DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE — Idm-E NO. 2 — DMEA NO. 110

Application
- [ ] Denied
- [ ] Withdrawn

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

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

Folder No. 1:

Left Side

- [ ] Royalty Audits
- [ ] 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
- [ ] Owner's Consent to Lien and Subordination Agreement
- [ ] Application and attachments

Right Side

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

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

- [x] Field Team Semi-Annual Report for Certified Project
- [x] Final Field Team Report (Tab)
- [x] Operator's Final Report (Tab)
- [x] Interim Field Team Reports
- [x] Operator's monthly reports and all attachments
- [x] On-site Exam Report (Tab)
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Folders No. 2 : Reports

Left Side

- [ ] Analysis of Semi-Annual Inspection Reports
- [ ] Project Summary (Interim) by DMEA Engineers

Right Side

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

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

Folders No. _____ : Settlement Sheets

Folders No. _____ : Drill Logs

Folders No. _____ : Royalty material

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF ROYALTY REVIEW

I have reviewed the files of the Washington office pertaining to Amended Contract Idm-E2, Docket DMEA-110 (lead-zinc), dated August 12, 1952, with

Callahan Zinc-Lead Company, Inc.
100 Park Avenue
New York 17, New York

for the purpose of determining the amount of royalty payable to the U. S. Government on sales of minerals from property referred to as the Victor, Akron, and Morning Star Mines located in Gunnison County, Colorado, during the period June 9, 1959, through April 2, 1962.

In accordance with a Termination Agreement and Annex II of the Amended Contract, royalty is payable on all minerals produced from the land described in Article 2 of the contract for a period of 11 years from the date of the Amended Contract or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first. A Report of Review dated December 2, 1955, indicated accepted costs under the exploration contract amounting to $148,051.22 with the Government's contribution on a 50 percent basis being $74,025.61.

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

This review established no sales subject to the Government's royalty subsequent to the period covered by a prior Report of Royalty Review which also found no sales subject to the Government's royalty through June 8, 1959. Accordingly, as of April 2, 1962, the royalty account of this project was found to be:

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

May 2, 1962

E. D. Talbert, OME Auditor

STATUS OF PROJECT, SCOPE OF REVIEW
AND REASONS THEREFOR

The Amended Contract, as further amended by Amendment No. 6 and a May 14, 1955, Termination Agreement, provides that the Operator or its successor in interest shall pay the Government a percentage royalty on all mineral production from 5 patented claims (Deadwood, North Star, Muldoon, Narrow Gauge, and Number Three) owned by it and 5 patented claims (Victor, Morning Star, Good Hope, Lucky Boy, and John C.) leased from the Hayden Mining Company, all located in the Tomichi Mining District. The usual requirement for execution by the lessor of an Owner's Consent to Lien was waived. The contract contains the so-called "abandonment" provision.

Exploration work under the contract was terminated in September 1953. No ore was produced during the exploration period and subsequent examinations of the property and inquiries addressed to the Operator and others have disclosed no further operations on the property, other than some geophysical surveys and annual assessment work.

In a letter dated March 14, 1957, the Operator advised that it was "in the process of transferring all of its right, title and interest in the Akron property to a new corporation - Pinnacle Exploration, Inc." The Washington files contain no evidence that the transfer was consummated other than a Region III interim report dated March 16, 1960, which states that "the assignee" reported no production.

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

(1) The files indicate that no ores were produced during the period covered by this review; and

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

JUN 11 1959
O.M.E.

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF ROYALTY REVIEW

I have reviewed the files of the Executive Officer, OME Field Team, Region III, Denver, Colorado pertaining to Contract Idm-82, Docket No. DMA 110, dated August 12, 1952, with

Calliham Dual-Flow Company
155 Park Avenue
New York 1, New York

for the purpose of determining the amount of royalties due the U. S. Government on the sales of fluor, lead ores, from property referred to as White Pine Mine, located in Gunnison County, Colorado, during the period August 12, 1952 to June 8, 1959.

Pseudo Certification was effected in Termination Agreement dated May 4, 1955 and accordingly royalty is payable on all production from the land described in Article 2 of the contract for a maximum period of 11 years from the date of the contract. A report of review in lieu of final cost audit dated December 2, 1953, indicated accepted costs under the Exploration Contract amounting to $148,031.82, with the Government's contribution on a 50 percent basis being $74,015.91.

No royalty has been paid to the Government to date in connection with this contract.

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

(a) According to the Field Team's Annual Report of certified project for the period January 1, to December 31, 1955, operation ceased about September 10, 1953; no ore subject to DMA royalty has been shipped since August 12, 1952, (the date of the exploration contract). Subsequent semi-annual reports of Field Team during period January 1, 1956 thru December 31, 1958 indicate the property is inactive and no operations or ore shipments are anticipated in 1959.

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

June 8, 1959

Donald T. Finch
Donald T. Finch
OME, Auditor

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

Sullivan Lead-Zinc Company
100 Park Avenue
New York, N. Y.

pertaining to Exploration Project Contract No. I-DMA-22, Docket No. 110, including Amendment Nos. 1 to 3 on the original contract, and as amended contract, including Amendments 1 to 7 thereto, for the period May, 1951 to December 2, 1955, including the subsequent disposition of property, covering a project for the exploration of lead and zinc-ore property known as the Alpen Mine located in Gunnison County, Colorado.

My review included an examination of the Monthly Reports (Form MP-104) and supporting documents attached thereto, computation of the costs claimed with the contract and pertinent schedules, consultation with the Executive Officer, DMEA Field Team, and a determination of the reasonableness and propriety of the costs.

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

(A) The administrative cost to the Government of an audit would be excessive in relation to the amount of possible disallowances thereunder.

(B) The accepted costs ($117,168.78) of all work on an actual cost basis were covered by an Interim Audit Report and Audit Certificate dated September 9, 1953, issued by T. E. Bunding, DMEA Auditor.

(C) A minor portion ($11,208.59) of the costs incurred were on the basis of agreed estimated costs of units of work actually performed.

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

Total cost as billed by Contractor:		$[illegible]
Less: Proceeds from property disposition		[illegible]
Net cost as claimed by Contractor		$[illegible]
Exceptions: By DMEA Officer	$0.00	
Remarks	[illegible]	
		[illegible]
Total Accepted Cost		[illegible]

The contract calls for a 50 percent participation of exploration expenses by the United States Government. Therefore, payment to the contractor by the Government in the amount of Seventy-four thousand, twenty-five and 41/100ths Dollars or $74,025.41 is

is considered valid and proper, provided 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.

December 2, 1955

T. E. Bunding, Auditor.

Grinswold

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

INTERIM AUDIT CERTIFICATE (2)

I have examined the records and transactions of:

Callahan Zinc-Lead Company
100 Park Avenue
New York, New York

pertaining to Exploration Contract I-DMA-E2, Docket No. DMA 110, including Amendments 1 to 3 on the original contract and Amendments 1 to 5 on the supplemental contract, covering a project of exploration for Zinc and Lead, for the period May 1951 to June 30, 1953. (Operations were recessed from May 1952 to August 1952).

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	$140,252.64
Exceptions (per Audit Report)	None
Total Accepted Cost	$140,252.64

The contract calls for a 50 percent participation of exploration expenses by the United States Government. Therefore, payment to the Contractor by the Government in the amount of Seventy Thousand One Hundred Twenty-Six and 32/100 Dollars

-$70,126.32-

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: September 3, 1953

T. H. Brading

T. H. Brading, Auditor

INTERIM AUDIT REPORT (2)

I. INTRODUCTION

A second interim audit (covering the period from May 26, 1951 to June 30, 1953) was made of the records and accounts of operations pertaining to Contract I-DMA-E2, Docket No. DMA 110 and Amendments 1 to 3 on the original contract, and 1 to 5 on the supplemental contract with

Callahan Zinc-Lead Company
100 Park Avenue
New York, New York

covering a project of exploration for Zinc and Lead.

The accounting records under this contract are located in the company's office at its mine and mill site, which is reached by proceeding approximately nine miles from Highway 50 at Sargents, Colorado, on an unnumbered country road.

During the course of the audit, the following employees of the company were consulted as required:

Mr. J. E. Dunn - Superintendent
Mr. R. James Flynn - Assistant Superintendent

Mr. C. M. Harrer, Mining Engineer, Denver, Colorado, collaborated in the audit.

Their cooperation and assistance greatly facilitated the audit.

Considerable time was spent in the office on preliminary work prior to the audit.

II. GENERAL INFORMATION ON RECORDS

The source documents covering the costs of this project are recorded on Monthly Work Sheets which form the basis of preparation of the Monthly MF-104 reports. Therefore, this audit involved in general, a check of the monthly work sheets and reconciliation of the work sheets with the Monthly MF-104 reports. Costs are recorded on a combination cash and 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 June, 1953. In view of the previous audit covering the period from May 26, 1951 to April 30, 1952, except as otherwise indicated, this

audit was limited to the costs claimed since that latter date. The Operator filed a supplementary claim for May, 1952 (in June, 1952), in the amount of $91.64 covering corrections in April report as follows:

Labor	$63.93
Timber	21.23
Payroll Taxes	3.99
Workmen's Compensation Insurance	2.49
Total	$ 91.64

The above items were verified in detail by checking appropriate records and computation of payroll taxes and compensation insurance.

The project was recessed from May 1952 to August 1952, at which time operations were resumed under Supplemental Contract dated August 12, 1952, and Amendments one to five, on a Unit Cost Basis.

Unit Costs as reported by the Operator for the period from August 1952 to June 30, 1953, in the amount of $23,142.92 were verified by checking Operator's records and examining engineer's Narrative Reports. Disallowance of $53.00 made by the Finance Officer was confirmed. This disallowance was accepted by the Operator.

A breakdown of these costs follows:

Raising 215' at $53.00	$11,395.00
Drifting 136' at $50.00	6,800.00
Repairs and Maintenance of Akron Tunnel at $625.00 per month	4,947.92
Total	$23,142.92

Costs are in line with supplemental contract and amendments one to five.

Amounts reported for May, 1952 were on the old form MF-104. Accounting distribution of amounts carried forward to August 1952 MF-104 were examined and verified by comparison with the May MF-104. Considerable analysis was necessary, especially in connection with Other Supplies.

Corrections as follows were made:

	May 1952 MF-104		Correct Distri-bution	*Disallowances	Approved Amounts
Timber	$8,635.93		$11,143.94		$11,143.94
Pipe	2,313.61		3,644.78		3,644.78
Track	1,821.61		2,797.17		2,797.17
Hand Tools		$ 455.26			
Drill Steel & Bits		624.56			
Other	11,211.51	4,240.64	5,320.46	$2300.80	3,019.66
Repairs	2,098.94		3,175.25		3,175.25
Totals	$26,081.60		$26,081.60	$2300.80	$23,780.80

* Disallowances adjusted by Operator.

IV. CONCLUSIONS AND RECOMMENDATIONS

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

	June 1953	Distribution Corrected	Allowed by Audit
Raising	$11,395.00	$11,342.00	$11,342.00
Drifting	6,800.00	6,800.00	6,800.00
Rep. & Maint. Akron Level	4,947.92	4,947.92	4,947.92
Labor & Supervision:			
Labor	69,258.95	69,258.95	69,258.95
Supervision	4,029.13	4,029.13	4,029.13
Operating Materials & Supplies:			
Timber	8,635.93	11,143.94	11,143.94
Explosives	6,974.81	6,974.81	6,974.81
Pipe	2,313.61	3,644.78	3,644.78
Track	1,821.61	2,797.17	2,797.17
Other	11,211.51	3,019.66	3,019.66
Power	3,578.44	3,578.44	3,578.44
Operating Equipment - Depreciation	5,363.93	5,355.00	5,355.00
Miscellaneous:			
Repairs to Equipment	2,098.94	3,175.25	3,175.25
Payroll Taxes	2,189.48	2,189.48	2,189.48
Workmen's Compensation	1,789.90	1,789.90	1,789.90
Miscellaneous	382.09	206.21	206.21
Audit Difference	(2,538.61)		
Totals	$140,252.64	$140,252.64	$140,252.64

At the conclusion of the audit, the findings were discussed with Mr. R. James Flynn, Assistant Superintendent, and Mr. C. M. Harrer, Mining Engineer, Denver Office, representative of the Executive Officer, Region IV.

T. H. Brading, Auditor

September 3, 1953

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

AUDIT CERTIFICATE

I have examined the records and transactions of:

Callahan Zinc-Lead Company

White Pine, Colorado

pertaining to Exploration Project Contract No. E2, Docket DMA-110, for the period of May 26, 1951 to May 31, 1952.

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 as billed by contractor			$119,556.69
Exceptions (See Audit Report for details):			
During this Audit		$2,325.39	
Prior to this Audit	$160.22		
Less Amounts determined to be allowable	None	160.22	2,485.61
Total Accepted Cost			117,071.08

This contract calls for a 50 percent participation of exploration expenses by the United States Government. Therefore, payment to the contractor by the Government in the amount of Fifty eight thousand five hundred thirty five dollars and 54/100

-- $58,535.54 --

is valid and proper.

Payment to date	$59,698.23
Payment authorized	58,535.54
Overpayment	1,162.69

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.

July 23, 1952

J. H. Bowding
Auditor, Region IV

Callahan Zinc-Lead Company
Exploration Project Contract No. E2
Docket No. DMA 110

I. INTRODUCTION

An audit was made from July 7 to July 11 of Defense Minerals Contract No. E2, Callahan Zinc-Lead Company. The general records pertaining to the contract are in the office of the company at White Pine, Colorado, while the head office of Callahan Zinc-Lead Company is in New York City.

The audit covered the period from May 26, 1951 to May 31, 1952. The contractor suspended operations early in June as funds available under Contract E2 were exhausted. Amendment requesting additional funds is in process at this time. Mr. J.W. Townsend, Mining Engineer, Mining Division Office, Denver, Colorado, assisted in a very capable manner. Mr. J.E. Dunn, Superintendent, Mr. R. James Flynn, Assistant Superintendent, and Mr. Frank Micari, Accountant, were present and consulted when necessary.

II. EXTENT AND SCOPE OF AUDIT

1. Operating Equipment - Furnished by Operator

Allowances made for operating equipment owned by operator are in agreement with contract. Charges were made for equipment when in use, as covered by the Colorado Division Mining Engineer's Monthly Narrative Report.

2. Labor

Productive labor is paid on a contract basis. The contract is on a footage basis and provides an incentive for increased production. Each miner prepares an individual time ticket daily. This ticket shows contract number, location, number of hours worked, and materials used. The shift boss or superintendent approves tickets daily, which are turned in to the engineering department who group tickets by contract, enter total time of individual

miners on contract calculation sheet every two week pay period. Engineer checks progress made on each contract, calculates total amount due for footage attained. This amount is divided by the total man hours for the period in order to determine rate per hour, which is noted on time ticket. Bookkeeper enters time tickets on monthly individual earnings record which shows all pertinent data regarding deductions, calculates pay due based on total hours times rates from daily time tickets, or at regular hourly rate. Sufficient test check was made to determine that payments to men were in order. Charges under indirect labor costs were carefully scrutinized for items which would not be allowable under terms of the contract. Supervision charges are in line with terms of the contract.

3. Supplies

All suppliers' invoices are vouchered and entered at net, i.e., total charge less discount. Charges to inventory records are at the same basis. Stores are inventoried monthly and unit cost arrived at by dividing total dollar value by total units on hand, to determine average unit cost. This figure is used in determining costs for the subsequent month. Purchases of timber and explosives for the month of March 1952 were verified by examination of invoices which were traced through voucher and check record. Charges to the project for these items for the month of March 1952 were verified by checking tabulation of miners' daily material use reports, compiled from daily time cards.

4. Power

Power bills from Public Service Company of Colorado for the months of June 1951 and March 1952 were examined and traced through voucher and check record. Cost of power is allocated on a basis which we were informed is

based on a study made by power company engineers. There are two meters, one at the Akron Mine, the other at the Erie Mine. Cost shown on Meter No. 1 are divided as follows:

Mill Power	50%
Akron Mine	30%
Camp	20%
	100%

Costs shown on Meter No. 2 are divided as follows:

Akron Mine	33-1/3%
Erie Mine	66-2/3%
	100%

It is the opinion of the division mining engineers who inspect the project that the division is fair and equitable.

5. Workmen's Compensation

Rates for workmen's compensation insurance were checked to State Insurance Department invoices for June 1951 and March 1952. Total charges to project were verified for those two months by multiplying total salaries and wages by applicable rates and checking proration as shown by schedule which is basis of preparation of MF-104.

6. Social Security Taxes

Social Security taxes for June 1951 and March 1952 were verified by applying proper rate to total salaries and wages charged those months and checking schedule of proration as above. Social Security reports are filed by main office in New York, hence it was not possible to examine those reports.

7. Boarding House Subsidy

Charges to this account are approved by the original contract. Test check disclosed that amounts allocated to project appear to be in order.

8. Other

Miscellaneous charges to this account all were disallowed with the exception of one small item for $9.31 which represents allocation of power for camp charged to this account in error.

III. FINDINGS

The records maintained by Callahan Zinc-Lead Company are in good condition and well maintained. Payroll records are somewhat involved, due to the fact that the productive men are paid on incentive plan basis. They are complete, and supporting data is amply cross referenced. Cancelled checks are forwarded to the central office of the company in New York City, hence it was not possible to refer to them.

Expenses are prorated between three operations -- company operations at Akron and Erie Mines, exploratory operations on Akron Tunnel and Morning Star Mine, and exploratory operations at Erie Mine. The prorations are based on man hours or tonnage basis and are considered to be fair and equitable.

Exceptions have previously been taken by the DMEA Finance Officer as follows:

September 1951 --		
Mine Lamp Rental	8.12	
Bank Service Charge	1.54	9.66
November 1951 --		
Claim for old maps - not allowable under contract	75.00	
Bank Service Charge	1.63	76.63
December 1951 --		
Purchase of Air Receiver - not authorized by contract		65.00
February 1952 --		
Equipment Rental - disallowed for one-half month's use of ambulance and two mine cars		8.93
		160.22

Exceptions taken during the audit are:

Miscellaneous items in	May	22.47	
	June	10.29	
	July	33.24	
	August	10.05	
	October	13.54	89.59
Snow shed over Waste Dump - excluded by Exhibit B under contract			1,572.33
Repairs and Maintenance Employees Living Quarters - excluded by Exhibit E under contract			663.47
			2,325.39
Total Disallowances			2,485.61

No further exceptions are taken, the costs being proper and within the terms of the contract and amendments.

IV. RECOMMENDATIONS

The Audit Certificate, prefacing this report, reflects the amount of the costs properly chargeable to this project through May 31, 1952.

Docket copy

TERMINATION AGREEMENT

It is agreed this 4th day of May, 1955, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Callahan Zinc-Lead Co., Inc., hereinafter called the "Operator," parties to that certain Amended Exploration Project Contract Idm-E2, Docket No. DMEA-110, dated August 12, 1952, as amended, hereinafter called the "Contract," that:

1. In Article 2 of the Contract the description of the land (Appendix I to the Original Contract) is amended effective August 12, 1952, to read as follows:

<u>Patented Claims held under lease</u>

Victor	No. 17173
Morning Star	No. 6575
Good Hope	No. 20008
Lucky Boy	No. 20008
John C.	No. 20008

<u>Patented Claims owned by the Operator</u>

The southerly 1,200 feet of the following claims:

Deadwood	No. 1872
North Star	No. 847A
Muldoon	No. 849
Narrow Guage	No. 848
Number Three	No. 850

The land described above is also shown on a map entitled "Fig. 5 Callahan Zinc-Lead Co., . . . Claim and Project Location Map," attached hereto and made a part hereof.

2. Effective September 10, 1953, the Contract and all obligations of the parties thereunder, except as otherwise herein expressly provided, shall be and are hereby terminated.

3. The Government shall contribute only to the fixed unit costs of work performed prior to September 10, 1953.

4. The Operator shall promptly perform all winding-up and settlement actions provided for in the Contract, including (a) the disposal of any facilities, buildings, fixtures, equipment, or other items to the cost of which the Government has contributed; and (b) the rendering of the final report and final account.

5. The total net amount contributed by the Government shall be repayable in the form of a percentage royalty on any minerals mined or produced from the land described in Article 2 of the Contract, in the manner and amount provided in the Contract, for a period of eleven years from the date of the Amended Contract (August 12, 1952), certification of discovery or development being hereby waived.

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

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

THE UNITED STATES OF AMERICA

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

Hoffbund
Chamberlain
Martin

CALLAHAN ZINC-LEAD CO., INC.

By E G Lala

Treasurer

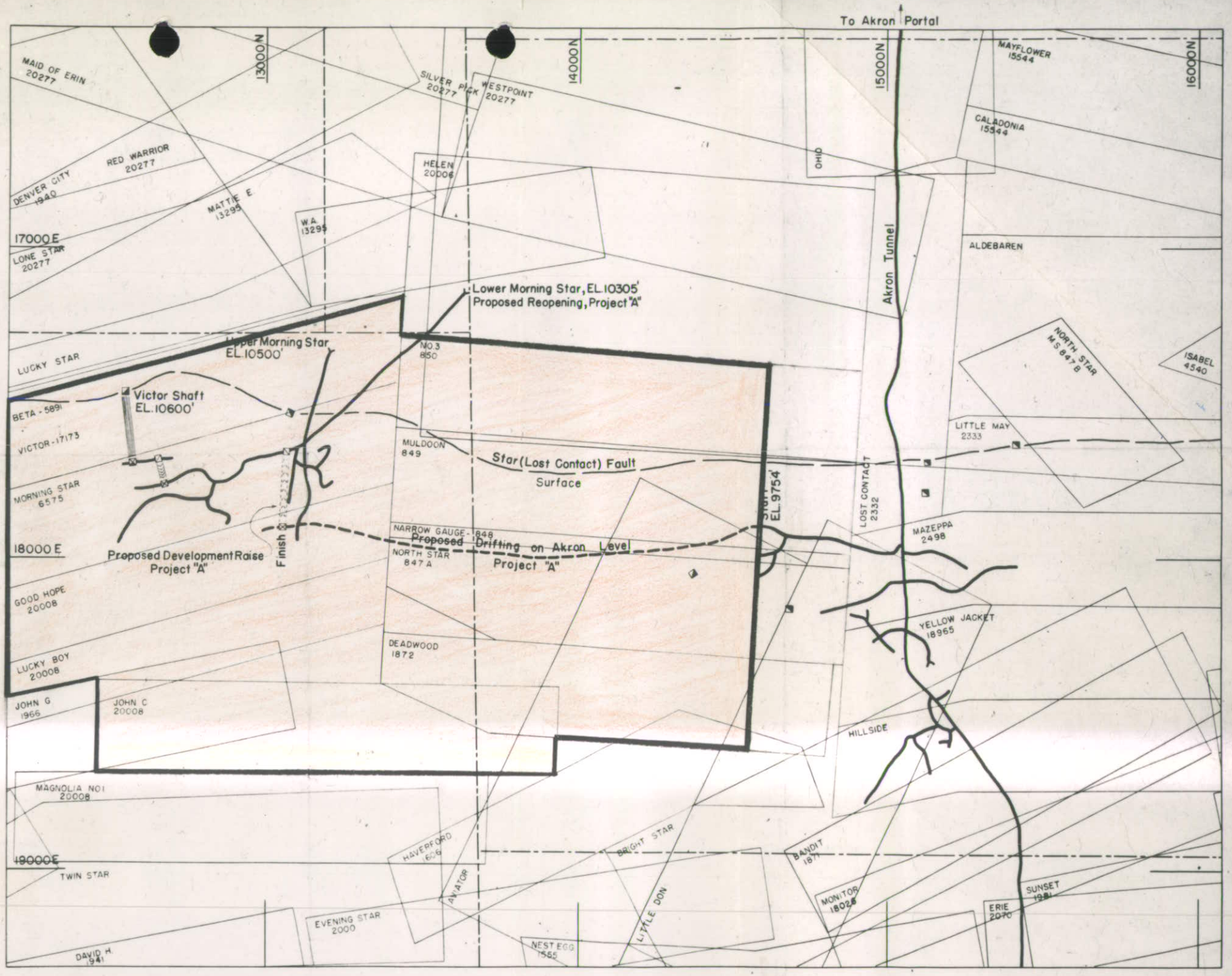

Fig.5, CALLAHAN ZINC-LEAD CO. AKRON UNIT, GUNNISON COUNTY, COLO.

CLAIM AND PROJECT LOCATION MAP, DMA-110

Extra Copy

AMENDED EXPLORATION PROJECT CONTRACT
CALLAHAN ZINC-LEAD COMPANY
DOCKET NO. DMEA-110

AMENDMENT NO. 7

It is agreed this 5th day of April, 1954, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and Callahan Zinc-Lead Company, that Amended Exploration Project Contract Idm-E2 (Docket No. DMEA-110), dated August 12, 1952 (hereinafter called the "Amended Contract"), as amended, is further amended, effective March 10, 1954, as follows:

1. a. Work under the Amended Contract shall be suspended during the period beginning March 10, 1954 (the end of the recess period provided under Amendment No. 6 to the Amended Contract), and ending not later than September 10, 1954.

b. No costs incurred by the Operator during the period of suspension shall be allowable for contribution by the Government.

c. The Operator, at its own cost and expense, without contribution by the Government, during the period of suspension shall preserve the project work and any property in which the Government has an interest.

2. In Article 3 of the Amended Contract form, as amended, delete the date "September 25, 1954," provided by Amendment No. 6, and substitute the date "March 25, 1955."

3. In Annex II attached to Amendment No. 6 to the Amended Contract:

a. In provision "(1)" under paragraph "b," delete the words "the date of the contract" and substitute the words "the date of the Original Contract (May 25, 1951)."

b. In provision "(2)" under paragraph "b," delete the words "for a period of ten years (or other period fixed by this contract) from the date of the contract" and

substitute the words "for a period of twelve years from the date of the Original Contract (May 25, 1951)."

4. It is of the essence of the Amended Contract that work be resumed on or before September 10, 1954; and if the work is not resumed within the time limited, in a manner to bring the project to completion as required:

a. All obligation of the Government to contribute to the unit costs of work not incurred before September 10, 1953, shall be and is hereby terminated.

b. The Operator shall promptly render to the Government a full and final report and final accounting of units of work performed under the Amended Contract.

c. The provisions of paragraph "b" of Annex II attached to Amendment No. 6 to the Amended Contract, as amended hereafter, shall remain in full force and effect. That part of paragraph "b" of Annex II which precedes the first colon is amended to read as follows:

> "The Operator, regardless of any certification of discovery or development, and regardless of whether the Operator is the producer or has any interest in the land or the production therefrom, shall pay to the Government a royalty on all minerals mined or produced from the land described in the Amended Contract for a period of twelve years from the date of the Original Contract (May 25, 1951), or until the total amount contributed by the Government, without interest, is fully repaid, whichever occurs first. Said royalty shall be a percentage of the net smelter returns, the net concentrator returns, or other amounts realized from the sale or other disposition of any such production (including any bonuses, premiums, allowances, or other benefits), in whatever form disposed of, including ore, concentrates, or metal, as follows . . ."

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may be required to contribute, nor the agreed unit cost of any item of work.

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

C. D. Mittendorf

By _____
Administrator, Defense
Minerals Exploration
Administration

CALLAHAN ZINC-LEAD COMPANY

By _____

Docket co

AMENDED EXPLORATION PROJECT CONTRACT
CALLAHAN ZINC-LEAD COMPANY
DOCKET NO. DMEA-110

AMENDMENT NO. 6

It is agreed this 25th day of November, 1953, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Callahan Zinc-Lead Company, a Colorado corporation, hereinafter called the "Operator," that Amended Exploration Project Contract Idm-E2, Docket No. DMEA-110, dated August 12, 1952, as amended, is further amended as follows:

1. This amendment shall be effective as of August 12, 1952.

2. In lieu of Article 6, the provisions of Annex II, attached hereto and made a part hereof, are substituted.

3. During the period from September 10, 1953, to March 10, 1954: (a) the project work shall be recessed; (b) the Government shall not contribute to any costs incurred by the Operator; and (c) the Operator shall save the Government harmless from any and all claims, and preserve and protect the project work and any property in which the Government has an interest.

4. In Article 3 of the amended contract form, as amended, in lieu of the words "prior to March 25, 1954," the words "prior to September 25, 1954," are substituted.

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may be required to contribute, nor the agreed unit cost of any item of work.

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By O. P. Mitchell
Administrator, Defense Minerals Exploration Administration

CALLAHAN ZINC-LEAD COMPANY

By E. G. Lobs
President

By Charles
Secretary

DEKrause
Gritm

ANNEX II

The following provisions are in lieu of Article 6 :

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

b. Percentage royalty.--The Operator, or his successor in interest, shall pay to the Government a royalty on all minerals mined or produced from the land described in Article 2,--(1) regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification of discovery or development, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first, unless the Government waives its right to a royalty; or (2) if the Government makes a certification of discovery or development, for a period of ten years (or other period fixed by this contract) from the date of the contract, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first. Said royalty shall be a percentage of the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production (including any bonuses), in whatever form disposed of, including ore, concentrates, or metal, as follows:

(a) One and one-half ($1\frac{1}{2}$) per cent of any such net amounts not in excess of eight dollars ($8.00) per ton.

(b) One and one-half ($1\frac{1}{2}$) per cent of any such net amounts, plus one-half ($\frac{1}{2}$) per cent of such net amounts for each additional full fifty cents ($0.50) by which such net amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) per cent of such net amounts.

(For instance: the percentage royalty on a net amount of five dollars ($5.00) per ton, would be one and one-half ($1\frac{1}{2}$) per cent; on a net amount of ten dollars ($10.00) per ton, three and one-half ($3\frac{1}{2}$) per cent.)

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

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

e. Notice to Purchasers.--The Operator shall notify any purchaser of the production of the Government's royalty interest, and shall authorize and direct the purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets; but failure or refusal by the purchaser to comply shall not relieve the Operator of liability to pay any royalty falling due.

f. No Obligation to Produce.--This article is not to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations.

No. 5

AMENDMENT OF CONTRACT: No. Idm-E2

Contract Docket No. DMEA-110, dated August 12, 1952, between the United States of America and Callahan Zinc-Lead Company is hereby amended as follows, effective June 25, 1953:

Referring to "EXHIBIT "A" attached to Exploration Project Contract Form MF-200(A), heading "Description of the work", subheading "Stage II", delete item "4" and in lieu thereof substitute the following:

"4. Drift and crosscut an estimated aggregate of 250 feet on a sublevel from the raise under item 3 to explore for the extension of the Morning Star ore body. The sublevel will be located below the Morning Star winze level approximately 100 feet down the dip of the structure. The location, direction and extent of crosscutting along or adjacent to the hanging wall of the dike will be determined after the hanging wall of the dike is encountered by the sublevel drift. The location and extent of crosscuts must be acceptable to the DMEA representative. Reimbursement to the operator for the costs of the drifting and crosscutting shall constitute final approval for the work."

Further referring to said "EXHIBIT "A", same heading, same subheading, delete item "5", and in lieu thereof substitute the following:

"5. Drift and crosscut from the 200 sublevel, cited under item 2, an estimated aggregate distance of 322 feet to explore for the downward extension of the Morning Star ore body approximately 200 feet below the work authorized under item 4. The location, direction and extent of drifting and crosscutting from the 200 sublevel will be determined after the results of work performed under item 4 are evaluated, and must be acceptable to the DMEA representative. The aggregate total footage of drifting and crosscutting under items "4" and "5" shall not exceed 572 feet."

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

Dated JUL 16 1953.

CALLAHAN ZINC-LEAD COMPANY

By E. G. Lalo
Secretary-Treasurer

SEAL

UNITED STATES OF AMERICA

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

Docket Copy

Department of the Interior
Defense Minerals Administration
RECEIVED
JUL 30 1953

AMENDED EXPLORATION PROJECT CONTRACT
CALLAHAN ZINC-LEAD COMPANY
DOCKET NO. DMEA-110

AMENDMENT NO. 4

It is agreed this 19th 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 Callahan Zinc-Lead Company, a Colorado corporation, hereinafter called the "Operator," that, effective as of July 1, 1953, Amended Exploration Project Contract Idm-E2 dated August 12, 1952, as amended, is further modified and amended, as follows:

1. In Exhibit "A", attached to the Amended Exploration Project Contract:

(A) Under "Description of the Work, Stage II" (1) in Item 3, the figure "190" is changed to "240". (2) in Item 4, the words "400 feet" are changed to "347 feet".

(B) Under "Estimated Costs of Additional Work, Stage II", the first two items thereof are changed to read as follows:

"289 feet of raising @
$53/ft. - $15,317.00"

"692 feet of drifts and crosscuts
@ $50/ft. - $34,600.00"

2. This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may be required to contribute, nor the agreed unit cost of any item of work.

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By C D Mitteudorf
Administrator, Defense
Minerals Exploration
Administration

CALLAHAN ZINC-LEAD COMPANY

By E G Lalo
Secretary-Treasurer

In file
O.E. Kane
6/4/53.

No. 3

AMENDMENT OF CONTRACT: No. Idm-82 amended

Contract Docket No. DMA 110, dated August 12, 1952, between the United States of America and Callahan Zinc-Lead Company is hereby amended as follows:

> Referring to Amendment No. 2 to the contract form, in the sixth line of the introductory paragraph, delete the date "March 25, 1953," substitute in lieu thereof the date February 7, 1953.
>
> Further referring to Amendment No. 2 to the contract form paragraph (2), delete the dates "March 25, 1953" and "September 25, 1953," substitute in lieu thereof the dates "February 7, 1953" and "May 11, 1953."

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: JUN 1 1953

CALLAHAN ZINC-LEAD COMPANY

By E. G. [illegible]
Secretary-Treasurer

UNITED STATES OF AMERICA

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

Docket Copy

EXPLORATION PROJECT CONTRACT
CALLAHAN ZINC-LEAD COMPANY
DOCKET NO. DMEA-110

AMENDMENT NO. 2
to
AMENDED CONTRACT

It is agreed this 4th day of May, 1953, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Callahan Zinc-Lead Company, a Colorado corporation, hereinafter called the "Operator," that, effective as of March 25, 1953, the Exploration Project Contract Idm-E2 dated August 12, 1952, is amended, as follows:

(1) In Article 3 of the contract form, the date "May 25, 1953," is hereby changed to "March 25, 1954."

(2) During the period March 25, 1953, to September 25, 1953, the project work shall be recessed without any obligation on the part of the Government for any costs whatever (including the cost of maintenance and/or rental of equipment) incurred by the Operator during that period.

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

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By O P Mitchell
Administrator, Defense
Minerals Exploration
Administration

CALLAHAN ZINC-LEAD COMPANY

By E G Lake
Secretary-Treasurer

DOCKET COPY

EXPLORATION PROJECT CONTRACT
CALLAHAN ZINC-LEAD COMPANY
DOCKET NO. DMA-110
CONTRACT NO. Idm-72

AMENDMENT NO. 1
(to amended contract dated August 12, 1952)

WHEREAS, Contract Docket No. DMA-110 dated May 25, 1951, between the United States of America and Callahan Zinc-Lead Company was amended effective August 12, 1952, to provide a Stage II for the project; and

WHEREAS, the amount of the Government's contribution to the project was correctly stated in Exhibit "A" of the amendment referred to above, and incorrectly stated on the contract form (MP-200) of the amendment;

NOW, THEREFORE, the amendment dated August 12, 1952, is amended as follows:

In Article 4 of the contract form, delete the amount "$27,453.50", and substitute in lieu thereof the amount "$27,452.50".

Dated November 25, 1952

THE UNITED STATES OF AMERICA

By C O Mitteudorf
Administrator, Defense Minerals
Exploration Administration

Callahan ZINC-LEAD COMPANY

By R M Lahney
Vice-President

No. 1(A)

AMENDMENT OF CONTRACT: No. Idm-E2

Contract Docket No. DMEA 110, dated August 12, 1952, between the United States of America and Callahan Zinc-Lead Company is hereby amended as follows, effective as of the date of said contract:

> Referring to "ANNEX I" attached to Exploration Project Contract Form MF-200(A), delete the second paragraph in its entirety and in lieu thereof substitute the following:
>
> "Work under the Original Contract having been suspended on or about May 1, 1952, and resumed on or about August 13, 1952, this Amendment and supplement providing for additional work shall become effective as of said resumption of work, and shall supersede the Original Contract in all respects except that vouchers and claims for the Government's contribution to the cost of the work performed under the Original Contract, prior to the effective date of this Amendment, shall be processed and paid as provided in the Original Contract."

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 November 17 1952

CALLAHAN ZINC-LEAD COMPANY

By R.F. Mahoney
R.F. Mahoney, Vice President

(Attest) E.G. Sale
Secretary

UNITED STATES OF AMERICA

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

No. 3

AMENDMENT OF CONTRACT: No. I-DMA-E2

Contract Docket No. DMA 110, dated May 25, 1951, between the United States of America and Callahan Zinc-Lead Company is hereby amended as follows, effective November 1, 1951:

> Referring to "Exhibit D" attached to Exploration Project Contract Form MF-200, titled "Question 8 Form MF-200", subtitles "Labor" and "Supervision and accounting", and referring to the amendment to the above subtitles:
>
> The wages of all personnel are increased by 12 cents an hour, or a total of 96 cents per 8-hour day.

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may pay or the percentage of the costs which the Government may pay under the provisions of Article 11 of the contract form.

Dated April 4, 1952.

CALLAHAN ZINC-LEAD COMPANY

By Joseph T. Hace
Pres.

UNITED STATES OF AMERICA

By J. H. Earth Jr.
Executive Officer - DMA

Docket

No. 2

AMENDMENT OF CONTRACT: No. I-DMA-E2

Contract Docket No. DMA 110, dated May 25, 1951, between the United States of America and Callahan Zinc-Lead Company is hereby amended as follows, effective as of the date of said contract:

Referring to "Exhibit D" attached to Exploration Project Contract Form MF-200, titled "Question 8 Form MF-200", subtitle "Labor", delete the material thereunder and insert in lieu thereof the following:

Number	Class	Maximum Base Days Pay	
4 to 10	Miners	10.88	1/
3	Trammers	10.83	2/
2	Timber Framers and Compressor Men	10.56	3/
2	Shopmen (Mechanics)	12.80	3/
2	Tunnel Maintenance Men (Timbermen)	10.88	3/
2	Waste Dump Men (Surface)	10.88	3/
1	Electrician and Mine Lamp Man	12.80	3/
1	Carpenter	11.84	3/
1	Warehouse Man	10.88	3/

The above daily wage rates are based on an 8-hour day, 5-day week. Time and one-half is allowable for overtime.

1/ Payment for work of miners will be inconformance with a contract or piece work system patterned after the "Butte system" which is the established procedure in the mine. The system provides for payment on the basis of units of the various types of work accomplished. Should a contract fall under the published base scale of wages for the type of work the contract or piece work rate is not used and the participants are paid at the base day rate of pay. Total unit payments for a contract period divided by the number of hours of labor performed designate base hourly rates on which overtime is paid in accordance with wage and hourregulations.

2/ Payment for main level tramming will be on a piece work basis at variable rates per ton handled depending on the distance trammed and conditions involved. This system has been in effect for over two years. The cost of main level tramming will be prorated among the Exploration Project work and other mine operations on the basis of tons of material handled from each operation.

3/ Payment for work performed by classes so noted is an indirect mining cost for the benefit of the Exploration Project work and other mine operations. Costs of such work will be prorated among the project and other mine operations on the basis of tons of material handled for the benefit of each.

With further reference to Exhibit D, same title, but subtitled "Supervision and Accounting" delete all material thereunder and substitute in lieu thereof the following:

Number	Class	Maximum Base Pay Rate
1	Superintendent	@ $643.50 per month
1	Mine Foreman (Shift Boss)	@ $456.30 per month
1	Engineer	@ $424.70 per month
1	Clerk	@ $ 9.60 per day

All salaries are paid as base salary plus a percentage of the base salary that changes with the cost of living index figures released by the Government. However, any increase above the maximum rates shown will require prior authorization from DMEA Region IV.

The salaries and wages of supervisory and accounting personnel listed above will be prorated between the Exploration Contract work and other mine operations on the basis of man-shifts of work performed for the benefit of each.

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may pay or the percentage of the costs which the Government may pay under the provisions of Article 11 of the contract form.

Dated April 4, 1952.

CALLAHAN ZINC-LEAD COMPANY

By Joseph T. Hall
Pres.

UNITED STATES OF AMERICA

By J. H. Smith
Executive Officer - DMA

Docket
No. 1

AMENDMENT OF CONTRACT: No. I-DMA-E2

Contract Docket No. DMA 110, dated May 25, 1951, between the United States of America and Callahan Zinc-Lead Company 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, titled "Question 3 Form MF-200", subtitle, "This project will consist of the following:" Item(2), delete the figure 500 wherever it appears and substitute in lieu thereof the figure 400; delete the figure $23,945.00 and substitute in lieu thereof the figure $19,156.00.

Referring to the same title and subtitle, item (3) delete the entire item and insert in lieu thereof the following: (3) 1400 feet of rehabilitation of the lower Morning Star tunnel including the crosscut leading to the Morning Star winze; and rehabilitation and repair of approximately 180 feet of the Morning Star winze to the lower winze level, including necessary station repairs. Estimated cost of labor, supplies and supervision - $17,412.00.

With further reference to Exhibit A, under the title "PROJECT A - Estimated Costs", under Item 2 delete the figure 10,300.00, and insert in lieu thereof the figure 7,300.00. Delete the figure 6,900.00 and insert in lieu thereof the figure 5,111.00. Under Item 3 delete the item in entirety and insert in lieu thereof the following: 3. 1400 Feet of rehabilitation of the lower Morning Star tunnel including the crosscut leading to the Morning Star winze; and rehabilitation and repair of approximately 180 feet of the Morning Star winze to the lower winze level, including necessary station repairs. Estimated cost of labor, supplies and supervision - $17,412.00.

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may pay or the percentage of the costs which the Government may pay under the provisions of Article 11 of the contract form.

Dated April 4, 1952.

CALLAHAN ZINC-LEAD COMPANY

By Joseph V. Hall
Pres.

UNITED STATES OF AMERICA

By J. H. E[illegible]
Executive Officer - DMA

MF-200 (A)
(February 1952)

DOCKET NO. DMEA 110

COMMODITY Lead-Zinc
Idm-E2

Docket Copy

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

amended

EXPLORATION PROJECT CONTRACT[1]

(Short Form)

IT IS AGREED this 12 day of August, 1952, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] Callahan Zinc-Lead Company
100 Park Avenue
New York 7, New York, as provided in Annex I, annexed hereto and as follows:

~~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 Colorado, County of Gunnison, described as follows:[3] A total of 31 patented and located claims totally owned, and 46 patented and located claims held by lease and option. All situated in Section 35, T. 50 N. R. 5 E, Tomichi Mining District and listed in Appendix I attached to the Original Contract and incorporated herein by reference thereto

the Operator represents and undertakes:[4]

(*a*) That the Operator is the owner, in possession and entitled to possession of the property listed in Appendix I, as wholly owned and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached: None

(*b*) That the Operator is a lessee, in possession and entitled to possession of the property listed in Appendix I as leased.

