreements necessary? **Yes**

a) MF-201? _____

b) MF-202? **Yes**

8. From the data presented, does the proposed project appear feasible from the point of view of:

a) Available manpower **Unknown**

b) Equipment and supplies **Unknown**
(question 14 plus general knowledge of availability)*

c) Accessibility (question 12)* **Unknown**

d) Water (question 13)* **Unknown**

e) Power (question 13)* **Unknown**

Is a field check needed on any of these points? **Yes**

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4)* **Present manager probably competent, but who will be the superintendent in direct charge.**

Is a field check needed on this point? **Yes**

10. Exhibit A. (question 21 and 22)*

a) Is the project adequately described? **Requires further details of plan**

If not, are there sufficient data given so that you can describe the project? **No** If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? **Needs more geology to show objectives.**

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? **Yes**

If not, what part of it is? _____

Is this part a worthwhile exploration project? Yes

d) Are the cost estimates detailed? Yes

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data? No If so, attach a draft.

e) Are the cost estimates reasonable? Appear to be high

f) Should more information be requested from applicant? Yes

g) Is a field examination necessary to complete Exhibit A? Yes

11. Exhibit B (question 23-d)*

a) Is it applicable? Yes

b) If so, are sufficient data furnished? No If so, attach a draft.

c) Is a field check needed? Yes

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable? Yes

b) Sufficient data? No If so, attach a draft.

c) Are rents and charges reasonable? Unknown

d) Is a field check needed? Yes

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data? No

b) Is the schedule adequate for the work proposed? Unknown

c) Is the schedule excessive for the work proposed? Unknown

d) Are the proposed wages and salaries reasonable? Unknown

e) Is a field check needed? Yes

14. Exhibit E (question 23-c)*

a) Is it applicable? Yes

b) Sufficient data? No

c) Reasonable? Unknown

d) Field check needed? Yes

15. In your judgment, can the proposed work be done in the proposed time? Yes

(All exploration must be completed within two years)

16. If field examination is not needed, attach your recommendation.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question? Sampling and WO_3 analysis of exposures which have a bearing on applicant's proposed exploration. Geological information re distribution of favorable beds on the hanging wall of the proposed shaft. Evaluation of the proposed exploration VS an alternative plan; investigation of property rights with relation to the adjoining pure gold claim; statement as to applicant's competence; plans for milling ore. Revision of costs in line with size of target if exploration is warranted. Investigate "Assignment" mentioned in paragraph 1, Line b, page 1 of applicant's statements. Applicant has not attached said assignment. If any assignment made, then applicant must have written consent of lessors. Would diamond drilling as the first step be a more practical program.

Reviewed by: Glenn G. Gentry

Date Feb. 11, 1952

IN REPLY REFER TO:

G-MD-DML

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

February 7, 1952

Memorandum

To: George C. Selfridge, DMEA

From: D. M. Lemmon, U.S.G.S.

Subject: Exploration application $93,037. DMEA 2356 - Tungsten
Nikas Mining Co.
55 W. Congress St.
Tucson, Arizona

Property: Morning Star claim
Old Hat mining district
Sec. 17, T. 10 S., R. 16 E.
Pinal County, Arizona

Proposal: It is proposed to sink a shaft inclined at 25 degrees to an inclined depth of 260 feet, and to drift 300 feet on the 125-foot level and 300 feet on the 250-foot level.

Geology: The Morning Star and adjoining Pure Gold mines were mapped by the Geological Survey in 1943-44; a copy of the maps and brief report, released July 7, 1944, is attached to this memorandum.

"Scheelite was mined at the Bonito mine, now known as the Maudina, by the Cody-Dyer Arizona Mining and Milling Co. during the years 1908-1912 and 1915-1916, with an output of about 3,000 units of WO_3. The Morning Star property was worked in 1913 and again during 1940-1944. A third deposit, on the Pure Gold claim, was worked in 1943-1944. The total output of these 3 mines to the end of 1944 is about 18,236 units.