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 ~~XXXX~~ shall continue work on a project of exploration for[5] zinc and lead in or upon the described land; and shall bring the project to completion ~~XXXXXXXXXXXX~~ prior to May 25, 1953 ~~XXXXXXXXXXXX~~ The work to be performed is more fully described in Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, are made a part of this contract. The Government will contribute to the cost of this work as hereafter provided. The work shall be performed by the Operator or by independent contractor or contractors efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for workmen's compensation and employers' liability insurance, with suitable and adequate equipment, materials, and labor, to bring the project to completion within the time fixed. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

ARTICLE 4. *Costs of the project.*—The agreed, estimated costs of performing the additional work, expressed in terms of units of work to be performed (per foot of drifting, per foot of drilling, per cubic yard of material to be moved, etc.) are set forth in Exhibit "A," attached hereto. The Government will pay 50 percent of these agreed, estimated costs, as they accrue, for units of work actually performed that conform with the description or specifications for the work set forth in this contract, in an aggregate total amount not in excess of $27,453.50 which is 50 percent of $54,917.00 the agreed, estimated total cost ~~XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX~~: *Provided,* That until the Operator's final report and final accounting have been rendered to the Government and any final check or auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of ten (10) percent of the maximum total which the Government might have been called upon to pay under the terms of the contract. The Government may, as it sees fit, make payments direct to the Operator's independent contractors, if any, for the account of the Operator, rather than to the Operator. See Article 9.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ARTICLE 9. *Changes and added provisions* In Article 4, add the following provisions immediately preceding the word "Provided": "The agreed, estimated total cost of the project, as amended and supplemented by this contract, is $171,988.08. The Government will pay 50 percent of the costs of the project, as they accrue not in excess of an aggregate total amount of $85,994.04."

Executed in sextuplicate the [redacted], 1952

THE UNITED STATES OF AMERICA

By C. Mitteudorf
Administrator - Defense Minerals Exploration Administration

Callahan Zinc-Lead Company
(Operator)

By R. F. Mahoney
Vice Pres.

Robert Hoffelund
Joy Chamberlin

I, E. A. Salo, certify that I am secretary of the corporation named as Operator herein; that R. F. Mahoney, who signed this contract on behalf of the Operator, was then Vice-President of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

[CORPORATE SEAL]

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

EXPLORATION PROJECT CONTRACT
CALLAHAN ZINC-LEAD COMPANY
DOCKET NO. DMEA-110X

ANNEX I

This agreement, between Callahan Zinc-Lead Company, and the United States, amends and supplements Contract Idm-E2, Docket No. DMEA-110, dated May 25, 1951, as amended prior hereto, all hereinafter called the "Original Contract," as follows:

When the work specified in the Original Contract is completed, this amendment and supplement providing for additional work shall become effective, and shall supersede the Original Contract in all respects, except that vouchers and claims for the Government's contribution to the costs of the work performed under the Original Contract shall be processed and paid as provided in the Original Contract.

EXPLORATION PROJECT CONTRACT
CALLAHAN ZINC-LEAD COMPANY
DOCKET NO. DMEA-110X

EXHIBIT "A"

Description of the Work

The work specified in the Original Contract is identified as Stage I and is retained as part of the specifications for the work under this amending and supplementing agreement, with the following additions thereto:

Stage II

1. Continue raise, started in Stage I, to the 4 200 sublevel above the Akron level, a distance of 49 feet.

2. Crosscut 120 feet in the direction of the Morning Star Winze on the 4 200 sublevel.

3. Raise 190 feet to connect to lower working level of the Morning Star Winze from the crosscut specified in item 2.

4. Drift and crosscut 400 feet on the 4200 sublevel to explore the mineralization found on the Akron level.

5. Drift 225 feet on the Akron level on the ore discovered along the footwall of the dike.

6. Repair and maintain the Akron level between the Akron Mine and the Morning Star Mine.

All drifts shall have a minimum size of 6'-0" x 7'-6".

The raise shall be of two compartments with a minimum size of 4'-0" x 8'-0".

The work in Stage II is shown on the attached map.

Estimated Costs of Additional Work

Stage II

239 feet of raising @ $53.00 per foot	$12,667.00	
745 feet of drifts and crosscuts @ $50.00 per foot	37,250.00	
Repairs and maintenance of Akron Level during eight (8) months @ $625.00 per month	5,000.00	
Total Cost of Stage II		$ 54,917.00

Note: For the purpose of this contract, repairs and maintenance for one month is considered a unit of work.

Cost of Work in Original Contract	$117,071.08	
Estimated Cost of Work in Amending Contract	54,917.00	
Total Estimated Cost of Project		$171,988.08
Government Participation @ 50%		$ 85,994.04

LARGE FORMAT DOCUMENTS AT END OF FILE

MF-200
(April 1951)

Docket No. DMA 110
Commodity Lead-Zinc
I-DMA-12

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT [1]

It is agreed this 5th day of May, 1951, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2]
Callahan Zinc-Lead Company
100 Park Avenue
New York 7, New York

hereinafter called the "Operator," as follows:

1. *Authority for contract.* This agreement is entered into under the authority of the Defense Production Act of 1950, pursuant to Mineral Order 5, entitled "Regulations Governing Government Aid in Defense Exploration Projects."

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of Colorado, County of Gunnison described as follows: [3] A total of 31 patented and located claims totally owned and 46 patented and located claims held by lease and option. All situated in Section 35, T. 50 N, R5E Tomichi Mining District and listed in Appendix I attached.
with respect to which the Operator represents and undertakes: [4]

(*a*) That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached: None.

Appendix II attached hereto is made a part of this contract.

(*b*) That he is a lessee, in possession and entitled to possession, and the subordination agreement of the lessor is attached.

3. *Exploration project.* The Operator, within ten (10) days days from the date of this contract shall commence work on a project of exploration for [5] zinc and lead; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of [6] thirteen (13) months from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

4. *Performance of the work.* The work shall be performed by the Operator, under his sole direction and control: *Provided,* That with the consent of the Government and its written approval of the contract or contracts, all or any part of the work may be performed by the Operator through contract or contracts with independent contractors. 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.

5. *Fixtures and improvements.* 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. Attached hereto, marked "Exhibit 'B'," is a detailed list of additional facilities, buildings, and fixtures, to be purchased, installed, or erected by the Operator, with the estimated cost of each, to which the Government will contribute its agreed pro-rata share of the cost. The difference between the cost of such additional facilities, buildings, or fixtures, and the salvage value thereof at the conclusion of the work, shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

6. *Operating equipment.* Attached hereto, marked "Exhibit 'C'," is a detailed list of operating equipment divided into categories of items to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or rental value, as the case may be, annexed to each. As to equipment purchased for the project, the Government will contribute its agreed pro-rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

[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.
[4] Strike out the provision not applicable.
[5] Name of mineral.
[6] Not in excess of 2 years.

7. *Title to and disposition of proper*[illegible] All facilities, buildings, fixtures, equipment, [illegible]her items costing more than $50 each, paid for or purchased with funds co[illegible]ributed jointly by the Operator and the Gover[illegible], shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

8. *Labor and supervision.* Attached hereto, marked "Exhibit 'D'," is an itemized schedule of labor, by numbers and classes (miners, muckers, millmen, etc.), and of supervisors, by numbers and positions, with the maximum wages or salaries that may be paid to each as an allowable cost of the project.

9. *Rehabilitation and repairs.* Attached hereto, marked "Exhibit 'E'," is a detailed schedule 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, which cost shall be allowed as a cost of the project.

10. *Allowable costs of the project.* The allowable costs of the project in which the Government will participate are limited to the necessary, reasonable, direct costs of performing the exploration work, including the costs of materials, supplies, engineering, power, water, and utilities, including items of equipment costing less than $50 each; and the costs referred to in Articles 5, 6, 8, and 9, and the exhibits annexed to and referred to in the contract. Although the Government may pay part of the cost of new or additional facilities, structures, buildings, and equipment, only the depreciation on such items, computed as indicated in Articles 5 and 6, will be charged as a cost of the project. No items of general overhead, corporate management, interest, or any other indirect costs not expressly allowed by these regulations, 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.

11. *Participation by the Government.* At the end of the first full calendar month after the Operator has commenced work under the project, and at the end of each succeeding calendar month, the Operator shall submit to the Government a voucher for payment with a detailed statement of work done and allowable costs (as defined in Article 10 of this agreement) incurred, in a form and with supporting data acceptable to the Government. After approving the voucher, the Government shall pay to the Operator 50 percent of the sum of such costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $ 60,000, which is 50 percent of the agreed estimated total cost of this project, $ 120,000.

12. *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.

13. *Progress reports.* The Operator shall provide the Government with monthly reports of progress in form and content satisfactory to the Government, and upon the completion of the project or termination of the contract shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability. Four copies of all reports shall be furnished to the Government.

14. *Repayment by Operator.* If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.

Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent additional for each full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the property which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

15. *No assignment of contract.* Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder.

16. *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 worthwhile 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 render to the Government a full and final accounting of his operations under the contract and his expenditures of money; shall dispose of any unused materials, supplies, and equipment for the joint account of the Operator and the Government in the proportion of their respective interests; and shall pay to the Government its pro-rata share of any money remaining.

Executed in ~~triplicate~~ certuplet the day and year first above written.

COM

GREAT BIG-LAND COMPANY, INC.

(Operator)

By James G. Flynn

Assistant Superintendent, Akron Unit

THE UNITED STATES OF AMERICA

By [signature]

Administrator, Defense Minerals Administration

U. S. GOVERNMENT PRINTING OFFICE 16—64066-1

LARGE FORMAT DOCUMENTS AT END OF FILE

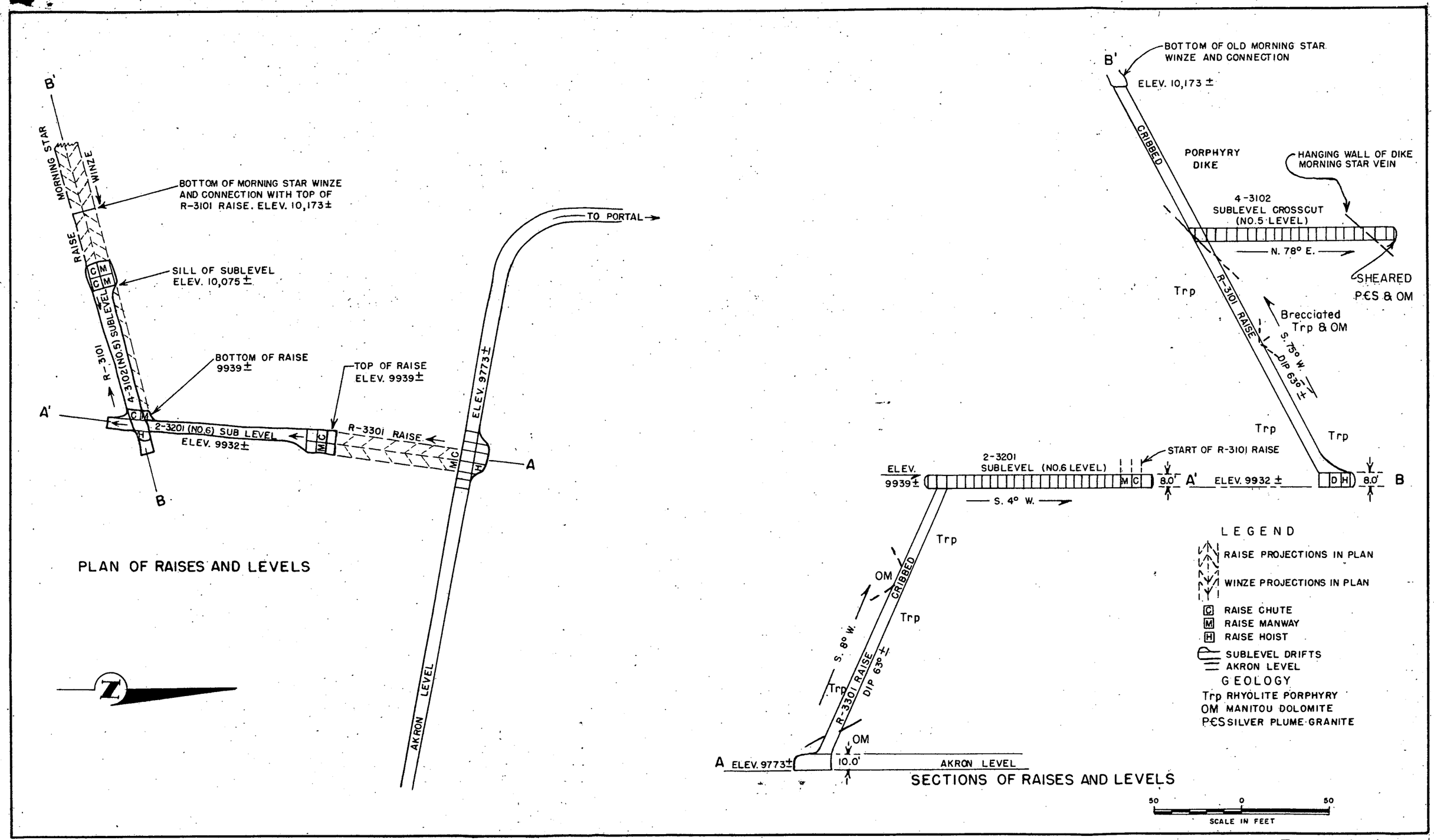

FIGURE 4 - PLAN AND SECTIONS THRU EXPLORATION RAISES INCLUDING GEOLOGY, CALLAHAN ZINC-LEAD CO., AKRON MINE, GUNNISON COUNTY, COLO.
DMEA 110, CONTRACT Idm-E2

RECEIVED
1955

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
7/17		225

PROJECT SUMMARY REPORT

By: J. W. Alt July 14, 1958

1. Docket No. DMEA-110 (Lead-Zinc)
Contract No. Idm-E2
Property: Akron and Morning Star Mines
Gunnison County, Colorado

Operator: Callahan Zinc-Lead Company
100 Park Avenue
New York 7, New York

Operator's Property Rights: Owner and Lessee of Claims.
Lease and Option dated February 2, 1951.
Subordination Agreement waived - Appendix II of Contract.

2. Contract dated May 25, 1951. To complete - 13 months.

Work Authorized

(1)	2,200 feet of drifting and crosscutting on the Akron Tunnel level south into the Morning Star-Victor ore shoots. 2,200 feet at estimated cost of $34.96/ft.	$ 76,912.00
(2)	500 feet of 2-component raise @ $47.89/ft.	23,945.00
(3)	1,200 feet of rehabilitation of the lower Morning Star tunnel @ $10.519/ft.	12,623.00
(4)	Equipment rental, 13 months © $501.50/month	6,520.00
	Total	$120,000.00

8623

Amendments

No. 1 Effective as of date of contract.

Changes the description of work in items 2 and 3.

No. 2 Effective as of date of contract.

Establishes a new wage scale for laborers.

No. 3 Effective November 1, 1951.

Increases wages of all personnel.

Amended Exploration Project Contract

Contract dated August 12, 1952. To complete - prior to May 25, 1953.

Work Authorized

The work specified in the Original Contract is identified as Stage I and is retained as part of the specifications for the work under this amending and supplementing agreement, with the following additions thereto.

STAGE II

1. Continue raise, started in Stage I, to the 200 sublevel above the Akron level, a distance of 49 feet.

2. Crosscut 120 feet in the direction of the Morning Star Winze on the 200 sublevel.

3. Raise 190 feet to connect to lower working level of the Morning Star Winze from the crosscut specified in item 2.

4. Drift and crosscut 400 feet on the 200 sublevel to explore the mineralization found on the Akron level.

5. Drift 225 feet on the Akron level on the ore discovered along the footwall of the dike.

6. Repair and maintain the Akron level between the Akron Mine and the Morning Star Mine.

Estimated Costs of Additional Work

STAGE II

239 feet of raising @ $53/ft.	$12,667.00
745 feet of drifts and crosscuts @ $50/ft.	37,250.00
Repairs and maintenance of Akron level during 8 months @ $625/month	5,000.00
Total Cost of Stage II	$54,917.00
Cost of work in Original Contract	$117,071.08
Estimated cost of work in Amended Contract	54,917.00
Total Estimated Cost of Project	$171,988.08
Government Participation @ 50%	$ 85,994.04

Amendments

No. 1(A) Effective as of the date of said contract.

Delete the second paragraph of Annex I and substitute a new paragraph.

No. 1 Dated November 25, 1952.

In Article 4 of the contract form, delete the amount "$27,453.50", and substitute in lieu thereof the amount "$27,458.50".

No. 2 Effective as of March 25, 1953.

Extends completion time from May 25, 1953 to March 25, 1954. Recesses work of the project from March 25, 1953 to September 25, 1953.

No. 3 Dated June 1, 1953.

Change the effective date of Amendment No. 2 to February 7, 1953. Change dates in Paragraph 2 of Amendment No. 2 to read "February 7, 1953" and "May 11, 1953".

No. 4 Agreed June 19, 1953.

Change in the description of the work.

No. 5 Effective June 25, 1953.

Changes in the description of the work.

Work Completed

Exploration work under the original contract consisted of:

Drifting 1,474 feet	$77,940.59	Cost per foot	$52.88
Crosscutting 416 feet	14,412.69	Cost per foot	34.65
Raising 151 feet	7,357.28	Cost per foot	48.72
Morning Star rehabilitation, 715 feet	19,937.77	Cost per foot	27.88
Operator's final MF-104A	$119,648.33		
Total Cost Approved by Audit	$117,162.72		

Exploration work under the Amended Contract consisted of:

Drifting 120 feet @ $50/ft	$ 6,000.00
Crosscutting 109.5 feet @ $50/ft.	5,475.00
Raising 279.5 feet @ $53/ft.	14,813.50
Akron level maintenance	5,000.00
Total Approved Cost	$31,288.50

Exploration work under the Original Contract was completed during the period May 26, 1951 to May 1, 1953.

Exploration work under the Amended Contract was started on May 1, 1953 and the contract was terminated by mutual agreement on September 10, 1953.

The Termination Agreement contains a Pseudo-Certification.

3. Report of Review: dated December 2, 1955.

Total cost as billed by Contractor	$148,451.22
Less: Proceeds from property disposition	400.00
Net cost as claimed by Contractor	$148,051.22
Exceptions	0.00
Total Accepted Cost	$148,051.22
Government Participation @ 50%	$ 74,025.61

Operator's final report - not dated, received February 13, 1956.
Field Team final report dated September, 1956.

4. Certification date: No Certification made but a Pseudo-Certification is contained in the Termination Agreement which is effective September 10, 1953.

5. Comments

The work conformed to the terms of the contract and was performed efficiently and in accordance with good mining practices. Unit costs were high, but not excessive for the severe conditions imposed by the soft, heavy, caving ground within the fault zone.

Work done under the original contract resulted in the discovery of a mineralized zone on the Akron level north drift that is up to 3 feet wide and 50 feet long and contains 5% lead, 5% zinc and 3.5 ounces of silver per ton.

Work done under the amended supplemental contract revealed no ore or significant mineralization. However, the projected downward continuation of the Morning Star ore shoot was not reached by the 4-3102 sub-level crosscut and is some distance north of it. This objective still remains a favorable target for exploration.

Completed exploration has tested most of the favorable targets for possible galena, spharite, chalcopyrite and silver occurrences, with the exception of the downward extension of the Morning Star ore shoot.

No further exploration with Government assistance is recommended.

J. W. Alt

J. W. Alt

JWAlt/ss 7/3/58
Copy to: Docket
Mr. Johnson
Chron.

Project Summary Report

By: A. G. Keating Date: 11/13/53

1. DMA 110 (Lead-Zinc)
   Contract I-DMA-E2
   Akron and Morning Star Mines
   Gunnison County, Colorado

   Operator: Callahan Zinc-Lead Company
   100 Park Avenue
   New York 17, N. Y.

   Operator's Property Rights:

   Totally owned - 31 patented and unpatented claims.
   Lease & Option 46 " " " "
   Operator's guarantee in lieu of Landlord's Subordination Agreement.

2. Contract dated May 25, 1951, to be completed within 13 months to June 25, 1952, extended by amendment 5/4/53 to March 25, 1954.

   Work authorized:

Drifting & crosscutting 2,200 ft. at $34.96 per ft.	$ 76,912.00
Raising 500 ft. at $47.86 per ft.	23,945.00
Rehabilitation of tunnel 1,200 ft at $10.519 per ft.	12,623.00
Equipment rental 13 months at $501.50 per mo.	6,520.00
Total estimated cost	$ 120,000.00
Government's participation 50%	60,000.00
Increased by Amended Contract to	$ 171,988.00
Government's participation 50 %	85,994.04

   Work completed prior to August 12, 1952 (Amended Contract)

Drifting 1,474 ft. at $52.88)		$ 77,940.59
Crosscutting 416 lt at $34.65)	Actual Cost	14,412.69
Raising 151 ft. at $48.72)		7,357.28
Rehabilitation of tunnel 715 ft at $27.88		19,937.77
	Total Cost	$ 119,648.33

Work completed after Amended Contract 8/12/52

Drifting	229½ ft. at $50.00 per ft.	$ 11,475.00
Raising	215 ft. at $53.00 per ft.	11,395.00
Repair and maintenance tunnel		5,000.00
	Total	$ 27,870.00

8/10/53	Corrected by audit to combined total cost	$ 144,979.72
8/12/52	Amended Contract increased total cost to	171,988.08
	Contract Funds unexpended to August, 1953.	27,008.36

Amendments:

1. 4/4/52 - Changing terms and cost of work. (no increase in total cost of project)
2. 4/4/52 - Changing base wage rates on basis of units of work accomplished and salaries on cost of living index figures.
3. 4/4/52 - Increasing pay of all personnel 12 cents per hr.
4. 8/12/52- Amended contract extends time for completion to May 25, 1953, and designates original contract work as Stage I and supplementing agreement as Stage II - and provides additional work and additional cost of Stage II $ 54,917.00

11/25/52 - Amendment No. 1 to Amended Contract changing Article 4 of contract $27,453.50 to $27,458.50 incorrectly stated (no change in estimated costs of project)

11/17/53 - Amendment No. 1A providing for amendment and supplement to become effective upon resumption of work.

5/4/53 - Amendment No. 2 to Amended Contract provides recess March 25, 1953 to September 25, 1953 and extends time for completion to March 25, 1954.

6/1/53 - Amendment No. 3 to Amended Contract in Amendment No. 2 to Amended Contract substitutes effective date February 7, 1953 and recess February 7, 1953 to May 11, 1953.

6/19/53 - Amendment No. 4 to Amended Contract provides change description of work. (No increase in total cost of project.)

7/16/53 - Amendment No. 5 changes description of work. (No increase in total cost of project).

The project property consists of a producing mine, mining and concentrating 1,400 tons of ore monthly averaging 4.5 oz. silver, 4.2% lead and 6.3% zinc. Estimated ore reserves are stated to be 10,000 tons of slightly higher average grade. The ore occurs as replacement masses in limestone and dolomite along the axis of porphry intrusions and fault planes. Approximately 2,000 feet south of the present producing ore bodies in the Akron mine

is another favorable ore zone which was worked in early days to a depth of 324 feet, producing 5,256 tons of ore averaging 16.4 ozs silver, .60% copper, 15.7% lead and 21.6%zinc.--the Morning Star Mine.

The project was established to explore by drifting and crosscutting southward on the Akron tunnel level into the downward extension of the Morning Star ore bodies 556 feet below the previous production workings.

Operation is difficult with unusually bad blocky ground, costly to maintain. Progress has been slow and the company appears to be reluctant to press the work. They report that due to blocky ground the cost of raising was costing $125.00 per foot as compared with $53.00 per foot allowed in the contract. They state their finances are unsufficient to carry on under such high costs and low metal prices.

As yet there has been no justification for making a certification of discovery, but the work has not reached all target areas.

August 27, 1953, the Field engineer reports the hanging wall of the porphry dike was penetrated about 89 feet east of the raise by a crosscut. The dike proved to be about 85 feet thick. Beyond the dike a sheared mixture of porphyry and limestone was disclosed. No ore was encountered.

A. G. Keating

☒ Audited

☒ Certified Pseudo.

W[redacted] ANALYSIS SHEET - DMEA PROJECT[redacted]

Analysis as of 3/23/55.
Incl. Voucher for Sept. 1953.

☒ Actual Cost

*☒ Agreed Unit Costs

Name[redacted] CALLAHAN ZINC-LEAD COMPANY

Docket No. 110

State COLORADO

Commodity LEAD*ZINC

Idm-E No. 2

OPERATION	AUTHORIZED Units	AUTHORIZED Cost	COMPLETED Units	COMPLETED Cost	NET COST
Drifting & Crosscutting	1890'	$93,353.28	1890.0'	$92,353.28	$91,953.28
6'X7'6" 50° *	691'	34,550.00	229.5	11,475.00	11,475.00
Raising	151'	7,357.28	151.0	7,357.28	7,357.28
4'X8' 53 *	289'	15,317.00	280.5	14,866.50	14,866.50
Shafts					
Winzes					
Drilling (Specify)					
Sur[redacted]e Excavation					
Underground Excavation					
~~Roads and Trails~~ Repairs & maintenance Alsron Level		5,000.00		5,000.00	5,000.00
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation		17,410.52		17,399.16	17,399.16
New Building, Improvements, etc.					
Other (Specify)					
Totals		$171,988.08		$148,451.22	$148,051.22

Proceeds from Property Disposition
$400.00

Field Bean Fund Report received 11/23/56

Prepared by W. R. Klugesheid

[illegible] agreement 5/4/55

Deposited

71626

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
1/30	Murphy	500
1/30	Talbott	800
	Selbrede	120
1/30	Johnson	110
2	Fumich	100
		220

JAN 31 1964

Pinnacle Exploration, Inc.
100 Park Avenue
New York 17, New York

Re: DMEA-110 (Lead-Zinc)
Callahan Zinc-Lead Company, Inc.
Victor, Akron, and Morning Star Mines
Gunnison County, Colorado
Contract Idm-E2

Gentlemen:

By the terms of the subject Amended Exploration Project Contract, as amended, and the royalty agreement in Paragraph 5 of the Termination Agreement, dated May 4, 1955, all minerals mined or produced from August 12, 1952, to August 12, 1963, were subject to the Government's percentage royalty as set forth in said amended contract.

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

Sincerely yours,

George Fumich, Jr.

Acting Director

FMMurphy/mm (1/30/64)
cc: Director's Reading File
Region III w/cy of Form 63 dated 8/20/63
CA&A Division
Docket
Code 500

43683

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
Building 20 - Federal Center
Denver, Colorado 80225

OFFICIAL FILE COPY
O. M. E
RECEIVED FEB 3 1964

DATE	INITIALS	CODE
2/3	[illegible]	800
		120
		500
		220

January 30, 1964

Memorandum

To: George C. Selfridge, Chief
Division of Field Operations, OME
Washington, D. C. 20240

From: Acting Field Officer, OME, Region III

Subject: DMEA-110 (Lead-Zinc)
Contract E2
Callahan Zinc-Lead Co., Inc.
(Victor, Akron, and Morning Star Mines)
Gunnison County, Colorado

Closed 1/31/64

DMEA-3032 (Thorium-Rare Earths-Columbium-Tantalum)
Contract Idm-E631
Rare Earth Mining Company
(Little Johnny, et al., Group of Claims)
Gunnison County, Colorado

EXPIRATION OF DMEA CONTRACTS PAYING ROYALTY

On my return from the next inspection of OME Contract 2171, Frank O. Richardson, I will stop in Gunnison and visit the subject properties.

Hugh M. Connors

Hugh M. Connors

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

August 20, 1963

OFFICIAL FILE COPY
O. M. E
RECEIVED SEP 5 1963

DATE	INITIALS	CODE
9/5		810
9/5		100
	Griswold	~~810~~
	Murphy	~~500~~

Re: DMEA-110 (Lead, zinc)
Callahan Zinc-Lead Co.
Akron & Morning Star Mines
Gunnison County, Colorado
Contract Idm-E2

Pinnacle Exploration, Inc.
100 Park Avenue
New York 17, New York

Gentlemen:

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

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

Sincerely yours,

W. R. Griswold

W. R. Griswold, Chief
Division of Minerals

MME Form 63
Revised 3-62

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since **April 2, 1962**, has there been a change in ownership, lease, or sublease? If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before. Yes [X] No [ ]

Pinnacle Exploration, Inc. has sold to James F. Poulos the mining claims as shown in the attached photocopy of mining deed dated August 10, 1962.

2. Since **April 2, 1962**, has there been any production from the land subject to the contract? Yes [ ] No [X]

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

	Quantity	Value

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

Type	Quantity	Estimated Grade	Location
Ore	Tons		
Concentrates	Tons		
Other	Tons		

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

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

Disposition of Material	Quantity	Value

Submitted by:

Name **William P. Lohden** Title **Assistant Treasurer**

Address **100 Park Avenue, New York 17, N.Y.** Date **September 3, 1963**

4511

MINING DEED

THIS INDENTURE, Made this 10th day of August, in the year of our Lord one thousand nine hundred sixty-two, between PINNACLE EXPLORATION, INC., a corporation whose address is 100 Park Avenue, New York 17, New York, party of the first part, and JAMES F. POULOS, of the County of Delta and State of Colorado, party of the second part;

WITNESSETH, That the said party of the first part, for and in consideration of the sum of ONE DOLLAR ($1.00) and other valuable consideration to it in hand paid by the said party of the second part, the receipt whereof is hereby acknowledged, has granted, bargained, sold, remised, released and forever quit-claimed, and by these presents does grant, bargain, sell, remise, release and forever quit-claim, unto the said party of the second part, his heirs and assigns, the following described property, situate, lying and being in Tomichi Mining District, in the County of Gunnison, and State of Colorado, to-wit:

All those patented lode mining claims described as follows, to-wit:

NAME OF CLAIM	SURVEY NO.
BANDIT	1871
YELLOW JACKET	18965
NIMROD	18861
PAYMASTER	18861
✓ NORTH STAR	847 A
NORTH STAR MILLSITE	847 B
✓ NUMBER THREE	850
✓ NARROW GAUGE	848
HAVERFORD	1606
MAZEPPA	2498
LOST CONTACT	2332
MULDOON	849
ERIE	2070

[illegible] claims not [illegible]

NAME OF CLAIM	SURVEY NO.
SUNSET	1981
SILVER TROWEL	1982
SILVER BAYONET and improvements	1942
LELIA ETTA	2511
SEDALIA	2512
BOB LEE	2494
ENSIGN	4508
TOMICHI MILLSITE	11525
LEONORA	5872
WOLVERINE	5872
UNDIVIDED 4/5 in IRON DUKE	1062
JERSEY	2305
SNOWDEN	2415
FLIRT MILLSITE a/k/a FLINT MILLSITE	2073 B
LITTLE MAY	2333
FLIRT	2073 A
NEST EGG CARBONATE KING	1555
EUREKA	1574
LEHIGH	7956

TOGETHER with all the dips, spurs and angles, and all the metals, ores, gold and silver-bearing quartz, rock and earth therein, and all the rights, privileges and franchises thereto incident, appendant and appurtenant, or therewith usually had and enjoyed; and all and singular the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining, and the rents, issues and profits thereof; and all the estate, right, title, interest, claim and demand whatsoever, as well in law as in equity, of the said party of the first part, of, in or to the said premises, and every part and parcel thereof, with the appurtenances.

TO HAVE AND TO HOLD, all and singular, the said premises, together with the appurtenances and privileges thereto incident,

unto the said party of the second part, his heirs and assigns forever.

IN WITNESS WHEREOF, The said party of the first part has hereunto set its hand and seal the day and year first above written.

PINNACLE EXPLORATION, INC.
a corporation

ATTEST:

Adrienne J. Marian
ASST. Secretary

By E. A. Salo
Vice President

STATE OF NEW YORK)
) SS.
COUNTY OF NEW YORK)

The foregoing instrument was acknowledged before me this 10th day of August, A.D. 1962, by E. A. Salo as Vice President and Adrienne J. Marian as Asst. Secretary of the Pinnacle Exploration, Inc., a corporation.

Witness my hand and official seal.

William P. Lobden
Notary Public

My commission expires 3-30-63.

Building 20 - Federal Center
Denver 25, Colorado

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAY 14 1962
5/11 gla 500
220

May 9, 1962

Memorandum

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

From: Acting Field Officer, OME, Region III

Subject: DMEA-110 (Lead-Zinc)
Contract Idm-E2
Callahan Zinc-Lead Company, Inc.
(Victor, Akron, and Morning Star Mines)
Gunnison County, Colorado

Attached is the original Report of Royalty Review on the subject property dated May 2, 1962 covering the period June 9, 1959, through April 2, 1962.

Original signed by
TMR
for
Hugh M. Connors

Attachments
HMC/lm
cc Chief, Division of Field Operations, OME
E. D. Talbert, Acting Chief
Contract Administration and Audit Division
Royalty Corres Idm-E2
Chron

Form 7
58)

OFFICIAL FILE COPY

Date	Surname	Code
		220

MAY 2 1962

Memorandum

To: Acting Field Officer, Region III

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

Subject: DMEA-110 (Lead-Zinc)
Callahan Zinc-Lead Company, Inc.
Victor, Akron, and Morning Star Mines
Gunnison County, Colorado
Contract Idm-82

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

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

(b) One copy for your files.

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

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

Enclosures

EDTalbert/ama 5-2-62

cc:
Docket
Director's Reading File
CA & A Division
Mr. Rothrock

43683

WPY

OFFICIAL FILE COPY
O. M. E.
APR 3 1962

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

MAR 3 0 1962

Re: DMEA-110 (Lead, Zinc)
Callahan Zinc-Lead Co.
Akron and Morning Star Mines
Gunnison County, Colorado
Contract Idm-E2

Pinnacle Exploration, Inc.
100 Park Avenue
New York 17, New York

Gentlemen:

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

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

Sincerely yours,

George C. Selfridge

George C. Selfridge, Chief
Division of Field Operations

MME Form 63
Revised 3-62

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since March 2, 1960, has there been a change in ownership, lease, or sublease? If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before. Yes ☐ No ☒

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

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

	Quantity	Value

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

Type	Quantity	Estimated Grade	Location
Ore	Tons		
Concentrates	Tons		
Other	Tons		

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

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

Disposition of Material	Quantity	Value

Submitted by:

Name L J Micari Title Treasurer

Address 100 Park Avenue New York 17, N.Y. Date 4/2/62

4511

OFFICIAL FILE COPY
O. M. F
RECEIVED FEB 8 1960

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2/8	[illegible]	800
"	[illegible]	500
		225

Building 20 - Federal Center
Denver 25, Colorado
February 3, 1960

Mr. J. E. Dunn
P. O. Box 144
Gunnison, Colorado

Re: Docket No. DMEA 110 (Lead-Zinc)
Contract No. Idm-E2
Callahan Zinc Lead Company
(Akron and Morning Star mines)
Gunnison County, Colorado

Dear Mr. Dunn:

In reference to Item 5 of the Termination Agreement on the captioned project, please indicate your answer to the following questions and return one copy of the questionnaire immediately to this office.

Very truly yours,
Original signed by

J. W. Townsend
Executive Officer, CME
Field Team, Region III

1. Has the property been sub-leased or any change made in ownership other than this office has been notified? Yes___ No___. If yes, please furnish details of the transaction on a separate sheet and include a true or signed copy of any instrument that was executed in conjunction with the matter.

2. Has there been production from the land subordinated under the referenced contract since January 1, 1959? Yes___ No___. If yes, and shipments made, who was the purchaser?_____

3. Is any of the following material stockpiled? Yes___ No___.

(a) Ore, Tons_____ Estimated grade_____
(b) Concentrates, lbs._____ Estimated grade_____
(c) Low grade ore, tons_____ Estimated grade_____
Place stockpiled_____

Signed_____

Title_____ Date_____

TMR:ltm cc: Chmn. Op. Comm. Roy. Corres. E2 Chron.

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
6/11	G	220
6/12	~~[illegible]~~	~~500~~
		225

JUN 11 1959

Memorandum

To: Mr. Donald T. Finch, OME Auditor

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

Subject: Docket No. DMEA-110 (Zinc-Lead)
Callahan Zinc-Lead Company
Contract No. Idm-E2

Your Report of Royalty Review on the subject contract is acceptable and distribution of the regional copies is authorized after correction of the Operator's name to "Callahan Zinc-Lead Company". No copy need be sent to the Operator.

EDTalbert/ama
June 11, 1959

Copy to: Docket
Director's Reading File
CA & A Division

43683

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
	Rubin	
	Shanzer	
4/15	Griswold	500
4-15	Chambers	220
4/15	Schlidzd	20
"	Johnson	110
"	Chittenden	100

APR 15 1957

Mr. J. G. McIntosh
Assistant Secretary
Callahan Zinc-Lead Company, Inc.
100 Park Avenue
New York 17, N. Y.

Re: Docket No. DMEA-110 (Lead-Zinc)
Callahan Zinc-Lead Company, Inc.
Akron and Morning Star Mines
Gunnison County, Colorado
Amended Contract No. Idm-E2

Dear Mr. McIntosh:

Your letter dated March 14, 1957, informed us of the transfer of the land described in the subject contract to Pinnacle Exploration, Inc., a new corporation, and asked what steps are necessary to "assign the Termination Agreement", executed under the contract, to the new corporation.

It is not necessary to assign the Termination Agreement. Rather, pursuant to Article 7 of the contract, you are required to make suitable provision for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof, the royalty being due the Government, pursuant to paragraph numbered 5 of the Termination Agreement, on any minerals mined or produced from the land from August 12, 1952, to August 12, 1963, or until the amount contributed by the Government under the contract is repaid.

Accordingly, the instrument under which the subject land is transferred from Callahan Zinc-Lead Company, Inc., to Pinnacle Exploration, Inc., should provide for the Government's royalty and lien, as described in the Termination Agreement; and payment of the Government's royalty should be made pursuant to Annex II to Amendment No. 6.

Please let us know the place of incorporation and address of Pinnacle Exploration, Inc.

Sincerely yours,

G. C. Kiernan

Administrator

HCRubin/emd 4/8/57

Copy to: DMEA Docket
Adm. Reading File
F. T., Reg. III (2)
Operating Committee
W. R. Griswold
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Mr. Dwyer
Mr. Rubin
chron. pending

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

500

Date	Surname	Code

April 1, 1957

Memorandum

To: Associate Solicitor, Division of Mineral Resources

From: Chief, Base Metals Division

Subject: Preparation of letter for reply for Docket No. DMEA-110, Callahan Zinc-Lead Company, Inc., Akron and Morning Star Mines, Gunnison County, Colorado, Amended Contract No. Idm-E2, Lead-Zinc.

I refer you to the March 14 letter from Callahan Zinc-Lead Company, Inc. Since this appears to be purely a legal matter, would you kindly prepare a reply.

W. R. Griswold

W. R. Griswold

WRG/er
Copy to: Docket
Chron.
Base Metals

8623

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

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 21 1957

DATE	INITIALS	CODE
3/21	C	220
		225

March 18, 1957

Memorandum

To: Chairman, Operating Committee, DMEA

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-110X (Zinc-Lead) Contract Idm-E2, Callahan Zinc-Lead Company, Inc. (Victor, Morning Star and Akron mines) Gunnison County, Colorado

Enclosed are the original and two copies of a letter dated March 14, 1957 from J. G. McIntosh, Assistant Secretary, Callahan Zinc-Lead Company, Inc., requesting advice as to the necessary steps to be taken to effect assignment of the Termination Agreement terminating Contract Idm-E2 from Callahan Zinc-Lead Company, Inc. to Pinnacle Exploration, Inc.

We will appreciate it if you will reply to Mr. McIntosh, giving information requested, with a copy of your letter to this office.

E. N. Harshman

E. N. Harshman

Enclosures

CALLAHAN ZINC-LEAD COMPANY, INC.
100 PARK AVENUE
NEW YORK 17, N.Y.
OREGON 9-1300

DMEA
DEPARTMENT OF THE INTERIOR
MAR 18 1957
REGION III
DENVER, COLORADO

OFFICE OF THE TREASURER

March 14, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 21 1957

DATE	INITIALS	CODE

U. S. Department of the Interior
Defense Minerals Exploration Administration
224 New Customhouse
Denver 2, Colorado

Re: Docket No. DMEA-110X
Contract No. Idm - E2
Commodity- Zinc and Lead

Gentlemen:

We wish to advise that Callahan Zinc-Lead Company, Inc. is in the process of transferring all of its right, title and interest in the Akron property to a new corporation - Pinnacle Exploration, Inc.

Callahan Zinc-Lead Company, Inc. wishes to assign the Termination Agreement dated May 4, 1955 in connection with the above mentioned contract.

Kindly advise as to the necessary steps that should be taken by Callahan Zinc-Lead Company, Inc. to effect assignment of the above mentioned Termination Agreement to Pinnacle Exploration, Inc.

Very truly yours,

CALLAHAN ZINC-LEAD COMPANY, INC.

J. G. McIntosh

J. G. McIntosh
Assistant Secretary

JGMcI/bm

W.O.

224 New Customhouse
Denver 2, Colorado

March 18, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 21 1957

DATE	INITIALS	CODE

Mr. J. G. McIntosh,
Assistant Secretary
Callahan Zinc-Lead Company, Inc.
100 Park Avenue
New York 17, New York

Re: Docket DMEA-110X (Zinc-Lead)
Contract Idm-E2
Callahan Zinc-Lead Company, Inc.
(Victor, Morning Star and Akron mines)
Gunnison County, Colorado

Dear Mr. McIntosh:

Reference is made to your letter of March 14, 1957 requesting advice as to the necessary steps to be taken to effect assignment of the Termination Agreement terminating Contract Idm-E2 from Callahan Zinc-Lead Company, Inc. to Pinnacle Exploration, Inc.

Your letter was referred to the Washington Office, DMEA, for a direct reply to you to supply the requested information.

Very truly yours,

Original signed by
E. N. HARSHMAN

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

Enclosures
JWT:jy
cc: Chm. Op. Comm. (2)
Harshman
Shaw
Townsend
Corresp. E2
Chron.

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

RECEIVED DEC 11 1956 D.M.E.A.

December 10, 1956

Re: DMEA-110;
Contract IDM-E2
Callahan Zinc-Lead Co.
Akron & Morning Star Mines
Gunnison County, Colorado

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop, Branch of Base Metals

Subject: Review of Final Report transmitted by field November 16, 1956; received November 29, 1956

The project, begun May 25, 1951, consisted of 1,594 feet of drifting, 529.5 feet of crosscutting, 430.5 feet of raising, 715 feet of rehabilitation of the lower Morning Star tunnel, and $5,000 expenditure in maintaining the Akron level. Total cost was $148,051.22 through September 10, 1953, when the Government ceased to participate in exploration costs.

Inasmuch as the ore bodies of the Akron, Morning Star and Victor mines are in and along the footwall of the Star fault zone and in the footwall of the dikes that have intruded the fault zone, the program was planned to explore the footwall of the fault zone between the Akron workings and the Morning Star, particularly below old workings.

The drift with crosscuts driven southward of the Akron 04 Raise to connect with the Morning Star workings encountered sulfide mineralization, of near commercial grade, but the 3401 Raise and 3 diamond drill holes failed to prove extensions to give it significance as a discovery. The ground which is now closely lagged and cribbed because of its heavy nature is reported by the operator to assay 5 percent each lead and zinc with 3.5 ounces of silver per ton over a width of up to 3 feet and over a length of 50 feet. No ore was mined from the discovery and the operation has been completely shut down since September 10, 1953.

In reviewing the work done, the cost data and findings, I conclude that work was carried forward in an efficient manner and at reasonable cost under the conditions encountered. It would appear, however, that the mineralization encountered must have

warranted sampling and assay, and that such information properly forms a part of the final report.

The investment by the Government is protected by royalty agreements until August 12, 1963, and that in light of the limited findings seems adequate.