The Bonito mine is in the north part of the Santa Catalina Mountains, 4 miles air-line southeast of Oracle, in the SW¼ sec. 17, T. 10 S., R. 16 E. The Pure Gold mine is about 1,000 feet south of the Bonito, and the Morning Star is 200 feet south of the Pure Gold. The Pure Gold and Morning Star mines are essentially part of the same deposit, divided by property lines. The mineralization is closely related to the Mogul fault and subsidiary faults which strike northwest, dip southerly, and separate pre-Cambrian granite on the north from Apache and Paleozoic sedimentary rocks on the south. The fault zone extends for 10 miles along the north end

of the range, and appears to warrant more extensive exploration for tungsten ore bodies.

At the Bonito mine, a scheelite ore body 50 feet long was stoped from the surface to a depth of 175 feet. The ore was 4 to 15 feet wide, and consisted of veinlets and replacement masses, locally with quartz, in a vertical fault cutting across sandstone and impure limestone. The mine was worked through an adit and a 175-foot vertical shaft from which short levels were turned at 100, 150, and 175 feet. It is reported that the best ore was found below the 100-foot level where the vein entered impure limestone.

On the Pure Gold claim, scheelite occure in siliceous limestone breccia in the hanging wall of a major fault between granite and limestone. The ore shoot at the surface is 5 to 40 feet wide and 200 feet long, and dips about 30° SW. The ore mined from an open cut contained 1 to 3 percent of WO_3 and averaged about 1.5 percent. In 1943-44, 6,284 tons containing 9,803 units of WO_3 were shipped to Metals Reserve Co., and concentrates containing 520 units were also produced. The downward limits of mineralization were unknown in 1945.

The Pure Gold ore body extends a few feet along the strike onto the Morning Star claim, and also extends beneath the Morning Star claim down the dip. In 1944-45, the apex rights of the 2 claims were in litigation.

The Morning Star mine contains 2 ore bodies in addition to the disputed part of the Pure Gold ore body. One of these, which had not been mined in early 1944, is 5 feet wide and 110 feet long, and lies along the same structure as the Pure Gold ore shoot, from which it is separated by 60 feet of barren siliceous limestone breccia. The second ore body is an irregular siliceous breccia in limestone, located 100 to 200 feet southwest of the first ore body. Two intersecting faults within this breccia contain scheelite ore for widths of 6 to 24 inches, with a content of WO_3 estimated at several percent. Scheelite is also sparsely disseminated through the rest of the breccia.

The mine is opened by 2 adits and a glory hole. Output was reported to be 335 units in 1913, and 1,165 units during 1940-1944. In 1944, an additional output of 3,216 tons of ore containing 3,416 units was shipped to Metals Reserve Co."

Conclusions: It appears likely that scheelite ore containing about 1.0 percent of WO_3 might be found along the Mogul fault on the Morning Star claim. The depth to which ore might extend probably depends on the distribution of the favorable limestone beds on the hanging wall of the fault.

In 1944-45, the ownership of the Pure Gold ore body at depth was in litigation, the results of which are not now at hand. If the Pure Gold claim has apex rights on the vein across the common side line shown on the map attached to DMEA 2356, then the proposed workings on the Morning Star claim will trespass on the Pure Gold rights.

It is not clear that the proposed exploration is the best plan. If the shaft and level proposal is followed, then the project should be set up in 2 stages, requiring satisfactory completion of exploration on the 125-foot level before additional sinking or drifting is approved.

The estimated cost of the work proposed is excessive.

Recommendation: It is recommended that the application be referred to the Field Team for the following information: (1) the distribution of favorable beds on the hanging wall of the proposed shaft; (2) evaluation of the proposed exploration vs. an alternative plan; (3) investigation of property rights with relation to the adjoining Pure Gold claim; (4) statement as to applicant's competence; (5) plans for milling ore; and (6) revision of costs in line with size of target if exploration is warranted.

Dwight M. Lemmon

Enclosure

EXPLORATION

Subject: DMEA-2356
Re: Exploration Loan
Morning Star
January 31, 1952

Mr. H. E. Krumlauf, Consulting Min. Engr.
Nikas Mining Company
55 W. Congress Street
Tucson, Arizona

My dear Mr. Krumlauf:

This will acknowledge receipt of your application dated January 28, 1952 for a loan under the Defense Production Act of 1950.

Your application was assigned Docket Number DMEA-2356 and referred to the Iron & Ferro-Alloys Division.

Kindly refer to DMEA-2356 in any future correspondence relating to your application.

Sincerely yours,

ROBERT E. ADAMS

Robert E. Adams
Acting Administrative Officerr

7862

DMEA-2356

NIKAS MINING COMPANY
55 West Congress Street
Tucson, Arizona

January 28, 1952

DEFENSE MINERALS ADMINISTRATION
U. S. Department of the Interior
Washington 25, D. C.

Dear Sirs:

This application for an exploration loan by the Nikas Mining Company of 55 West Congress Street, Tucson, Arizona, contains four copies of Form MF-100 and four copies of Form MF-103 filled out according to instructions, four copies of the lease agreement between the Nikas Mining Company and the owners of the Morning Star Mines and statements concerning the metallurgical treatment of the ore. A Landlord's Subordination Agreement is being prepared and will be sent to you at a later date.

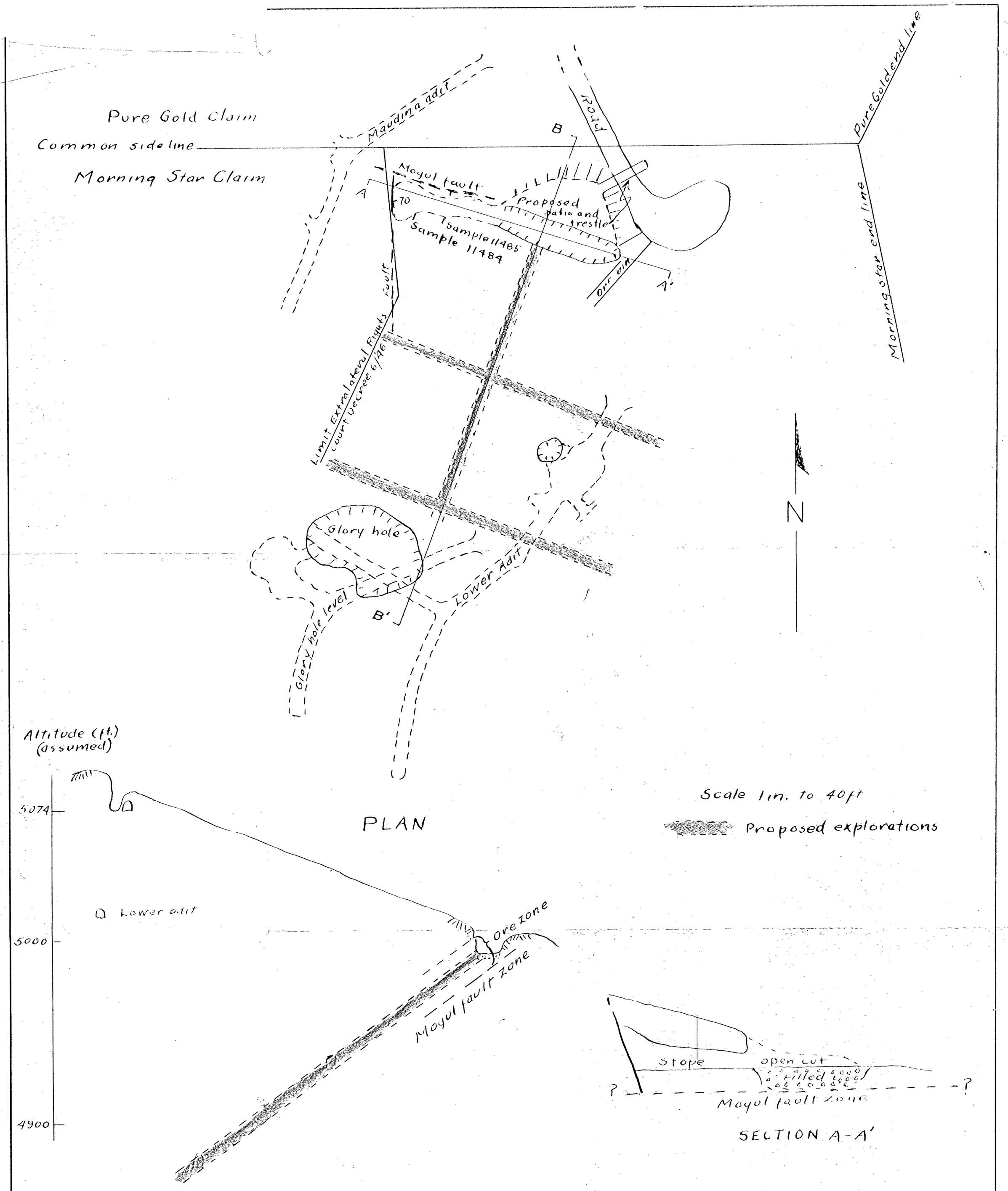
Additional information will be furnished at your request.