O. M. Bishop

O. M. Bishop

Copy to - Division of Minerals
Mr. Kiilsgaard, Room 5224
Mr. Lamb
Mr. Bishop
Files

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

RECEIVED NOV 26 1956

224 New Customhouse
Denver 2, Colorado

November 23, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA 110 (Lead-Zinc), Contract No. Idm-E2, Callahan Zinc-Lead Company (Akron and Morning Star mines), Gunnison County, Colorado

Reference is made to the Field Team's final report, dated November 16, 1956, pertaining to the subject contract.

Please change the docket number reference in the report to DMEA 110, instead of DMEA 1010.

W. M. Traver

W. M. Traver

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

RECEIVED NOV 23 1956 D.M.E.A.

224 New Customhouse
Denver 2, Colorado

November 16, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Docket No. DMEA 110 (Lead-Zinc), Contract No. Idm-E2, Callahan Zinc-Lead Company (Akron and Morning Star mines), Gunnison County, Colorado - FINAL REPORT

Enclosed are the original and three copies of a joint final engineering and geologic report, dated September, 1956, pertaining to work completed under the subject contract, by D. H. Richter, Geologist, Geological Survey, and C. M. Harrer, Mining Engineer, Bureau of Mines, and transmittal thereof, dated November 13, 1956, from E. N. Harshman and John F. Shaw.

Also enclosed are the original and one copy of forms MF-104 and MF-104A, submitted by the Operator as a final accounting report.

The original and one copy of the Operator's final report were forwarded to you by memorandum of February 10, 1956.

The contract was terminated, effective September 10, 1953, by agreement dated May 4, 1955, before completion of all the work provided for in the contract.

Final payment to the Operator was processed by this office December 12, 1955, in conformance with the Audit Certificate and Report, dated September 3, 1953, and subsequent Report of Review, dated December 2, 1955, by the Contract Administration and Audit Division, DMEA.

The exploration work completed consisted of 2,119.5 feet of drifting and crosscutting, 430.5 feet of raising, rehabilitation of 715 feet of the Morning Star tunnel, and general maintenance of the Akron level, at a total accepted cost of $148,051,22, toward which the Government contributed 50%, or an amount of $74,025.61.

Reviewed by
DMEA OPERATING COMMITTEE
11-28-56
(Date)

FINAL F.T. Report

The work failed to disclose significant ore bodies, but, as the contract was terminated before one of the objectives was reached - the area beneath the Morning Star ore shoot - the termination agreement contained a provision to the effect that the total amount contributed by the Government shall be repayable in the form of a percentage royalty on any minerals mined or produced from land described in Article 2 of the contract for a period of eleven years from the date of the Amended Contract, August 2, 1952, or until the entire amount contributed had been repaid, whichever would occur first.

W. M. Traver

W. M. Traver

E. N. Harshman

E. N. Harshman

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Building 20
Denver Federal Center
Denver 2, Colorado

REGION III
Memorandum

November 13, 1956

DMEA
DEPARTMENT OF THE INTERIOR
NOV 15 1956
REGION III
DENVER, COLORADO

To: Executive Officer, DMEA Field Team, Region III

From: E.N. Harshman
John F. Shaw

Subject: Joint Engineering and Geologic Final Report, DMEA 110, (Lead-Zinc) Contract Idm-E2 (Akron and Morning Star Mines) Callahan Zinc-Lead Co., Gunnison County, Colorado

Enclosed are the original and seven mimeographed copies of subject report by D. H. Richter, geologist and C. M. Harrer, mining engineer.

The report covers exploration done along the footwall side of a fault zone, southward into the areas of the Morning Star and Victor mines. This work was done under a contract, dated May 25, 1951, which was replaced by an amended supplemental contract on August 12, 1952, providing for a total expenditure of $171,988.08. The final contract was terminated May 4, 1955, with a stipulation that Government would participate in costs incurred up to September 10, 1953. The total approved costs incurred were $117,162.72 under the original contract and $31,288.50 under the amended supplemental contract, or a total of $148,451.22. After crediting $400.00 salvage against this sum, the net costs were $148,051.22 and Government participation was $74,025.22.

The work failed to disclose significant ore bodies, but the contract was terminated before one of the objectives—the area beneath the Morning Star ore shoot—was reached. This area is still considered to hold promise of finding ore.

A certification of discovery was waived on agreement that the Government shall be repaid by a royalty on ores produced from other portions of the property owned or controlled by the subject company.

R.U. King for
E. N. Harshman
Member Field Team

R.C. Houalman for
John F. Shaw
Supervising Mining Engineer

JFS:sh
Enc.
cc: 7
ENHarshman
Idm-E2
Chron

Reviewed by
DMEA OPERATING COMMITTEE
11-28-56
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
FRED A. SEATON, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

JOINT REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA 110

EXPLORATION PROJECT CONTRACT Idm-E2

AKRONAND MORNING STAR MINES

CALLAHAN ZINC-LEAD CO.

GUNNISON COUNTY, COLO.

JOINT GEOLOGIC AND ENGINEERING FINAL REPORT

Lead-Zinc

D. H. Richter, Geologist
Geological Survey

C. M. Harrer, Mining Engineer
Bureau of Mines

Sept., 1956

Reviewed by
DMEA OPERATING COMMITTEE
11-28-56
(date)

DMEA 110
EXPLORATION CONTRACT Idm-E2
AKRON AND MORNING STAR MINES
CALLAHAN ZINC-LEAD CO.
GUNNISON COUNTY, COLO.

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Efficiency of project operations 17
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Production from discovery 18
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DMEA 110
CALLAHAN ZINC-LEAD CO.
Akron and Morning Star Mines
Exploration Contract Idm-E2
Gunnison County, Colorado

RECEIVED
NOV 23 1956
D.M.E.A.

INTRODUCTION AND SUMMARY

On May 25, 1951, exploration project contract Idm-E2 was activated between Callahan Zinc-Lead Company, Inc., of 100 Park Ave., New York 7, N. Y., and the Defense Minerals Exploration Administration. The purpose of the project was to explore for replacement bodies of galena-sphalerite-chalcopyrite ore along the footwall of the Star-Lost Contact fault zone, from the southern end of the Akron mine workings south to the Morning Star and Victor mines, and especially in the favorable area below the old workings of those mines.

The contract provided for an expenditure of $120,000.00 to complete 2,200 feet of drifting and crosscutting, 500 feet of a 2-compartment raise, and to rehabilitate 1200 feet of the lower Morning Star tunnel. The time alloted for completion of the work was 13 months. This contract was on a "long form" or actual cost-incurred basis.

On August 12, 1952, this contract was replaced by an amended supplemental contract providing for additional work at a cost of $54,917.00. In this new contract, the estimated cost of work provided

for under the original contract was reduced to $117,071.08, and the total cost of the project was set at $171,988.08. Work under the supplemental contract included 239 feet of additional raise, 745 feet of additional drifting and crosscutting, and the repair and maintenance of the Akron level.

Work under the original contract (figs. 2 and 4) started on May 26, 1951, and was to be completed by September 25, 1954.

On May 4, 1955, contract Idm-E2, Docket DMEA 110, as amended, was terminated by mutual agreement with the stipulation that the Government would only share in exploration costs incurred to September 10, 1953.

Exploration work, under the original acontract (figs. 2 and 4) was completed during the period May 26, 1951 to May 1, 1953, and the following was accomplished:

Units	Total Costs	Cost per foot
Drifting 1,474 feet	$77,940.59	$52.88
Crosscutting 416 feet	14,412.69	34.65
Raising 151 feet	7,357.28	48.72
Morning Star rehabilitation 715 feet	19,937.77	27.88
	$119,648.33	(Operator's MF-104A for Aug. 12, 1952)
Total Cost approved by audit	$117,162.72	(Audit report 12/9/55)

During the period May 1, 1953 to September 10, 1953 exploration costs were based on a unit cost, supplemental short-form-contract, and the following was accomplished:

Units	Total Costs	Cost per foot
Drifting 120 feet	$ 6,000.00	$50.00
Crosscutting 109.5 feet	5,475.00	50.00
Raising 279.5 feet	14,813.50	53.00
Akron level maintenance	5,000.00	
Total approved cost	$ 31,288.50	

Costs incurred under the contract totaled $148,451.22.

Disposal of property at termination of the contract netted $400.00, making the final costs of exploration $148,051.22, and Government participation, at 50 percent, $74,025.61.

The work conformed to the terms of the contract and was performed efficiently and in accordance with good mining practices. Unit costs were high but not excessive for the severe conditions imposed by the soft, heavy, caving ground within the fault zone.

Work done under the original contract resulted in the discovery of a mineralized zone on the Akron level north drift that is up to 3 feet wide and 50 feet long and contains 5 percent lead, 5 percent zinc and 3.5 ounces of silver per ton (fig. 2).

Work done under the amended supplemental contract revealed no ore or significant mineralization. However, the projected downward continuation of the Morning Star ore shoot was not reached by the 4-3102 sub-level crosscut and is some distance north of it. This objective still remains a favorable target for exploration. The contract was terminated before reaching the Morning Star objective.

Certification of Discovery or development was waived on the agreement that the net amount contributed by the Government shall be repaid by a royalty on minerals mined from 5 of the 31 claims, owned by Company, and the southerly 1200 feet of 5 of the 46 claims it holds under lease (fig. 2).

No further exploration with DMEA assistance is recommended.

LOCATION, TOPOGRAPHY AND PHYSICAL FEATURES

The property is a quarter of a mile southeast of White Pine, on West Point Hill, in the White Pine area of the Tomichi mining district, Gunnison County, Colo., in unsurveyed T. 50 N., R. 5 E., New Mexico principal meridian (fig. 1). It is 185 miles southwest of Denver, 43 miles east of Gunnison, and 11 miles north of Sargents, Colo. Operators of the property have ready access to transportation, industrial, and supply facilities. The services of Denver & Rio Grande Western Railroad are available at Sargents and Salida, Colo. Mine workings are at altitudes ranging between 9,700 and 10,000 feet. The terrain is steep and rugged, and the mountain slopes are wooded with pine suitable for mining purposes. Ample water is available from nearby Tomichi Creek and from mine workings. Year-around mining operations are maintained in spite of heavy snows and cold weather that occur during winters.

HISTORY AND PRODUCTION

Ore was first discovered in the Tomichi mining district in 1879, when the North Star claim was located. The Victor-Beta claims were located in 1882. During 1885-1893, the district was prosperous, but after 1893 only a few mines produced ore in quantity.

The Akron property was acquired by Callahan Zinc-Lead Company in 1938 and was placed in production during 1940. On January 1, 1948, a new 80-ton-per-day lead-zinc differential-flotation mill was put in operation. The property was operated continuously until November 3, 1952, when it was shut down due to the low prices of lead and zinc. During the period 1901-1955, the Akron mine produced 129,119 dry tons of ore, from which 742 ounces of gold, 659,300 ounces of silver, 337,818 pounds of copper, 20,909,144 pounds of lead and 26,358,495 pounds of zinc were recovered. Based on those production figures, the ore had an average content of 0.006 ounce gold and 5.1 ounces silver per ton, 0.1 percent copper, 8.1 percent lead and 10.2 percent zinc.

During the period 1907-1935, the Morning Star mine had a production of 3,881 tons of ore, which had an average content of about 0.03 ounce gold and 17.5 ounces of silver per ton, 0.14 percent copper, 14.4 percent lead and 24.6 percent zinc, based on recovered metals.

Between 1906 and 1924, the Victor mine produced 1,375 tons of ore which had an average content of 0.007 ounce gold and 13.4 ounces silver per ton, 1.9 percent copper 19.4 percent lead and 13.3 percent zinc; based on recovered metals.

On March 12, 1951, Callahan Zinc-Lead Company's Colorado properties, known as the Akron Unit, were examined by a Geological Survey and Bureau of Mines team in connection with an application for exploration assistance under the Defense Production Act of 1950. An exploration program was recommended for approval in April 1951, and an exploration contract between Callahan Zinc-Lead Company and the Defense Minerals Exploration Administration was activated on May 25, 1951. On August 12, 1952 an amended supplemental exploration contract was signed. This contract, Idm-E2, Docket DMEA 110, was terminated by mutual agreement. Although the agreement was signed on May 4, 1955, September 10, 1953 was set as being the date of termination, after which the government would no longer participate in the exploration project.

PROPERTY RIGHTS

Under the contract Idm-E2, Docket No. DMEA 110, Callahan Zinc-Lead Company subordinated the 31 claims (fig. 2), which it owns and incorporated a subordination agreement from Hayden Mining Company on 46 claims, which it controls under lease.

In the termination agreement dated May 4, 1955, the contract was amended to subordinate only those claims directly benefited by the exploration program and release the rest of them. The claims so affected are also shown on figure 2.

The Government's share of expenditures in the exploration program is now payable through a royalty on any minerals produced until August 12, 1963, from the following claims and parts of claims which the operator owns, or leases from the Hayden Mining Company.

Claims subject to DMEA Royalty Payments (fig. 2)

Name	Kind	Survey No.	Part subject to DMEA Royalty	Title
Deadwood	Patented lode	1872	The southerly 1200 ft.	Owned by Callahan Zinc-Lead Co.
North Star	" "	847A	" " " "	"
Muldoon	" "	849	" " " "	"
Narrow Gauge	" "	848	" " " "	"
Number Three	" "	850	" " " "	"
Victor	" "	17173	All	Leased from Hayden Mining Company
Morning Star	" "	6575	"	"
Good Hope	" "	20008	"	"
Lucky Boy	" "	20008	"	"
John C.	" "	20008	"	"

GEOLOGY AND ORE DEPOSITS

General Statement

The geologic information in this report has been compiled from the reports of C. S. Robinson, who conducted a detailed investitation of the Whitepine area for the U. S. Geological Survey from

1949 to 1952, and the work of M. R. Brock, who mapped part of the development drift for DMEA. Parts of two mines in the area, the Morning Star and Victor, were inaccessible during the contract period, and information concerning them is based on surface studies and old mine maps of the Callahan Zinc-Lead Company.

The Akron, Morning Star, and Victor mines are in the southern or Whitepine area of the Tomichi mining district, on the west slope of the Sawatch Range, Gunnison County, Colo. The sedimentary formations overlying the Precambrian granite in the Whitepine area are successively, the Cambrian Sawatch quartzite, the Manitou dolomite, Harding quartzite, and Fremont dolomite, all of Ordovician age - the Devonian Chaffee formation, the Mississippian Leadville limestone, and the Pennsylvanian Belden shale. The sedimentary rocks are folded into a broad syncline with minor folds on the limbs. The formations have been faulted and intruded by the Princeton quartz monzonite, Akron rhyolite, and rhyolite porphyry dikes all of tirtiary age. Replacement deposits of lead-zinc-silver ore occur in the limestones and dolomites along the faults, and in part, along the axes of the folds.

The ore bodies of the Akron, Morning Star, and Victor mines are in and along the footwall of the Star (Lost Contact) fault zone and generally in the footwall of the rhyolite porphyry dikes that have intruded this fault zone. The purpose of the Callahan

Zinc-Lead Company's development drift was to explore the footwall of the Star fault zone from the southern end of the Akron workings, south to the Morning Star and Victor mines, and especially to explore the favorable area below the old workings of these two mines (fig. 3).

Akron Mine

The Akron mine is worked through the Akron tunnel, the portal of which is about 800 feet south of the town of Whitepine. There are about 10,000 feet of drifts and crosscuts on the tunnel level, and the six main levels above the tunnel have a total of 6,000 feet of workings.

The ore occurs in the Ordovician Manitou dolomite, in the footwall of the Star (Lost Contact) fault. The dolomite which ranges in thickness from 20 to 100 feet is shattered, silicified and locally mineralized. Bedding is difficult to distinguish, but in general the beds have a northerly strike and dip 40°-70° E. A highly altered rhyolite porphyry dike with gouge contacts lies within the Star fault zone. West of the Manitou dolomite is a body of highly sericitized and silicified rhyolite referred to as the Akron rhyolite. This formation is, in places, very difficult to distinguish from the silicified Manitou dolomite.

The Star fault, as exposed in the Akron tunnel, is a 60-foot breccia and gouge zone containing 40 feet of altered rhyolite porphyry.

It is a reverse fault with a general northerly strike and an average dip of 60°E. Small mineralized faults, probably contemporaneous with the Star fault, are locally present in the dolomite and numerous post-ore faults offset ore bodies and the rhyolite porphyry.

The ore occurs as lenticular bodies in two zones in the Manitou dolomite. One zone is along or close to the Manitou-porphyry contact and the other is usually 20 to 60 feet farther in the footwall at, or near, the Manitou-Akron contact. Most of the production has come from the zone along the porphyry dike, but recently considerable ore has been found in the outer zone. In general, the ore bodies which range from 50 to 150 feet long, 50 to 200 feet high, and 6 to 25 feet wide, are elongated parallel the Star fault and dip 40°-80°E.

The ore in the zone near the porphyry dike is composed of large masses of sugary-grained sphalerite and galena with small, disseminated grains of pyrite and chalcopyrite. The ore in the zone near the contact of the Manitou and Akron rhyolite is composed of bands of sulfide in a gangue of Manitou dolomite. Individual sulfide bands consist of layers of nearly pure galena and sphalerite alternating with layers of sphalerite mixed with pyrite and chalcopyrite. According to figures submitted by the Callahan Zinc-Lead Company, the average grade of ore mined during the last 25 years is 14.96% zinc, 11.43% lead, and 6.04 ounces of silver per ton.

Morning Star Mine

The Morning Star mine workings are about 3,500 feet southeast of Whitepine and consist of an inclined shaft, about 300 feet deep, and two tunnels and a winze level having about 4,500 feet of drifts and crosscuts (fig. 2).

The ore is in the Mississippian Leadville limestone, a dolomitic-limestone marble, which forms the footwall of the Star fault. The limestone is cut at places by a rhyolite porphyry dike, which locally departs from the fault leaving a thin slab of limestone between the dike and fault. Massive sulfide bodies have been mined from both sides of the rhyolite dike, and oxidized ore is reported to have extended to depths of 100 feet.

Victor Mine

The Victor mine workings are about 4,200 feet southeast of Whitepine. They comprise an inclined shaft and tunnel; both caved prior to 1951. The workings are in dolomitic-limestone marble of the Leadville formation on the footwall of the Star fault. As in the nearby Morning Star mine, the fault contains a dike of rhyolite porphyry, which at places deviates from the fault zone leaving a thin plate of limestone between dike and fault.

According to Crawford[1] the largest ore body in the Victor mine was a silver-bearing lead carbonate sheet west of the porphyry that extended from the surface to a depth of 182 feet. The longest drift on ore had a length of 300 feet; the greatest thickness was 8 feet. Sulfide ore in smaller bodies has been mined from the east side of the porphyry dike.

Akron-Morning Star Exploration Work

The Akron-Morning Star development drift, one of the major projects of the exploration contract, was started near the 04 Raise in the Akron workings (fig. 3). Drifting was begun in the highly altered Akron rhyolite and continued south in this formation for approximately 250 feet. The remainder of the drift was in white to black dolomitic limestone of the Manitou formation, on the footwall side of the Star (Lost Contact) fault. Two long crosscuts off the main drift intersected the rhyolite porphyry dike and were terminated in granite. The ground crosscut under the Morning Star mine is undoubtedly on the Star fault, as evidenced by the intense shearing within the rhyolite dike and Manitou dolomite. There is some doubt whether the rhyolite porphyry dike in the Akron workings

1/ Crawford, R. D., Geology and Ore Deposits of the Monarch and Tomichi districts, Colorado. Colo. Geol. Survey Bull. 4, 1913, p. 300.

connects with similar rock in the Morning Star, as it does not show in Akron workings south of the 04 Raise where the fault zone was cut. A small, 15-foot thick, rhyolite porphyry dike, which occupies a small fault zone in the Manitou formation, was cut in the southernmost crosscut.

Minor sulfide mineralization was observed in small shear zones and faults in limestone and rhyolite throughout the entire workings (fig. 3). The only promising mineralized zone discovered was in the drift north from the south crosscut. The ore occurs on the limestone footwall in a zone up to 3 feet wide and 50 feet long. Assays indicate a content of 5% lead, 5% zinc and 3.5 ounces of silver per ton. Two short crosscuts through the hanging wall of the porphyry and into the granite in this area showed only a few small fragments of drag ore. To complete exploration of the hanging wall possibilities, Callahan Zinc-Lead Company put three diamond drill holes through the porphyry--one at the extreme south face, one at the north face, and one from the top of the 3401 Raise. None of them cut ore of commercial grade. The 3301 Raise, which was driven to connect with the lower Morning Star workings, was, so far as is known, almost enterely in the small rhyolite porphyry dike.

Although all conditions on the exploration level were indicative of possible ore deposition, no commercial ore was located at any point

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Although all conditions on the exploration level were indicative of possible ore deposition, no commercial ore was located at any point

in either the hanging wall or footwall of the porphyry dike. There are still possibilities of locating commercial grade ore in the Morning Star area, but based on the evidence gained from this project and on the knowledge of the old deposits, it is assumed that the quantity would be small.

WORK COMPLETED UNDER THE CONTRACT

Contract Idm-E2, Docket No. DMEA 110, was for an expenditure of $120,000.00 and was signed on May 25, 1951. Exploration work under the terms of the contract started on May 26, 1951, and was coordinated with the lead-zinc production operations of the company.

The contract was revised and amended on the basis of work already performed. The amended contract was signed and activated on August 12, 1952.

Work accomplished (fig. 2) consisted of the following:

(a) A total of 1,890 feet of drifts and crosscuts was driven through very heavy ground on the Akron level. Close timbering and considerable cribbing was required. Drifting was accomplished at a cost of $52.88 per foot and crosscutting for $34.65 per foot.

(b) A two-compartment cribbed raise (figs. 2 and 4) was driven through heavy ground for an inclined distance of 175 feet above the Akron level. This raise is known as R-3301 and was driven on an inclination of 63° with a bearing of S. 8° W. Part of this raise was driven on a cost-incurred basis for $48.72 per foot; the rest was driven under a short-form contract at a unit cost of $53.00 per foot.

(c) A sub-level crosscut known as 2-3201 (figs. 2 and 4) was driven S. 4° W., 122 feet, from the top of raise R-3301. This sub-level was driven at a unit cost of $50.00 per foot.

(d) A second raise (R-3101) (figs. 2 and 4) was started from the end of the 2-3201 sub-level on a S. 75° W. Bearing and at an inclination of 63°. This section of raise was driven 255.5 feet to connect with the bottom level of the Morning Star winze. It was driven at a unit cost of $53.00 per foot.

(e) A sub-level crosscut, numbered 4-3102, was driven from the R-3101 raise for 107.5 feet in a N. 78° E. direction. The sill of this sub-level is 150.6 above the top of the 2-3201 sub-level. The sub-level (figs. 2 and 4) was driven at a unit cost of $50.00 per foot.

(f) A total of 715 feet of the Lower Morning Star adit level was rehabilitated (fig. 2). This included penetrating badly caved areas and necessitated close and heavy timbering and considerable cribbing. Rehabilitation was accomplished at an average cost of $27.88 per lineal foot.

The original contract, dated May 25, 1951 was amended three times. Amendment No. 1 (April 4, 1952) increased Morning Star level rehabilitation from 1200 feet to 1400 feet; reduced exploration raising from 500 feet to 400 feet; and revised costs correspondingly. Amendment No. 2 (April 4, 1952) revised labor and supervision to include miners, a carpenter, a warehouseman and a superintendent. Amendment No. 3 (April 4, 1952) provided a $0.12-per-hour increase in

wages for all personnel. On August 12, 1952, an amended supplemental contract was signed.

This contract was amended six times. Amendment No. 1 (Nov. 25, 1952) revised funds allotted to the project from $27,453.00 to $27,458.00. Amendment No. 2 (March 25, 1953) recessed the project from May 25, 1953 to March 25, 1954. Amendment No. 3 (June 1, 1953) revised the recess period designated in Amendment No. 2 to the period February 7, 1953-May 11, 1953. Amendment No. 4 (July 1, 1953) increased exploration raising from 190 feet to 240 feet and reduced sub-level drifting from 400 feet to 347 feet. Costs were revised accordingly. Amendment No. 5 (July 16, 1953) eliminated further drifting on the Akron level and substituted 322 feet of drifting on the 200-foot sub-level above. It also provided for 250 feet of sub-level drift and crosscut about 100 feet below the Morning Star winze level. Amendment No. 6 (August 12, 1952) recessed the project from September 10, 1953 to March 10, 1954.

EXPENDITURES UNDER THE CONTRACT

Exploration under the original contract (figs. 2 and 4) was for the period May 26, 1951 to May 1, 1953. During this time Callahan Zinc-Lead Company completed the following work:

Items	Amount	Costs	Cost/foot
Drifting	1,474 feet	$77,940.59	$52.88
Crosscutting	416 "	14,412.69	34.65
Raising	151 "	7,357.28	48.72
Morning Star rehabilitation	715 "	19,937.77	27.88
Total cost from MF-104A form dated 8/12/52		$119,648.33	
Total cost approved by audit, dated 12/9/55		$117,162.72	

During the interval between May 1, 1953 and September 10, 1953 exploration (figs. 2 and 4) was continued under a supplemental short form contract on a unit basis. The following work was completed:

Items	Amount	Costs	Cost/foot
Drifting (sub-level)	120.0 feet	$ 6,000.00	$50.00
Crosscutting (sub-level)	109.5 "	5,475.00	50.00
Raising	279.5 "	14,813.50	53.00
Akron level maintenance		5,000.00	--
Total costs		$31,288.50	

The above costs total $148,451.22. Disposal of equipment and supplies at the termination of the project netted $400.00. Final costs of exploration, therefore, total $148,051.22 and Government participation of 50 percent is $74,025.61.

EFFICIENCY OF PROJECT OPERATIONS

The cost of the work under the project was high; however, the operation was efficient and performed by skilled miners on a contract system. Most of the exploration was in soft and heavy ground, and timbers failed frequently. Excavations frequently caved and had to be cribbed. Exploration was carried on in conjunction with ore production from other parts of the Akron mine.

DESCRIPTION OF DISCOVERY

The only discovery of lead-zinc-silver ore was made in the drift going north from the extreme south crosscut (figs. 2 and 3). A very irregular ore-shoot was disclosed in the drift in widths up to

3 feet, and over a length of 50 feet (figs 2 and 3). The ore shoot could not be closely examined or sampled as it was in bad ground that had been closely lagged and cribbed. Callahan Zinc-Lead Company report that samples of this ore contained 5 percent lead, 5 percent zinc and 3.5 ounces of silver per ton. There is insufficient data on which to base an estimate of ore reserves.

PRODUCTION FROM DISCOVERY

No ore was mined from the discovery, and the property has been completely shut down since September 10, 1953. Ore production stopped on November 3, 1952.

CONCLUSIONS AND RECOMMENDATIONS

Completed exploration has tested most of the favorable targets for possible galena, sphalerite, chalcopyrite and silver occurrences, with the exception of the downward extension of the Morning Star ore shoot. The Morning Star objective still remains a favorable target for exploration.

The only discovery of lead-zinc-silver ore was an irregular shoot up to 3 feet wide and about 50 feet long. It contains about 10 percent combined lead and zinc and 3.5 ounces silver per ton.

"Certification of Discovery" has been waived but DMEA retains royalty rights to August 12, 1963.

No further exploration with DMEA assistance is recommended.

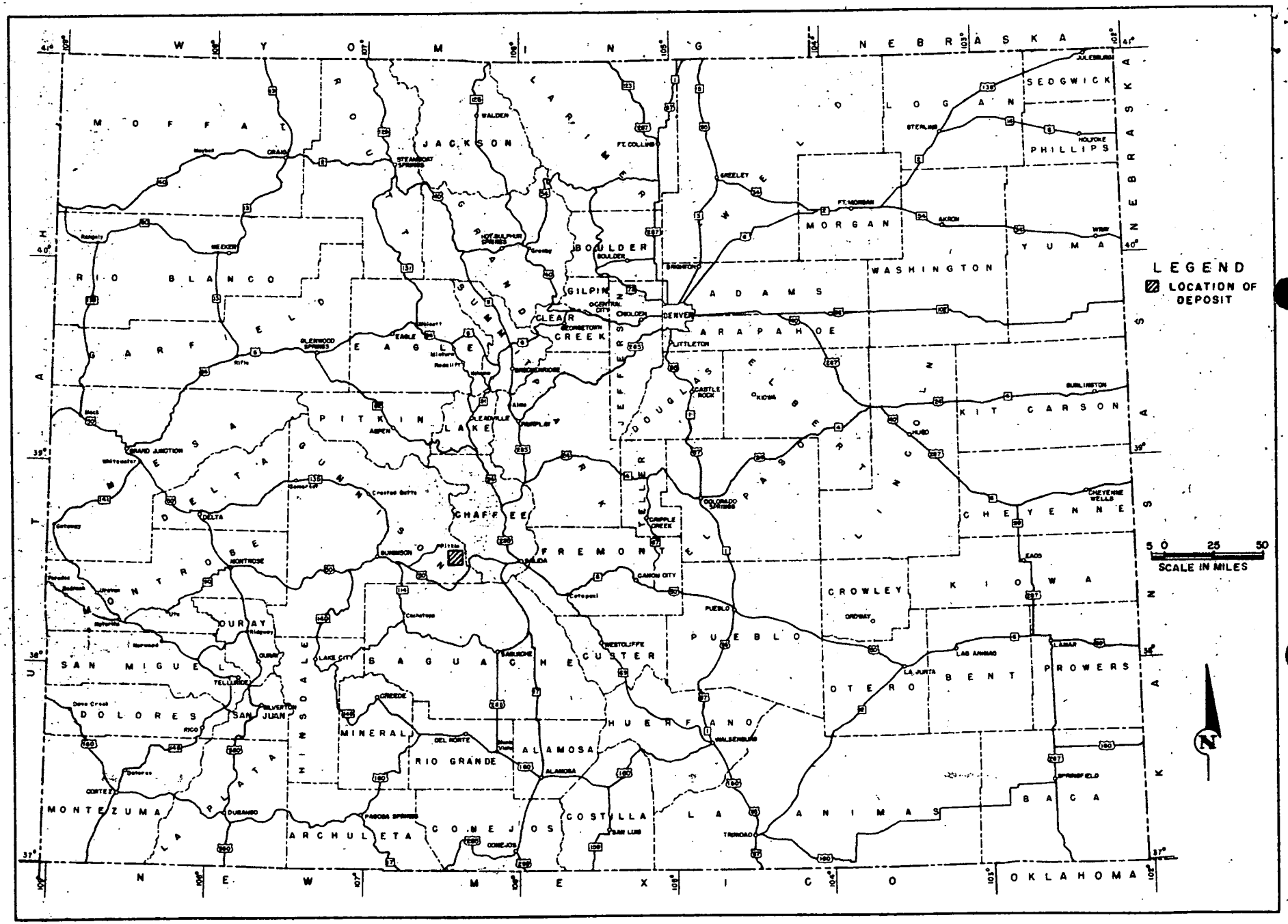


FIGURE 1 - LOCATION MAP, AKRON AND MORNING STAR MINES, CALLAHAN ZINC-LEAD CO., GUNNISON COUNTY, COLO.
DMEA 110 CONTRACT Idm-E2

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

RECEIVED
FEB 13 1956

224 New Customhouse
Denver 2, Colorado

February 10, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMA-110 (Lead-Zinc), Contract Idm-E2, Callahan Zinc-Lead Company, Gunnison County, Colorado

In compliance with the "Special Notice" instructions contained in the "Minutes, Operating Committee," No. 622, dated January 27, 1956, we are enclosing the original and one copy of the Operator's Final Report.

The Field Team's Final Report will be forwarded as soon as the engineering and geologic sections are available.

W. M. Traver

W. M. Traver

Enclosure

Open File Report

RECEIVED
FEB 18 1953

FINAL ENGINEERING REPORT - Idm-E2

MORNING STAR-VICTOR EXPLORATION

AKRON MINE-WHITEPINE, COLORADO

CALLAHAN ZINC-LEAD COMPANY

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

HISTORY AND PRODUCTION

The Tomichi Mining District was discovered in the early 1870's. Early work was almost entirely in the oxide zone in ore that was high in lead and silver and contained only negligible quantities of zinc. This early production all came from shallow workings with a maximum depth of about 200 ft. below the outcrops. The general area was inactive from sometime during the 1890's until about 1910, when some deeper work was started. It produced steadily from 1915 until 1930. It was inactive again until 1942, when Callahan Zinc-Lead Company - who had obtained the property in 1938 - started small-scale production. Production was increased in 1946, with all ore being shipped to American Smelting & Refining Company's mill at Leadville, Colorado until a treatment plant was completed in December of 1947. This plant, capable of handling 75 to 100 tons of ore daily, was in continuous operation until November 1, 1952, when - due to continued lowering of metal prices - it was shut down.

Gross production from the camp, while not all a matter of record, must be between 10 and 15 million dollars, with Callahan Zinc-Lead Company's operation since 1943 contributing approximately 5 million to this total. The combined production of the Morning Star and Victor Mines was close to a million dollars.

EXPLORATION PROJECT Idm-E2

The objective of Project Idm-E2 was to explore the Morning Star and Victor ore shoots on the Akron tunnel level about 400 ft. below the lowest known work in the Morning Star Mine. This was to be accomplished by driving the Akron tunnel haulage level south from the Akron Mine a distance of approximately 1800 ft. Included in the project was a connection through to Morning Star workings and some main and sublevel drifting. Work in the Morning Star Mine proper consisted of rehabilitation of existing - but caved - openings.

Prior to government approval of the Project, drifting on the main level was started in October, 1950. A total of 270 ft. of main level drift was completed prior to January 1, 1951. This was through some of the most difficult ground we have ever encountered in the district. Work was continued by Callahan in 1951 until in May, when it came under government participation. Some work had been done in the Morning Star Mine on rehabilitation. Drifting done by Callahan alone totaled 730 ft. on the Akron tunnel, and 824 ft. of drift and tunnel reopened in the Morning Star.

Drifting and crosscutting under government participation continued through 1951, with an additional 1459 ft. of main level drift and crosscut and 585 ft. of drift retimbered in the Morning Star. Work was continued through 1952, with 531 ft. of drift and crosscut, 130 ft. of Morning Star rehabilitation, and 184½ ft. of raise toward a connection with Morning Star work. The 531 ft. of drift and crosscut included 100 ft. of drifting on a sublevel at the top of the first 184½ ft. lift of the connection raise. In January of 1953, 20 additional feet were added to this sublevel and the second and final lift of the raise was taken up about 60 feet.

The work was then shut down until May of 1953, when raising was started again. The raise was taken up to within 100 ft. of the lowest Morning Star level, which was at the bottom of a 200 ft. incline and partially filled with water. At this point, a total of 109½ ft. of crosscut was driven to the hanging wall of the porphyry dyke, with a dual objective -- (1) to check the hanging wall for mineralization, and (2) to pick up any water possible from the waterfilled workings above, with the thought that it might drain the work at some other point than our hole through to the bottom of the sump. This crosscut was not successful in either of these objectives, in that it was completely dry, with no mineralization. A diamond drill hole was driven from the face of the raise a short distance above the station and intersected the old work. It did not drain the workings, as it was impossible to keep it open. We therefore took the raise up to within 6 ft. of the sump bottom before it caved through. This was the last work done on the Project and totaled 129½ ft. of drift and crosscut, and 247 ft. of raise for the year 1953. All of this work was completed before September 10, 1953. Totals of all work done are:

2849½ ft. of drift and crosscut

431½ ft. of raise

1539 ft. of retimbering of old Morning Star workings

Both the Akron and Morning Star - Victor Mines are located on the Star Fault. This is a major north-south striking fault zone with approximately 4000 ft. of vertical displacement. Akron orebodies occurred in lenses parallel to and in the fault zone. These are replacement of the original limestone on the footwall of the fault, but are not always in conformity with the original bedding. Largest lenses in the Akron have been adjacent to and under a rhyolite porphyry dyke, with an average dip of 60° to the east. Ground conditions are extremely bad and require heavy timber. Ore widths vary greatly, with extreme widths up to 80 ft. down to a minimum width that can be mined profitably. Average grade from the Akron Mine has been something over 20% combined lead and zinc. The Star Fault has been the channel of mineralization for all of the Lost Contact orebodies.

Upper Morning Star geology has been somewhat different from the occurrences in the Akron Mine. Lenses of ore, while comparable as to grade, have been much smaller, and occur as replacement of limestone along the hanging wall of the porphyry dyke between it and the granite, rather than on the footwall, as has been the rule in the Akron. Enclosed maps show the geology of the main haulage level as mapped by Callahan Zinc-Lead Company, and also of the upper Morning Star, as taken from maps made by U. S. Smelting Company in 1929 or 1930. The U. S. Smelting maps with the geology of the upper levels were not available when planning the Project.

The map entitled Plan of Akron Haulage Level shows geology of main level work. It will be noted that the drift, started near 04 Raise, was in the Akron formation. This is a highly-altered, igneous rock with no known ore occurrences. The remainder of main level work was in limestone, with the exception of crosscuts through the porphyry dyke into the granite. The areas crosscut under the Morning Star Mine are definitely on the Star Fault, as evidenced by heavy movement within the porphyry, causing almost unbelievably heavy ground. It is not known whether or not the porphyry dyke is continuous between the Lost Contact ore zone and the Morning Star. It is doubtful if the porphyry in the Akron connects with the Morning Star, as it does not show in Akron workings south of 04 Raise, where the fault zone was cut.

Some mineralization is shown on the main level in the drift north from the extreme south crosscut. This was very irregular, with a maximum width of 2 ft. for one 10 ft. strike length. This ore was on the footwall of the porphyry and the best values found were about 8% combined lead and zinc. Exploration of about 300 ft. of the strike was carried out at this point along the footwall of the vein. Two crosscuts through the hanging wall of the porphyry and into the granite showed a few tiny fragments of drag ore. To complete exploration of the hanging wall possibilities, Callahan Zinc-Lead Company put three diamond drill holes through the porphyry - one of these at the extreme south face, one at the extreme north face, and one between the north face and the northernmost crosscut. 3301 Raise and the sublevel south to put us in position to tap the Morning Star Winze were both in rhyolite porphyry. The crosscut driven 100 ft. below the Morning Star lowest level -- designated as No. 5 Level -- went through the porphyry and into the granite. It was also completely barren. All old work, with the exception of the winze, below the Morning Star lower adit was completely caved.

CONCLUSIONS

All work on the main level was indicative of possible ore deposition, but no commercial ore was located at any point on either the hanging wall or footwall of the porphyry dyke. There are still possibilities of locating commercial grade ore in the Morning Star area, but it is the

writer's belief that any ore located would be in small quantities. This supposition is borne out by upper Morning Star work, as indicated on accompanying geology plans. Even under good market prices, I do not believe that further exploration work is justified in the area. The main haulage level was located in the best ground possible and is extremely difficult to hold. It is now tightly caved 50 ft. south of 04 Raise, so that inspection is impossible. Reopening costs to the Morning Star Mine would probably be in excess of $ 6000. Recovery of rail and pipe is not economically feasible, as this exceeds their new cost.