Sincerely yours,

H E Krumlauf

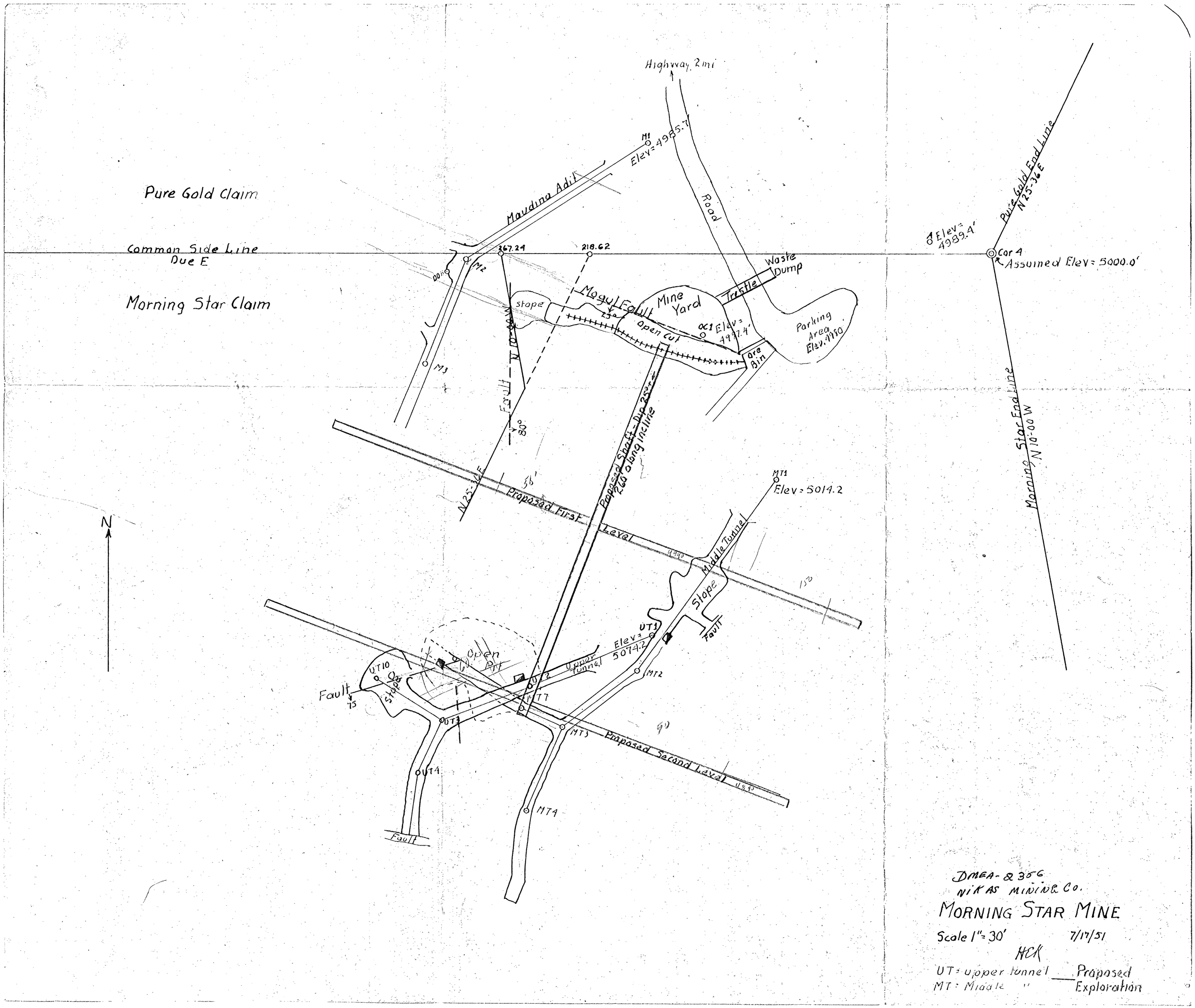
H. E. Krumlauf
Consulting Mining Engineer
for the Nikas Mining Company.