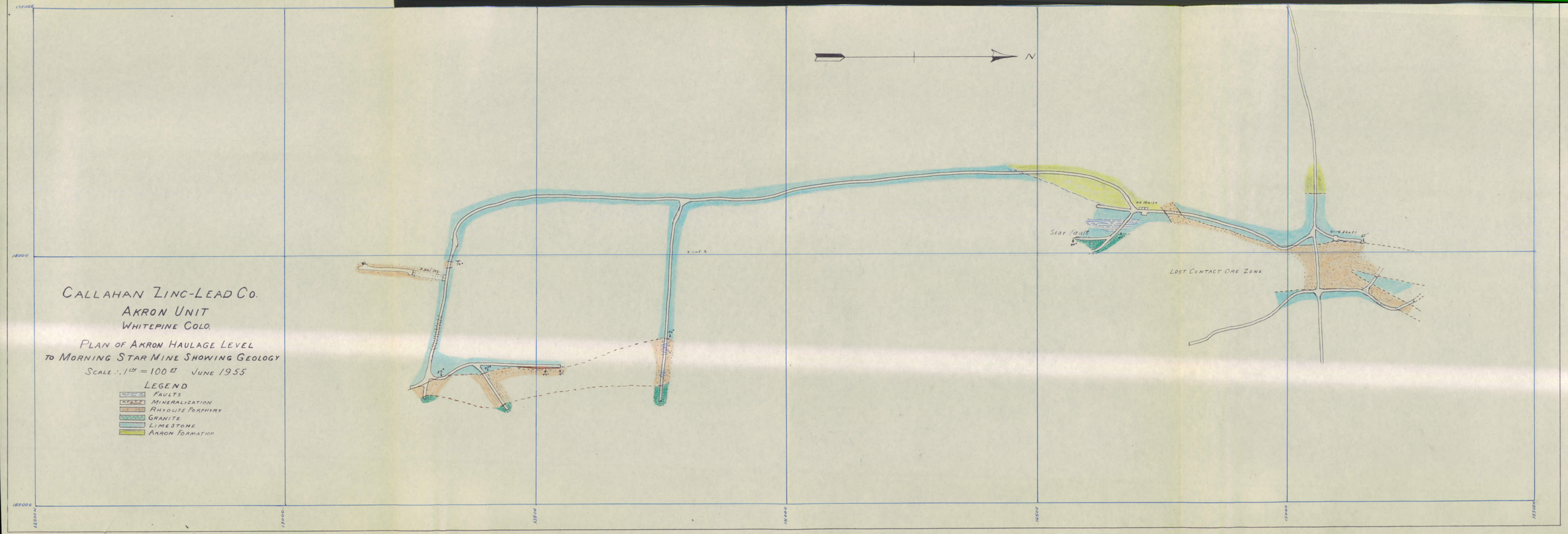
Respectfully submitted,

CALLAHAN ZINC-LEAD COMPANY

J. E. Dunn
General Superintendent

JED:lf

LARGE FORMAT DOCUMENTS AT END OF FILE


CALLAHAN ZINC-LEAD CO.
AKRON UNIT
WHITEPINE COLO.
PLAN OF AKRON HAULAGE LEVEL
TO MORNING STAR MINE SHOWING GEOLOGY
SCALE: 1 IN = 100 FT JUNE 1955
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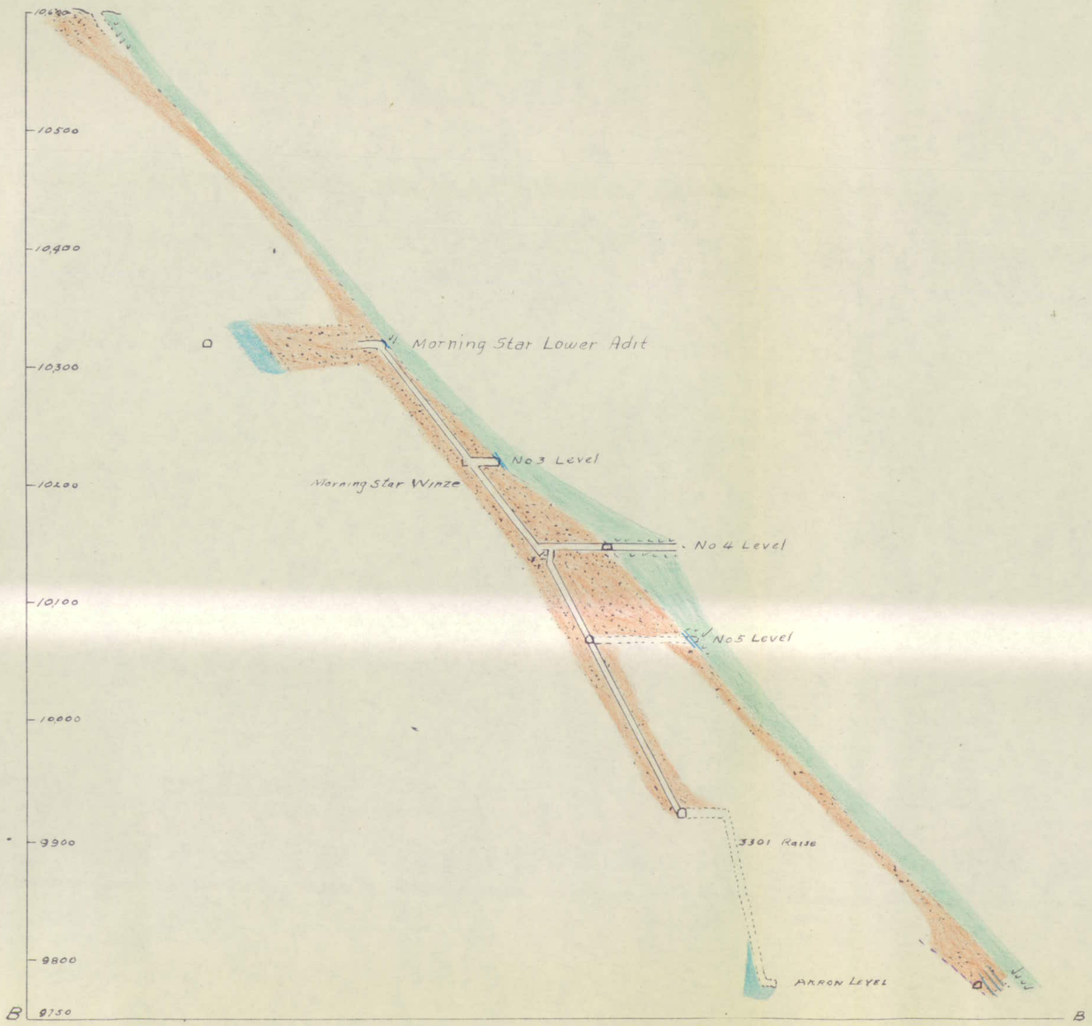

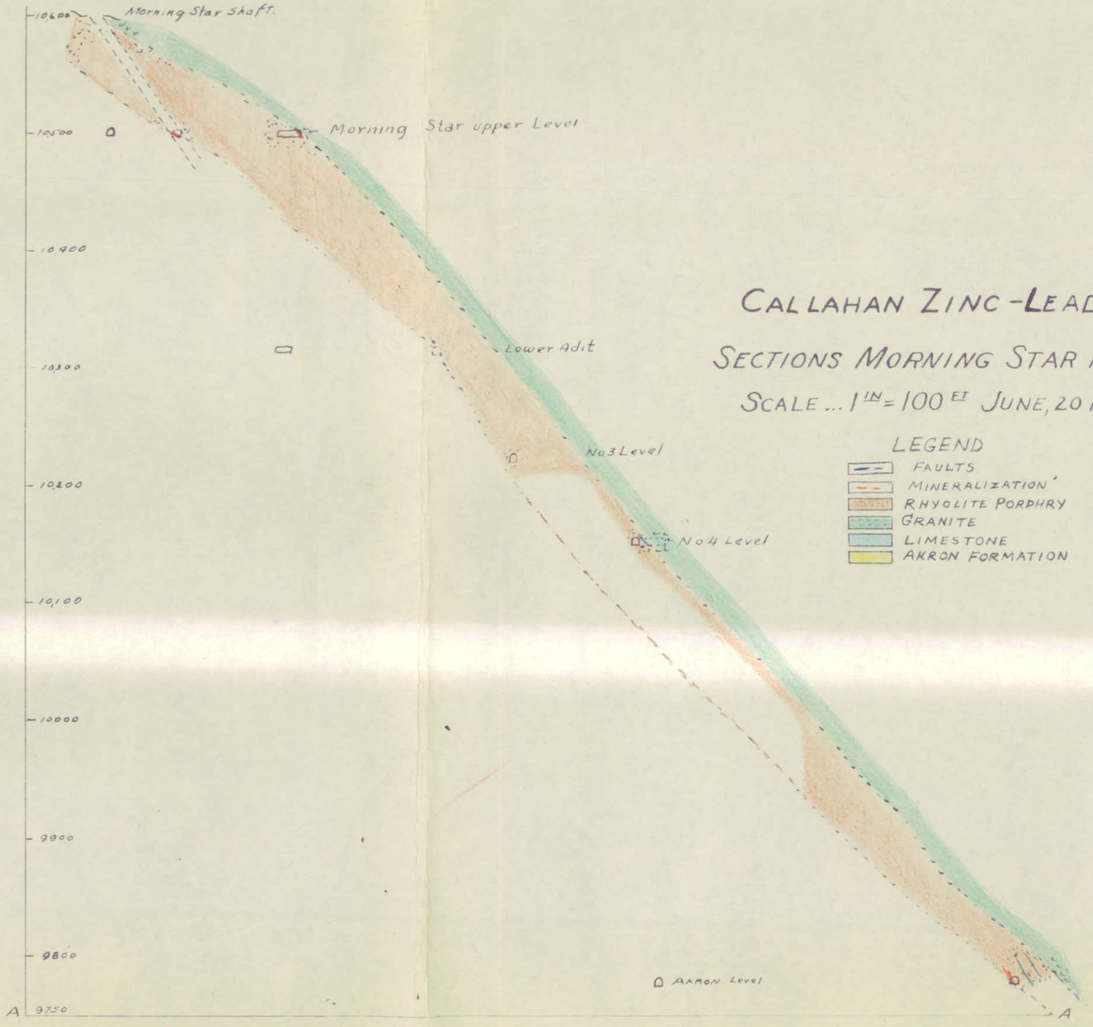

CALLAHAN ZINC-LEAD CO.

SECTIONS MORNING STAR MINE

SCALE ... 1 IN = 100 FT JUNE, 20 1955

LEGEND

- FAULTS
- MINERALIZATION
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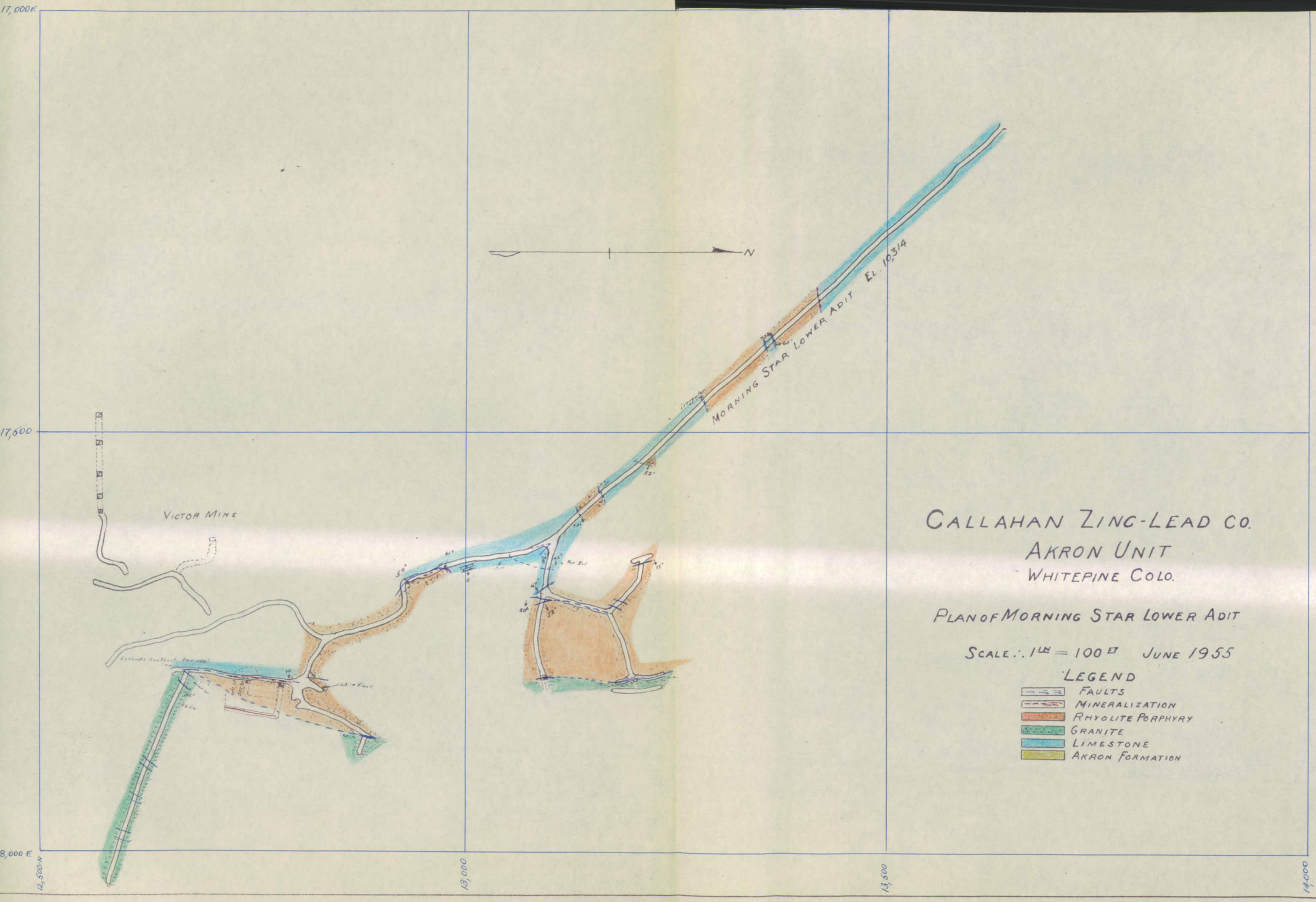
- GRANITE
- LIMESTONE
- AKRON FORMATION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AKRON UNIT
WHITEPINE COLO.
PLAN OF MORNING STAR LOWER ADIT
SCALE: 1 IN = 100 FT JUNE 1955
LEGEND
FAULTS
MINERALIZATION
RHYOLITE PORPHYRY
GRANITE
LIMESTONE
AKRON FORMATION

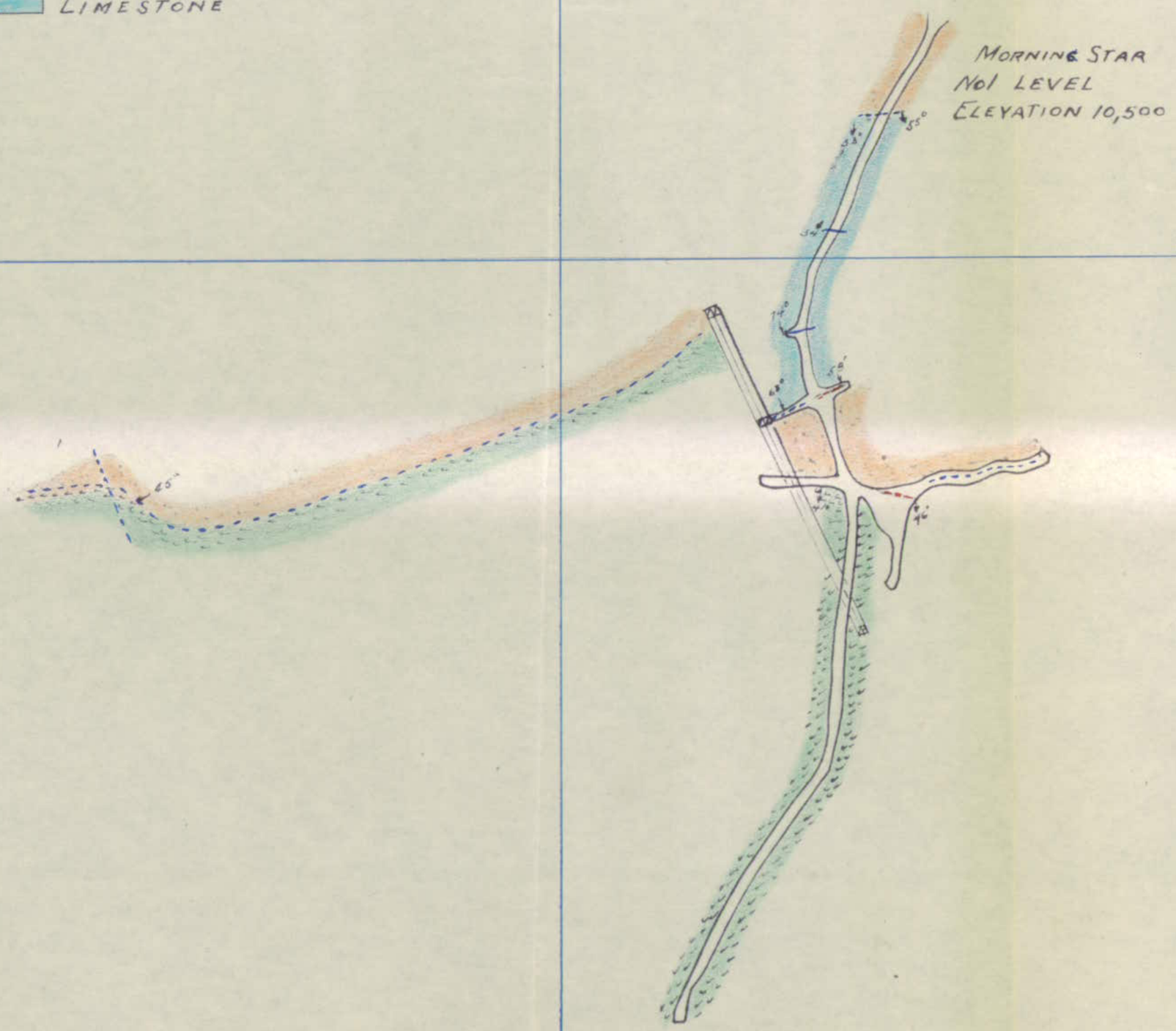
CALLAHAN ZINC-LEAD CO.
AKRON UNIT
WHITEPINE COLO.

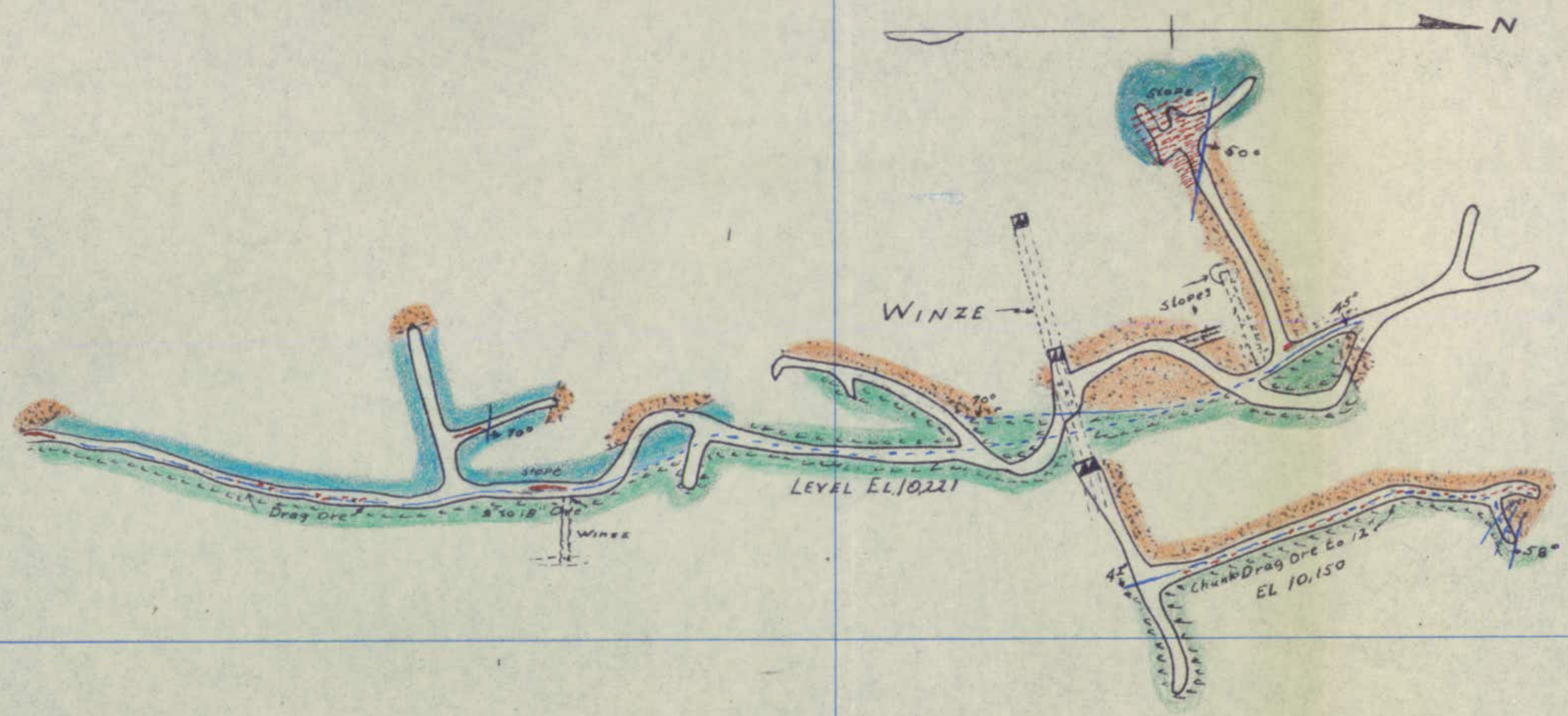
PLAN OF MORNING STAR UPPER ADIT

SCALE . . 1 IN = 100 FT JUNE 1955

LEGEND

- FAULTS
- MINERALIZATION
- RHYOLITE PORPHYRY
- GRANITE
- LIMESTONE





CALLAHAN ZINC-LEAD CO.

AKRON UNIT

WHITEPINE COLO.

PLAN OF MORNING STAR WINZE LEVELS

SCALE : 1 IN = 100 FT JUNE 1955

LEGEND

- FAULTS
- MINERALIZATION
- RHYOLITE PORPHYRY
- GRANITE
- LIMESTONE

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

Mr. Thomas H. Breding
DMEA Auditor
224 New Customhouse Building
Denver 2, Colorado

Re: Report of Review
Idm-K2, Docket 110
Callahan Lead-Zinc Co.

Dear Tom:

Receipt is acknowledged of your Report of Review covering the above-cited Exploration Project Contract.

The Report is acceptable and normal distribution may be effected.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Chief
Contract Administration
and Audit Division

WBorovies/wb
December 6, 1955

Copy to: Docket
Admr. ReadingFile
Mr. Chambers

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

224 New Custo house
Denver 2, Colorado

July 19, 1955

Memorandum

To: J. F. Shaw W/Copy of Operator's Letter

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA-110 (Lead-Zinc), Contract Id -E2 Amended, Callahan Zinc-Lead Company, Inc., (Akron and Morning Star mines), Gunnison County, Colorado

Enclosed is a copy of a letter from J. E. Dunn representing the subject contractor in which he offers $200.00 for the Government's interest in jointly-owned pipe and track purchased during operation of the project.

This is apparently in response to our letter of May 17, 1955 and Dunn advises it is impossible to obtain other bids as the aterial is under a cave and inaccessible.

W. M. Traver

W. M. Traver

Enclosure

WMT:sr

cc Subject)
Chairman Op. Comm. (2))
Harshman) w/copy operator's letter
Townsend)
Chron

DMEA
Date Rec'd.

JUL 19 1955

BUREAU OF MINES
Denver, Colorado

July 18, 1955

Defense Minerals Exploration Administration
834 New Customhouse
Denver 2, Colorado

Attn: W. M. Travers
Executive Officer, DMEA
Field Team, Region XII

Re: Docket DMEA-110
Contract Idm-22

Gentlemen:

With reference to Idm-22 Exploration Project on which you have recently received a final engineering report, we note that in accordance with the government's records we have spent $ 6,441.35 for pipe and track which is partly owned by the government.

As noted in my final report, due to caved ground this is now inaccessible and recovery costs are greater than the new value of the supplies. With this fact in mind, we will offer $ 200.00 for the government's interest in the pipe and track.

I trust this will clear up the matter.

Very truly yours,

CALLAHAN ZINC-LEAD COMPANY

J. E. Dunn
General Superintendent

JED:lf

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

224 New Customhouse
Denver 2, Colorado

May 17, 1955

Mr. E. A. Salo, Treasurer
Callahan Zinc-Lead Company, Inc.
100 Park Avenue
New York 17, New York

Re: Docket DMEA-110 (Lead-Zinc)
Contract Idm-E2

Dear Mr. Salo:

By the terms of the exploration project contract under which you are operating, the Government acquires an interest in property purchased for use on the project which is "....paid for or purchased with funds contributed jointly by the operator and the Government...." Such property includes any individual items of equipment and facilities, buildings, or other fixtures costing more than $50.00 each. It also includes materials and supplies considered in groups or categories (such as pipe, explosives, rails, drill steel), if the original cost of the remaining unexpended portion of any such category of materials or supplies exceeded $50.00. As to any facility, building, fixture, or piece of equipment, and as to any such group or category of materials or supplies the original cost of which or the unexpended portion of which did not exceed $50.00, the Government does not assert any claim or interest under the terms of the contract.

The effect of the contract provisions is to make you the agent of the Government for the disposition of its interest in such property. Therefore it is your responsibility to make the best possible disposition of the property for the benefit of the Government. Every reasonable effort must be made to realize its full value. Such reasonable efforts might include: (1) Advertising in newspapers, periodicals, and posting notices in public places; (2) canvassing users of and dealers in such property; and (3) negotiating with the original vendor for the repurchase of the property.

Should you wish to retain the property or, in effect sell it to yourself, you may do this only after first having made every reasonable effort to procure a price higher than you yourself are willing to pay; or you may buy the Government's equity by paying for it either on the basis of the original cost or at a price higher than the highest bid obtainable from two independent bidders. In bidding on the property for yourself you should give consideration to the fact that the property in place is worth considerably more to you than if dismantled and disposed of elsewhere.

The undersigned is authorized to approve of and to join in the sale of such property for the joint account of the operator and the Government. You are requested to advise this office in advance of the proposed disposition of any such property so that we may advise you if the Government will approve thereof and join in the transaction. Please supply this office with the original and five copies of your liquidation proposal and all documents and other material relative to the property disposition.

Records in this office indicate that the following property is subject to liquidation of the Government's interest:

Item	Cost to Project
Pipe -	$3,644.78
Track -	2,797.17
Total - - - - -	$6,441.95

We are desirous of closing this account at an early date, therefore we will appreciate receiving your proposal relative to the property disposition and your final report in conformance with item "4" of the Termination agreement.

Both your proposal and your final report must be rendered in quintuplicate complete with all supporting data.

Very truly yours,

W. M. TRAVER

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

JWT:sr

cc Subject
Chron
Chairman Op. Comm. (3)
Brading
Shaw
Harshman
Townsend

File Copy
Surname

Griswold
Selfridge
Johnson
Montgomery

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

MAY 12 1955

Mr. W. M. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Bldg.
Denver 2, Colorado

Re: Docket No. DMEA-110 (Lead-Zinc)
Callahan Zinc-Lead Co., Inc.
Akron and Morning Star Mines
Gunnison County, Colorado
Amended Contract No. Idm-E2

Dear Mr. Traver:

Referring to our letter to you of May 5, we are enclosing the Finance Office, Field Team, and extra copies of the Termination Agreement covering the cited contract.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (GLB)

Enclosures

WRGriswold/er 5/10/55

APPROVED:

/s/ C. W. Johnson (GLB)
Member, Bureau of Mines

Thor H. Kiilsgaard (GLB)
Member, Geological Survey

Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

R.G.G.

CALLAHAN ZINC-LEAD COMPANY, INC.
100 PARK AVENUE
NEW YORK 17, N.Y.
OREGON 9-1300

OFFICE OF THE TREASURER

May 6, 1955

Department of the Interior
Defense Minerals Exploration Administration
Washington 25, D.C.

Re: Docket No. DMEA-110 (Lead-Zinc)
Callahan Zinc-Lead Co., Inc.
Akron and Morning Star Mines
Gunnison County, Colorado
Amended Contract No. Idm-E2

Attention: Mr. Frank E. Johnson
Acting Administrator

Gentlemen:

I have signed the Termination Agreement enclosed with your letter of May 5th in connection with the above mentioned contract and am returning the original and four copies to you.

We shall, in due course, perform all of the requirements in Paragraph 4.

Yours very truly,

CALLAHAN ZINC-LEAD COMPANY, INC.

E. A. Salo

E. A. Salo
Treasurer

EAS:eam
Encl.

File Copy
Surname
Mr. Wrend
Chambers
From
Volin
Martin

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

MAY - 5 1955

Mr. E. A. Sale, Treasurer
Callahan Zinc-Lead Company, Inc.
100 Park Avenue
New York 17, New York

Re: Docket No. DMEA-110 (Lead-Zinc)
Callahan Zinc-Lead Co., Inc.
Akron and Morning Star Mines
Gunnison County, Colorado
Amended Contract No. Idm-E2

Dear Mr. Sale:

Referring to your letter of March 24, covering the cited amended contract, I am enclosing the original and five copies of a Termination Agreement which I believe is in accord with your letter and as outlined at our recent meeting.

If you approve of the agreement, will you kindly sign all copies, retain the "Operator's Copy" for your files, and return the balance to this office.

Sincerely yours,

Frank E. Johnson (for)

Enclosures

ACTING Administrator

WRGriswold/er 4/19/55

Copy to: Docket
Admr. R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Region III (2)
Chron.

R.C.A.

File Copy
Surname

Chumley
Stirewalt
Maylin
Johnson

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

Mr. W. M. Traver, Executive Officer
DMEA Field Team, Region III
224 New Custombouse Building
Denver 2, Colorado

MAY - 5 1955

Re: Docket No. DMEA-110 (Lead-Zinc)
Callahan Zinc-Lead Co., Inc.
Akron and Morning Star Mines
Gunnison County, Colorado
Amended Contract No. Idm-E2

Dear Mr. Traver:

With reference to your letter of January 18, with enclosures, covering the cited project, the subject involved has been covered with various conferences with the representatives of the Operating company.

We are quite in accord with the opinions expressed by yourself, and by the examining engineer and geologist, that it would be desirable to have the work program carried to conclusion. On the other hand, the representatives maintain that the economic realities preclude their reopening this mine in the foreseeable future.

At this moment, in view of the many problems which still confront the domestic lead-zinc industry, we are reluctant to institute legal proceedings against this Operator to attempt to enforce complete compliance of the program.

It has therefore seemed advisable to execute a mutual termination of the project, such a termination containing a stipulation having the effect of a project certification.

We have noted in the memorandum of October 4, 1954, by Mr. W. H. King, that the Government has a joint interest in equipment to the extent of $3,644.78 expended for pipe and $2,797.17 for track. He further stated that for the months of August and September, 1953, an aggregate amount of Government participation of $1,735.75 was held in deferment. We presume that the track and pipe have some salvage value and we suggest that this account be negotiated with the Operator's representative.

Sincerely yours,

W. S. Martin
ACTING Chairman, Operating Committee (GLB)

APPROVED:

M. E. Volin (GLB)
Member, Bureau of Mines

/S/ R. D. Trace (GLB)
Member, Geological Survey

WRGriswold/er (4/19 & 5/2/55)
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Killsgaard, USGS
Mr. Jay Chambers
Chron.

R.G.J.

File Copy
Surname
Chambers

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

Mr. W. M. Traver, Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-110 (Lead-Zinc)
Callahan Zinc-Lead Co., Inc.
Akron and Morning Star Mines
Gunnison County, Colorado
Amended Contract No. Idm-E2

Dear Mr. Traver:

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At this moment, in view of the many problems which still confront the domestic lead-zinc industry, we are reluctant to institute legal proceedings against this Operator to attempt to enforce complete compliance of the program.

It has therefore seemed advisable to execute a mutual termination of the project, such a termination containing a stipulation having the effect of a project certification.

We have noted in the memorandum of October 4, 1954, by Mr. W. H. King, that the Government has a joint interest in equipment to the extent of $3,644.78 expended for pipe and $2,797.17 for track. He further stated that for the months of August and September, 1953, an aggregate amount of Government participation of $1,735.75 was held in deferment. Therefore, will you please utilize this sum of $1,735.75 to reimburse the Government in full for its equity in the cited jointly-owned equipment.

Sincerely yours,

Chairman, Operating Committee

APPROVED:

Member, Bureau of Mines

Member, Geological Survey

WRGriswold/er 4/19/55
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Killsgaard, USGS
Mr. Jay Chambers
Chron.

5. The Government's interest in supplies and equipment purchased under the Original Contract is agreed upon as amounting to $1735.75, and the Government may deduct this amount from any money owing to the Operator.

6. The total net amount contributed by the Government shall be repayable in the form of a percentage royalty on any minerals mined or produced from the land described in Article 2 of the Contract, in the manner and amount provided in the Contract, for a period of eleven years from the date of the Amended Contract (August 12, 1952), certification of discovery or development being hereby waived.

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

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

THE UNITED STATES OF AMERICA

By _____
Administrator, Defense
Minerals Exploration
Administration

CALLAHAN ZINC-LEAD CO., Inc.

By _____

_____

5. The total net amount contributed by the Government shall be repayable in the form of a percentage royalty on any minerals mined or produced from the land described in Article 2 of the Contract, in the manner and amount provided in the Contract, for a period of eleven years from the date of the Amended Contract (August 12, 1952), certification of discovery or development being hereby waived.

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THE UNITED STATES OF AMERICA

By _____
Administrator, Defense Minerals
Exploration Administration

CALLAHAN ZINC-LEAD CO., INC.

By _____

_____

Pmbin
Hoffland (memo)
Appd. Sol. Off.

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

April 19, 1955

Memorandum for the File

From: Chief, Base Metals

Subject: Docket No. DMEA-110, Callahan Zinc-Lead Company, Inc. Amended Contract No. Idm-E2, Akron and Morning Star Mines, Gunnison County, Colorado, (Lead-Zinc).

The last work done on the cited project was in September 1953. Subsequently, Amendment No. 6 to the contract was executed, providing for recess of the project from September 10, 1953 until March 10, 1954.

Work has never been resumed on the project and the Operator reported that the mine was closed down and that they had no plans for resuming operations within the foreseeable future. There has been considerable correspondence with the Operator, and at various times its representatives have been in Washington to discuss the matter. In essence, the position of this company is that sufficient work was done on the project so there remains little expectancy of discovering anything of major importance; that furthermore, in view of the presently depressed zinc market, there is no expectancy that an operation of this mine could be an economic success.

On the other hand, the Field Team has recommended that, if possible, this Operator should be required to complete the project. The field believes that inherent possibilities remain for a discovery of some magnitude.

Various courses of action were possible; the Government might have entered into litigation attempting to force this Operator to complete the work or to return all Government funds which had been received. Such a course of action would have been of questionable wisdom. A certain amount of merit probably may be attached to the Operator's contention, viewed from the standpoint of prudent business procedure. Furthermore, the institution of legal action on our part could be translated as being harsh and arbitrary, and not in accord with the hard facts of economic realities.

It has therefore been considered as being to the best interest of the Government to arrange an Agreement of Mutual Termination between the Government and the Operator. However, such an agreement shall contain a clause which provides for royalty payments to the Government on all ores which may be produced from the land involved in the contract for a period of eleven (11) years from the contract date. In this manner, if the property

should later go into production due to changed economic conditions, or any other reason, the Government equities are maintained.

The Termination Agreement has also delineated the lands which pertain to the contract as thoses which have actually been benefited or may receive benefit from the contract work. This particular contract was one of the oldest written, and many land areas were originally included which were not pertinent to the contract work in any possible manner. Such lands are now deleted.

W. R. Griswold

W. R. Griswold

WRG/er

Copy to: Docket
Base Metals
Chron.

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

APR 14 1955

Memorandum

To: The Administrator, DMEA
Attention: W. R. Griswold

WEM

From: Acting Assistant Solicitor, Defense Minerals

Subject: Docket No.DMEA-110 (Lead-Zinc), Callahan Zinc-Lead Co., Inc., Akron and Morning Star Mines, Gunnison County, Colorado, Amended Contract Idm-E2

Pursuant to two memoranda dated April 4 from Mr. Griswold we have prepared the attached termination agreement.

A justification should be written to accompany the Government's copy of the agreement and should cover two points, the reason for changing the description of the land and the reason for terminating the project. We could write a justification for the first point, but not for the second, therefore, we have not drafted a justification in this office.

The amended contract is on the short form, but there seems to be some question as to disposition of equipment in which the Government has an interest, apparently a hangover from the Original Contract, (See the memo dated October 4, 1954, from the Executive Officer to the Operating Committee). This question should be resolved prior to execution of the Termination Agreement and, if necessary, we can insert a provision in the agreement covering this point.

J. L. Hoffiund
Acting Assistant Solicitor,
Defense Minerals

Rubin

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

APR 14 1955.

Memorandum

To: The Administrator, DMEA
Attention: W. R. Griswold

From: Acting Assistant Solicitor, Defense Minerals

Subject: Docket No.DMEA-110 (Lead-Zinc), Callahan Zinc-Lead Co., Inc., Akron and Morning Star Mines, Gunnison County, Colorado, Amended Contract Idm-E2

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J. L. Hofflund

J. L. Hofflund
Acting Assistant Solicitor,
Defense Minerals

HCRubin:gjb 4/12/55
Copy to: DMEA Docket
Sol. Docket
W. R. Griswold (2)
H. C. Rubin
J. L. Hofflund
Chron. File

File Copy
Surname

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

April 4, 1955

Memorandum

To: Acting Assistant Solicitor, Defense Minerals

From: Chief, Base Metals Division

Subject: Docket No. DMEA-110 (Lead-Zinc), Callahan Zinc-Lead CO., Inc. Akron and Morning Star Mines, Gunnison County, Colorado, Amended Contract Idm-E2

Will you please prepare a mutual termination agreement, effective as of September 10, 1953, which shall also contain a "pseudo" certification clause.

W. R. Griswold

W. R. Griswold

WRG/er

Copy to: Docket
Base Metals
Chron.

File Copy
Surname

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

April 4, 1955

Memorandum

To: Acting Assistant Solicitor, Defense Minerals

From: Chief, Base Metals Division

Subject: Docket No. DMEA-110 (Lead-Zinc), Callahan Zinc-Lead Co., Inc., Akron and Morning Star Mines, Gunnison County, Colorado, Amended Contract Idm-E2

INTERIOR DEPT.
APR 4 - 1955
SOLICITOR

Will you kindly prepare an Amendment No. 7 to the cited amended exploration contract which will provide that the land referred to in Article 2 of said contract will be deleted and the following patented claims will be considered as pertaining to the contract:

Patented Claims held under lease

Victor	No. 17173
Morning Star	No. 6575
Good Hope	No. 20008
Lucky Boy	No. 20008
John C.	No. 20008

Patented Claims Owned

The southerly 1200 feet of the following claims:

Deadwood	No. 1872
North Star	No. 847A
Muldoon	No. 849
Narrow Guage	No. 848
Number Three	No. 850

The above claims included in the contract are shown on the shaded portion of the attached map entitled "Fig 5, Callahan Zinc-Lead Co., Akron Unit, Gunnison County, Colo. Claim and Project Location Map DMA-110".

W. R. Griswold

W. R. Griswold

WRG/er
Copy to: Docket
Base Metals
Chron.

Com

CALLAHAN ZINC-LEAD COMPANY, INC.
100 PARK AVENUE
NEW YORK 17, N.Y.
OREGON 9-1300

Defense Minerals Exploration Administration
MAR 2 6 1955

OFFICE OF THE TREASURER

March 24, 1955

Mr. C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Docket No. DMA-~~1225~~ 110X (Lead-Zinc)
Contract No. Idm-E235

Dear Mr. Mittendorf:

Following the most recent of our conferences with the DMEA which you and I held last Friday, I hope that we have reached a mutually satisfactory basis for responding to your letter of October 27, 1954.

As you know, we are of the opinion that further exploration on this project would not be prudent under existing conditions. We feel enough work has been done to disprove the original concept we held when starting the exploration program in which our investment is about $153,000. Under the circumstances, we feel it would not be in the best interest of this Corporation and its many stockholders to proceed with the work.

Our contract was one of the first ones signed and under the definition of property, all claims leased or owned by us were included under the contract. It is our understanding that it is not the intent to require that all the claims of a property be committed but only those that might benefit from any discovery due to the exploration work. We, therefore, suggest that the existing contract be amended to limit the property covered to the following claims which are the only ones which stood to benefit from the project:

Claims leased by us: Victor, Morning Star, Good Hope, Lucky Boy and John C.

Claims owned by us: (1200 feet north of the south end line of the following claims). Deadwood, North Star, Muldoon, Narrow Gauge and Number Three.

When and if such an amendment has been completed, we shall be happy to follow the standard procedures described by you to terminate the contract.

Yours very truly,

CALLAHAN ZINC-LEAD COMPANY, INC.

E. A. Salo

E. A. Salo
Treasurer

EAS:eam

File Copy
Surname

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

MAR 1 5 1955

Mr. E. A. Salo, Treasurer
Callahan Zinc-Lead Company, Inc.
100 Park Avenue
New York 17, New York

Re: Docket No. DMEA-110 (Lead-Zinc)
Callahan Zinc-Lead Co., Inc.
Akron and Morning Star Mines
Gunnison County, Colorado
Amended Contract Idm-E2

Dear Mr. Salo:

On January 24, we discussed the cited contract over the phone. It was my understanding that Mr. Hall was in Denver at the time and that you desired to have a talk with himafter his return. I believe Mr. Hall planned to see the members of the Field Team while in Denver.

I am sure you can understand we are anxious that the matters pertaining to this project be cleared up, and we will appreciate hearing from you, with reference to our letter of October 27.

Sincerely yours,

E. O. Mittendorf
By 257
Administrator

WRGriswold/er 3/14/55
Copy to: Docket
Region III (2)
Admr. R. File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

R.C.G.

January 24, 1955

Memorandum for the Files

From: Administrator

Subject: DMEA-110, contract Idm-E2, Callahan Zinc-Lead Co. Record of phone conversation with A. E. Salo, Treasurer

As background, I refer to our letter of October 27 to the operator which cited his default under the terms of the subject contract. As of today, the operator has not replied to that letter.

On Nov. 3, 1954, Mr. Joe Hall, President of the company, called at my office to discuss the contents of our letter of October 27. He argued that the work done to date did not justify further work and made it clear that he had no intention of completing the work under the contract. He also made it clear that he would not sign proposed Amendment 7, which was intended to terminate the contract by mutual agreement but with a pseudo-certification provision. After discussing the matter at considerable length, Joe Hall admitted that he was not familiar with all the details of the case, and he requested time to review the entire matter with Salo when he returned to New York.

Not hearing from either Hall or Salo, as a result of my conversation of November 3, we decided to needle the operator, and on November 30 wrote him again.

On December 16 Salo phoned me from New York to apologize for not replying to our letters of October 27 and November 30. He said their Superintendent, Jim Dunn, had conferred with the field team at Denver on November 18 and had convinced the field team that the company was not justified in doing any more work on the project.

On December 20 I phoned King at Denver and related to him the substance of my conversation with Salo on December 16. King confirmed that Dunn had discussed the project with him, and had brought in some maps which he had recently acquired through the U.S. Smelting & Refining Co. King said the engineers and geologists were studying the maps and they would prepare written memoranda in the near future.

On January 19, 1955, we received the memoranda from Traver, Shaw, Salisbury, and Harshman. None of these men were convinced by Mr. Dunn's visit of Nov. 18 or from the maps which were left that the work should not be pursued to completion. On the contrary, each has reaffirmed his original opinion that the work should be completed or that the project should be certified on the basis of ore disclosures made up to this time.

I phoned Mr. Salo at New York today to inform him that we had received the field team's recommendations, and I familiarized him with their conclusions. I pointed out the necessity of a formal reply to our letters of October 27 and November 30.

He was obviously surprised to learn that the field team had reaffirmed their earlier opinions. He assured me that the company wished to settle this matter in a manner entirely satisfactory to the Government.

He said Joe Hall, President, has been in Denver for the past week and intended to call on the field team for a further discussion of the case. He said Hall will return to New York Monday, January 31, and that he, Salo, desired to defer a reply to our recent letters until he had the opportunity to discuss the matter with Hall.

C O Mittendorf

Administrator

COMittendorf/fw
cc: Docket
Base Metals Div.
Admr. Reading File
Diary

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 19 1955

224 New Customhouse
Denver 2, Colorado

January 18, 1955

AIRMAIL

Memorandum

To: C.O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMA 110 (Lead-Zinc), Contract I-DMA-E2, Callahan Zinc Lead Co., Inc., Akron and Morning Star Mines, Gunnison County, Colorado

In conjunction with matters discussed in your telephone call to this office on December 20, 1954, we are enclosing the following material:

1. Original and ~~four~~ 3 copies of memorandum dated January 14, 1955 from M. H. Salsbury, Mining Engineer, U.S. Bureau of Mines, Region III, and transmittal thereof dated January 17, 1955 from John F. Shaw.

2. Original and three copies of a memorandum dated January 6, 1955 from E.N. Harshman, U.S. Geological Survey.

The examining engineer and geologist in their memoranda are still firm in their opinion, in which we concur as indicated in our prior memorandum of October 15, 1954, that either the operator be required, if possible, to complete the work authorized under the contract, or that in terminating the contract a Certification of Discovery or Development be issued in order to protect the Government's interest in the investment under the contract.

W. M. Traver

W. M. Traver

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

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

Region III

Building 20, Room 137
Denver Federal Center
Denver 2, Colorado
January 17, 1955

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 19 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: John F. Shaw

Subject: DMA 110, Contract I-DMA-E2 Amended (Lead-zinc), Callahan Zinc-Lead Company, Inc., (Akron and Morning Star mines) Gunnison County, Colorado

Enclosed are the original and eight copies of a memorandum report by M. H. Salsbury, in accordance with the request in the memorandum from the Field Team dated December 22, 1954.

It is believed that the operator should carry the work to completion. If the operator refuses, a certification should be made.

John F. Shaw

JFS/dj

Enclosures

cc: 8
E2
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 19 1955

Region III

Building 20, Room 137
Denver Federal Center
Denver 2, Colorado
January 14, 1955

Memorandum

To: John F. Shaw

From: M. H. Salsbury

Subject: DMA 110, Contract I-DMA-E2 Amended (Lead-zinc), Callahan Zinc-Lead Company, Inc., (Akron and Morning Star mines) Gunnison County, Colorado

In accordance with a memorandum from the Chief, DMEA Field Team, Region IV, dated December 22, 1954, geologic maps lately furnished by the operators under the subject contract were reviewed with the object of considering a revision of the writer's recommendations on the project dated October 12, 1954.

The geologic maps show the Morning Star workings above the DMEA project area. They are not sample maps and do not give any information about the tonnage or grade of ore found in the course of exploration in the vicinity of the Star fault. No stoping is indicated on the two upper levels, although some must have been done. On the third or 10,260-foot level, stopes B, C, D and E are designated. Of these, stopes B, D and E were on the porphyry-granite contact on the hanging wall of the Star fault. On the fourth or 10,175-foot level, the downward continuation of the same fault was drifted on under stopes D and E. No stoping is shown on the fourth level, but mineralization is indicated on the contact, and there is a notation, "chunks drag ore to 12 inches".