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D.C.
JAN 30 1 58 PM '52



Nikas Mining Co., DMEA 2356

Fig. 4 Proposed explorations, Morning Star Tungsten Mine, Pinal County, Arizona



DMEA-&356
NIKAS MINING CO.

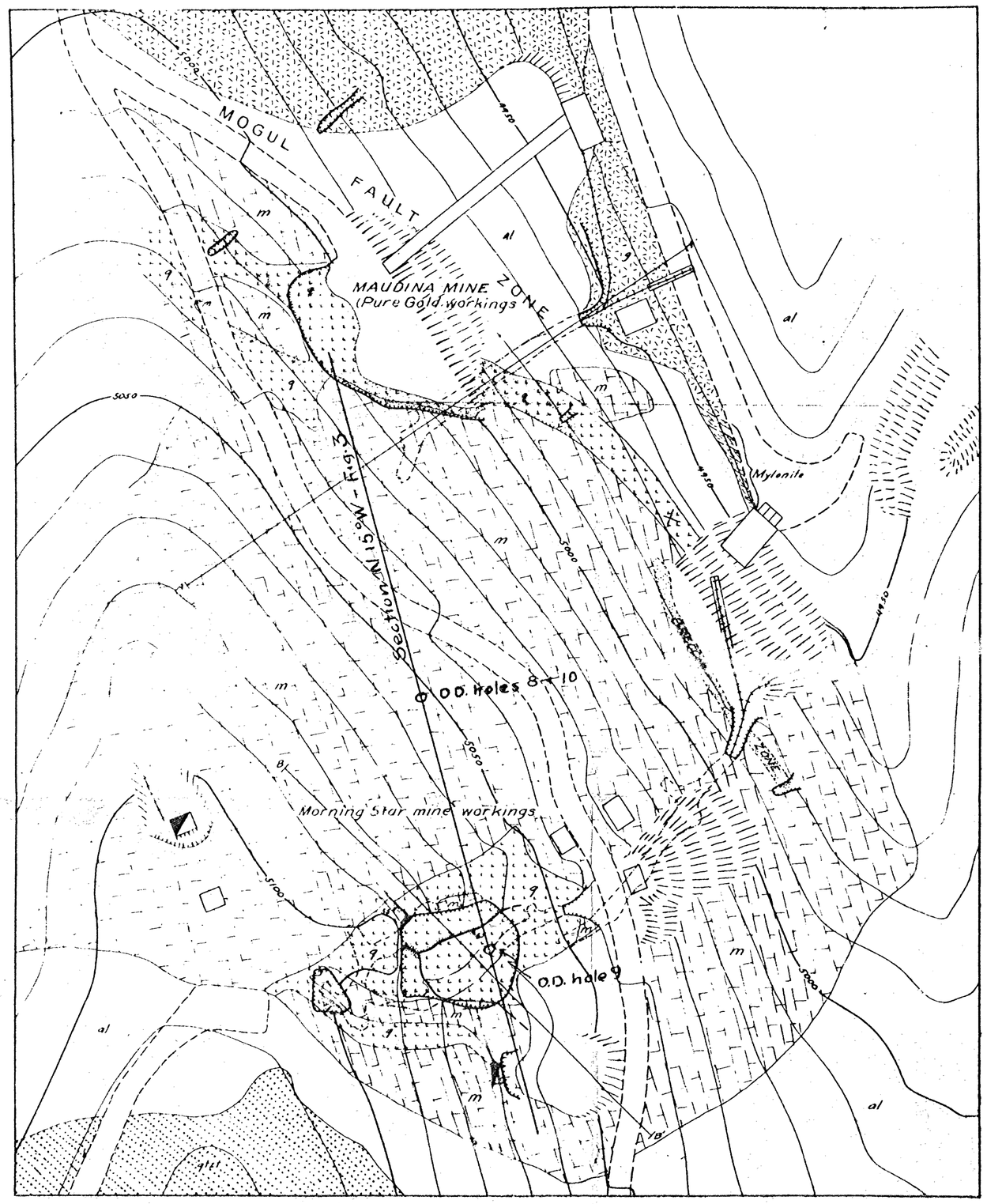
MORNING STAR MINE

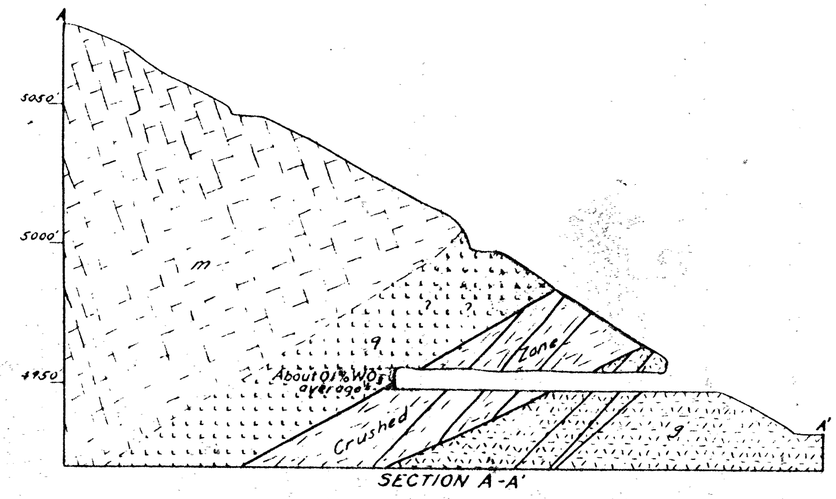
Scale 1" = 30' 7/17/51

HCK

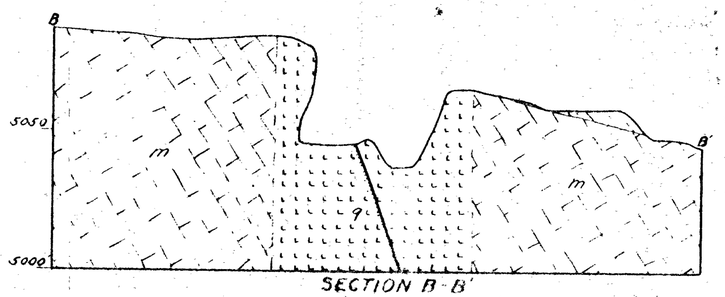
UT = upper tunnel
MT = Middle "

Proposed Exploration





SECTION A-A'



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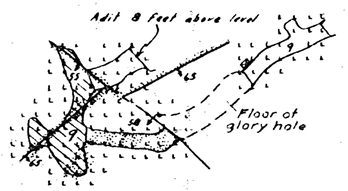
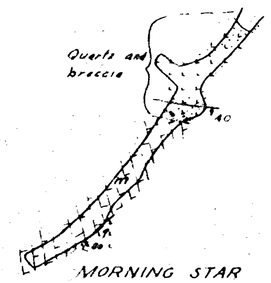
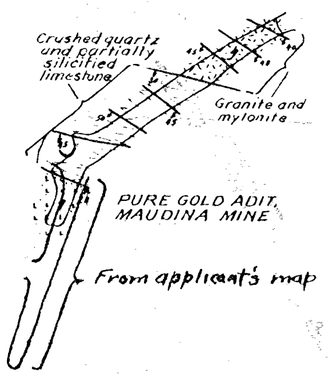


MORNING STAR
GLORY HOLE LEVEL



MORNING STAR
LOWER ADIT



From applicant's map

See fig. 3 for present status of

EXPLANATION

al — Alluvium	g — Granite	65 — Strike and dip of beds	Opencut
WO_3 Mineralization	m — Marble	Fault showing dip	Dump
q — Quartz and silicified limestone	qtzt — Quartzite	Underground workings	Stope