Exploration of this contact under the workings of the fourth level was one of the objectives of the last DMEA project work, which was continued long enough to cut the contact in the 4-3102 crosscut (upper sublevel), but not to examine the contact northward under the fourth level drift and stopes D and E.

The recently discovered maps give no clue whatever as to the grade of mineralization found in the Morning Star mine. They appear to have been made solely for geologic study. Separated from the report for which they were prepared, it is the writer's opinion that they do not affect materially the validity of the reasoning under which the DMEA exploration was proposed.

The fact that no stoping is shown on the fourth level might be taken as indicating that the mineralization there was not of ore grade at the time the work was done. This could have been true on ore which, with present day metallurgical advances, might be of considerable value. The fact that the United States Mining, Smelting and Refining Company did not go any further with a project after examining it in 1928 is hardly conclusive proof as to its worth. An ore deposit can be of substantial value, and still not be of interest to one of the larger companies.

Unfortunately, the Morning Star workings along the Star fault are inaccessible, so that an actual examination is not possible.

If anything, the maps submitted might be considered as indicating an opportunity for more exploration, rather than less. A deposit on the third level in the limestone west of the Star fault is shown as "stope C". Existence of this stope was not known to the field examiners who approved the DMEA exploration project, so far as the writer knows, and of course exploration in the limestone was not considered.

No reason is seen to change the recommendations in the writer's memorandum of October 12, 1954, and completion of work which has cost the government more than $15,000.00 so far, without reaching the objective, should be insisted on. Failing this, certification on the basis of the low-grade discovery on the Akron level should be made to protect the Government's interest.

M. H. Salsbury
Mining Engineer

MHS/dj

cc: 8
E2
Chron

January 6, 1955

Date Rec'd.
JAN 7 1955
RECEIVED
BUREAU OF MINES
Denver, Colorado
JAN 19 1955

Memorandum

To: DMEA Field Team, Region IV

From: E. N. Harshman

Subject: DMEA Docket 110 (lead-zinc), Contract Idm-E2 amended, Calahan Zinc-Lead Company, Inc., Akron and Morning Star Mines, Gunnison County, Colorado

The Executive Officer's memorandum of December 22, 1954, requests a review of all pertinent data on the subject property, particularly 3 plan maps recently submitted by Mr. Dunn showing various workings in the Morning Star Mine. The request for review was initiated after a telephone conversation with Administrator C. O. Mittendorf in which he stated that Mr. Salo, Treasurer, Callahan Zinc-Lead Company, had implied that the Field Team, Region IV, was about to reverse its decision regarding certification and/or completion of the work under Contract Idm-E2.

The maps submitted by Mr. Dunn were traced from maps prepared by U. S. Smelting and Refining Company in 1928. They show the geology of the Morning Star workings and although they add detail to the general picture of the mine area they do not change the over-all aspect of the ore potential of the ground remaining to be explored under the contract. Differences of opinion may exist on the ore potential of the target area but these differences are certainly not based on the results of raising from the Akron level and crosscutting from the raise to the Star fault - work accomplished at a cost to DMEA of over $20,000.

It is my firm conviction that DMEA would be criticized for approving the expenditure of over $20,000 in Government money to reach the ore bearing structure (the Star fault) if they did not make every effort to compel the operator to complete the contract by exploring along that structure.

Defense Minerals
RECEIVED
APR 19 1955

As stated in my memorandum of October 12, 1954, it does not appear in the best interest of the Government to terminate Contract Idm-E2 prior to completion of at least a significant portion of the 572 feet of drifting and crosscutting authorized on the upper and 200-foot sublevels. I fully realize that it may be difficult to force the operator to complete the work and that it may be administratively expedient to terminate the project. If the project is terminated, it should be certified as if a discovery had been made, for only in this way can the Government's interest in potential lead-zinc ore below the old Morning Star workings be protected.

File Copy
Surname
Griswold

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

Mr. Jos. Hall, President
Callahan Zinc-Lead Company, Inc.
100 Park Avenue
New York 7, New York

Re: Docket No. DMEA-110 (Lead-Zinc)
Callahan Zinc-Lead Company, Inc.
Akron and Morning Star Mines
Gunnison County, Colorado
Amended Contract No. Idm-F2

Dear Mr. Hall:

On November 3, we discussed the matters pending on the exploration project of your company at the Akron and Morning Star mines. It was my understanding that you would review the situation and let me have your ideas.

Since the project is presently dormant with an indefinite status, I would appreciate hearing from you as soon as you have had an opportunity to formulate your thoughts on the subject.

Sincerely yours,

C. O. Mittendorf (fw)

Administrator

WRGriswold/bjl (11/30/54)

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Bishop
Mr. Kiilsgaard
Region IV (2)
Chron.

cc

File Copy
SURNAME

Johnson
Selfridge

OCT 27 1954

Mr. E. A. Salo, Treasurer
Callahan Zinc-Lead Company, Inc.,
100 Park Avenue
New York 17, New York

Re: Docket No. DMEA-110 (Lead-Zinc)
Callahan Zinc-Lead Co., Inc.
Akron and Morning Star Mines
Gunnison County, Colorado
Amended Contract No. Idm-E2

Dear Mr. Salo:

Reference is made to your letter of September 17, 1954, commenting upon the proposed Amendment No. 7 to the subject contract, and advising that you were sending your final accounting report to our Denver Office and requesting your Colorado manager to prepare the final engineering report for filing in the near future.

We have delayed replying to your letter in order to give us an opportunity to make a complete review of your project and obtain current information from our Field Team on work accomplished under the contract.

I wish to point out to you that under the terms of the exploration project contract Callahan Lead-Zinc Company may not take unilateral action in terminating the project, and that it now is in default of the contract. Unless this default is rectified it will be necessary that the Government take appropriate steps to protect its interest.

We are greatly disappointed in the attitude taken by your company in view of the implied intention in your letter of August 11, 1954 to resume work. We are also unable to understand your position, now that only a moderate amount of work on the exploration project remains unfinished, and at a time when working conditions, including ventilation, are improved and the general economic conditions for lead and zinc are on the uptrend. The work accomplished under the amended contract has been mainly preparatory, and favorable target areas have not been adequately

R.C.G.

Docket No. DMEA-110 (Lead-Zinc)

explored. It is our desire, concurred in by the Field Team, that the remaining work be done. It is to the interest of both your company and the Government to see that an orderly completion of the work, in accordance with the terms of the contract and spirit of both parties when the project was approved, is accomplished.

We request that you reconsider your intention with respect to the future of the project and advise so as to enable us to decide on a course of action which will protect the Government's interests.

Sincerely yours,

C. O. Mittendorf

Administrator

WRGriswold/FEJohnson/er/bih
10/26/54

cc to: Docket
Admr. Reading File
Operating Committee
Region IV (2)
Base Metals (2)
Messrs. Bishop USBM
Kiilsgaard USGS
FEJohnson

File Copy
Surname

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

Mr. E. A. Salo, Treasurer
Callahan Zinc-Lead Company, Inc.,
100 Park Avenue
New York 17, New York

Re: Docket No. DMEA-110 (Lead-Zinc)
Callahan Zinc-Lead Co., Inc.
Akron and Morning Star Mines
Gunnison County, Colorado
Amended Contract No. Idm-E2

Dear Mr. Salo:

Reference is made to your letter of September 17, 1954, commenting upon the proposed Amendment No. 7 to the subject contract, and advising that you were sending your final accounting report to our Denver Office and requesting your Colorado manager to prepare the final engineering report for filing in the near future.

We have delayed replying to your letter in order to give us an opportunity to make a complete review of your project and obtain current information from our Field Team on work accomplished under the contract.

I wish to point out to you that under the terms of the exploration project contract Callahan Lead-Zinc Company may not take unilateral action in terminating the project, and that it now is in default of the contract. Unless this default is rectified it will be necessary that the Government take appropriate steps to protect its interest.

We are greatly disappointed in the attitude taken by your company in view of the implied intention in your letter of August 11, 1954 to resume work. We are also unable to understand your position, now that only a moderate amount of work on the exploration project remains unfinished, and at a time when working conditions, including ventilation, are improved and the general economic conditions for lead and zinc are on the uptrend. The work accomplished so far on the project has been mainly preparatory, and favorable target areas have not been adequately explored. It is our desire, concurred in by the Field Team, that the remaining work be done. It is to the interest of both your company and the Government to see that an orderly completion of the work, in accordance with the terms of the contract and spirit of both parties when the project was approved, is accomplished.

We request that you reconsider your intention with respect to the future of the project and advise so as to enable us to decide on a course of action which will protect the Government's interests.

Sincerely yours,

Administrator

WRGriswold/er 10/25/54

Copy to: Docket
Admr R File
Op. Committee
Base Metals
Region IV (2)
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

File Copy
Surname

500

October 25, 1954

Memorandum

To: Administrator

From: Chief, Base Metals Division

Subject: Docket No. DMEA-110 (Lead-Zinc), Amended Contract No. Idm-E2, Callahan Zinc-Lead Company, Inc., Akron and Morning Star Mines, Gunnison County, Colorado

I have reviewed the proposed letter to the cited Operator. I feel that it is quite in order: we are not weakening our position in any manner and we may, of course, still certify this project at our own discretion.

W. H. Griswold

W. H. Griswold

WRG/er 10/25/54

Copy to: Docket
Base Metals
Chron.

R.C.L.

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

Defense Minerals Administration
RECEIVED
OCT 25 1954

224 New Customhouse
Denver 2, Colorado

October 22, 1954

Memorandum

To: Chairman, Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA-110 (Lead-Zinc), Amended Contract No. Idm-E2, Callahan Zinc-Lead Company, Akron and Morning Star Mines, Gunnison County, Colorado

Reference is made to your letter of October 19, 1954, wherein you advise that action regarding termination or certification of the subject contract is being deferred pending your hearing from us regarding points brought up in your letter of October 4, 1954.

The examining team and field team recommendations in the matter were forwarded to you by our memorandum of October 15, 1954.

W. H. King

File Copy
Surname

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

NSinRR

October 21, 1954

Memorandum

To: Administrator

From: Chief, Base Metals Division

Subject: Docket No. DMEA 110 (Lead-Zinc), Amended Contract No. Idm-E2, Callahan Zinc-Lead Company, Inc., Akron and Morning Star Mines, Gunnison County, Colorado

Referring to our previous discussions on this project, we now have received the review of the Field Team (W. H. King's memorandum of 10/15 to the Operating Committee). You will note they feel the Operator should be required to finish the work or else that we should certify. They would prefer that the work be completed, feeling that a good target still exists.

It appears that you now must make a formal demand that the work be completed or all Government funds be refunded; or else we should certify and thereby protect the Government interest.

Incidentally, it would perhaps be well to refuse consideration to this Operator if at any time it might submit another application.

W. R. Griswold

W. R. Griswold

WRG/er 10/21/54

Copy to: Docket
Base Metals
Chron.

File Copy
Surname

Griswold
Selfridge
Johnson
Mitchell

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

OCT 19 1954

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

Re: Docket No. DMEA-110 (Lead-Zinc)
Callahan Zinc-Lead Company
Akron and Morning Star Mines
Gunnison County, Colorado
Amended Contract No. Idm-E2

Dear Mr. King:

We have your letter of October 4 regarding the cited contract. We had written you on the same date regarding your recommendations on this project and shall withhold action until hearing from you regarding the points which we brought up.

The sum of $1,735.75 which you state represents Government participation held in deferment should of course be held pending until settlement has been made of the jointly-owned property account.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (JHS)

WRGriswold/er 10/14/54
Copy to: Docket
Admr. R. File
Operating Committee
Base Metals
Mr. Kiilsgaard, USGS
Mr. Bishop, USBM
Chron.

APPROVED:

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

Trygve H. Kiilsgaard
Member, Geological Survey (JHS)

R.C.G.

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

224 New Customhouse
Denver 2, Colorado

October 15, 1954

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 110 (Lead-Zinc), Contract Idm-E2 Amended
Callahan Zinc-Lead Company, Inc., Akron and Morning
Star Mines, Gunnison County, Colorado

In conjunction with matter discussed in your letter of October 4, 1954 and our memorandum to you of the same date, we are enclosing the original and three copies of the following material:

1. Memorandum dated October 12, 1954 from E.N. Harshman, Geologist, U.S. Geological Survey.

2. Memorandum dated October 12, 1954 from M.H. Salsbury, Mining Engineer, U.S. Bureau of Mines, and transmittal thereof dated October 14, 1954 from the Chief, Mineral Resources Branch, Mining Division, Region IV.

The examining engineer and geologist are firm in their recommendations, in which this office fully concurs, that either the operator be required, if possible, to complete the work authorized under the contract or that a Certification of Discovery or Development be issued in order to protect the Government's interests in the investment under the contract.

W. H. King

W. H. King

Enclosures

October 12, 1954

Memorandum

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration

To: A. H. Koschmann E.N.H. for A.H.K.

From: E. N. Harshman

OCT 18 1954

Subject: DMEA Docket 110 (lead-zinc), Contract Idm-E2, Akron and Morning Star Mines, Callahan Zinc Lead Company, Inc., Gunnison County, Colorado

In a letter dated October 4, 1954, the Chairman of the DMEA Operating Committee requests the opinion of the Executive Officer, DMEA Field Team, Region IV, regarding termination of the subject contract. The Executive Officer in a letter of October 7, 1954, requests a brief analysis of the work performed, the results therefrom, and recommendations relative to continuation of the project work as authorized under the contract.

Work under the subject contract began in May 1951 and continued intermittently until September 1953 when work was stopped without Government authorization. About 1474 feet of drifting and 416 feet of crosscutting was completed on the Akron level and 183-1/2 feet of raising was done from that level. Exploration on the Akron level did not result in the discovery of significant amounts of ore. Marginal ore is exposed in 50 feet of the hangingwall drift; it is reported by the applicant to contain 5% zinc, 5% lead, and 3-1/2 ounces of silver per ton over an average width of 3 feet. A crosscut 160 feet north of the face of this drift does not expose ore.

All work above the Akron level was authorized for the sole purpose of exploring for lead-zinc ore along the Star fault in the area between the bottom of the ore in the Morning Star mine and the Akron level. At the time operations were suspended, the following work had been done above the Akron level:

Item	Length	Approximate Govt. participation
3001 raise	183-1/2 feet	4862
2-3201 drift	120 feet	3000
2-3101 raise	247 feet	6545
4-3102 X cut	109-1/2 feet	2737
Maintenance of Akron level		2500
	Total	$19644

The work itemized above was preparatory to drifting along the Star fault on the so-called upper and 200 foot sublevels and in itself has little or no exploratory value. The 4-3102 crosscut intersected the Star fault and where intersected there was no ore on this structure.

Work above the Akron level, done at a cost of about $20,000 to the Government, has not explored that portion of the Star fault along which there is a probability of finding significant bodies of lead-zinc ore. It therefore does not appear to be in the best interest of the Government to terminate the contract prior to completion of the 572 feet of drifting and crosscutting authorized on the upper and 200-foot sublevels. Should Callahan Zinc Lead Company, Inc. refuse to continue exploration under contract Idm-E2, the project should be certified for the proper protection of the Government's interest.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Date Rec'd.
OCT 15 1954
BUREAU OF MINES
Denver, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
OCT 18 1954

Region IV

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

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

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

Subject: DMA 110, Amended contract Idm-E2 (Lead-zinc) Callahan Zinc-Lead Company, Inc. (Akron and Morning Star mines) Gunnison County, Colorado

Enclosed are the original and eight copies of a memorandum by M. H. Salsbury covering his recommendations with respect to termination of the subject contract which I approve.

I might add that in my opinion, the operator should be required if it is possible under DMEA contracts, to complete the work authorized because there is every possibility that it could result in a discovery of substantial ore reserves. In any event, a Certification of Discovery or Development should be made under the provisions of DMEA Circular 33, dated June 30, 1954.

W. M. Traver

W. M. Traver

enclosures

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DMEA Chron.

WMT/pam

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration

OCT 18 1954

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
October 12, 1954

Memorandum

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

From: M. H. Salsbury

Subject: DMA 110 (Lead-zinc) Amended contract Idm-E2, Callahan Zinc-Lead Company, Inc. (Akron and Morning Star mines) Gunnison County, Colorado - Recommendation of field inspector in regard to contract termination

Exploration under the subject contract was carried out from May 26, 1951, to September 1953. From the start until May 1, 1953, work was done under the long-form contract, all on the Akron level of the mine, with the exception of the first part of the 3301 raise, and rehabilitation of the Morning Star tunnel and winze at a higher level. During this period, the following work was accomplished:

		Cost per foot
Drifting 1,474 feet	$77,940.59	$52.88
Crosscutting 416 feet	14,412.69	34.65
Raising 151 feet	7,357.28	48.72
Rehabilitation 715 feet (including Morning Star adit and winze)	19,937.77	27.88
Total cost reported	$119,648.33	
Audit differences (disallowances)	2,485.61	
Approved cost	$117,162.72	
Government participation (50 percent)	$58,581.36	

On August 12, 1952, a short-form contract (form MF-200(A) was signed replacing the original contract and authorizing all work on a unit-cost basis. From this date, until suspension of operations in September 1953, exploration consisted of raising and sublevel work between the Akron level and the Morning Star winze, connection to the winze being completed just prior to shutting down. The following was accomplished.

Place	Feet	Total cost	Unit cost per foot
3301 Raise (completion of work started under original contract)	*32.5	$1,722.50	$53.00
2-3101 Raise	247.0	13,091.00	53.00
2-3201 Drift (+200 sublevel)	120.0	6,000.00	50.00
4-3102 Crosscut (upper sublevel)	109.5	5,475.00	50.00
Maintenance of DMEA exploration work on the Akron level		5,000.00	
Total approved cost		$31,288.50	
Government participation at 50 percent		$15,644.25	

*Operation claimed 33.5 feet for this raise, 1 foot of which was disallowed.

Total approved cost of project	$148,451.22
Government participation at 50 percent	$74,225.61
August and September 1953 claims deferred	-1,735.75
Actual Government outlay	$72,489.86

All advance was within the maximums allowed under the contract. Operations were carried on efficiently throughout the project. The Akron mine has difficult ground conditions and is admittedly a high-cost mine and the average cost of driving on the Akron level is high but not out of line.

On the work above the level, very poor ground conditions were encountered, and ventilation was also poor. Consequently, costs were higher. However, the cost claimed by the operator in his work, $125.00 per foot, probably reflects, in part, too high contract price given the sub-contractor. The unit cost prices of $53.00 per foot for raising and $50.00 per foot for drifting and crosscutting used in the short-form contract were set after consideration of the operator's, as well as the DMEA engineer's, reports, and did not differ materially from the operator's estimate.

Work under the original contract resulted in the discovery of at least 50 feet of low-grade lead-zinc-silver mineralization in the north drift on the Akron level, driven in a shear zone near the hanging wall of an altered porphyritic dike, which is associated with most of the known ore occurrences of the property. This drift was not active at the time the writer took over inspection of the project, the air was bad, and only one brief examination was made of the ore occurrences. The ground is very soft and is heavily timbered, but inspection of some of the vein material visible between lagging, showed definitely that there was some good mineralization present. It was not possible under these conditions to take samples which would have been significant. The previous inspector states that the work along the ore zone was done in an interval between his monthly visits and the ore was masked by heavy timber when he inspected it. However, in a statement in a letter to

J. H. East, Jr., dated March 19, 1952, signed by J. E. Dunn, the mine superintendent for the operator, a mineralized zone in the north drift 50 feet long, which averages 3 feet wide and assayed 5 percent zinc, 5 percent lead, and 3-1/2 ounces silver per ton is described. This mineralization is again mentioned in the March 1952 narrative report dated April 15, 1952, and described as "marginal ore.....for a distance of 50 feet with up to a 3-foot width. Grades were subcommercial with values about 10 percent lead and zinc." This grade and type of ore was not mineable at the time it was discovered, nor at the present time, but it can be considered as having commercial value at some future date under more favorable market conditions. It is not possible, on the limited showing, to compute an ore reserve. If necessary for the protection of the Government's interest under the present circumstances, it is the inspecting engineer's opinion that a Certification of Discovery or Development is justified on the basis of the mineralization found.

In the cases of DMEA 270X, contract Idm-E261, Montana Mining and Development Company, and DMA 1173X, contract I-DMA-E37, John A. and Ben A. Smith, the projects were terminated with provision that the Government would have liens against the respective properties for 10 years. These termination agreements were signed by the operators. On the supposition that the operator under the subject contract will not sign such a termination agreement, and that it is not advisable to provide for a lien without certification, Certification of Discovery or Development is recommended. Such certification would be similar to one made on a marginal ore discovery under DMEA 2517, contract Idm-E413, Defender Mining Company. It could be described as follows: "The nature of said discovery or development is described broadly or indicated as follows: Limited drifting on the Akron level of the Akron mine has partly exposed mineralization stringers of lead-zinc ore along the hanging wall of a porphyritic dike for a length of approximately 50 feet in the so-called north or hanging wall drift, with an estimated width up to 3 feet, averaging 3-1/2 ounces silver per ton, 5 percent lead, and 5 percent zinc, more or less."

Work carried on under the short-form contract after August 12, 1952, was directed in part towards exploring the possible downward continuation of a reportedly rich lead-zinc ore shoot mined from the Morning Star winze workings. Indications of this were found during the rehabilitation work in the Morning Star winze workings. It was possible too that this ore shoot might prove to be connected with the mineralization found on the Akron level. Investigation of the possible upward extension of this mineralization was a second objective of the work above the Akron level. Considerable difficulty was experienced in the unusually bad ground, but the raise was finally holed through to the Morning Star winze, effecting excellent ventilation for the entire mine, and an intermediate crosscut driven to intersect the potential ore-bearing shear zone on the hanging wall of the dike. No ore or mineralization was found at the point of intersection. However, the possible downward continuation of the Morning Star ore shoot would be some distance to the north on the indicated rake of the shoot. The next work planned under the DMEA project was to drift north from the end of the crosscut to this possible ore occurrence. There was ample footage remaining under the contract (462.5 feet) to accomplish this objective. However, the operator did not see fit to

continue the work after completing the raise and obtaining good ventilation. From an exploration standpoint nothing has been accomplished for more than $15,000.00 of Government money spent to carry on the second part of the exploration project, and neither objective has been reached. With good ventilation available, this could have been done very easily at a reasonable additional cost. Since suspension of the work in September 1953, the operator has received authorization for a recess to March 10, 1954 (Amendment No. 6) and was offered a further recess under proposed Amendment No. 7. Instead, the operator appears to be determined on termination of the contract without liability for Government royalty on future ore production.

Termination before drifting on the upper sublevel to prove or disprove the existence of an extension of the Morning Star ore shoot is not, in the opinion of the DMEA inspector, in the Government's interest and is not recommended.

In the event that, for other reasons, termination is considered advisable by the Field Team or the Washington office, Certification of Discovery or Development should certainly be made.

M. H. Salsbury
Mining Engineer

cc 8
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DMEA Chron.

MHS/pam

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

224 New Customhouse
Denver 2, Colorado

October 4, 1954

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 110 (Lead-Zinc), Amended Contract Idm-E2, Callahan Zinc-Lead Company, Inc., Akron and Morning Star Mines, Gunnison County, Colorado.

to Code 500

Enclosed for your information is the following material:

1. Form MF-104A, Operator's and Engineers' Reports, and progress maps for the month of August 1953.

2. Form MF-104A, Operator's and Engineers' Reports, and progress maps for the month of September 1953.

3. Letter dated September 29, 1954 from E. A. Salo, Treasurer, Callahan Zinc-Lead Company, Inc., with attachments of final reports, Form MF-104 and 2 Forms MF-104A, dated September 29, 1954.

The Form MF-104 reports for the months of August and September, 1953, have been deferred from processing by this office pending resolution of matters relative to resumption of work under the terms of the contract.

E. A. Salo, in his letter of September 29, 1954, implies that they intend to terminate the contract. However, there is the matter of liquidating the Government's interest in jointly-owned property acquired under the contract before the account can be closed. The interim audit report by the Contract Administration and Audit Division dated September 3, 1953, indicates allowable expenditures of $3,644.78 for pipe and $2,797.17 for track, which may be the only categories of jointly-owned property involved, as other material was charged to the project from the Company warehouse as it was used.

Records in the Finance Office, Region IV, indicate that the Government has contributed to the cost of the project to date an amount of $72,489.86, and there is an aggregate amount of Government participation of $1,735.75 held in deferment in conjunction with Forms MF-104 for the months of August and September, 1953.

To protect the Government's interest in the matter, we recommend that either one of two things be effected:

(a) That the operator be required, if possible, to complete the work authorized in the contract, or

(b) That the contract be terminated under the provisions of Article 5(b) of the contract form with the inclusion of recitation establishing the operator's obligation for the payment of the Government's percentage royalty, regardless of whether or not the project is certified as a discovery or development.

As the above involves DMEA policy, we are forwarding the matter to you for your consideration and appropriate action and/or advice to us as to how we should proceed in the matter.

W. H. King

W. H. King

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Surname
Swanwold
Selfridge
Joshua

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UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

OCT 4 1954

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

Re: Docket No. DMEA-110 (Lead-Zinc)
Akron and Morning Star Mines
Gunnison County, Colorado
Amended Contract No. IDM-E2

Dear Mr. King:

We call your attention to the attached copies of a letter received from the cited Operator, dated September 17. The Operator is completely in error in stating that the proposed Amendment No. 7 materially changes the intent of the original contract; however, it is not required to sign an amendment to which it objects.

You will note that this company apparently is determined to terminate this contract. Under the terms of the exploration project contract it may not take such unilateral action, hence, we must determine whether or not it is to the best interest of the Government to consent to such termination. Therefore, we request that you advise us, as soon as possible, the viewpoint of the Field Team in this matter, stating your reasons and giving us something in the nature of a brief summary of a final Field Team report. Obviously this is a question which should be settled in the very near future, yet is not a matter which we should pass upon without a field opinion.

Our present thoughts are about as follows:

First The project can be certified and should be certified, for the proper protection of the Government's interest. The Operator stated, in a letter dated March 19, 1952:

"Drifting north (on the Akron level) .... has exposed a 50 foot long mineralized zone. .... it averages about 3 feet in width and will average 5% zinc, 5% lead and 3½ ounces of silver."

R.C.S.

It is our understanding that such ore exposure may or may not be a continuation of the Morning Star ore zone of the old workings. While, at the moment, it could not be classified as a large or important discovery, nevertheless it could form a proper basis for certification and afford protection for the interest of the Government.

Second It would appear that there would be little point in demanding that the project be carried to termination, inasmuch as work done to date has shown little promise of exposing large and significant ore bodies. It further seems that such work has been sufficiently advanced so that the small amount of work still available under the contract is not likely to encounter anything of a major nature.

However, as above, we wish to take no action until hearing from you and having your ideas on the subject.

Sincerely yours,

George C. Selfridge
(by ESF)
Chairman, Operating Committee

Enclosures 2

APPROVED:

J. H. Hedges

Member, Bureau of Mines
Thor H. Kiilsgaard

Member, Geological Survey

WRGriswold/er 9/30/54

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Kiilsgaard, Rm 5227
Mr. Bishop
Chron.

File Copy
Surname

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

NSin RR

September 24, 1954

Memorandum

To: Administrator

From: Chief, Base Metals Division

Subject: Docket No. DMEA-110 (Lead-Zinc), Akron and Morning Star Mines, Gunnison County, Colorado, Amended Contract No. Idm-E2

Supplementing my September 22 memo to you on the cited contract, it is somewhat difficult to appraise the remaining target value. Essentially, the project consisted of exploring for the downward extensions of the previously mined Morning Star ore bodies. The Akron level (extended with DMEA assistance) is some 380 feet lower than the botton of the old Morning Star workings. While results were generally disappointing, yet a short ore section was encountered in the Akron level drifting. Such discovery was described by the Operator as follows:

> "Drifting north on the main level advanced 97 ft. and was discontinued. This advance in part was dong a mineralized zone. Marginal ore showed for a distance of 50 ft. with up to a 3-ft. width. Grades were sub-commercial with values about 10% combined lead and zinc."

Subsequently, about 330 feet of raise was driven from the Akron level, with the idea of exploring for downward ore projections by means of sublevels. One such sublevel was driven about 110 feet in length from a point near the top of the raise but nothing was found.

The raise still lacks something around 75 feet to connect with the bottom of an old winze sunk from the old workings. A diamond drill hole drilled from the top of the raise connected with the winze and drained it.

Without having good maps and comprehensive data pertaining to the ore occurrences of the old Morning Star mine, it is out of the question to make positive statements as to the remaining target potential. Certainly the work done to date has not given promising results, and I would be a little dubious as to future target possibilities of a major nature. It seems logical to believe the ore section encountered on the Akron level was the downward extension of the Morning Star ore body. We feel that it would have been more prudent for the Operator to have raised on this ore body, rather than driving blind raises and cross-cuts in barren country rock.

It is the recommendation of the Base Metals Division that the project be certified and terminated. Certainly the DMLA ore section was not of an impressive nature, but at least it warrants certification.

W. R. Griswold

W. R. Griswold

WRG:er 9/24/54

Copy to: Docket
Base Metals
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

September 22, 1954

Memorandum

To: Administrator

From: Chief, Base Metals Division

Subject: Docket No. DMEA-110 (Lead-Zinc), Akron and Moring Star Mines, Gunnison County, Colorado, Amended Contract No. Idm-E2

With reference to the attached letter dated September 17, from this Operator, they are, in effect, calling off the program of which $140,252.64 has been already spent. The total estimated sum was $171,988.04.

Their stated excuse is the flimsy one contained in their letter of May 4. Even under the original contract, if certification were made, they could not have sold the land and been absolved of all royalty responsibility.

The project to date has been unsuccessful and apparently prospects are not good for finding important ore bodies; at least it appears so from work which has been done to date.

I refer you to the Project Summary in the docket which was made by A. G. Keating on November 13, 1953.

In view of the poor results achieved to date under this project, it very well could be to the Government's best interest to let this Operator terminate, as he appears determined to do. On the other hand, since it is a company of at least a limited degree of responsibility, we cannot let them calmly decide to terminate the contract on their own accord without consideration on our part. Since policy is involved, the matter is referred to you.

W. R. Griswold

W. R. Griswold

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UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

September 22, 1954

Memorandum

To: Administrator

From: Chief, Base Metals Division

Subject: Docket No. DMEA-110 (Lead-Zinc), Akron and Moring Star Mines, Gunnison County, Colorado, Amended Contract No. Idm-E2

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W. R. Griswold

W. R. Griswold

WRG:er 9/22/54
Copy to: Docket
Base Metals
Chron.

CALLAHAN ZINC-LEAD COMPANY, INC.
100 PARK AVENUE
NEW YORK 17, N.Y.
OREGON 9-1300

OFFICE OF THE TREASURER

SEP 20 195

September 17, 1954

Mr. C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Docket No. DMEA-110 (Lead-Zinc)
Akron and Morning Star Mines
Gunnison County, Colorado
Amended Contract No. Idm-E2

Dear Mr. Mittendorf:

The officers of this Corporation have reviewed your letter of August 9th and other correspondence in connection with the above mentioned contract, and also have reviewed amendment no. 7 dated April 5, 1954 which you sent to us some time ago.

As this amendment materially changes the intent of the original exploration contract signed by this Company with the Defense Minerals Exploration Administration, we do not deem it in the best interests of this Corporation to sign said amendment.

We are, therefore, sending to your Denver office the final accounting report. We have also requested our manager in Colorado to prepare the final engineering report which will be filed in the near future.

Yours very truly,

CALLAHAN ZINC-LEAD COMPANY, INC.

E. A. Salo

E. A. Salo
Treasurer

EAS:aim

CALLAHAN ZINC-LEAD COMPANY, INC.
100 PARK AVENUE
NEW YORK 17, N.Y.
OREGON 9-1300

OFFICE OF THE TREASURER

August 11, 1954

Mr. C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Docket No. DMEA-110 (Lead-Zinc)
Akron and Morning Star Mines
Gunnison County, Colorado
Amended Contract No. Idm-E2

Dear Mr. Mittendorf:

I want to acknowledge receipt of your letter dated August 9th concerning the above mentioned contract.

As you know, our Akron property is shut down, and we only have two men on the payroll, our manager and watchman. Unfortunately, a few months ago our manager was in a serious automobile accident and has not been able to get around until the last few weeks. He still has a bad leg, and this accident has held up his study of the situation and getting additional information to us.

Also, due to vacations and out-of-town trips, all our officials will not be available to study this situation until after Labor Day. We have not forgotten the matter raised in your letter of June 1st, but circumstances beyond our control have prevented us from arriving at the proper plans for the Akron property. We will be writing to you concerning this subject shortly after Labor Day.

Yours very truly,

CALLAHAN ZINC-LEAD COMPANY, INC.

E. A. Salo

E. A. Salo
Treasurer

EAS:aim
CC: R. F. Mahoney

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

AUG 9 1954

Mr. E. A. Salo, Treasurer,
Callahan Zinc-Lead Company, Inc.,
100 Park Avenue
New York 17, New York.

Re: Docket No. DMEA-110 (Lead-Zinc)
Akron and Morning Star Mines
Gunnison County, Colorado
Amended Contract No. Idm-E2

Dear Mr. Salo:

We have had no reply to our letter to you of June 1 with respect to the proposed Amendment No. 7 of the subject contract nor have we been apprised concerning the intentions of your company regarding completion of the contract work.

We must point out that your company is in default of the contract for failing to resume work on March 10, 1954, in a manner to complete the project by September 24, 1954.

We must, therefore, request that you promptly advise us regarding the plans of your company, acceptable to the Government, pertaining to work under the contract. Otherwise, we shall be required to take appropriate action in the circumstances.

Sincerely yours,

C. O. Mittendorf

Administrator

WRGriswold:HCRubin:lm - 8-5-54

Copies to: Solicitor Docket
DMEA Docket
Op. Committee
W.R. Griswold (2)
Mr. Kinkel (G.S.)
H.C. Rubin
Adm. R. File
C. O. Mittendorf
Field Team, Reg. IV (2)
Mr. Bishop (B.M.)
J. L. Hofflund
Chron
Pending

R.G.S.

File Copy
Surname

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

INTERIOR DEPT.
JUL 29 1954
SOLICITOR

July 27, 1954

Memorandum

To: Acting Assistant Solicitor, DMEA

From: Chief, Base Metals Division

Subject: Docket No. DMEA-110 (Lead-Zinc), Callahan Zinc-Lead Company, Inc., Amended Contract No. Idm-72

We have prepared the attached rough draft of a letter to the cited operator. Will you kindly prepare it in final form.

This Operator resorted to a flimsy excuse for not signing Amendment No. 7 which contained a "pseudo-certification" provision. His stated reason for not signing cannot be accepted since a discovery of ore, with subsequent certification, would have, in any case, had the same effect as the clause to which he objects.

Since this Operator is a responsible company, and since the Government has some $70,000 in this project, we should take a firm position.

W. R. Griswold

W. R. Griswold

WRGriswold/bjl (7/28/54)

Copy to: Docket
Base Metals
Chron.

FILE COPY
SURNAME:

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

Brylin
Hoffland
Talbot

JUN - 1 1954

Mr. E. A. Salo
Treasurer, Callahan Zinc-
Lead Company, Inc.
100 Park Avenue
New York 17, New York

Re: Docket No. DMEA-110(Lead-Zinc)
Akron and Morning Star Mines
Gunnison County, Colorado
Amended Contract No. Idm-E2

Dear Mr. Salo:

This responds to your letter dated May 4 to the Executive Officer, Region IV, concerning paragraph 4c of a proposed Amendment No. 7 of the subject contract.

Your letter objects to the provisions in paragraph 4c on the basis that ". . . if, for example, Callahan were to sell the Akron property and the purchaser did not pay a royalty on all minerals mined or produced from the land described in the amended contract, you could hold Callahan Zinc-Lead Company liable."

We should like to point out in connection with the contract that under the provisions in Amendment No. 6 your company undertook to resume work by March 10, 1954, and to complete it by September 25, 1954. If your company did not resume work on March 10, 1954, it is in default of the contract.

At the request of your company we have proposed in Amendment No. 7 a further extension both of the time within which to resume work and the time within which to complete it. As a part of the consideration for these extensions we have provided in the amendment that the royalty provisions be further amended (paragraph 4c) so that in the event work is not resumed the Government will be entitled to royalty automatically and without the necessity for certification. Apparently, your company is not disturbed about this fact but rather is apprehensive of liability for payment of royalty even if the land is transferred to a third party.

R.C.G.

What we said in our letter dated May 21 concerning your Horse Creek Placer Project (Docket No. DMEA-2576) is also appropriate to this case with respect to this question, i.e., we relied upon the undertaking of your company to perform the work and to repay royalty and, based upon such reliance, we waived the requirement of an Owner's Consent to Lien. We feel, therefore, that our proposal in Amendment No. 7 is appropriate.

Sincerely yours,

C. O. Mittendorf

Administrator

HCRubin:lm - 5-27-54

Copies to: Docket
Adm. R. File
C. O. Mittendorf
Op. Committee
Field Team, Region IV (2)
W. R. Griswold (2)
Mr. Bishop (B.M.)
Mr. Kinkel (G.S.)
J.L. Hofflund
H. C. Rubin
Chron.
Pending

File Copy
Surname

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

N. S. in P.R.

May 13, 1954

Memorandum

To: Acting Assistant Solicitor, DMEA

From: Chief, Base Metals Division

Subject: Docket No. DMEA-11, Callahan Zinc-Lead Company, Contract No. Idm-E2

The attached letter from Mr. W. H. King, dated May 6, and copy of a letter from the Operator are self-explanatory. Government expenditures on this project to date (nothing since July 1953) are $72,489.86.

We feel that the point cited by the Operator is of little value — obviously, if they should sell the mine, the new owner should pay royalties on ores produced, or else the Callahan-Zinc-Lead Company should assume the responsibility. Certainly someone must be prepared to satisfy the Government's equity if ores are discovered and production made. The Operator fully understood this when he entered into the contract. Incidentally, so far no ore of significance has been found.

Will you kindly prepare a reply to this Operator, with copies to Region IV.

W. R. Griswold

W. R. Griswold

WRGriswold/bjl

Copy to: Docket
Base Metals
Chron.

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

224 New Customhouse
Denver 2, Colorado

May 6, 1954

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 110 (Lead-Zinc), Contract Idm-E2, Callahan Zinc-Lead Company, Akron and Morning Star Mines, Gunnison County, Colorado

Reference is made to a letter from the Chairman of the Operating Committee, dated April 5, 1954, forwarding the original and five copies of Amendment No. 7 to the subject contract.

The amendment was forwarded to the Callahan Zinc-Lead Company by our letter of April 12, 1954, relative to which we received a reply from E. A. Salo, Treasurer, stating that they do not feel that they can sign the amendment for reasons stated.

For your information and appropriate action in the matter we are enclosing the original and two copies of the letter dated May 4, 1954 from E. A. Salo, Treasurer, Callahan Zinc Lead Company, Inc. It is suggested that the matter be handled direct between the Washington office and the New York City office of Callahan Zinc-Lead Company. Otherwise, please advise us as to how we should proceed in the matter.

W. H. King

W. H. King

Enclosures

CALLAHAN ZINC-LEAD COMPANY, INC.
100 PARK AVENUE
NEW YORK 17, N.Y.
OREGON 9-1300

Mining Division
Date Rec'd.
MAY 6 - 1954
BUREAU OF MINES
Denver, Colorado

OFFICE OF THE TREASURER

May 4, 1954

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

Re: Docket DMEA 110 (Lead-Zinc)
Contract Idm-E2

Dear Mr. King:

I have been giving your letter of April 12th enclosing Amendment No. 7 to Contract Idm-E2 considerable study.

We do not feel that we should sign this Amendment because it is our interpretation that under Paragraph 4C Callahan Zinc-Lead Company would be liable for the repayment even if we did not have any interest in the land or production therefrom. As I understand Paragraph 4C (if, for example, Callahan were to sell the Akron property and the purchaser did not pay a royalty on all minerals mined or produced from the land described in the amended contract, you could hold Callahan Zinc-Lead Company liable.)

We, therefore, feel we cannot sign the Amendment. If this is not the intent of Paragraph 4C, then in my estimation, it should be reworded.

Very truly yours,

CALLAHAN ZINC-LEAD COMPANY, INC.

E. A. Salo

E. A. Salo
Treasurer

EAS:aim
CC: J. E. Dunn

FILE COPY
SURNAME

Griswold
Talbut
Selfridge
H Johnson

500

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

APR 5 1954

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

Re: Docket No. DMEA-110 (Lead-Zinc)
Callahan Zinc-Lead Company
Akron and Morning Star Mines
Gunnison County, Colorado
Amended Contract No. Idm-E2

Dear Mr. King:

Referring to your teletype of March 22 regarding the cited contract, we are enclosing the original and five copies of Amendment No. 7 which provide for the requested recess.

If the amendment meets with your approval kindly present it to the Operator for signature and distribute the copies in the usual manner. If not, and if any proposed changes should lie beyond the range of your delegated authority, please return all copies to this office with your recommendations.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (SHB)

Enclosures 6

WRGriswold/bjl (4/2/54)

APPROVED:

J. H. Hedges

Member, Bureau of Mines (SHB)

Philip W. Guild

Member, Geological Survey (SHB)

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Kinkel
Mr. Bishop
Chron.

Docket Copy
Surname
Griswold

500

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

N/S. in R. R.

March 24, 1954

Memorandum

To: Chief Counsel

From: Chief, Base Metals Division

Subject: Docket DMEA-110 (Lead-Zinc), Callahan Zinc-Lead Co., Akron and Morning Star Mines, Gunnison County, Colorado, Contract Idm-F2

Will you kindly prepare Amendment No. 7 to the cited contract, providing:

1. Additional recess period from March 10, 1954 to Sept. 10, 1954.

2. Extend project completion time from Sept. 25, 1954 to March 25, 1955

3. If work is not resumed by project on or before Sept. 25, 1954, the contract is thereby cancelled. Also, in case such an automatic termination takes effect, the Government reserves its right to make a certification.

W. R. Griswold

WRGriswold/bjl

Copy to: Docket
Base Metals
Chron.

FILE COPY
SURNAME:

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

Original
Withdrawn

WRGriswold/bjl, Rm. 4058, Ext. 3669

Base Metals Div., DMEA

14X3923.970 Working Fund,
Interior, DMEA

T E L E T Y P E

X XXXXXXXX XXXXXXXXXXXXXXXXXXXX
X XXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Date: March 23, 1954

To: L. M. King, Executive Officer, DMEA Field Team, Region IV, Denver, Colorado

Heurtt March 22, 1954, Docket DMEA-110, Callahan Zinc-Lead Company, Contract Idm-E2. We will prepare an amendment granting six-month extension of recess period and corresponding extension of time for completion of work.

George C. Selfridge
Chairman, Operating Committee (248)

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Accounts
Mr. Bishop
Mr. Kinkel
Chron.

SENT
MAR 23 1954
Clerical Service Section

R.C.K. 3-23-54

C. O. Mittendorf
3-22-54
12:00 noon

Defense Minerals
MAR 22 1954

DN 235 BUREAU MINES 3-22-54 9-57 AM

C O MITTENDORF

REFERENCE DOCKET 110, DXX CONTRACT IDM"-E2, CALLAHAN ZINC-LEAD COMPANY, INC. OPERATOR REQUESTS A SIX MONTH EXTENSION OF RECESS PERIOD

CERTIFICATION AS A RESULT OF WORK TO DATE NOT POSSIBLE, BUT BELIEVED POSSIBLE IF WORK IS COMPLETED. PLEASE TELETYPE ADVICE IN THE MATTER.