Geology and topography by P. C. Bateman and M. P. Erickson
February 18, 1944

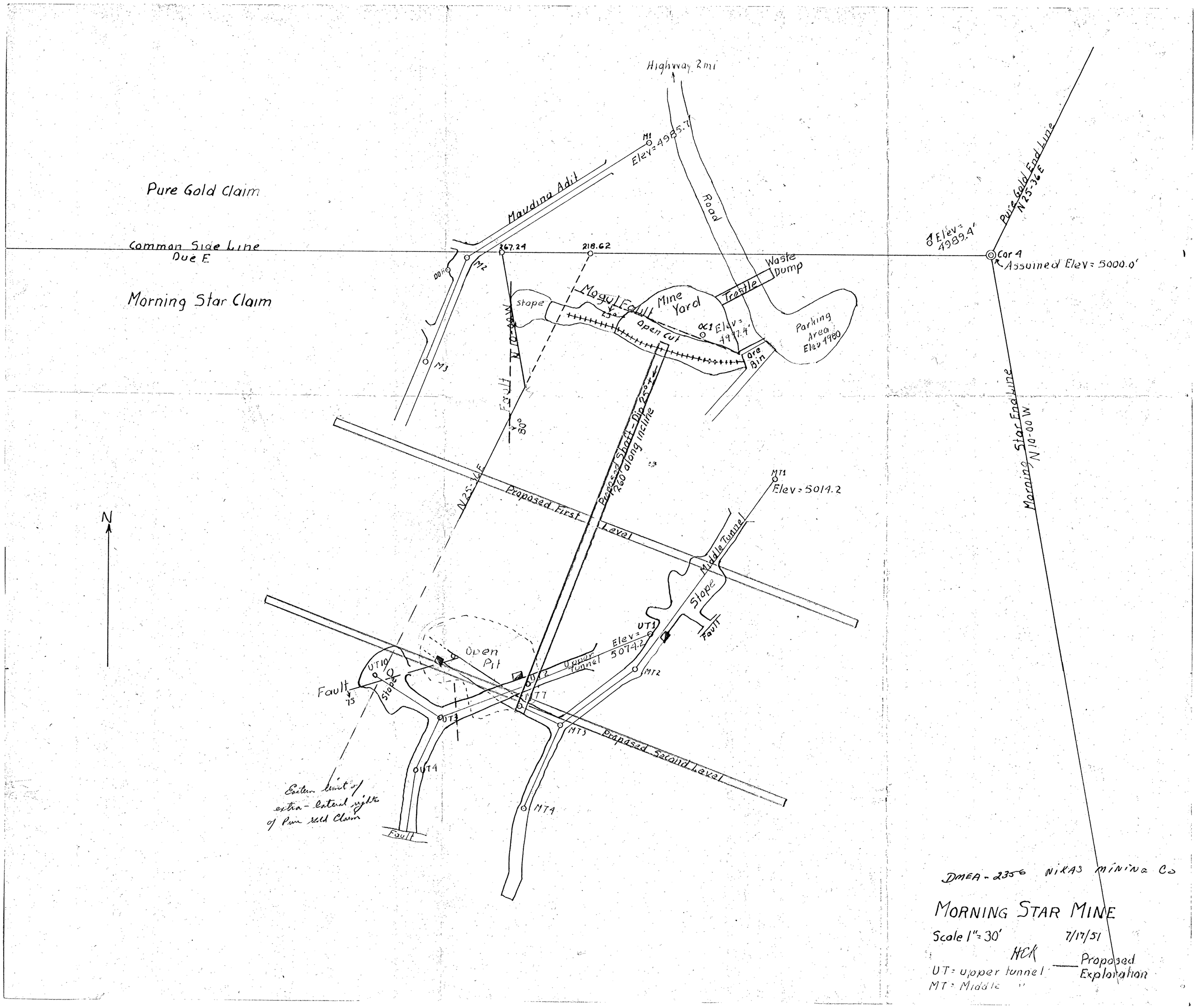
FIGURE 2

40 0 40 80 120 160 Feet

Contour interval 10 feet

NIKAS MINING CO., DMEA-2356

Fig. 2 — MAUDINA AND MORNING STAR TUNGSTEN MINES, PINAL COUNTY, ARIZONA