JOHN F. SHAW FOR W. H. KING

MAR 22 12 22 PM '54

BUREAU OF MINES
MAIL ROOM
WASHINGTON D.C.

MAR 22 12 22 PM '54

BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

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

224 New Customhouse
Denver 2, Colorado

March 16, 1954.

Mr. E. A. Salo, Secretary-Treasurer
Callahan Zinc-Lead Company, Inc.
100 Park Avenue
New York 17, N. Y.

Re: Docket No. DMEA-110
Contract No. Idm-E2

Dear Mr. Salo:

Your attention is directed to the provisions of Amendment No. 6 to Contract Idm-E2, Item 3, which provides for recess of operations from September 10, 1953 to March 10, 1954.

Inasmuch as the recess period has expired, we will appreciate advice relative to your plans for resumption of operations.

Very truly yours,

W H King

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

JWT:cwm

cc: Contract
Chairman of the Oper. Comm.
WMTraver
AHKoschmann
Chron.
JWTownsend

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

224 New Customhouse
Denver 2, Colorado

December 10, 1953

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 110 (Lead-Zinc), Contract Idm-E2, Callahan Zinc-Lead Company, Akron and Morning Star Mines, Gunnison County, Colorado

Enclosed are the Government, Division, and Docket copies of Amendment No. 6 to Contract Idm-E2 which was prepared in Washington and executed by you for the Government to amend article 6 of the contract by inclusion of Annex II, authorize a recess of operations to March 10, 1954, and extend the completion date of the contract to September 25, 1954.

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

cc
12-14

500

FILE COPY
SURNAME:

Keating
Graber
Martin
F. Johnson

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

NOV 25 1953

Mr. [illegible] King
Executive Officer
DMA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMA 110 (Lead-Zinc)
Callahan Zinc-Lead Company
Akron and Morning Star Mines
Gunnison County, Colorado
Contract No. Adm-82

Dear Mr. King:

Pursuant to our teletype to you November 20, 1953, regarding a recess of work and extension of time for completion of the work for the subject project, Amendment No. 6 signed by the Administrator is enclosed. This amends the amended contract.

If the amendment meets with your approval and that of the Operator please obtain the required signatures and distribute the copies in the usual manner.

Sincerely yours,

W. S. Martin (JHB)
ACTING Chairman, Operating Committee

Enclosures 6
APPROVED:

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

D. M. Larrabee (JHB)
Member, Geological Survey

AGKeating/hmj
(11-23-53)
CC to: Docket
Adm. R. File
Op. Committee
Mr. Kinkel
Mr. Bishop
Base Metals Division
Chron.

11-25-53

FILE COPY
SURNAME: 9B

Keating

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

N.S. in R.R.

November 23, 1953

Memorandum

To: The Administrator

From: Chief, Base Metals Division

Subject: Request for recess Docket No. 110 Callahan Zinc-Lead Company, Akron & Morningstar Mines, Colorado, Contract Idm-52.

Attached is a copy of a teletype to the Field Team which has been prepared in answer to a teletype from them regarding a request by the operator for a recess of work.

Also attached is a Project Summary which shows that if the necessary extension of time for completion of the work is provided it will run past the two-year period allowed by contract form.

The Field Team and Base Metals Division recommend favorable consideration of the request, and because of the limitations of the two-year period your signature is required if the request is to be approved.

W. R. Griswold

W. R. Griswold

Attachments

AGKeating/hmj
CC to: Docket
Operating Committee
Base Metals Div.
Chron.

FILE COPY
SURNAME:

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

AEKane
Chron
Keating
Griswold
Selfridge
Hutchinson

NOV 20 1953

AEKane/emd
4627

2919

14X3923.970--Working Fund, DMEA

W. H. King, DMEA Executive Officer, DMEA Field Team, Region IV, Bureau of Mines, Denver, Colorado

REURTEL dated November 18, Docket DMEA-110, Callahan Zinc-Lead Company, Inc., Contract Idm-E2, amendment granting recess to March 10, 1954, and extending performance time to September 25, 1954, being forwarded for Operator's signature.

George C. Selfridge

G. C. Selfridge, Chairman
Operating Committee
Defense Minerals Exploration
Administration

AEKane/emd
11/20/53

Copy to: Docket
Confirmation
Mr. Thayer
Mr. Hedges
Adm. Reading File
Operating Committee
Audits Div, B.M.
J. L. Hofflund
W. R. Griswold
A. E. Kane
chron.
pending

SENT
NOV 20 1953
Clerical Service Section

R.C.G.
11-20-53

Mr. C.O. Mittendorf
Nov. 18, 1953
4:01 P.M.
MS

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 19 1953

BUR MINES DN 235 11-18-53 1-58 PM

C O MITTENDORF

REFERENCE DOCKET DMEA-110, CONTRACT IDM-E2, CALLAHAN ZINC-LEAD COMPANY, INC. OPERATOR REQUESTS AUTHORIZATION OF SIX MONTHS, RECESS PERIOD EFFECTIVE ON OR ABOUT SEPTEMBER 10,1953 . OPERATOR,S MF-104 REPORTS FOR MONTSXXXX MONTHS OF AUGUST AND SEPTEMBER 1953 HAVE NOT BEEN PROCESSED FOR REIMBURSEMENT TO OPERATOR. PLEASE TELETYPE AUTHORIZATION FOR US TO PREPARE NECESSARY AMENDEXXXX AMENDMENT.

J W TOWNSEND FOR W H KING

Denver, Colo.

NOV 19 8 13 AM '53
BUREAU OF MINES
MAIL ROOM
WASHINGTON D C.

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

Department of the Interior
Defense Minerals Administration
RECEIVED
NOV - 6 1953

224 New Customhouse
Denver 2, Colorado

November 2, 1953

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA 110, Contract Idm-E2, Akron Mine, Callahan Zinc-Lead Company, Inc.

Enclosed for your information are copies of the following correspondence:

(1) Letter dated September 24, 1953 to Mr. J. E. Dunn, Superintendent, Callahan Zinc-Lead Company, White Pine, Colorado.

(2) Letter dated October 8, 1953 from J. E. Dunn in reply to our letter of September 24, wherein he advises that our inquiry had been referred to their New York office.

(3) Letter dated October 28, 1953, from E. A. Salo, Treasurer, in reply to our letter of September 24, 1953.

(4) Copy of our letter to Mr. Salo advising him that willful suspension of operations is a breach of contract.

W. H. King

W. H. King

Enclosures

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

224 New Customhouse
Denver 2, Colorado

October 30, 1953

Mr. E. A. Salo, Treasurer
Callahan Zinc-Lead Company, Inc.
100 Park Avenue
New York 17, New York

Re: Docket No. DMEA 110
Contract Idm-E2
Akron Mines

Dear Mr. Salo:

Receipt is acknowledged of your letter of October 28, 1953 in reply to our letter to Mr. J. E. Dunn of September 24, 1953, relative to suspension of work under Contract Idm-E2.

Willful suspension of operations under the contract without an amendment authorizing such is a default of the contract.

Therefore, you should request an amendment to the contract, stating the date operations were recessed, and the date on or before which operations will be resumed.

Very truly yours,

W. H. King
Executive Officer
DMEA Field Team
Region IV

JWT:es
cc:
Contract
Chron
Mittendorf w/enc.
Traver
Townsend
Koschmann (2)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 1953

CALLAHAN ZINC LEAD COMPANY, INC.
100 Park Avenue
New York 17, New York

October 28, 1953

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

Re: Contract Idm-E2
DMEA Docket 110
Akron Mine

Dear Mr. King:

I must apologize for not answering earlier your letter of September 24th to Mr. Dunn. Mr. Dunn sent your letter on to us and it apparently became lost in my mail while I was away from the office for two weeks.

In answer to the question contained in your letter, work under contract Idm-E2 was suspended early in September.

Yours very truly,

CALLAHAN ZINC-LEAD COMPANY, Inc.

(signed) E. A. Salo

Treasurer

C
O
P
Y

Defense Minerals Administration
RECEIVED
NOV 10 1953

CALLAHAN ZINC-LEAD COMPANY, INC.
AKRON MINE
WHITEPINE, COLORADO

October 8, 1953

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

Dear Mr. King:

Your letter of September 24, regarding Idm-E2 has been referred to our New York Office.

Their reply, with a decision, regarding E-2 will undoubtedly reach you in a short time.

Very truly yours,

CALLAHAN ZINC-LEAD COMPANY

BY: /s/ J. E. Dunn

J. E. Dunn
Superintendent

Defense Minerals Administration
RECEIVED
OCT 3 1953

224 New Customhouse
Denver 2, Colorado

September 24, 1953

Mr. J. E. Dunn, Superintendent
Callahan Zinc-Lead Company
White Pine, Colorado

Re: Contract Idm-E2
DMEA Docket 110
(Akron Mine)

Dear Mr. Dunn:

When the Akron Mine was visited on August 31, 1953 by M. H. Salsbury, you expressed some doubt as to the company's willingness to continue exploration under Contract Idm-E2.

Please advise us immediately when and if work under this contract is suspended.

Very truly yours,

(signed) W. H. King

Executive Officer
DMEA Field Team,
Region IV

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

224, New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV - 3 1953

October 30, 1953

Mr. E. A. Salo, Treasurer
Callahan Zinc-Lead Company, Inc.
100 Park Avenue
New York 17, New York

Re: Docket No. DMEA 110
Contract Idm-E2
Akron Mine

Dear Mr. Salo:

Receipt is acknowledged of your letter of October 28, 1953 in reply to our letter to Mr. J. E. Dunn of September 24, 1953, relative to suspension of work under Contract Idm-E2.

Willful suspension of operations under the contract without an amendment authorizing such is a default of the contract.

Therefore, you should request an amendment to the contract, stating the date operations were recessed, and the date on or before which operations will be resumed.

Very truly yours,

W. H. KING

W. H. King
Executive Officer
DMEA Field Team
Region IV

JWT:es
cc:
Contract
Chron
Mittendorf w/enc.
Traver
Townsend
Koschmann (2)

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

224 New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 30 1953

July 16, 1953

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Amendment No. 5 to Contract I-DMA-E2, Docket DMA-110, Callahan Zinc-Lead Company (Lead-Zinc) Gunnison County, Colorado

Enclosed are the original and two copies of Amendment No. 5 to the subject contract which have been processed by this office to modify the extent of work under items 4 and 5 of Exhibit "A" attached to Exploration Project Contract Form MF-200(A). Also enclosed are three sets of data in support of this amendment.

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

RECEIVED
JUL 31 1953
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

Coe
7-20

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

Defense Minerals Administration
RECEIVED
JUL 20 1953

224 New Customhouse
Denver 2, Colorado

July 15, 1953

Memorandum

To: C.O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Amendment No. 4 to Contract Idm-E2, Docket DMEA-110, Callahan Zinc-Lead Company, Gunnison County, Colorado (Lead-Zinc)

Enclosed are the original and two copies of Amendment No. 4 to Contract Idm-E2 which has been executed by the operator. 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

FILE COPY
SURNAME:

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

Finished
Filed
Statistics

N.O. in R. & R.

DMEA

WRGriswold/bjl
3669 4058

June 25, 1953

. . King, Executive Officer, DMEA Field Team, Region IV, Denver, Colorado

Dmrtt June 24, 1953, Docket No. DMEA-110, Contract Idm-12, Callahan Zinc-Lead Company. Amendment No. 4 mailed to you June 22.

Chairman, Operating Committee

Copy to:

Docket
Admr. R. File
Op. Committee
Base Metals (DMEA)
Mr. Bishop (USBM)
Mr. Kinkel (USGS)
Accounts
Chron.

SENT
JUN 25 1953
Clerical Service Section

Mr. C. O. Mittendorf
6-24-53
12:23 P.M.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 24 1953

DN 235 BUREAU MINES 6-24-53 8-45 AM

C O MITTENDORF

REFERENCE DOCKET 110, CONTRACT IDM-E1XXXX IDM-E2, CALLAHAN ZINC-LEAD COMPANY, OUR MEMORANDUM OF MAY 21,1953. PLEASE TELETYPE ADVICE RELATIVE TO STATUS OF REQUESTED AMENDMENT.

W H KING

Denver, Colo.

JUN 24 1 22 PM '53

BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

500

FILE COPY
SURNAME:

Keating
Burwell
Chapman
Selfridge
Johnson

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

JUN 22 1953

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

Re: Docket No. DMEA-110 (Lead-Zinc)
Callahan Zinc-Lead Company
Akron Mine
Gunnison County, Colorado
Amended Contract No. Idm-E2

Dear Mr. King:

Enclosed are the original and five copies of Amendment No. 4 to the cited amended contract, to provide for additional raising, which have been signed by the Administrator.

If the Amendment meets with your approval and that of the Operator, please obtain the proper signatures and distribute in the usual manner.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Enclosures 6

APPROVED:

J. H. Hedges

Member, Bureau of Mines

A. R. Kinkel, Jr.

Member, Geological Survey

AGKeating/hmj
(6/16/53)
CC to: Docket
Adm. R. File
Op. Committee
Base Metals Division
Mr. Kinkel
Mr. Bishop
Chron.

FILE COPY
SURNAME: 500

Keating
Griswold

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

June 16, 1953

Memorandum

To: The Administrator

From: Chief, Base Metals Division

Subject: Amendment No. 4 to Amended Contract Docket No. DMA-110 (Lead-Zinc) Callahan Zinc-Lead Company, Akron Mine, Gunnison County, Colorado Contract No. Idm-E2.

Attached are the original and five copies of amendment No. 4 to the subject amended contract, which is to be signed by you.

The amendment has been prepared in response to Mr. King's memorandum to you dated May 21, 1953, relative to a request by the Operator for additional raising.

The Operator asks that the 239 feet of raise, as provided in the amended contract at a cost of $12,667.00, be increased 50 feet to a total of 289 feet at a cost of $15,317.00. The cost of this additional work will not increase the total estimated cost of the project but is to be provided for by reducing the terms of the amended contract from 745 feet of drifting and crosscutting costing $37,250.00 to 692 feet costing $34,600.00.

The Base Metals Division approves favorable consideration of the requested amendment.

W. R. Griswold

W. R. Griswold

Attachment

AGKeating/hmj
(6/16/53)
CC to: Docket
Op. Committee
Base Metals
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
June 12, 1953

Memorandum

To: Executive Officer, Field Team, Region IV

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

Subject: DMEA 110, Contract Idm-E2 (Lead-zinc), Callahan Zinc-Lead Company (Akron mine), Gunnison County, Colorado - Request for amendment

Please find enclosed the original and five copies of M. H. Salsbury's memorandum covering the subject request for amendment.

Salsbury recommends approval of the amendment request, subject to agreement by the Geological Survey. I understand you have or will receive their memorandum, and the recommendation therefore has my approval. Salsbury also suggests wording of the amendment for your consideration.

The copy of the operator's request is returned herewith.

W. M. Traver

W. M. Traver

enclosures

WMT/pam

cc 3
E2
DMEA Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
June 12, 1953

Memorandum

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

From: M. H. Salsbury

Subject: DMEA 110, Contract Idm-E2, Callahan Zinc-Lead Company, Gunnison County, Colorado - Request for amendment

The changes in exploration work requested by the contractor were discussed with J. E. Dunn, General Superintendent of the Whitepine unit, at the time of the last inspection, February 17, 1953.

The request is the result of more mature consideration of the possible position of the Morning Star ore body below the old workings.

While the Morning Star winze workings have never been seen by the Bureau engineer, Dunn's reasons for the changes are entirely logical, and it would be good mining practice to attempt to locate the ore shoot extension at a level somewhat closer to the last point it was worked.

From an engineering standpoint, the proposed amendment is recommended for approval. However, this decision may be subject to geological considerations.

A change in the wording of Dunn's description is recommended to take care of other changes which might arise later and cause delay while approval is sought.

The exploration under the contractor's "clauses 4 and 5," totaling 553 feet, should be described in the amendment so that it can be done either on the proposed upper sublevel or the 200-foot sublevel.

With the limited information at hand it is not possible to state that 203 feet of work on the upper sublevel would reach the objective.

Also, if the ore body is not located on the upper sublevel, it would hardly be worth while to look for it on the 200-foot sublevel, and the only work which would remain on that sublevel would be to explore for the possible upward extension of the mineralization discovered in the Government-assisted work on the Akron level.

Also, after the upper raise is connected through to the old Morning Star winze workings, some additional information might be obtained which would alter exploration plans. As an illustration, it might be better to locate the upper sublevel at an elevation as much as 150 feet on the dip below the lowest Morning Star winze level.

Suggested wording for the proposed amendment is as follows:

"Drift and crosscut 553 feet on an upper sublevel and on the 200-foot sublevel, work to be done in that order, for the purpose of locating the downward extension of the Morning Star ore shoot--the proportion of work on each level and the location of the upper sublevel to be determined after the upper raise is connected through to the Morning Star winze. Any unexpended footage remaining after the above work is completed to be used to explore on the

200-foot sublevel, or on the Akron level, the mineralization discovered during Government-assisted work on the Akron level. All stages of the work are subject to approval by a representative of the Region IV Field Team."

The proposed amendment would eliminate the exploration under item 5, stage II of the contract, unless approval is given for some drifting after other work is completed.

The mineralization cut on the Akron level does not show any sign of getting stronger going north, and it may not even be the downward extension of the Morning Star ore shoot. The Bureau engineer agrees that it is of secondary importance to be given further consideration if there is unexpended footage from the other work.

The additional 50 feet of raising, requested by the contractor on January 17, 1953, for which approval has already been recommended, was allowed for and was deducted in setting the total of drifting and crosscutting called for by the new proposed amendment. The total amount of the original contract and annex I is not exceeded.

Approval of the requested amendment is recommended, subject to any necessary geological considerations. A broader wording of the amendment, as suggested, is recommended if it does not conflict with DMEA regulations.

Floyd W. Everett
for
M. H. Salsbury
Mining Engineer

MHS/pam

cc 5, E2, DMEA Chron.

June 8, 1953

G.K.K.

Memorandum

To: Mr. A. H. Koschmann

From: E. N. Harshman, Geologist, U. S. Geological Survey

Subject: Request for amendment to Contract Idm-E2, DMEA Docket 110, Callahan Zinc-Lead Company, Gunnison County, Colorado.

In a letter dated May 25, 1953, from J. E. Dunn, General Superintendent of Callahan Zinc-Lead Company to the Executive Officer, Region IV Field Team, two amendments were requested as follows:

Docket No. DMEA 110X, Exhibit "A", Stage II:

Change clause 4 to read as follows: Drift and crosscut up to 350 feet on the 200-foot sublevel to explore for the extension of the Morning Star ore body down the dip of the structure.

Change clause 5 to read as follows: Drift and crosscut up to 203 feet to locate the Morning Star ore body at an elevation approximately 100 feet down the dip from the lower Morning Star winze level.

From the geological viewpoint both amendments appear justified and in accordance with good exploration procedure. Exploration on the main (adit) level of the Akron mine has been disappointing in that the downward extensions of the Morning Star ore bodies were not found. Since significant mineralization was not found by the lower level exploration accomplished to date, it appears reasonable to explore first in the area immediately below the known ore. Data obtained by this exploration can be used to plot the downward projection of the ore shoots and to guide exploration at greater depths.

Although Mr. Dunn has requested a specific number of feet of work to be done on each of two levels, it appears more reasonable to allow a total of 553 feet of drift and crosscut to be applied to exploration on 2 levels from the raise, the exact amount on each level and the exact position of the levels to be determined after the completion of the raise and as exploration on the levels progresses.

Approval of the amendments requested by the Callahan Zinc-Lead Company is recommended with a slight re-wording as suggested above.

FILE COPY
SURNAME: 500

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

BP

June 10, 1953

Memorandum

To: Chief Counsel N. S. in R. v R.

From: Base Metals Division

Subject: Docket No DMEA-110, Callahan Zinc-Lead Company
Akron Mine, Contract No. Idm-E2

Attached is a letter to the Field which has been signed by the Operating Committee. This letter suggested that the required amendment be prepared and executed in the Field.

Later it was decided that the amendment should be prepared in Washington since the Field had so requested it.

A. G. Keating

Attachment

AGKeating/hmj
(6/10/53
CC to: Docket
Base Metals
Chron.

FILE COPY 500
SURNAME:

Keating

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

June 10, 1953

Memorandum

M. S. in R. v R.

To: Chief Counsel

From: Docket No. DMEA-110, Callahan Zinc-Lead Company
Akron Mine, Contract No. Idm-E2

Attached is a letter to the field which has been signed by the Operating Committee. This letter suggested that the required amendment be prepared and executed in the field.

Later it was decided that the amendment should be prepared in Washington since the field had so requested it.

The Operator's request for amendment is as follows:

Exhibit A of the Amended Contract August 12, 1952, provides, under the heading "Description of the Work" Stage II,

Paragraph (3). Raise 180 feet to connect to lower working level of the Morning Star Winze from the crosscut specified in Item 2.

Under the heading "Estimated Cost of Additional Work

Stage II

239 feet of raising @ $53.00 $ 12,667.00

The Operator's request that Paragraph 3, Raising 190 feet be increased by 50 feet @ $53.00 per foot = $2,650.00, and that this amount of increase cost for raising be deducted from Paragraph 2, 120 feet of crosscut, Paragraph 4, Drift and crosscut 400 feet and Paragraph 5, drift 225 feet.

Under the heading "Estimated Cost of Additional Work"

Stage II

745 feet of drifts and crosscuts @ $50.00 per foot $37,250.00

AGKeating/hmj
(6/10/53
CC to: Docket
Base Metals
Chron.

A. G. Keating

Docket copy

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

224 New Customhouse
Denver 2, Colorado

June 1, 1953

RECEIVED
JUN 12 1953
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

Memorandum

To: C.O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Amendment No. 2 and Amendment No. 3 to Contract Idm-E2, Docket DMA 110, Callahan Zinc-Lead Company, Inc.

Enclosed are the original and two copies of Amendment No. 2 and the original and two copies of Amendment No. 3 to Contract Idm-E2. Copies of these amendments have been given to the operator, the Fiscal Officer, Region IV, and a copy has been retained for our files.

SIGNED BY MITTENDORF

W.H. King
W.H. King

Enclosures

coe
6/4

May 25, 1953

Mining Division
Date Rec'd.
MAY 28 1953
BUREAU OF MINES
Denver, Colorado

Mr. W. H. King, Executive Officer
Field Team, Region IV
224 New Custom House
Denver, Colorado

Re: DMEA Docket 110
Contract Idm-82

Dear Mr. King:

Please consider this a request for amendment to Contract Idm-82 as follows:

Docket No. DMEA 110 R, Exhibit "A", Stage II

Change Clause 4 to read as follows:

Drift and Crosscut up to 350 ft. on the 200 ft. sublevel to explore for the extension of the Morning Star ore body down the dip of the structure.

Change Clause 5 to read as follows:

Drift and crosscut up to 205 ft. to locate the Morning Star ore body at an elevation approximately 100 ft. down the dip from the lower Morning Star Winze level.

Sequence of work would be to do the drifting at the higher elevation immediately after completing the raise, with work on the 200 ft. level started after locating ore above.

The necessity of these changes is due to the following: Study of the geology on the Morning Star area indicates that the ore body had a relatively short strike length, that the ore body was located on the hanging wall of the porphyry dike in a narrow band of limestone along the major granite contact, and rake of the ore down the dip has been to the north from the Morning Star tunnel to the surface. Mapping in old workings and interpretations of this work indicate the possibility of an abrupt change in rake at or near the elevation of the Morning Star tunnel level. Mineralization located to date on the main level has been on the footwall of the dike. It is doubtful if this mineralization is directly associated with the Morning Star ore bodies, although, of course, the source of mineralization was probably the same. We believe that we should first locate the ore body at some point closer to where the last mining was done before expenditure of any further funds on main level exploration. The relatively short strike length of the Morning Star ore body and the lack of information about its rake might result in a great deal of dead work being done on the main level before locating the ore body.

I am enclosing a map that will assist in clarifying the proposal.

Very truly yours,

CALLAHAN ZINC-LEAD COMPANY

J. E. Dunn
General Superintendent

JED:rjf

Enc.

COPY

LARGE FORMAT DOCUMENTS AT END OF FILE

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

224 New Customhouse
Denver 2, Colorado

May 21, 1953

Memorandum

To: C. O. Mittendorf, Administrator, Defense Minerals Exploration Administration

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 110 (Lead-Zinc), Contract Idm-E2, Callahan Zinc-Lead Company, Gunnison County, Colorado

Enclosed are three sets of data consisting of the following matter pertaining to an amendment to the subject contract to increase the footage and funds authorized for raising by decreasing the units and funds authorized for drifting:

1. Letter from the Operator dated January 17, 1953, requesting the amendment.

2. Memorandum report dated February 4, 1953, from C. M. Harrer of the Bureau of Mines recommending that the operator's request be approved.

3. Memorandum dated February 4, 1953, from the Chief, Mineral Resources Branch, Bureau of Mines, transmitting Harrer's report and indicating his concurrence of Harrer's recommendations.

4. Letter dated May 13, 1953, from this office to the operator inquiring as to the operator's current desires in the matter of his request of January 17, 1953.

5. Letter from the operator dated May 15, 1953, in reply to our letter of May 13, wherein he confirms his earlier request and reiterates the necessity for the change.

Work under the subject was recessed February 7, 1953, and resumed May 11, 1953. Amendment No. 3 is in process to correct date of recess period in Amendment No. 2.

The matter is forwarded for your consideration and preparation of Amendment No. 4 to authorize the changes in conformance with Harrer's recommendations, inasmuch as allowable maximums are involved.

The amendment should contain recitation to the effect that if the distance is less than estimated for a connection to the Morning Star shaft, that the unexpended portion of fund allocated to the raising will automatically revert back to the drifting fund on completion of the raise.

W. H. King

W. H. King

Enclosures

FILE COPY
SURNAME:

500

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

Keating

May 18, 1953

Memorandum for the Files

Subject: Docket No. DMEA-110, Callahan Zinc-Lead Company, Akron Mine, Gunnison County, Colorado, Contract No. Idm-E2

In a telephone conversation with Mr. King an attempt was made to clarify the meaning of a teletype to this office from King dated May 13, 1953, in which he called attention to corrections he believed should be made in an amendment for a recession and extension of time prepared and executed in the Washington office and which had been forwarded to the Field.

Inasmuch as the amendment was drawn in exact conformity with a memorandum dated March 30, 1953 from King, the meaning of his teletype was complete confusing. This was clarified with the result that the amendment remains as it is drawn and King can allow a shorter time of recession period if that is desired.

/s/
A. G. Keating

AGKeating/bjl

Copy to: Docket
Admr. R. File
Op. Committee
Chron.

CALLAHAN ZINC-LEAD COMPANY, INC.
AKRON MINE
WHITEPINE, COLORADO

Mining Division
Date Rec'd.
MAY 18 1953
BUREAU OF MINES
Denver, Colorado

May 15, 1953

Mr. W. H. King, Executive Officer
Field Team, Region IV
224 New Custom House
Denver 2, Colorado

Re: DMEA Docket 110
Contract Idm-E2

Dear Mr. King:

With reference to your letter of May 13th, we wish to advise that we are starting to advance the raise heading under contract Idm-E2.

Please proceed with our request for amendment dated January 17, 1953. The additional 50 feet of raise is required to complete a connection to Morning Star Workings. It is a step that must be completed before any of the approved drift work can be undertaken.

Very truly yours,

CALLAHAN ZINC-LEAD COMPANY

BY: J. E. Dunn

J. E. Dunn
General Superintendent

224 New Customhouse
Denver 2, Colorado

May 13, 1953.

Mr. J. E. Dunn, General Superintendent
Callahan Zinc-Lead Company
Whitepine, Colorado

Dear Mr. Dunn:

Reference is made to your letter dated January 17, 1953, wherein you request that Contract Idm-E2 be amended to authorize an additional 50 feet of raising and that funds for the work be taken from the funds allocated to drifting.

Recommendations relative to your request were received from the field about the time you recessed operations under the contract, therefore the matter has been held in deferment pending when or if operations were resumed. The matter of deferment was discussed with you at the time of your visit to Denver to attend the Mining Convention, and it was our understanding that you would further advise this office when plans had been formulated relative to resumption of operations.

Please advise this office, with the original and five copies of your letter, as to your desires at this time in the matter of your request of January 17, 1953.

The field engineers have recommended that an amendment be prepared to authorize the changes you have requested, therefore if you desire no other changes the matter can be forwarded to Washington for their consideration upon receipt of your confirming letter of a current date.

Very truly yours,

W. H. KING

W. H. King
Executive Officer
IMEA Field Team, Region IV

JWT:cwm

cc: Contract
Chron.
WMTraver
AHKoschmann (2)
JWTownsend (6)

Mr. C. O. Mittendorf
5/13/53
Rec'd 5:28 P.M.
BL

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 14 1953

DN 235 BUREAU MINES 5-13-53 3-28 PM

C O MITTENDORF

REFERENCE AMENDMENT NO. 2 TO CONTRACT IDM-E1XXXX IDM-E2, DOCKET NUMBER DMEA 110 WHICH WAS PREPARED IN WASHINGTON OFFICE AND SIGNED BYPXXX BY ADMINISTRATOR. THE DATE MARCH 25,1953 IN INTRODUCTORY PARAGRAPH SHOULD BE CHANGED TO FEBRUARY 7,1953. PARAGRAPH /2/ SHOULD READ "DURING THE PERIOD FEBRUARY 7,1953, TO MAY 11,1953.....". PLEASE TELETYPE PERMISSION TO REWRITE THIS AMENDMENT FOR SIGNATURE OF EXECUTIVE OFFICER OR PREPARE AND FORWARD REVISED AMENDMENT.

W H KING

Denver, Colo.

MAY 14 8 27 AM '53
BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

FILE COPY
SURNAME:

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

Keating
Selfridge

N.S. in R.R.

DMEA

ACKeating/bjl
3669 2616

May 8, 1953

. H. King, Executive Officer, DMEA Field Team, Region IV, Denver, Colorado

Reurtt Docket No. DMEA-110, Callahan Zinc-Lead Company, Akron Mine, Colorado, Contract No. Idm-F2. We approve recession of work from March 25, 1953 to July 25, 1953, and an extension of time for completion of project from May 25, 1953 to May 25, 1954, which extension is approved by the Administrator. We approve of your preparation and execution of the necessary documents.

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Bishop
Mr. Kinkel
Accounts
Chron.

G. C. Selfridge, Chairman
Operating Committee, DMEA

SENT
MAY 8 1953
Clerical Service Section

Mr. C. O. Mittendorf
5/6/53
3:10 P.M.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 7 1953

DN 235 BUREAU MINES 5-5-53 11-11 AM

C O MITTENDORF

CONTRACT NUMEXXXX NUMBER IDM-E2, DOCKET NUMBER DMEA 110, CALLAHAN ZINC-LEAD COMPANY SUSPENDED OPERATIONS ON MARCH 25,1953 . . JAMES DUNN, SUPERINTENDENT TELEPHONED TODAY AND REQUESTED PERMISSION TO RESUME OPERATIONS ON ONE SHIFT BASIS. HAVE STARTED REHABILITATION. WILL REQUIRE TWO TO THREE WEEKS BEFORE ACTUAL RAISING CAN COMMENCE. OPERATOR ALSO REQUESTS EXTENSION OF LIFE OF CONTRACT FOR ONE YEAR. WE APPROVE THESE REQUESTS. PLEASE TELETYPE YOUR APPROVAL. E. A. SALO, SECRETARY OF COMPANY WILL BE IN WASHINGTON MAY 6,1953 AND MAY CALL ON YOU.

W H KING

Denver Colo.

MAY 7 8 29 AM '53
BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

FILE COPY
SURNAME:

500

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

Keating
Kinkel
Talbert
Selfridge
Hyamson

MAY 5 1953

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

Re: Docket No. DMA-110 (Lead-Zinc)
Callahan Zinc-Lead Company
Akron Mine
Gunnison, Colorado
Contract No. Idm-M2

Dear Mr. King:

Pursuant to your recommendation of March 19, 1953, you will find enclosed an original and five copies of Amendment No. 2 to the above-cited contract, which have been signed by the Administrator.

If the amendment is satisfactory, will you please obtain the signature of the Operator and distribute in the usual manner.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

AGKeating/bjl (written 4/30/53*

Enclosures 6

APPROVED:

J. H. Hedges
Member, Bureau of Mines

A. R. Kinkel, Jr.
Member, Geological Survey

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Bishop
Mr. Kinkel
Chron.

5-5-53

FILE COPY
SURNAME:

500

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

Keating
Wrained
Talbiff

April 30, 1953

Memorandum

To: Administrator

From: Chief, Base Metals Division

Subject: Docket No. DMA-110, Callahan Zinc-Lead Company (Lead-Zinc), Akron Mine, Gunnison County, Colorado, Contract No. Idm-F2 (amended)

On February 3, 1953, Mr. Joseph C. Hall, President of the subject company, called at this office and informed us that the work was costing them a great deal more than the unit cost as allowed in the contract, and that he had wired their office to shut down. You later spoke to him by telephone.

The property has extremely bad and difficult ground, but the project is considered favorably by the examining engineers and commodity members. Expenditures under the contract through December 1952 totaled $127,010.22, with the total estimated cost of the amended contract being $171,980.03. The work has not reached the target, a considerable sum has been expended and the project is considered favorably by the examining engineers and commodity members. The Base Metals Division recommends that favorable consideration be given to the request for an amendment to defer the work from March 25, 1953 to September 25, 1953, together with an extension of completion time from March 25, 1953 to March 25, 1954.

W. R. Griswold
W. R. Griswold

AGKeating/bjl

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Chron.

FILE COPY
SURNAME:

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

BW

April 9, 1953

Memorandum

To: Chief Counsel

N.S. in R.v.R.

From: Base Metals Division

Subject: Docket No. DMEA-110, Callahan Zinc-Lead Company, Akron Mine, Gunnison, Colorado, Contract No. Idm-E2

Attached is a request for a six-month's recession of work and a similar extension of time for completion of the work under an amended contract dated August 12, 1952, to be completed May 25, 1953. The original contract is dated May 25, 1951, so that if an additional extension of six months' time is allowed it will run over the two-year period as provided in DMEA Order 1.

The project has merit; $127,010.22 has been expended under the contract and the targets have not been reached.

The Field Team recommends favorable consideration of the request, in which the Base Metals Division concurs, provided the Operator maintains the project during the recess at his own expense.

Your preparation of an amendment is requested.

/s/
A. G. Keating

AGKeating/bjl

Copy to: Docket
Base Metals Division
Chron.

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

Griswold
Keating

224 New Customhouse
Denver 2, Colorado

March 30, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 2 1953

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMA 110, Contract I-DMA-E2, Callahan Zinc-Lead Company

Reference is made to your letter dated March 26, 1953. Please prepare an amendment that will allow a recession of operations from March 25, 1953 to September 25, 1953, and extend the time for completion of the work to March 25, 1954.

W. H. King
W. H. King

FILE COPY
SURNAME:

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

Keating
Greenwood
Selfridge
Kinkel
Whittemore

MAR 2 6 1953

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

Re: Docket No. DMA 110 (Lead-Zinc)
Callahan Zinc-Lead Company
Akron Mine
Gunnison, Colorado
Contract No. Idm-E2

Dear Mr. King:

This is in response to your memorandum dated March 18, 1953, relative to a request by the Operator to recess operations until late in 1953 or early 1954.

We will favorably consider amending the contract to allow deferment of the work for a period of six months from March 25, 1953, to September 25, 1953, and in addition to that, an extention of the time for completion of the work for a period of six months to March 25, 1954, provided the Operator will agree to start work at the end of the deferred period. In this connection the Operator should also agree that the cost of maintenance and the cost of equipment rental will not be chargeable to the project, but at his own expense.

If the above suggestions for deferment meet with your approval and that of the Operator, please advise this office and an amendment for deferment will be prepared to be forwarded to you for execution.

Sincerely yours,

George C. Selfridge (JB)

Chairman, Operating Committee

AGKeating/hmj (3-25-53)

CC to: Docket File Copy
Admin. R. File
Operating Committee
Base Metals Division
Mr. Kinkel
Mr. Bishop
Mr. Keating
Chron.

3/26/53

APPROVED:

J. H. Hedges (JB)

Member, Bureau of Mines

A. R. Kinkel, Jr. (JB)

Member, Geological Survey

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

224 New Customhouse
Denver 2, Colorado

March 18, 1953

Memorandum

To: C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 23 1953

From: DMEA Field Team, Region IV

Subject: Docket DMEA 110, Contract I-DMA-E2, Callahan Zinc-Lead Company

Enclosed are ~~two~~ 1 copy* copies of a letter from J. E. Dunn, General Superintendent, Callahan Zinc-Lead Company, in which he requests permission to recess operations under the terms of Contract I-DMA-E2.

The Field Team recommends that an amendment be prepared extending the completion date of the contract from May 25, 1953, to May 25, 1954, and that the operator be granted permission to recess operations until late in 1953 or early in 1954.

Please notify us of your decision in this matter so that we may transmit this information to the operator.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

Enclosures See letter from Operating Committee - 2/20/53

* One copy received in Mos 7 - 3/23/53 - BB

/ C O P Y /

CALLAHAN ZINC-LEAD COMPANY
Akron Mine
Whitepine, Colorado

March 11, 1953

Mr. W. H. King, Executive Officer
Field Team, RegionIV
224 New Customhouse
Denver 2, Colorado

Re: DMEA Docket 110
Contract Idm-E2

Dear Mr. King:

Please consider this a request for amendment on Contract Idm-E2, Docket No. DMEA 110 as follows:

Change the date of completion from May 25, 1953 to May 25, 1954.

We will be unable to do any further work until late in 1953 or early in 1954 and would plan to leave the area idle until that time.

Under present market conditions it is not possible to continue an extraction program and increased costs of exploration without an active operation makes continuation of the exploration program impractical.

I trust that this will give you necessary information to make a decision and that you willadvise us concerning it as soon as possible.

Very truly yours,

CALLAHAN ZINC-LEAD COMPANY

BY: /s/ J. E. Dunn

J. E. Dunn
General Superintendent

JED/rjf

FILE COPY
SURNAME:

500

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

Coating
original
Mr. Johnson
Rollund
Crawford
Jellinge
Mr. Hetteman

FEB 20 1953

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

Re: Docket No. DMA-110 (Lead-Zinc)
Callahan Zinc-Lead Company
Gunnison, Colorado
Contract No. Idm-F2

Dear Mr. King:

It has been noted that work progress accomplished on the above project for the past several months has been negligible. The total advance of the No. 3301 raise for the months of September, October and November is reported to be 22.5 feet, plus an insignificant amount of drifting footage. From this it would appear that there is little disposition on the part of this company to press this project.

This is borne out by a phone call received on February 4 from Mr. Joe Hall, President of the subject company, who stated that he had suspended operations under their exploration contract. He said that blocky ground had been encountered in driving the 239-foot raise approved under the contract and that the work was costing about $125.00 per foot, as compared with the $53.00 per foot allowed under the contract. He further stated that his company lacks financial means to carry the project further in view of the high cost, and in general appears to have lost all interest in the project in view of the declining market prices for the metals.

We cannot accept the Operator's premise that he is privileged to terminate this contract by unilateral action. It was pointed out to him that an Operator signing such a contract has made certain commitments, as well as having received financial assistance from the Government.

Nevertheless, before consideration is given to this case, it is desirable that we have recommendations and expressions of opinion from the Field Team. It is obvious that the additional section of the project covered by the amended contract (August 12, 1952) has been allowed to lie in a semi-dormant condition, and now has been stopped entirely.

It may very well be that physical conditions encountered in this raise have been of such an unexpectedly unfavorable character as to cast doubt upon the wisdom of attempting further work at such point. Perhaps there are alternate measures which the Field Team might see fit to recommend and toward which the Operator might feel more kindly disposed; or it may be that the Field Team may feel that physical conditions are so adverse as to warrant a recommendation for project termination.

Will you be kind enough to investigate the matter and advise us accordingly.

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

J.H. 2/20/53

WRGriswold/bjl (written 2/17/53)

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals Div.
Mr. Bishop
Mr. Kinkel
Chron.

FILE COPY
SURNAME:

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

Memorandum February 4, 1953

To: Files

From: C. O. Mittendorf
Administrator

BW

Subject: Suspension of operations, Callahan Zinc-Lead Company, DMA-110, contract Idm-E2

Mr. Joe Hall, President of the subject company, phoned me this afternoon to advise that he had suspended operations under his exploration contract. He said blocky ground had been encountered in driving the 239-ft. raise approved under the contract, and that the work was costing about $125 a foot, as compared with $53 a foot allowed under his short-form contract. It is my understanding that approximately 175 feet of additional raising must be done to connect with the 200 sublevel of the mine, and thereafter approximately 400 feet of drifting are approved under the contract. Hall states that it is costing his company $6000 to $7000 a month to carry on this work, and that their finances are insufficient to carry on. He also appears to have lost interest in the project in light of the declining metal market prices and his pessimistic outlook for the future. He plans to serve the Executive Officer of Region IV with a formal notice that he has terminated the work under the contract.

I explained to Hall that under the terms of the short-form contract he might be legally liable for the completion of the work, regardless of its cost. He appeared to be surprised at my statement and said if any attempt was made on the part of the Government to force completion of the work "we might run into trouble."

It appears that the Government has already contributed about $70,000 to this project and that there is absolutely no justification for making a certification on the basis of the results obtained thus far. My understanding of the project is that a vertical raise is being driven in the footwall of an old winze sunk from the 200-ft. level, which winze itself is reported to be in the footwall of the vein which is being sought. From this description of the project, it appears that the tarket area would not be reached until the raise was completed and a certain amount of crosscutting and drifting was then done. Hall estimates that it would require approximately $60,000 to complete work called for under the contract and says his company has no prospect of furnishing its half of that sum.

I inquired if the recent fatal accident had a bearing on his decision to suspend operations, or if it was responsible for excessive costs that he had experienced during the last month. I was told that the accident affected the morale of the crew for a few days, but that the real cause for his decision and the high costs was bad ground.

C. O. Mittendorf (fw)

Administrator

COMittendorf/fw

cc: Admr Reading File
Mails & Files
Field Team, Region IV
Base Metals Div.
Mr. Hofflund
Mr. Mittendorf

Mr. Mittendorf: 2/4/53

To call:

Joe Hall, Callahan (Lead-Zinc), - NY Op. 435

Story:

Yesterday Hall came to see Mr. Knouse (old friend and co-worker), re DMA-110.

Said they are having difficulty driving a raise in a property in Colorado, which was costing them two or three times as much as the contract (on unit cost basis) allowed.

Mr. Knouse took him to Base Metals, and in absence of Mr. Keating Mr. Alt talked to him.

Betty Lackhoff says gist of conversation with Mr. Alt was:

They are losing money on the short-form contract

They have notified the plant to shut down operations.

Mr. Alt told Hall that Mr. Keating had worked on the case and drawn up the short form contract, and there was little he could do in Mr. Keating's absence.

Mr. Hall said he would call Mr. Mittendorf today (Wed.).

fw

Mr. Mittendorf called Mr. Hall. See memo of conversation.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
February 4, 1953

Memorandum

To: Executive Officer, Field Team, Region IV

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

Subject: DMEA 110, Contract Idm-E2 (lead-zinc), Callahan Zinc-Lead Company (Akron mine), Gunnison County, Colorado - Request for amendment

Please find enclosed six copies of C. M. Harrer's memorandum regarding the subject request for amendment.

Harrer recommends an amendment to substitute the amount of raising required to make the Akron-Morning Star connection for an equivalent dollar amount of drifts and crosscuts.

I concur with his recommendations.

W. M. Traver, Jr.

W. M. Traver, Jr.

enclosures

WMT/amh

cc: 5
E2
DMEA Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
February 4, 1953

Memorandum

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

From: C. M. Harrer

Subject: DMEA 110, Contract Idm-E2 (lead-zinc), Callahan Zinc-Lead Company (Akron mine), Gunnison County, Colorado - Request for amendment

J. E. Dunn, superintendent of Callahan Zinc-Lead Company, at Whitepine, Colorado, requests by letter dated January 17, 1953, an amendment to the subject contract to fulfill the objective stated in item 3 of Exhibit "A", stage II, under "Description of the Work".

Since start of work under the supplemental contract, a part of the lowest workings of the Morning Star mine became accessible. Inspection of these lowest Morning Star workings by the contractor indicated that 40 to 50 feet of additional raise will be required to connect the Akron level with the lowest workings of the Morning Star.

Dunn requests that the 239 feet of raise specified in the contract, at a total cost of $12,667.00, be increased 50 feet to a total of 289 feet of raise, at a total cost of $15,317.00.

Consequently, the 745 feet of drifting and crosscutting specified in the contract, at a total cost of $37,250.00, would be reduced to 692 feet, at a total cost of $34,600.00, in order not to increase the over-all cost of the project.

In addition, any funds remaining to the raise after its completion would revert to drifting and crosscutting from which it came.

Since the intent of the raise, as stated in the contract, is to connect the Akron and Morning Star workings, and since footages and costs are stipulated as estimates in the contract and not as maximums, it is recommended that an indeterminate but adequate sum be made available to complete the raise to the lowest Morning Star workings from remaining funds now allotted to drifts and crosscuts.

If definite footages must be assigned, the amendment, as outlined above, is recommended with the provision for return of unexpended funds to drifts and crosscuts.

C. M. Harrer

C. M. Harrer
Mining Engineer

CMH/amh

cc: 5
E2
DMEA Chron.

500 FILE COPY
SURNAME:

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

M. S. in B. v P.

BW.

February 3, 1953

Memorandum for the Files

Re: Docket No. DMEA-110

Mr. J. Hall, Callahan Lead-Zinc Company called at the office accompanied by Fred Knouse.

Mr. Hall stated that they were losing money on their short form amended contract - the work they were doing was costing them a great deal more than the unit cost as allowed in the contract. That of this date, he had wired their office to shut down the operation.

He wanted to know what could be done and I told him that he should see the Administrator, Mr. Mittendorf.

Mr. Hall said he could not see Mr. Mittendorf today as he had to go to the R. F. C., and then back to New York. He would phone Mr. Mittendorf from there.

Mr. Hall stated that he was not familiar with the amended contract. I showed him the contract, pointing out the total amount of it and the unit costs for raising and drifting.

J. W. Alt, Base Metals Div.

[redacted]

JWAlt/hmj
2-3-53
CC to: Docket
Admr. Reading File
Operating Committee
Mr. Alt
Chron.

CALLAHAN ZINC-LEAD COMPANY, INC.
AKRON MINE
WHITEPINE, COLORADO

January 17, 1953

Mining Division
Date Rec'd
JAN 29 1953
BUREAU OF MINES
Denver, Colorado

Mr. W. H. King, Executive Officer
Field Team, Region IV
224 New Custom House
Denver 2, Colorado

Re: DMEA Docket 110
Contract Idm-E2

Dear Mr. King:

Please consider this letter a request for Amendment to Contract Idm-E2 as follows:

Additional Raise Footage

Authorized remaining raise footage as of January 1, 1953 is 205½ ft.

Required footage to complete connection to Morning Star Shaft is between 245 and 255½ ft.

We request that the amount necessary for the additional 50 ft. to complete the work be taken from funds allotted to drifting, increasing total authorized units of raising and lowering authorized units of drifting. It is quite possible that 40 ft. additional footage would complete the connection, in which case the unexpended balance should revert to drifting.

This change is made necessary by the fact that when the original footage estimate was made some water remained in Morning Star workings. Later work since water levels have dropped indicate that estimated elevations for the lower level and sump were in error, making additional raising necessary to complete the connection.

Very little information is available on any of the Morning Star Shaft work and it is doubtful if any surveys were made of the bottom level where we will make connection.

Since water levels have lowered by natural drainage into lower work we have been able to locate what we believe to be the lowest point in shaft work. Due to bad air, any entry into this area requires the use of oxygen breathing apparatus.

I trust that this gives you a clear picture of the situation and will enable you to make required changes without difficulty.

Very truly yours,

CALLAHAN ZINC-LEAD COMPANY

J. E. Dunn
General Superintendent

RAB.

JED:lf

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
DEC 5 1952

224 New Customhouse
Denver 2, Colorado

December 2, 1952

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Amendment No. 1 to Contract Idm-E2 as amended August 12, 1952, Docket DMA 110, Callahan Zinc-Lead Company

Enclosed are the original and two copies of Amendment No. 1 to Contract Idm-E2 as amended August 12, 1952. 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

cee
12-5

FILE COPY
SURNAME:

Keating
Butrin
Keller
Hollund
Talbot

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

500

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

NOV 19 1952

Re: Docket No. DMA-110 (Lead-Zinc)
Contract No. Idm-X2
Callahan Zinc-Lead Company

Dear Mr. King:

This refers to a memorandum of November 7, 1952, from Mr. John S. Shaw, relative to the above-numbered contract, in which our attention is called to a typographical error in the statement of the amount of the Government's participation as enumerated in Article 4 of the amended contract dated August 12, 1952.

While the correct amount is not as Mr. Shaw has stated in his letter, we do find that there has been a misprint and that the figure should be $27,458.50 instead of $27,453.50.

Enclosed is an original and five copies of an executed amendment which has been prepared to correct the error. Please present this to the Operator for approval and signature, and when completed, distribute in the usual manner.

We realize that Mr. Salo, the Secretary of the company, had not signed the amended contract nor was the corporate seal affixed at the time Mr. Mahoney signed, but our Office of the Chief Counsel deemed the signature of the vice president legally sufficient. Since we had been informed that the matter was urgent and to prevent further delay, it was accepted.

F.H. 11-21-52

Sincerely yours,

(signed) FRANK E. JOHNSON
(HE)
Chairman, Operating Committee

AGKeating/bw
(11/17/52)
Copy to:
Docket
Adm R. File
Op. Comm.
HFKeller (2)
AGKeating
Mr. Bishop
Mr. McKnight
Chron.

Enclosures 6

APPROVED:

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

A. R. Kinkel, Jr. (HE)
Member, Geological Survey

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

224 New Customhouse
Denver 2, Colorado

November 17, 1952

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Amendment No. 1(A) to Contract Idm-E2, Docket DMEA 110, Callahan Zinc-Lead Company, Inc.

Enclosed are the original and two copies of Amendment No. 1(A) to Contract Idm-E2. 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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 20 1952

Enclosures

RECEIVED
DEC 1 - 1952
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

11-21

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 10 1952

224 New Customhouse
Denver 2, Colorado

November 7, 1952

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Contract I-DMA-E2, Amended, Docket DMA 110, Callahan Zinc-Lead Company (Lead-Zinc)

Article 4 of the Exploration Project Contract Form states that the amount of Government participation is $27,453.50 which is 50% of $54,917.00. The amount of Government participation should be $54,458.50. This is probably a typographical ~~error and the~~ amount is small, but we thought it best to call it to your attention.

$27,458.50

Your attention is also called to the fact that the contract was signed by R. F. Mahoney, Vice President, but was not signed by E. A. Salo, Secretary, nor was the corporate seal affixed.

cc
11-10

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

FILE COPY
SURNAME:

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

500

Keating
Chamber

OCT 13 1952

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

Re: Docket No. DMA-110 (Zinc-Lead)
Contract No. Idm-N2
Callahan Zinc-Lead Co.
Colorado

Dear Mr. King:

In a telephone conversation of October 6, 1952, with Mr. John Shaw regarding a proposed amendment to the above numbered contract, our Base Metals Division conveyed the wording of a suggested preamble to this amendment which had been approved by our Chief Counsel. We now find that it is necessary to make a correction in the wording of the preamble, and have this date sent you by teletype a corrected wording.

This is to confirm the above communications and there is attached a copy of the preamble as revised.

Sincerely yours,

(signed) FRANK E. JOHNSON

Chairman, Operating Committee

AGKeating/bw (written 10/10/52)
Copy to:
Docket
Admr. Read. File
Op. Comm.
H. F. Keller (2)
A. G. Keating
Mr. Bishop
Mr. McKnight
Chron.

10.13.52

APPROVED:

J. H. Hedges

Member, Bureau of Mines

T. P. Thayer

Member, Geological Survey

Work under the original contract having been suspended on or about _____, and resumed on or about _____, this amendment and supplement providing for additional work shall become effective as of said resumption of work, and shall supersede the original contract in all respects except that vouchers and claims for the Government's contribution to the costs of the work performed under the original contract prior to the effective date of this amendment shall be processed and paid as provided in the original contract.

FILE COPY
SURNAME:

Keating
Dykane
Algomlin
F. Johnson

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

cn. 5. cw R. & R.

500

DMEA-Base Metals Div.

3669 AGKeating/bjl 2616

October 10, 1952

W. H. King, Executive Officer, DMEA Field Team, Reg. IV, Denver, Colorado

Please correct amendment to Docket No. DMEA-110, Contract Idm-F2, Callahan Zinc-Lead Company to read as follows: Work under the original contract having been suspended on or about blank, and resumed on or about blank, this amendment and supplement providing for additional work shall become effective as of said resumption of work, and shall supersede the original contract in all respects except that vouchers and claims for the Government's contribution to the costs of the work performed under the original contract prior to the effective date of this amendment shall be processed and paid as provided in the original contract.

(signed) FRANK E. JOHNSON

F. E. Johnson, Chairman
Operating Committee

AGKeating/bjl
Copy to: Docket
Admr. R. File
Op. Committee
H. F. Keller (2)
A. G. Keating
Mr. Bishop
Mr. McKnight
Audits
Chron.

FEB
OCT 13 1952

Section

FILE COPY
SURNAME:

Keating
Bartin
Holland

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

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

SEP 2 0 1952

re: Docket No. DMEA-110 (Zinc-Lead)
Contract No. Idm-12
Callahan Zinc-Lead Company
Gunnison County, Colorado

Dear Mr. King:

You will recall that the Callahan Zinc-Lead Company had requested that an amendment, when completed, be sent to New York for signature.

There are enclosed two copies of a revision amending and supplementing the above-numbered contract which have been signed by both the Government and the Operator. One copy is for your file and one for the National Finance Office. One copy has been forwarded to the Operator, and the original and one copy retained by this office.

Sincerely yours,

9-30
(B. H.)

Frank E. Johnson
Chairman, Operating Committee

Enclosures 2

AGKeating/bw (written 9/25/52)
Copy to: Docket
Admr. R. File
Op. Committee
H. F. Keller (2)
A. G. Keating
Mr. Bishop
Mr. McKnight
Chron.

APPROVED:

C. H. Johnson (B. H.)
Member, Bureau of Mines

A. R. Keikel, Jr. (B. H.)
Member, Geological Survey

FILE COPY
SURNAME:

Keating
Butrin
Hoffland
Kimball
Johnson
Johnson

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

Mr. Joseph T. Hall, President
Callahan Zinc-Lead Company, Inc.
100 Park Avenue
New York 17, N. Y.

SEP 30 1952

Re: Docket No. Idm-110 (Zinc-Lead)
Contract No. Idm-K2

Dear Mr. Hall:

This will acknowledge receipt of a letter dated September 17 from your company enclosing the original and five copies of a revision amending and supplementing Exploration Project Contract No. Idm-K2, which you have had executed. There is being returned to you herewith, your copy of this agreement signed by the Government.

Sincerely yours,

9.30

C. O. Mittendorf

Administrator

AGKeating/bw (written 9/25/52)

Copy to: Docket
Admr. R. File
Op. Committee
H. F. Keller (2)
A. G. Keating
Mr. Bishop
Mr. McKnight
Chron.

CALLAHAN ZINC-LEAD COMPANY, INC.
100 PARK AVENUE
NEW YORK 17, N.Y.
OREGON 9-1300

OFFICE OF THE TREASURER

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 18 1952

September 17, 1952

Mr. C. O. Mittendorf
Administrator
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D.C.

Re: Docket No. DMA-110X (Lead-Zinc)
Contract No. Idm-E2

Dear Mr. Mittendorf:

We are enclosing the original and five copies of a revision amending and supplementing the above described contract. All six copies have been duly executed by the proper officers of this corporation.

It is our understanding after the contracts have been signed by the Government you will send us a signed copy.

Yours very truly,

CALLAHAN ZINC-LEAD COMPANY, INC.

E. A. Salo

E. A. Salo
Treasurer

EAS:JT

Encs.

cc: James E. Dunn

Sd S
9/19/52

FILE COPY
SURNAME:
500

Keating

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

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

Re: Docket No. 110
Contract No. Idm-32
Callahan Lead-Zinc Company

Dear Mr. King:

Attached is a copy of a letter from Mr. E. A. Salo, Treasurer of Callahan Lead-Zinc Company, Inc., together with a copy of the reply from this office. Will you be kind enough to investigate and advise Mr. Salo.

Sincerely yours,

9/15/52

(Signed) FRANK E. JOHNSON

Chairman, Operating Committee

Attachments

AEKeating-mb
September 11, 1952
Copy to: Docket
Adm. Reading File
~~Operating Committee~~
Mr. Keller (2)
Mr. Keating
~~Mr. Bishop~~
~~Mr. McKnight~~
~~Region IV~~

APPROVED:

J. H. Hedges

Member, Bureau of Mines

T. P. Thayer

Member, Geological Survey

FILE COPY
SURNAME:
500

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

Keating
Chamber
F. Johnson

Mr. F. A. Salo, Treasurer
Callahan Lead-Zinc Company, Inc.
100 Park Avenue
New York 17, New York

Re: Docket No. 110
Contract No. Idm-72

Dear Mr. Salo:

This will acknowledge receipt of your letter of September 8, 1952, in which you call attention to an item of expenditure of $91.64, shown on your Operator's Monthly Report for May. We note that you have not received a reimbursement from the Government as provided in your contract.

We are referring your inquiry to Mr. W. H. King, Executive Officer, Region IV, Denver, Colorado, with a request that an investigation be made and that you be advised promptly.

Sincerely yours,

H. F. Keller 9/15/52

H. F. Keller
Chief, Base Metals Division

AGKeating-mb
Sept. 11, 1952
Copy to: Docket
Adm. Reading File
~~Operating Committee~~
Mr. Keller (2)
Mr. Keating
~~Mr. Bishop~~
~~Mr. McKnight~~
~~Region IV~~

FILE COPY
SURNAME:

500

Keating
Walker
Hadges
Thayer
H. Johnson

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

SEP 1 5 1952

Mr. Joseph T. Hall, President
Callahan Zinc-Lead Company, Inc.
100 Park Avenue
New York 17, New York

Re: Docket No. DMA-110X (Lead-Zinc)
Contract No. Idm-F2

Dear Mr. Hall:

Pursuant to the recent telephone request of Mr. R. F. Mahoney of your company, there are enclosed the original and five copies of a revision, amending and supplementing the above-described contract. These have not yet been executed by the Government.

You will note that the agreement has been prepared on the short form, MF-200A, and that when the work specified in the initial contract is completed, this amendment and supplement providing for additional work shall become effective.

If you find the provisions of the amendment satisfactory, please have the original and all copies executed by the proper officials of your company and returned to this office. Upon receipt of these amendments, a copy will be signed by the Government and forwarded to you at the above address.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

Enclosures 6
AGKeating-mb
September 10, 1952
Copy to: Docket
Adm. Reading File
Operating Committee
Mr. Keller (2)
Mr. Keating
Mr. Bishop
Mr. McKnight
Region IV

FILE COPY
SURNAME:

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

Defense Minerals Exploration Administration
H. F. Keller
3669
2616
Keating
Johnson

September 11, 1952

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

Rett: Callahan Zinc-Lead, DMA-110, Idm-E2 Amendment has been processed $54,917.00, additional funds allowed. Mahoney, President of the company requests contract be sent him in New York for signature we expect it to be mailed the first of next week.

(signed) FRANK E. JOHNSON
Chairman, Operating Committee

AGKeating-mb
Copy to: Docket
Adm. R. File
Oper. Comm.
Mr. Keller
Mr. Keating
Confirmation

n.s. in R. v R.

C. O. Mittendorf
September 11, 1952
11:15

DN 235 BUREAU MINES 9-11-52 8-15 AM

C O MITTENDORF

PLEASE ADVISE STATUS OF AMENDMENT AUTHORIZING ADDITIONAL FUNDS DMA-110, I-DMA-E2, CALLAHAN ZINC-LEAD, REFERENCE OUR MEMO AND TELETYPE OF AUGUST 15 AND INFOR MATION GIVEN JOHNSON ON RECENT VISIT HERE.

W H KING

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 11 1952

Denver, Colo.

SEP 11 1 23 PM '52
BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

CALLAHAN ZINC-LEAD COMPANY, INC.
100 PARK AVENUE
NEW YORK 17, N.Y.

OREGON 9-1300

OFFICE OF THE TREASURER

Gas

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 9 1952

September 8, 1952

Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.

Re: I-DMA-E2

Gentlemen:

Under date of June 17th, we filed with your Denver office the May report on the above contract. This report showed an expenditure of $91.64 for the month. We wish to bring to your attention that to date we have not received the 50% monthly participation payment on this amount.

Yours very truly,

CALLAHAN ZINC-LEAD COMPANY, INC.

E A Salo

E. A. Salo
Treasurer

EAS:mat
CC:JEDunn

FILE COPY
SURNAME:

Rubin

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

BP

September 8, 1952

n.s. in R. & R.

Memorandum

To: Administrator

Through: H. F. Keller

From: Chief Counsel

Subject: Amendment of Contract Idm-E2, Docket No. DMEA-110, Callahan Zinc-Lead Company

There is attached in satisfactory legal form for execution, a revision of the contract amending and supplementing the above-described contract, which was transmitted with my memorandum of August 28.

Although it was not pointed out in my memorandum of August 28, it is noted that the item for repairs and maintenance at the unit cost of $625.00 per month is not defined very specifically and, we assume, that there is a compelling reason for estimating this item of cost in this general manner.

J. L. Hofflund

J. L. Hofflund
Chief Counsel

Attachment

HCRubin/ema
cc: Mails & Files
J. LHofflund
H. C. Rubin
H. F. Keller
Chron.

FILE COPY
SURNAME:

500

Keating
Mallon

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

September 8, 1952

Memorandum

To: Administrator

From: Chief, Base Metals Division

Subject: Exploration Project Contract Amendment, Callahan Zinc-Lead Company, Colorado - Docket No. DMEA 110X, Contract No. Idm-E2

The above-numbered contract became effective May 25, 1951, with a total estimated cost of $120,000.00, and designed to bring the project to completion within 13 months.

The following amendments were executed April 4, 1952, to be retroactive as of May 25, 1951, the effective date of the contract, without increasing the cost of the project:

Amendment (1) Deletion of certain items of work and corresponding costs.

Amendment (2) Substituting a new schedule of wages and salaries for supervisors.

Amendment (3) Increasing the wages of all personel.

In a letter of March 1952, from the Operator to Mr. J. H. East, it was stated that the funds remaining under the contract were not sufficient to complete the project, and that an additional fund of $73,383.43 would be required. On May 21, 1952, the Field Team recommended approval of this request with the added information, that the Operator had recessed his operations on May 1, 1952, owing to lack of funds.

Numerous and extensive letters and memorandums were exchanged regarding the project and the requested amendment. Some diversity of opinion developed particularly with reference to what appeared to be unusually high costs of operation. As a result, an audit of accounts of the Operator was conducted covering the period of May 26, 1951 to May 3, 1952. In a letter of July 14, 1952, Mr. W. H. King reported that the audit disclosed that but for a few exceptions, all charges were in conformity with, or allowable under the terms of the contract, and that the cost per foot appeared reasonable under the conditions of work. The audit also showed an unexpended balance plus deductions and amounts reimbersable to contract funds of $2,928.92.

In a letter of July 3, 1952, from the Operating Committee to Mr. King, several proposals were made, one of which would provide funds which appeared to be necessary for the completion of the work of the project. On August 8, 1952, Mr. King advised this office that the amendment as suggested in this letter was satisfactory to the Operator and that work was starting under conditions as outlined in the proposed amendment.

To clarify the situation and obtain an agreement in the matter, a meeting of Washington members of the USGS and USBM and DMEA Base Metals Division was arranged. A copy of the memorandum covering this meeting is attached in which it is recommended that certain work be undertaken and additional funds for this work be provided.

Thereupon an amendment to the contract has been prepared with terms and conditions in conformity with the recommendations agreed upon at the conference of the commodity members and the Base Metals Division.

H. F. Keller

AGKeating-mb
Copy to: Docket
Adm. Reading File
Operating Committee
Mr. Keller (2)
Mr. Keating
Mr. Bishop
Mr. McKnight

September 5, 1952 COPY

Memorandum

Subject: Exploration Project Contract Amendment request - Callahan Zinc-Lead Company (L ead-Zinc) Docket No. DMA-110X, Contract Idm-E2

At a conference held September 3, 1952, to review a request for an amendment to the above-numbered contract, there was present Mr. Bishop of USBM, Mr. Newcomb of USGS and the undersigned, member of Base Metals Division.

Mr. C. S. Robinson, a member of the USGS Field Team, Region IV, had examined the project in two instances and had been the one who prepared a Field report for the original application and also for the proposed amendment. It developed that Mr. Robinson was in Washington and available, and he also attended the conference. His clear, concise, and definate descriptions of the project were of important value to the reviewers.

As a result of the conference the following conclusions were reached:

The property consisted of two adjacent mine workings, known as the Akron and Morning Star-Victor. The ore occurs as pipes and lenses in limestone. An examination of the records disclosed that the Akron Mine during the years 1925 to 1950 had produced approximately 60,000 tons of ore with an average value of 26% combined lead and zinc and 6 ozs. silver. The lenses of ore as proven in the Akron workings were 50 feet to 150 feet in length, 50 feet to 200 feet in height and 5 feet to 25 feet in width and were of sufficient continuity to maintain successful production.

Robinson stated that he had made careful study of the geology as shown in Akron and the Morning Star-Victor workings and comparing the results, reached the firm conclusion that the geological conditions in the two workings were similar. It followed therefore, that if a proper exploration program was carried out in the Morning Star-Victor workings, it would be reasonable to expect a discovery of ore bodies comparable in value and extent to those found in the Akron workings. While the hight cost of the exploration had been questioned, Robinson reported the management was competent but the ground was unusually bad. Swelling ground was encountered in a major portion of the working areas. In some instances this required constant relieving and retimbering. Tunnel sets were often spaced inches apart and when an area had been mined, no attempt was made to keep it open.

It was the unanimus conclusion of all those present that favorable recommendation be made to the request for an amendment as outlined by the following items of exploration work and corresponding estimated costs:

/s/ Keating

STAGE II

1. Continue raise, started in Stage I to the 200 sublevel above the Akron level, a distance of 49 feet.

2. Crosscut 120 feet in the direction of the Morning Star Winze on the 200 sublevel.

3. Raise 190 feet to connect to lower working level of the Morning Star Winze from the crosscut specified in Item 2.

4. Drift and crosscut 400 feet on the 200 sublevel to explore the mineralization found on the Akron level.

5. Drift 225 feet on the Akron level on the ore discovered along the footwall of the dike.

6. Repair and maintain the Akron level between the Akron Mine and the Morning Star Mine.

Estimated Cost of Additional Work in Stage II

239 feet of raising @ $53.00 per foot	$12,667.00	
745 feet of drifts and crosscuts @ $50.00 per foot.	37,250.00	
Repairs and maintenance of Akron level during 8 months @ $625.00 per month.	5,000.00	
Total Cost of Stage II		$ 54,917.00

Cost of Work in Original Contract	$117,071.08
Estimated Cost of Work in Amending Contract	54,917.00
Total Estimated Cost of the Project	$171,988.08
Government Participation at 50%	$ 85,994.04

	Work Completed Through April 30, 1952			Work Remaining		
	Amount	Cost	Cost per Ft.	Amount	Estimated Cost per Ft.	Estimated Cost
Drifting	1474'	$76313.99	$51.77	745'	$52.02	$38754.90
Crosscutting	416'	14101.09	33.90	—	—	—
Raising	151'	7113.87	47.11	239'	53.00	12667.00
Tunnel Rehabilitation	715'	19791.94	27.68	200'	39.00	7800.00
Tunnel Maintenance	—	—	—	—	—	5000.00
TOTAL		$117,320.89				$64,221.90

Unexpended Balance of Approved Funds May 1, 1952 -	$443.31	
Disallowed charge for construction on snow shed	1572.33	
Disallowed charge for repairs to employee living quarters	663.47	
Miscellaneous disallowances covered by audit report	89.59	
Prior deductions not deducted from amounts reported on MF-104 Reports	160.22	
Total unexpended balance plus deductions and amounts reimbursable to contract funds		$2,928.92
Additional funds required -		$61,291.46

The estimated costs per foot appear reasonable under the conditions of work, and extent of allowable indirect charges as authorized in the contract.

We suggest that consideration be given to terminating Contract I-DMA-E2 and executing a short form contract for the remaining work. Unit costs of drifting and raising could be increased sufficiently to absorb the $5000.00 estimated for expense of tunnel maintenance. The matter of course would be contingent on the issuance of a certificate of discovery or development to protect the present investment under Contract I-DMA-E2.

We understand that Mr. W.D. Robinson is at present in the Washington office of the Geological Survey and therefore available for discussion of geologic problems.

W. H. King
W. H. King

Donald R. Mackaven
for
A. H. Koschmann

July 9, 1952

Mr. W. H. King
Executive Officer, DMPA Field Team
Region #4
New Custom House
Denver 2, Colorado

Dear Mr. King:

Enclosed are six copies of an analysis of project costs for the period from May, 1951 through April 30, 1952 which have been revised to reflect deduction of charges disallowed by the Contract Administration and Audit Division.

The following is related to our application for Amendment to I-DMA-E2 dated March 19, 1952, and the letter of clarification dated June 10, 1952.

In view of first costs on raising and the enclosed recapitulation of Past Costs on the project we believe the following revisions on the Cost estimate attached to the request for Amendment are in order.

TWO COMPARTMENT RAISE (4x8 cribbing not lined)		
239' (Raise footage remaining) @ $53.00		$12,667.00
DRIFTING AND CROSS CUTTING		
745' of Drift @	52.02	38,754.90
STATIONS		
Cost of 4 stations to be deleted and absorbed by Drifting and Raising		
REHABILITATION MORNING STAR LOWER LEVEL		
200' of Drift @	39.00	7,800.00
MAIN LEVEL REPAIR AND MAINTENANCE		
Estimated repair cost Akron level between Akron Mine and Morning Star for term of contract		5,000.00
Total Estimated cost of remaining work		$64,221.90

The above listed work is the minimum amount necessary to reach the original objective of the project.

Estimated costs are slightly over those shown under revised E2 Costs due to the following facts:

COPY

Raising cost to date shows $47.11 per foot. This was for the first 150 feet above the main level. Service is becoming more difficult with distance above the level and further work will necessitate the addition of a hoist man for each shift. Material from the final section of the raise will also have to be transferred on the sublevel with a further cost increase for that section.

Sublevel drift which will be hand mucked always averages somewhat higher in cost than the more accessible main level headings. Raise and drift headings will absorb cost of stations listed in original application.

Past work on Morning Star rehabilitation was on a main level with access to the surface for all material removed. Material from sublevel rehabilitation will have to be handled on the sublevel and transferred on the level below before it reaches the main haulageway on the Akron level. Actual retimbering also promises to be more difficult than the average of the ground encountered on the Morning Star main level.

Estimated repair costs to maintain the main haulageway between the Akron and Morning Star mines, we believe to be extremely conservative as several stretches will require extensive work. This cost is based on several years of experience with maintenance under similar conditions. The greater part of this sum will be expended within 4 months from the start of work.

I trust that this will assist in expediting approval of the Amendment as we have already lost a great deal of time. Completion of the project will require at least 10 months after authorization.

Very truly yours,

CALLAHAN ZINC-LEAD COMPANY

J. E. Dunn
Superintendent

IW

Enc. (6)

COPY

I-DMA-E2-COSTS AS REPORTED ON MF104 REPORTS

May, 1951 through April 30, 1952

	Direct Costs	Per ft.	Per cent of Total	Indirect Costs	Per ft.	Per cent of Total	Total	Per ft.
South Drift	$48,116.96	$32.64	61.7	$29,823.63	$20.23	38.3	$77,940.59	$52.88
Cross Cutting	9,217.01	22.16	64.0	5,195.68	12.49	36.0	14,412.69	34.65
M. S. Rehab.	17,421.51	24.37	87.4	2,516.26	3.52	12.6	19,937.77	27.88
3301 Raise	4,489.77	29.73	61.8	2,775.87	18.38	38.2	7,265.64	48.12
Total	$79,245.25	$28.75	66.3	$40,311.44	$ 14.63	33.7	$119,556.69	$43.38

ADJUSTMENT OF COSTS AS REPORTED ON MF104 REPORTS

May, 1951 through April 30, 1952

	Original Indirect Costs	*Snow shed Deducted	**Dwelling Rep. Ded.	Total Ded.	Balance
South Drift	$29,823.63	$1,223.74	$ 402.86	$1,626.60	$28,197.03
Cross Cutting	5,195.68	234.44	77.16	311.60	4,884.08
M. S. Rehab.	2,516.26	---	145.83	145.83	2,370.43
3301 Raise	2,775.87	114.15	37.62	151.77	2,624.10
Total	$40,311.44	$1,572.33	$ 663.47	$2,235.80	$38,075.64

*Distributed on basis of direct costs to lower level work
**Distributed on basis of direct costs to all work

REVISED E-2 COSTS

May, 1951 through April 30, 1952

	Direct Costs	Per ft.	Per cent of Total	New Indirect Costs	Per ft.	Per cent of Total	Total	Per ft.
South Drift	$48,116.96	$32.64	63.1	$28,197.03	$19.13	36.9	$76,313.99	$51.77
Cross Cutting	9,217.01	22.16	65.4	4,884.08	11.74	34.6	14,101.09	33.90
M. S. Rehab.	17,421.51	24.37	88.0	2,370.43	3.31	12.0	19,791.94	27.68
3301. Raise	4,489.77	29.73	63.1	2,624.10	17.38	36.9	7,113.87	47.11
Total	$79,245.25	$28.75	67.5	$38,075.64	$13.82	32.5	$117,320.89	$42.57

FILE COPY
SURNAME:

500

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

JUN 30 1952

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

Re: Docket No. DMA 110X (Lead-Zinc)
Contract I-DMA-E2
Callahan Zinc Lead Company
Gunnison County, Colorado

Dear Mr. King:

Relative to the telephone conversation you had with Mr. Alt of the Base Metals Division on June 24, we have written Mr. Chambers asking him to audit the accounts of the above referenced docket.

Inasmuch as the applicant has requested an extension to the contract permitting additional exploration work and the additional expenditure of some $70,000.00, we believe that an audit of the accounts is necessary. The estimated costs per foot of exploration work and rehabilitation submitted by the applicant as the basis for estimating the cost of the proposed project, are excessive, especially the average overhead charge per foot of advance of approximately $15.00. In comparison with the average unit costs of exploration work for other large companies having contracts with the Government, the proposed costs of the applicant are out of line, even though partially substantiated by the accounts rendered under the subject contract.

We shall appreciate a report on the audit of the contract accounts as soon as possible so as to permit us to continue processing the requested amendment to the contract.

Sincerely yours,
(signed) FRANK E. JOHNSON (GWB)
Chairman, Operating Committee
Defense Minerals Exploration
Administration

S.N. 6-30-52

APPROVED:

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

L. C. Thayer (GWB)
Member, Geological Survey

JWAlt/HFKeller/mef/mb
6/25/52

cc to: Docket
Adm. R. File
Opp. Comm.
Mr. Keller
Mr. Alt
Mr. Bishop
Mr. McKnight
Region IV

FILE COPY
SURNAME:

500

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

JUN 30 1952

Mr. Jay L. Chambers
c/o Mr. W. H. King, Executive Officer
DMEA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMA 110 (Lead-Zinc)
Contract I-DMA-E2
Callahan Zinc Lead Company
Gunnison County, Colorado

Dear Mr. Chambers:

As the subject contract has been terminated in that the funds have been expended, and the applicant is desirous of continuing the exploration project, he is requesting that either an amendment or extension of the existing contract be made permitting some additional exploration work at an additional estimated cost of some $70,000.00. As the costs that have been presented by the Operator in form MF-104 appear to be exorbitant in relation to the amount of work being done, and as that data is the basis of estimating the cost of proposed work, we believe that an audit of the accounts of the contract should be made. Mr. Alt of the Base Metals Division, on June 24, phoned Mr. King, Executive Officer, Region IV, to ask you to audit the accounts of the contract.

The overhead costs that are charged against the contract work are much greater per unit of advance than seems warranted. It may be possible to come to some arrangement with the company which would permit a minimum base overhead charge per unit of advance on any work done in the future.

We shall appreciate your making this audit as soon as possible, as we are now processing the request for an amendment to the contract.

Sincerely yours,

C. O. Mittendorf (fw) S.H. 6-30-52

Acting Administrator

JWAlt/HFKeller/mef/mb
6/25/52

cc to: Adm R. File
Opp. Comm
Docket
Mr. Keller
Mr. Alt
Mr. Bishop
Mr. McKnight
Region IV

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

224 New Customhouse
Denver 2, Colorado

June 24, 1952

Memorandum

To: Secretary to the Operating Committee
Defense Minerals Exploration Administration

From: Executive Officer, Field Team, Region IV

Subject: Form MF-104, DMA Docket 110, Contract No. I-DMA-E2, Callahan Zinc-Lead Co., Gunnison County, Colorado

Enclosed is a copy of the Operator's Progress Report Form MF-104, Operator's Narrative Report, Inspecting Engineer's Narrative Report and other supporting data for the period of April, 1952, pertaining to DMA Docket 110, Contract I-DMA-E2, Callahan Zinc-Lead Co.

Only one copy of this Progress Report is available for the Washington office because the report has been in process prior to the date of our instructions to submit two copies.

According to our agreement with Mr. Mittendorf and Mr. Chambers, the Washington office will photostat all Progress Reports that were being processed prior to the date of our instructions.

W. H. King

W. H. King

Enclosures

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 27 1951

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

224 New Customhouse
Denver 2, Colorado

June 12, 1952

AIR MAIL

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
JUN 13 1952

Memorandum

To: Secretary to the Operating Committee
Defense Minerals Exploration Administration

From: Field Team, DMEA, Region IV

Subject: DMA Docket 110, Contract I-DMA-E2, (Lead-Zinc) Callahan Zinc-Lead Company - Request for anamendment to provide additional funds

Reference is made to the letter from Frank E. Johnson dated May 27, 1952, and to the memorandum from O. M. Bishop to D. E. Moulds dated May 14, 1952, concerning the request from Callahan Zinc-Lead Company for an amendment to DMA Contract I-DMA-E2, to provide additional funds to complete exploration work under the contract.

The company's request has been restudied by the Bureau of Mines and the Geological Survey and we are enclosing in duplicate the following matter to supplement our submission of April 15, 1952:

1 - Supplemental Justification from Callahan Zinc-Lead Co.

2 - Supplemental memorandum report by C. S. Robinson of the Geological Survey.

3 - Supplemental memorandum report by C. M. Harrer of the Bureau of Mines.

We fully concur in the recommendation of the examining Geologist and Engineer.

After carefully reconsidering our original submission and the above supplemental matter we find that we cannot alter our original recommendation that the request for additional funds be approved in the amount of $73,383.00. We further recommend that the completion period (Article 3, Form MF-200) be amended from "thirteen (13) months" to "two (2) years".

Prompt consideration of this matter will be appreciated.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

Enclosures

SWS 6-13-52

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20
Denver Federal Center
Denver 14, Colorado
June 11, 1952

Mining Division
Date Rec'd.
JUN 1952
BUREAU OF MINES
Denver, Colorado

Memorandum

To: Acting Chief, Mining Division, Region IV

From: Chief, Colorado Branch, Mining Division, Region IV

Subject: DMA 110, Contract I-DMA-E2, Callahan Zinc-Lead Company, Inc. (Akron mine), Gunnison County, Colorado - Request for amendment to provide additional funds and extend time for a supplemental exploration program

Please find enclosed the original and eight copies of C. M. Harrer's memorandum report on the above subject.

The report has my approval, but I suggest that possibly we have failed to stress enough the project completion term which will expire June 27, 1952, and the amendment should certainly provide for its extension. Harrer recommends 12 months.

W. M. Traver, Jr.

W. M. Traver, Jr.

enclosures

WMT/dd

cc 8
E2
DMEA Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20
Denver Federal Center
Denver 14, Colorado

June 9, 1952

Memorandum

To: Chief, Colorado Branch, Mining Division, Region IV

From: C. M. Harrer

Subject: DMA 110, Contract I-DMA-E2, Callahan Zinc-Lead Company, Inc. (Akron mine), Gunnison County, Colorado - Request for amendment to provide additional funds.

As a basis for reviewing the exploration program submitted in a memorandum report on recommendations for completing the original contract and additional exploration, dated April 3, 1952, an Exhibit "A" has been prepared including work already approved and new work recommended. Costs recorded on the "Operator's Monthly Progress Reports", form MF-104, are tabulated, with monthly costs per foot calculated to bring out the extreme variations in costs. An analysis is made of past costs and estimated future costs as of May 1, 1952.

EXHIBIT "A"

The Exploration Project	Estimated Cost
1. 2,200 feet of drifting and crosscutting on the Akron tunnel level south into the Morning Star-Victor ore shoots. The main drift south would parallel the shear zone in the footwall of the fault. The fault zone would be checked periodically by crosscuts.	
2,200 feet at estimated cost of $34.96 per foot	$ 76,912.00
2. 500 feet of two-compartment exploration raise considered necessary to complete the exploration in this area.	
500 feet at estimated cost of $47.98 per foot	23,945.00
3. 1,200 feet of rehabilitation of the lower Morning Star tunnel	
1,200 feet at estimated cost of $10.519 per foot	12,623.00
4. Equipment rental, 13 months at $501.50	6,520.00
Total estimated cost of project	$120,000.00

(Estimated time required - 13 months)
(Approximately June 1, 1951 to July 1, 1952)

STATUS OF CONTRACT (May 1, 1952)

Item	Exploration approved	Work completed	Funds expended	Work remaining
Drifting and crosscutting	2,200 feet	1,890 feet	$92,216.35	310 feet
Raising	500 feet	151 feet	7,265.62	349 feet
Morning Star Rehabilitation	1,200 feet	715 feet	19,914.41	485 feet
			$119,396.38	

Approved cost of project	$120,000.00
Funds expended to date	119,396.38
Balance of approved funds	$ 603.62

The intent of the contract has not been completed and the project is now inoperative due to lack of funds.

TABULATION OF PROJECT COSTS TO DATE AND A COST ANALYSIS OF PROPOSED WORK
SUBSEQUENT TO MAY 1, 1952

DRIFTING

Month	Wages and Salaries 5/	Equipment 1/	Supplies	Other 6/	Total	Work Units	Cost per Unit
May 26 to June 30, 1951	$3,366.49	$ 598.56	$ 2,230.47	$ 421.30	$6,616.82	123 feet	$53.80
July	3,742.50	445.26	2,780.08	475.85	7,443.69	177	42.05
August	3,601.02	315.98	2,126.84	458.64	6,502.48	202	32.19
September	4,529.20	336.03	1,833.42	479.78 2/	7,178.43	62	115.78
October	3,603.48	328.49	2,105.16	380.16	6,417.29	88	72.92
November	3,933.02	364.08	1,723.68	416.08 3/	6,436.86	148	43.49
December	6,026.78	483.63	2,055.59 4/	775.51	9,341.51	243	38.44
January '52	4,795.10	483.63	1,765.74	597.28	7,641.75	145	52.70
February	6,115.90	483.63	2,712.48	824.70	10,136.71	189	53.63
March	5,581.88	395.93	3,471.77	655.36	10,104.94	97	104.17
April							
Totals	$45,295.37	$4,235.22	$22,805.23	$5,484.66	$77,820.48	1,474 feet	$ 52.80
Cost per foot	$ 30.73	$ 2.87	$ 15.47	$ 3.72	$ 52.80		

1/ Equipment depreciation allowance (rental).
2/ A deduction of $9.66 for lamp rental, etc., is prorated on the basis of wages and salaries involved.
3/ Deducted $76.63 pro rata.
4/ Deducted $65.00 for a receiver.
5/ Includes direct and indirect charges without F.I.C.A., F.U.T.A., and S.C.I. tax deductions.
6/ Includes F.I.C.A., F.U.T.A., and S.C.I. tax deductions, power and boarding house subsidy.

TABULATION OF PROJECT COSTS TO DATE AND A COST ANALYSIS OF PROPOSED WORK
SUBSEQUENT TO MAY 1, 1952

CROSSCUTTING

Month	Wages Salaries 5/	Equipment 1/	Supplies	Other 6/	Total	Work Units	Cost per Unit
May 26 to June 30, '51	---	---	---	---	---	---	---
July	$ 487.46	$ 56.24	$ 351.18	$ 60.52	$ 995.40	23 feet	$41.54
August	1,639.09	167.67	1,127.10	197.80	3,131.66	107	29.27
September	2,556.84	147.60	945.26	181.37 2/	3,831.07	123	31.15
October	2,177.98	155.14	1,243.59	200.34	3,777.05	100	37.77
November	1,704.83	119.55	557.83	121.55 3/	2,503.76	63)	42.87
December	170.53	--	7.29	19.11	196.93	0)	
January '52		None					
February		None					
March		None					
April		None					
Totals	$8,736.73	$646.20	$4,232.25	$780.69	$14,395.87	416 feet	$34.60
Cost per foot	$ 21.00	$ 1.55	$ 10.17	$ 1.88	$ 34.60		

Average cost per foot of combined drifting and crosscutting is $48.79.

1/ Equipment depreciation allowance (rental).

2/ A deduction of $9.66 for lamp rental, etc., is prorated on the basis of wages and salaries involved.

3/ Deducted $76.63 pro rata.

5/ Includes direct and indirect charges without F.I.C.A., F.U.T.A., and S.C.I. tax deductions.

6/ Includes F.I.C.A., F. U. T. A., and S.C.I. tax deductions, power and boarding house subsidy.

TABULATION OF PROJECT COSTS TO DATE AND A COST ANAYLSIS OF PROPOSED WORK
SUBSEQUENT TO MAY 1, 1952

RAISING

Month	Wages and Salaries5/	Equipment 1/	Supplies	Other6/	Total	Work Units	Cost per Unit
March	$ 379.74	$ 26.94	$ 181.88	$ 44.58	$ 633.14	34 feet	$18.62
April	3,714.75	330.50	2,181.54	405.71	6,632.50	117	56.69
Total	$4,094.49	$357.44	$2,363.42	$450.27	$7,265.62	151 feet	$48.12
Cost per foot	$ 27.11	$ 2.37	$ 15.65	$ 2.98	$ 48.11		

1/ Equipment depreciation allowance (rental).
5/ Includes direct and indirect charges without F.I.C.A., F.U.T.A., and S.C.I. tax deductions.
6/ Includes F.I.C.A., F.U.T.A., and S.C.I. tax deductions, power and boardinghouse subsidy.