DMEA - 2356 NIKAS MINING Co

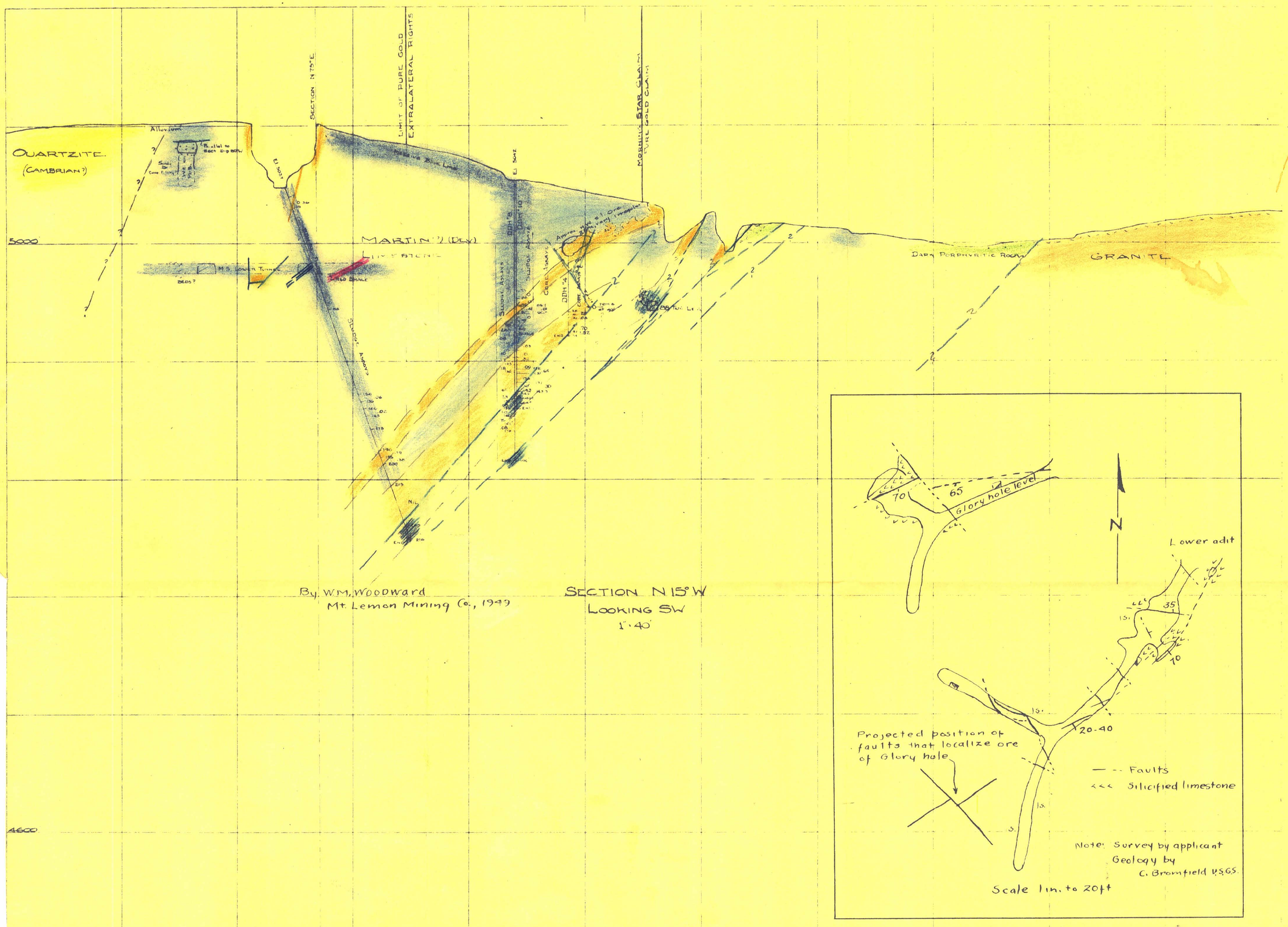
MORNING STAR MINE

Scale 1" = 30' 7/17/51

HCK

UT = upper tunnel
MT = Middle "

— Proposed Exploration



Nikas Mining Co., DMEA - 2356

Fig. 3 Section and plan, Morning Star Tungsten Mine, Pinal County, Ariz.