TABULATION OF PROJECT COSTS TO DATE AND A COST ANALYSIS OF PROPOSED WORK
SUBSEQUENT TO MAY 1, 1952

MORNING STAR REHABILITATION AND REPAIRS

Month	Wages and Salaries 5/	Equipment 1/	Supplies	Other 6/	Total	Work Units	Cost per Unit
May 26 to June 30, '51	$3,738.08	------	$1,463.18	$ 377.55	$ 5,578.81	330	$ 16.90
July	1,658.97	------	81.85	126.31	1,867.13	90	20.75
August	1,558.01	$ 17.85	147.50	90.83	1,814.19	60	30.24
September	1,735.84	17.87	343.31	82.67 2/	2,179.69	60	36.33
October	1,160.13	17.87	201.86	67.27	1,447.13	12	120.60
November	1,532.72	17.87	191.54	114.50 3/	1,856.63	21	88.41
December	1,412.96	17.87	239.09	92.05	1,761.97	12	146.83
January '52	1,211.58	17.87	367.28	97.34	1,694.07	22	77.00
February	1,089.27	8.94	533.67	82.91	1,714.79	108	15.88
March	-----	-----	-----	-----	-----	---	-----
Total	$15,097.56	$116.14	$3,569.28	$1,131.43	$19,914.41	715	$27.85
Cost per foot	$ 21.11	$ 0.16	$ 4.99	$ 1.58	$ 27.85		

1/ Equipment depreciation allowance (rental).
2/ A deduction of $9.66 for lamp rental, etc., is prorated on the basis of wages and salaries involved.
3/ Deducted $76.63 pro rata..
5/ Includes direct and indirect charges without F.I.C.A., F.U.T.A., and S.C.I. tax deductions.
6/ Includes F.I.C.A., F.U.T.A., and S.C.I. tax deductions, power and boardinghouse subsidy.

DMA 110

PROPOSED EXPLORATION PROGRAM

(partly allowed under the contract and partly new work)

Location	Item	Units	Remarks
Akron tunnel level	Drift	220 feet	Allowed under contract
195-foot sublevel	Drift and crosscuts	525 feet	New work 7/
Akron to Morning Star levels	Raise	239 feet 8/	Allowed under contract
Lowest Morning Star winze level	Rehabilitation	200 feet	New work 9/

Total drifting and crosscutting	745 feet at $55.15	$41,086.75
Total raising	239 feet at $58.14	13,895.46
Total rehabilitation	200 feet at $49.48	9,896.00
Four raise stations	at $1,000.00 each	4,000.00
Maintenance of Akron level to end of contract		5,000.00
Total cost		$73,878.21

7/ Work on the 195-foot sublevel is assumed as new work only because it is above the Akron level.

8/ A total of 349 feet of raise is still allowed under the contract for the 390-foot raise and miscellaneous short prospect raises.

9/ A total of 485 feet of rehabilitation is still allowed under the contract; however, this item is classed as new work since it is below the Morning Star adit level.

DMA 110

SUMMARY OF PROJECT COSTS THROUGH APRIL 30, 1952

Item	Funds Expended	Actual Cost per Foot	Estimated Cost per Foot
Drifting	$ 77,820.48	$52.80	
Crosscutting	14,395.87	34.60	
Combined drifting and crosscutting		$48.79	$34.96
Raising	7,265.62	48.11	47.98
Tunnel Rehabilitation, Morning Star	19,914.41	27.85	10.519
Total	$119,396.38		

ANALYSIS OF REQUEST FOR ADDITIONAL FUNDS

Comparison of past project costs and estimated future costs:

Source	Drifting and Crosscutting	Raising	Rehabilitation
Past cost from MF-104's	$48.79 per foot	$48.12 per foot	$27.85 per foot
Estimate of future costs	$55.15 per foot	$58.14 per foot	$49.48 per foot

Estimated costs are higher than average costs in past work. Extreme monthly variations brought out in the tabulations from forms MF-104 should be noted. The increases of estimated costs over the past averages are justified by changes in operating conditions brought about by increasing inaccessibility and more difficult operating conditions. A considerable portion of the drifting and crosscutting will be from the top of the first

195-foot raise section under difficult conditions. The second 195-foot raise section will be increasingly costly as it advances. Raise advance during April 1952 is a representative monthly advance which bears out the estimate.

Rehabilitation of the lowest Morning Star level is not comparable with work already accomplished since this latter was from a readily accessible adit, whereas new work will be from the head of a 390-foot raise under severe conditions. At the time of inception of contract exploration, the bottom Morning Star workings were not known to exist. Since their extent or conditions are indeterminate, it is reasonable to expect very bad conditions which must be overcome from the long raise. The workings may be flooded and this condition would hinder normal advance. In addition, there is a sharp increase in equipment allowance (rental).

Exploration by raising is justified by past experience on the property where drifting and crosscutting alone have missed ore horizons. Ventilation of the 195-foot sublevel would also be greatly improved and the lowest Victor-Morning Star workings would be made accessible for examination, exploration, and the planning of additional exploration. The raise is two-compartment and driven only for exploration. Its use for production would require enlargement.

DMA 110

BREAKDOWN OF ESTIMATED PROJECT COSTS

Item	745 feet of Drifts and Crosscuts	390 feet of Raises	200 feet of Morning Star Rehabilitation
Wages and salaries	$25.00	$25.32	$20.00
Social security, unemployment and compensation taxes	1.12	1.14	0.90
Supplies	10.00	10.53	8.00
Indirect costs, pro rata 10/	15.89	16.28	12.72
Equipment allowance	3.14	4.87	7.86
Totals	$55.15	$58.14	$49.48

10/ Callahan Zinc-Lead Company, Inc., now operates two mines, a selective flotation mill, and an extensive surface plant and maintains a camp. Costs are based on direct charges and indirect charges common to the entire operation. The latter are prorated on a basis of man-shifts and production, as shown in schedules A and B attached to the MF-104 forms. Indirect costs covered in prior cost estimates by the company and the Bureau engineer include pro rata charges for yard, road, trucks, boardinghouse subsidy, camp power, mine power, office, engineering, tramming, compressed air, Akron tunnel maintenance, shops, lamps, and warehouse.

DMA 110

FUTURE WORK

Item	Balance Approved	Additional Work	Cost per foot	Total Cost
Drifting and crosscutting	310 feet	435 feet	$55.15	$41,086.75
Raising	349 feet	0	58.14	13,895.46 11/
Morning Star Rehabilitation	0	200 feet	49.48	9,896.00
Maintenance of Akron level	0			5,000.00
4 raise stations	0			4,000.00
Total cost of project				$73,878.21
Unexpended balance of approved funds May 1, 1952				- 603.62
Additional funds required				$73,274.59
Originally approved funds				120,000.00
Total estimated cost of project				$193,274.59
Government participation (50 percent)				$ 96,637.29
Estimated time to complete project				12 months

11/ Total cost of raise is for 239 feet which is 110 feet less than originally requested at an earlier date.

Calculations checked by C. N. Conwell.

C. M. Harrer

C. M. Harrer
Mining Engineer

bam

CALLAHAN ZINC-LEAD COMPANY, INC.
AKRON MINE
WHITEPINE, COLORADO

June 10, 1952

REGIONAL DIRECTOR'S OFFICE
RECEIVED
1 1952
BUREAU OF MINES
DENVER, COLORADO

Mr. W. H. King
Executive Officer, DMEA Field Team
Region # 4
New Customs House
Denver 2, Colorado

Dear Mr. King:

The following additional information is submitted in clarification of our application for amendment to our project I-DMA-E2. This includes some remarks on cost estimates as well.

1. Connection to Morning Star Shaft:

It is considered essential that this connection be made since the exploration of the block will be greatly facilitated. The connection will provide natural ventilation, an escape way in case of accident, and will allow servicing through the Morning Star Shaft.

The completion of this connection makes accessible the area of the last known Morning Star production.

We consider that the other work in this area cannot be carried through to a satisfactory conclusion if this connection is not completed first.

2. Rehabilitation of Morning Star Lower Level:

This work will provide much valuable geological information since it will enable us to define the Morning Star ore shoot at this elevation. Also it offers the best chance for early production in the Morning Star area. The drift is relatively short, being approximately 200 feet in length. Since this is rehabilitation of a drift which has been closed for many years, we expect the work to be costly and have estimated a higher cost per foot than on other rehabilitation. Ofcourse, since we are contributing equally to the cost, we would hope to do the work cheaper than estimated.

3. Indirect Costs in Estimate:

Compilation of past costs on I-DMA-E2 indicate that indirect costs were 33% of total costs. This figure includes indirect prorated labor and supervision which in turn includes main level maintenance, main level tramming, timber framing and compressor, machine shop, warehouse, waste dump, office and engineering work. A complete break down of this is given on the monthly MF 104 form.

CALLAHAN ZINC-LEAD COMPANY, INC.
AKRON MINE
WHITEPINE, COLORADO

4. Main Level Repair Work Costs:

About 35% of the drift from the Akron mine to the Morning Star area has been in ground requiring timber. Some short stretches have been very difficult to hold and have required what is commonly called solid sets. These sets consist of 8 feet long round posts, 14 inches in diameter and 10 x 12 Coast fir caps. The sets are placed with only three inches of space between timber. They have been only partially successful and a great deal of repair work will be necessary during the next 12 months. We believe that after the ground is relieved this time that following maintenance will not be so heavy.

The $ 5,000.00 estimated for this repair work will certainly be no more than adequate.

Very truly yours,

CALLAHAN ZINC-LEAD COMPANY

J. E. Dunn,
Superintendent

JEC:ds

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : A. H. Koschmann DATE: June 9, 1952

FROM : C. S. Robinson

SUBJECT: Review by O. M. Bishop, U. S. Bureau of Mines, and E. J. Lyons, U. S. Geological Survey of Callahan Zinc-Lead Company request for additional funds to complete work under Contract I-DMA-E2 (Docket DMA-110)

I do not agree with the conclusions of Mr. Bishop and Mr. Lyons on their denial of the raise from the extension of the Akron level, Akron mine to the lowest winze level of the Morning Star mine.

Stage 3 of the original request of the Callahan Zinc-Lead Company was to drive 600 feet of raise from the Akron level extension to the lowest winze level of the Morning Star mine with level stations at 100 foot intervals and 700 feet of drifts from these stations. This work was approved under contract I-DMA-E2. As a result of information obtained by the exploration work, the company in applying for additional funds, modified the work of Stage 3. Under the modified program the company proposes to drive 390 feet of raise from the Akron level extension to the lowest winze level of the Morning Star mine, do 745 feet of drifting from a station on the raise, and rehabilitate 200 feet of the lowest winze level of the Morning Star mine. The main differences between these two programs is that the raise under the modified program is to be driven in two steps rather than as one continuous raise from the Akron level to the Morning Star mine as originally proposed. The raise would start at the Akron level and be driven 195 feet at 65 degrees. At the head of this raise the foot and hanging walls of the Star fault would be explored to the north by 325 feet of drifting and cross-cutting and by 110 feet of drifting to the south. From the end of the south drift the raise would be continued 195 feet at 65 degrees, to the lowest winze level of the Morning Star mine. This lowest winze level of the Morning Star mine was not known to exist at the time exploration work started.

It is believed that the raise from the Akron level to the Morning Star mine is the most favorable part of the exploration program. The ore bodies in the Akron mine, and from what information is available on the Morning Star mine, are comparatively small high-grade lenticular bodies plunging northward, primarily in the footwall, but with some in the hanging wall, of the Star fault. These ore bodies have three dimensions so exploration should be carried out in three dimensions. In the Akron mine most of the ore bodies were discovered by raises from the Akron level to the old workings of the May, Mazeppa, and W. and A. mines.

Of this exploration program to date, about 75 percent of the money has been spent to get into the favorable ground below the old ore shoots of the Morning Star mine. It would be a waste of the money already spent not to explore completely the area between the Akron level extension and the lowest winze level of the Morning Star mine. From the present known conditions in the Morning Star mine, the modified program of the Callahan Zinc-Lead Company of driving the raise in two stages is strongly recommended.

The decision as to whether the lowest winze level should be rehabilitated or not can be deferred until the raise is complete.

Approved: A. H. Koschmann

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

FILE COPY
SURNAME: Docket

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

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

Re: Callahan Zinc-Lead Company
Docket No. DMA 110, Idm-E2

Dear Mr. King:

The memoranda of the above referenced docket of March 28, April 4, April 15, 1952 and the letter of March 19, 1952 to Mr. J. H. East, Jr. from J. E. Dunn, Superintendent, Callahan Zinc-Lead Company, Inc. have been received by the Base Metals Division of the Defense Minerals Exploration Administration.

A complete review of the Monthly Progress Reports from May 26, 1951 to March 1, 1952, of the Callahan Lead-Zinc Co., Docket No. DMA-110 Idm-E2 reveals the following facts:

	Wages & Salaries	Equipment	Supplies	Other	Total	Advance
Drifting	$39,713.49	$3,839.29	$19,398.46	$4,884.25	$67,835.49	1377'
Cost per foot	28.84	2.79	14.09	3.555	49.26	
Crosscutting	$ 8,736.73	$ 646.20	$ 4,232.25	$ 797.51	$14,412.69	416'
Cost per foot	21.00	1.55	10.17	1.92	34.64	
Crosscutting	$48,450.22	$4,485.49	$23,630.71	$5,681.76	$82,248.18	1793'
Cost per foot	27.02	2.50	13.18	3.17	45.87	
Rehabilitation	$15,097.56	$ 125.07	$ 3,569.28	$1,145.86	$19,937.87	715'
Cost per foot	21.11	0.17	4.99	1.60	27.88	

A total of 1377 feet of drifting was completed at a cost of $67,835.49 or $49.26 per foot of advance, crosscutting 416 feet for $14,412.69 or $34.64 per foot. The total for combined drifting and crosscutting amounted to $82,248.18 or $45.87 per foot, 715 feet of rehabilitation of the Morning Star tunnel was accomplished at a cost of $19,937.87 or $27.88 per foot.

As allowed in the contract:

2200 feet of drifting and crosscutting at $34.96, $76,916.00. A breakdown of this item shows labor, which includes Social Security, taxes and unemployment insurance, to be $12.72 per foot; direct supervision engineering surveying, employee living quarters, boarding house subsidy, mine office and accounting to be $2.12 per foot. These two items give a total of $14.86 per foot as against the present actual cost of $27.02 for wages and salaries, a difference of $12.16, an increase of approximately 82 percent above the estimated cost as given in the contract.

The following is a comparison of costs as presented in the contract, the work that has been completed and for work proposed as presented in the memorandum from C. M. Harrer to W. M. Traver.

Drifting and Crosscutting:

	Cost per foot	Percent above contract
Contract Estimate	$34.96	
Actual Cost	45.87	31.21
Forecast	55.15	57.7
Raising		
Contract Estimate	$47.89	
Actual Cost		
Forecast	58.14	21.4
Rehabilitation		
Contract Estimate	$10.519	
Actual Cost	27.88	165.0
Forecast	49.48	370.3

In the costs as presented by C. A. Harrer for Drifts, Crosscuts, Raises and Rehabilitation are listed, indirect costs, pro rata. This item will need clarification.

The estimated costs supplied by the Callahan Zinc-Lead Company representative immediately prior to the drawing up the contract were approved and incorporated in the contract.

C. S. Robinson, Geologist, U. S. Geological Survey in the memorandum of March 28, 1952 to A. H. Koschman, Field Team, Region IV, states:

> "The original funds approved under Contract I-DMA-E2 were not sufficient for two main reasons: (1) The cost of drifting from the Akron level was considerably higher than anticipated because of bad ground; and (2) the Star fault are 200-250 feet in length instead of 50-100 feet in length as predicted. A change in the dip of the Star faults could not be predicted and accounts for the greater length of the crosscuts." The exploratory crosscuts into

> "The Callahan Zinc-Lead Company have carried out this exploration program as efficiently as possible, and it is believed that the increased cost of the project is through no fault of the company, but rather the result of unforseen geologic conditions. The work to date has disclosed some low grade ore."

The Company states:

> "On the lower or Akron level, 1890 feet of drift and crosscut have been driven. Drifting north from the last crosscut has exposed a 50 foot long mineralized zone. This is along the footwall contact of the Porphyry dike. It averages about 3 feet in width and will average 5% Zn. 5% Pb. and 3½ oz. Ag. Under present conditions this cannot be mined profitably. It is encouraging, however, and we now propose to go ahead with raise exploration as listed under Item 2 of the original contract".

Copies of memoranda from O. W. Bishop, U. S. Bureau of Mines and Erwin J. Lyons, U. S. Geological Survey, Commodity Specialists are enclosed, outlining their recommendations.

We are submitting these figures for your careful consideration and study. In order to consider the feasibility of an amendment to the contract, or the drawing up of a new contract, we would appreciate your suggestions and comments regarding the proposal of the Callahan Zinc-Lead Company.

Sincerely yours, 5/27

(Signed) FRANK E. JOHNSON

Chairman, Operating Committee
Defense Minerals Exploration
Administration

Enclosures - 2

APPROVED:

W. H. Hedges (GB)

Member, Bureau of Mines

D. M. Lemmon (GB)

Member, Geological Survey

JWAlt/hmj 5-22-52

CC to: Adm. Reading File, Op. Committee, Mr. Bishop, M. Alt, Docket File Copy, Region IV, Mr. McKnight, Mr. Moulds

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

224 New Customhouse
Denver 2, Colorado

May 22, 1952

Memorandum

To: Secretary to the Operating Committee
Defense Minerals exploration Administration

From: Executive Officer, Field Team, Region IV

Subject: Form MF-104, DMA Docket 110, Contract I-DMA-E2, Callahan Zinc-Lead Company, Gunnison County, Colorado

Enclosed are the Operator's Monthly Progress Report Form MF-104, Operator's Narrative Report, Inspecting Engineer's Narrative Report and other supporting data for the period of March, 1952, pertaining to DMA Docket 110, Contract I-DMA-E2, Callahan Zinc-Lead Company.

W. H. King

W. H. King

Enclosures

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
MAY 28 1952

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

224 New Customhouse
Denver 2, Colorado

May 21, 1952

Memorandum

To: Acting Administrator, Defense Minerals Exploration Administration

From: Executive Officer, Region IV

Subject: Request for amendment to Contract I-DMA-E2, DMA docket 110, Callahan Zinc-Lead Company

Kindly inform us of the status of the request for an amendment to contract I-DMA-E2, DMA docket 110, Callahan Zinc-Lead Company which provided for additional funds.

The request was sent via airmail to the Secretary to the Operating Committee, Defense Minerals Exploration Administration, on April 15, 1952.

The company recessed operations May 1, 1952 owing to lack of funds.

W. H. King

W. H. King

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 26 1952

IN REPLY REFER TO:

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

May 15, 1952

Memorandum

To: Mr. D. E. Moulds, DMEA

From: Erwin J. Lyons, USGS

Subject: Contract I-DMA-E2 (Docket DMA-110), Callahan Zinc-Lead Company.

The Callahan Zinc-Lead Company has requested an amendment to the subject contract to provide additional funds in the amount of $73,383.43 for completion of work already approved and for additional exploration. The field team recommends that this amendment be approved.

The present reviewer believes that the applicant should be granted sufficient funds to complete the drifting (220 ft.) on the Akron level and to explore the upward extension of the mineralized zone which was discovered along the footwall contact of the porphyry dike. To accomplish this latter work it is proposed to drive 195 ft. of raise and 415 ft. of drift and crosscut in the footwall.

The applicant's proposal also included driving 110 ft. of crosscut from the head of the above raise and from that heading drive a 195 ft. raise to connect with the lowest winze level of the Morning Star. This would permit rehabilitation and exploration of that lowest winze level. The present reviewer can find no geologic justification for this work and recommends that it be denied at this time, but that further consideration be given it, if the applicant so desires, when the other work is completed.

Erwin J. Lyons

Erwin J. Lyons
Geologist

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

May 14, 1952

Re: I-D.M.A.-E-2
(Docket No. DMA-110
Callahan Zinc-Lead Co.
Akron Unit
Gunnison Co., Colorado

Memorandum

To: D. E. Moulds, DMEA

From: O. M. Bishop, USBM

Subject: Addition to present contract to provide funds in the amount of $73,383.43 for completion of work already approved and for additional exploration.

The field team has examined the workings of this mine to check the application for the extension of the contract and have approved it. They say that the cost of drifting was considerably higher than anticipated because of bad ground and that the crosscuts into the Star fault are 200 to 250 feet in length instead of the 80 to 100 feet in length as predicted. They have recommended that $72,657.35 be allotted to the Callahan Zinc-Lead Company to complete the work outlined in their new application.

The work proposals under this extension of the contract include:

1. Completion of the timbered drift on Akron level, following the mineralized limestone-porphyry contact for about 220 feet. This was part of the original program.

2. Drive about 195 feet of two compartment raise on a 65° incline to a point from which the dike walls can be explored midway between the Akron level and the lowest Morning Star winze level. This was part of the original contract.

3. From the head of this raise, a drift to the north for 325 feet, exploring the footwall of the dike. This is additional work recommended.

4. At favorable points explore the dike to its hanging wall with about 90 feet of x-cutting. This is additional work recommended.

5. From the head of the raise, x-cut to the south for about 110 feet to a point where the lowest winze level of the Morning Star can be connected

with a 65° raise extension. This is new work under the revised plan. We recommend denial of this work as it is not exploration.

6. Complete connection to the lowest winze level of the Morning Star with about 195 feet of raise. We recommend denial of this work as it is not exploration.

7. Rehabilitate and explore the lowest winze level of the Morning Star, roughly estimated 200 feet long. This is new work outlined under the new extension. We deny this item, also.

Using Mr. W. M. Traver's and Mr. C. M. Harrer's costs, in their memorandum of April 3, 1952 and deducting the items which we believe should be denied, the actual amount we recommend for approval would be $41,753 instead of $72,657.35. The items which we recommend denial on are as follows:

110 ft. of x-cutting from top of raise to bottom of new raise @ $55.15 per ft.--	$6,067
195 ft. of raising to Morning Star lowest level @ $58.14 per ft.----------	11,337
2 sill stations in raise @ $1,000 ea.------	2,000
200 ft. of Morning Star lowest level rehabilitation----------	9,896
Maintenance of Akron level----------	1,000
Cutting out 1 -1-ton airhoist, 1 air receiver and the 440 c.f.m. compressor---	604
Total amount denied----------	$30,904
Total amount recommended by field team-----	$72,657
Less amount denied----------	30,904
Total recommended----------	$41,753

O. M. Bishop

O. M. Bishop

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

224 New Customhouse
Denver 2, Colorado

APR 1 1952

Airmail

April 15, 1952
Reviewed by
DMEA OPERATING COMMITTEE
4-23-52
(date) (JNB)

Memorandum

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

From: Field Team, Region IV

Subject: DMA Docket-110, Contract I-DMA-E2, Callahan Zinc-Lead Company - Request for an amendment to provide additional funds

Enclosed are three copies each of the following:

1. Request from Callahan-Zinc-Lead Company for an amendment to Contract I-DMA-E2 to provide additional funds to complete presently approved work, to authorize additional work, and to extend the time limit 12 months for completion of the work.

2. Memorandum from C. S. Robinson, of the Geological Survey, concerning geologic phases of the additional work.

3. Memorandum from C. M. Harrer of the Bureau of Mines, concerning engineering phases of the request for additional funds.

4. Copy of letter from Callahan Zinc-Lead Company under date of April 12, 1952, advising that present funds will be expended by May 1, 1952.

Involved in the request for additional funds, are the following:

Completion of work approved in the contract or amendments thereto.

1. Drift on Akron Level - - - - - - - - - - - 220. feet

2. Raise between Akron & Morning Star workings 390. feet

Additional work

1. Cutting drift stations from raise - - - - 4
2. Drifting and crosscutting from Raise - - 525 feet
3. Rehabilitation of lowest Morning Star (Winze) level - - - - - - - - - - - - - - - - 200 feet
4. Maintenance of Akron level to end of project.

Estimated additional time required to complete work - 12 months.

Incident to the above work are charges for labor, supervision, supplies, and depreciation of operating equipment amounting to $73,383.43 additional funds.

Operating equipment to be furnished by the operator in addition to that listed under "Exhibit C", attached to the Contract, is as follows:

Equipment	Value	Depreciation rate per month
2 - 1 Ton Air Hoists	$2,000.00	$33.33
1 - Air Driven Blower	200.00	3.33
1 - Air Receiver	250.00	4.16
1 - 16 Cu. Ft. Mine Car	161.00	2.68
1 - 15 H.P. Elec. Hoist	2,400.00	40.00
1 - 440 c.f.m. Compressor	6,000.00	100.00

We recommend that additional funds be approved in the amount of $73,383.00, which is consistent with the operator's request, recommended by the examining Geologist, and supported to a practical extent by the examining Engineer.

Prompt consideration will be appreciated.

for W. H. Kerig
J. H. East, Jr.

A. H. Koschmann
A. H. Koschmann

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

224 New Customhouse
Denver 2, Colorado

April 15, 1952

Memorandum

To: DMA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: DMA Docket 110, Contract I-DMA-E2, Callahan Zinc-Lead Company, Request for Amendment to provide additional funds

Enclosed are nine copies of a memorandum from C. M. Harrer, of the Bureau of Mines, pertaining to a request from the Callahan Zinc-Lead Company for an amendment to Contract I-DMA-E2 to provide additional funds to complete presently approved work and to authorize additional work. Harrer recommends that additional funds be approved in the amount of $72,657.35 as against the amount of $73,383.43 which was requested by the company. Traver recommends that the figure be rounded off to $75,000.00 additional funds.

W. H. King

W. H. King

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20
Denver Federal Center
Denver 14, Colorado
April 3, 1952

Mining Division
Date Rec'd.
APR 3 - 1952
BUREAU OF MINES
Denver, Colorado

Memorandum

To: Acting Chief, Mining Division, Region IV

From: Chief, Colorado Branch, Mining Division

Subject: DMA 110, Contract I-DMA-E2, Request for amendment to provide additional funds

Please find enclosed nine copies of C. M. Harrer's memorandum report recommending approval of an amendment to the subject contract providing additional funds for its continuation.

Harrer estimates $72,657.35 will be required instead of the $73,383.43 estimated by J. E. Dunn, Callahan Zinc-Lead Company's superintendent. In order to allow for unforeseen contingencies which are likely in this instance to be excessive, I'd suggest a round figure of $75,000.00 for the total amount requested, with Government participation $37,500.00, subject to the contractor's approval if considered necessary.

The copy of Dunn's letter submitted with your instructions to make the investigation is also returned herewith.

W. M. Traver, Jr.

W. M. Traver, Jr.

enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20
Denver Federal Center
Denver 14, Colorado
April 3, 1952

Memorandum

To: W. M. Traver, Jr., Chief, Colorado Branch, Mining Division

From: C. M. Harrer

Subject: DMA 110, Contract I-DMA-E2, Request for amendment to provide additional funds

Remaining funds available under the subject contract are insufficient to complete work included in exhibit "A" of the original contract and additional funds estimated at $72,657.35 are recommended for completion of the project.

Work proposals under this change include:

(1) Completion of the timbered drift on the Akron level, following the mineralized limestone-porphyry contact for about 220 feet with 7- by 8-1/2-foot cross section. This was part of the original program.

(2) Drive about 195 feet of two-compartment 4-1/2 by 8-1/2 feet cribbed raise on a 65° incline to a point from which the dike walls can be explored midway between the Akron level and the lowest Morning Star winze level. This raise was part of the original contract.

(3) From the head of this raise, drift to the north for about 325 feet, exploring the footwall of the dike. This is additional work recommended, and may require considerable timbering.

(4) At favorable points explore the dike to its hanging wall with about 90 feet of crosscut. This is additional work recommended.

(5) From the head of the raise, crosscut to the south for about 110 feet to a point where the lowest winze level of the Morning Star can be connected with a 65° raise extension. This is a new connection occasioned by discovery of workings below the main level of the Morning Star.

(6) Complete the connection to the lowest winze level of the Morning Star with about 195 feet of raise inclined to 65 degrees. This was part of the original contract.

(7) Rehabilitate and explore the lowest winze level of the Morning Star, roughly estimated 200 feet long. This is new work as the lowest level was not known to exist at the time of the original contract.

The work is shown on a map accompanying the applicant's amended proposal.

Work Proposed

Unit	Length	Time
Akron level drift	220 feet	5 months
195-foot sublevel drift	325 feet	
195-foot sublevel crosscut	200 feet	
Raise between Akron level and lowest Morning Star level	390 feet	5 months
Rehabilitation of lowest Morning Star winze level	200 feet	2 months

The following data on the proposed work schedule are the best estimate possible on conditions presumed severe:

Data on operating equipment to be furnished by
Callahan Zinc-Lead Company, Inc.,
on a monthly allowance basis of value divided by 60

Item	Cost	Monthly Allowance	Months Used	Location
1 Eimco 12-B loader	$2,967.00	$ 49.45	7	Levels
1 Jumbo and 3 DA30 drifters	3,955.00	65.92	5	do.
16 25-cu.ft. cars	6,000.00	100.00	12	Levels, raises, and rehabilitation
1 Electric locomotive with 2 Sets of batteries and cases	8,370.00	139.50	12	do.
1 Battery charger	1,520.00	25.33	12	do.
1 Canton car transfer	450.00	7.50	7	Level and rehabilitation
3 16-cu.ft. transfer cars	483.00	8.05	9-1/2	Levels, raises, and rehabilitation
1 Air receiver	250.00	4.17	12	do.
1 Blasting machine	55.00	0.92	12	do.

Item	Cost	Monthly Allowance	Months Used	Location
3 S-91 stopers	$1,830.00	$ 30.50	7	Raises and rehabilitation
1 Copus 15 hp. blower	1,175.00	19.58	12	Levels, raises, and rehabilitation
1 Copus 2-1/2 hp. blower	450.00	7.50	12	do.
1 Air-driven blower	200.00	3.33	12	do.
2 Worthington pumps	400.00	6.67	12	do.
2 1-ton air hoists	2,000.00	33.33	12	do.
1 440 c.f.m. compressor	6,000.00	100.00	5	Rehabilitation, etc.
1 15 hp. electric hoist	2,400.00	40.00	5	do.

Equipment allowance per foot of drift and crosscut	$3.14
Equipment allowance per foot of raise	4.87
Equipment allowance per foot of Morning Star rehabilitation	7.86

Unit Costs per Foot of Advance

Item	745 feet Drifts and Crosscuts	390 feet Raises	200 feet Morning Star Rehabilitation
Wages and salaries	$25.00	$25.32	$20.00
Social security and compensation taxes	1.12	1.14	.90
Supplies	10.00	10.53	8.00
Indirect costs, pro rata	15.89	16.28	12.72
Equipment allowance	3.14	4.87	7.86
Totals	$55.15	$58.14	$49.48

Estimated Cost of Proposed Work

Item	Cost
745 feet drifts and crosscuts at $55.15/foot	$41,086.75
390 feet raise, in two stages, at $58.14/foot	22,674.60
4 sill stations for raises at $1,000.00 each	4,000.00
200 feet Morning Star lowest level rehabilitation at $49.48/foot	9,896.00
Maintenance of Akron level to end of contract	5,000.00
Total cost of project	$82,657.35
Funds remaining under the original contract when the proposed raise was started (on March 20, 1952)	- 10,000.00
Additional funds required to complete the original contract and proposed additional work.	$72,657.35

The proposed amendment with the exception of the sub-level exploration will complete the terms of the original contract under exhibit "A".

The applicant, Callahan Zinc-Lead Company, Inc., estimates total additional funds required to complete the work mentioned earlier as $73,383.43.

It is estimated that the cost of the proposed work will be $72,657.35 in addition to all funds remaining from the original grant of $120,000.00. Government participation will be 50 percent, or $36,328.68.

Amendment of the contract to include the proposed work in items 1 to 7, previously mentioned, at a cost of $72,657.35 is recommended for approval.

for W. M. Craven Jr.
C. M. Harrer
Mining Engineer

CALLAHAN ZINC - LEAD COMPANY, INC.
AKRON MINE
WHITEPINE, COLORADO

April 12, 1952

COPY

Mr. J. H. East, Jr.
Regional Director
Bureau of Mines
224 New Custom House
Denver 2, Colorado

Dear Mr. East:

Our best estimate indicates that funds under I-DMA-E2 will be exhausted by May 1, 1952.

We will plan on discontinuing work in the area at that time unless we hear to the contrary from your office.

Very truly yours,

CALLAHAN ZINC-LEAD COMPANY

/s/ J.E. Dunn

J. E. Dunn
Superintendent

JED:lf

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED:
APR 10 1952

224 New Customhouse
Denver 2, Colorado

April 7, 1952

Memorandum

To: C. O. Mittendorf, Acting Administrator
Defense Minerals Exploration Administration

From: Executive Officer, Field Team, Region IV

Subject: Amendment to Contract I-DMA-E2, Docket DMA 110, Callahan Zinc-Lead Company

Enclosed are the original and two copies of each of three amendments to the above contract. Copies of each of these amendments have been given to the operator, the Fiscal Officer, Region IV, and we have retained a copy of each for our files.

W. H. King
W. H. King, for
J. H. East, Jr.

Enclosures

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

200 New Customhouse
Denver 2, Colorado

April 1, 1952

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMA Docket 110, Callahan Zinc-Lead Company, Contract I-DMA-E2

Attached are 4 copies of a memorandum from C. S. Robinson regarding a request by the Callahan Zinc-Lead Company for $73,383.43 additional funds with which to complete exploratory work under Contract I-DMA-E2. Robinson recommends that these additional funds be granted, and I concur with his recommendation.

A. H. Koschmann

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (4)

March 28, 1952

Memorandum

To: A. H. Koschmann, Field Team, Region IV

From: C. S. Robinson, Geologist, U. S. Geological Survey

Subject: Callahan Zinc-Lead Company, Contract I-DMA-E2

The Callahan Zinc-Lead Company under Contract I-DMA-E2 were awarded $120,000 for exploration in their Akron and Morning Star mines in Gunnison County, Colorado. The work to be done was described in detail in DMA Docket 110. A portion of the work has been carried out, but it is now apparent that the funds remaining are not sufficient to complete the project. As a result, the Callahan Zinc-Lead Company, in a letter to J. H. East, Jr., dated March 19, 1952, have requested additional funds of $73,383.43.

The original funds were to cover driving a drift from the south end of the Akron level of the Akron mine, parallel to the Star fault, to a point below the old workings of the Morning Star mine, crosscuts from this drift into the Star fault, a raise from this drift to the workings of the Morning Star mine, and to rehabilitate some of the workings of the Morning Star mine. To date, the company has completed the drift from the Akron level to under the old workings of the Morning Star mine, two crosscuts into the Star fault, and rehabilitated some of the workings of

the Morning Star mine. The additional funds are to be spent for 390 feet of raise from the Akron level drift to the workings of the Morning Star, 745 feet of drifting on the Akron level and from a station on the raise, and rehabilitating 200 feet of the lower level of the Morning Star mine.

The original funds approved under Contract I-DMA-E2 were not sufficient for two main reasons: (1) The cost of drifting from the Akron level was considerably higher than anticipated because of bad ground; and (2) The exploratory crosscuts into the Star fault are 200-250 feet in length instead of 50-100 feet in length as predicted. A change in the dip of the Star faults could not be predicted and accounts for the greater length of the crosscuts.

The Callahan Zinc-Lead Company have carried out this exploration program as efficiently as possible, and it is believed that the increased cost of the project is through no fault of the company but rather the result of unforeseen geologic conditions. The work to date has disclosed some low grade ore. No facts have been discovered which would appreciably change estimates of the ore reserves, 84,000 tons of inferred ore, calculated in the original geologic report for DMA Docket 110. It is recommended that the additional funds, $73,383.43, be allotted to the Callahan Zinc-Lead Company to complete the work as outlined in their request to J. H. East, Jr., of March 19, 1952.

C. S. Robinson

CALLAHAN ZINC-LEAD COMPANY, INC.
AKRON MINE
WHITEPINE, COLORADO

March 19, 1952

REGIONAL DIRECTOR'S
OFFICE
REGION IV
MAR 20 1952
BUREAU OF MINES
DENVER, COLORADO

Mr. J. H. East, Jr.
Regional Director Bureau of Mines
224 New Custom House
Denver 2, Colorado

Subject: I-DMA-E2

Dear Mr. East:

Exploration under Contract I-DMA-E2 has accomplished the following since Government participation on the project:

On the lower or Akron level, 1890 feet of drift and cross cut have been driven. Drifting north from the last cross cut has exposed a 50 foot long mineralized zone. This is along the footwall contact of the Porphyry dike. It averages about 3 feet in width and will average 5% Zn., 5% Pb. and 3½ oz. Ag. Under present conditions this cannot be mined profitably. It is encouraging however, and we now propose to go ahead with raise exploration as listed under item 2 of the original contract.

Morning Star rehabilitation has opened up all necessary main level work and the south Morning Star Winze. This is draining through low level work with the water at present at a point 180 feet down the dip below the main level. This Winze has two levels at 100 foot intervals with the lower level, which is 400 feet up the dip from present Akron tunnel drifting, the location of the last mining done in the Morning Star. Local history indicates that leasers had just opened up an ore body on this lower level when they were forced to quit work by termination of their lease. The Winze is in excellent condition and should require no major repair for some time.

The mineralized zone on the Akron level lines up fairly well with the projection of Morning Star ore but is on the footwall of the Porphyry while the greater part of the Morning Star ore was removed from the Dike hanging wall, on the Porphyry Granite contact.

Mineralization located on the lower level has been encouraging enough so that we believe that an amendment to contract I-DMA-E2 is justified and propose the following program:

1. The original contract provides for a raise to explore the area between the Akron level and the Morning Star. Sufficient finances are not available to complete this work nor is time adequate since the original contract expires in June of 1952.

The original contract specified $120,000.00. Expenditures total $ 102,186.11 through February 29, 1952. We estimate about $ 11,000.00 costs for March leaving about $ 7,000.00 of the original fund for April expenditures on raising.

An exploration raise has been started to intersect the structure midway between the Akron level and the lowest level on the Morning Star. It is being taken up in the footwall limestone as the contact which dips at

at about 40 degrees is too flat to carry a working opening the required distance to adequately explore the area.

From the top of the first raise section 200 feet up the dip above the Akron level, a cross cut would be driven to a point in line with the Morning Star Winze and the second section driven for connection. This connection is extremely important as the first step in the program due to the following facts.

A. It is becoming encreasingly difficult to supply adequate ventilation by mechanical means.

B. The opening would allow compressor installation at the Morning Star to augment existing compressed air supply which now is carried almost 1½ miles from the Akron Portal to present working faces.

C. Rehabilitation of the lower winze level would be a great deal more economical with service from the Akron level.

This first step in continued exploration would require 390 feet of raise and 120 feet of cross cut.

2. The next work undertaken would be rehabilitation of the lower winze level in the Morning Star. We estimate a maximum of 200 feet of drift has been driven here.

3. In conjunction with rehabilitation work above 400 feet of sub-level drift would be driven north along the contact from the top of the first raise at the halfway point between Morning Star and low level work. This would cut the mineralization exposed on the Akron level approximately 200 feet up the dip.

4. Complete the connection between cross cuts along the footwall of the dike on the main level. Mineralization is still present in the north drift face and continuation of the heading is an excellent prospect as well as desireable from the stand point of improved ventilation.

The first and fourth items would be done in conjunction with raise work given preference. Steps 2 and 3 could also progress in a like manner, setting the time estimate on the job at 12 months.

Cost estimates for the work are attached.

Very truly yours,

CALLAHAN ZINC-LEAD COMPANY

J. E. Dunn
Superintendent

JED:ds
encl.

RAISING

TWO COMPARTMENT RAISE (4" x 8" cribbing not lined)

Labor,	390 ft. of raise @ 25.32	$ 9,874.80	
Supplies	390 ft. of raise @ 10.53	4,106.70	
Social Security, Compensation Insurance		444.37	
Total Direct Cost		14,425.87	
Indirect Cost		6,347.38	
Total 390 feet of Raise @ 53.26			$ 20,773.25

DRIFTING AND CROSS CUTTING

Labor,	745 ft. Drift & Cross Cut @ $ 25.00	18,625.00	
Supplies	745 ft. Drift & Cross Cut @ 10.00	7,450.00	
Social Security, Compensation Insurance		838.13	
Total Direct Costs		26,913.13	
Indirect Cost		11,841.77	
Total 745 feet of Drift @ 52.02			38,754.90
Stations,	4 @ $ 1,000.00		4,000.00

REHABILITATION MORNING STAR LOWER LEVEL

Labor,	200 ft. @ $ 20.00	4,000.00	
Supplies	200 ft. @ 8.00	1,600.00	
Social Security, Compensation Insurance		180.00	
Total Direct Cost		5,780.00	
Indirect Cost		2,543.20	
Total 200 feet of Drift @ 41.62			8,323.20

MAIN LEVEL REPAIR AND MAINTENANCE

Probable repair cost Akron level between Akron Mine and Morning Star to May 1952-	5,000.00

EQUIPMENT RENTAL

The following items of equipment will be used in addition to that already listed on Contract I-DMA-E2:

2- 1 ton air hoists	value	$ 2,000.00 @ 33.33 per mo.	
1- air driven blower	value	200.00 @ 3.33 per mo.	
1- air receiver	value	250.00 @ 4.16 per mo.	
1- 16 cu.ft. Level car	value	161.00 @ 2.68 per mo.	
Estimated additional equipment used and listed under original contract		@360.84 per mo.	
Total Rental per month		404.34	
Total Rental 12 months period			4,852.08

Following equipment in use last five months of contract.

1- 440 cu.ft. Compressor w/75 H.P. motor	value	$ 6,000.00 @ 100.00 per mo.		
1- 15 H.P. Electric Hoist	value	2,400.00 @ 40.00 per mo.		
Total Rental per month			140.00	
Total Rental 12 month period				$ 1,680.00
Overall Total Cost				$ 83,383.43
Funds remaining under original contract as of start of first Raise station March 20th.				10,000.00
Total additional funds required				$ 73,383.43

LARGE FORMAT DOCUMENTS AT END OF FILE

Small 110X

Mr. J. M. East, Jr.
Executive Officer, Region IV
Field Team
[illegible] Sanitation Building
Denver 2, Colorado

Re: Docket No. DSA 1311 - Uranium
The Realty Company - Ida-175
Docket No. DSA [illegible] - Lead-Zinc
Sherwood E. Owen - Ida-210
Docket No. DSA 1108 - Lead-Zinc
Sullivan Diamond Co. - Ida-[illegible]

Dear Mr. East:

Reference is made to the memorandum of January 4th, of Mr. Ellsman to you, [illegible] interpretation of certain provisions in the above-named contracts.

In connection with contract Ida-175, Docket No. DSA 1311 with The Realty Company, it is pointed out that the cost for Stage I was omitted. In Exhibit A under the caption on page 2 entitled "Stage I", it is stated "1. Mine Rehabilitation and Repairs", and, "2. These costs are included elsewhere". From the description of the work and the detailed estimated cost items, Stage I should amount to approximately the following estimated cost.

Stage I

1. Overhaul average equipment from Rehabilitation and Repairs	[illegible]
2. Purchase 600 feet of 3" pipe and fittings	450.00
Power @ $944.44 per month, 2 months	1,[illegible]
Supervision @ $[illegible] per month, 2 months	[illegible]
Total	$[illegible]

Review of the Field Team and Supply Division recommendations shows that no specific item for labor was included for the deepening of the shaft. Generally, it was taken for granted by everyone that the cost partly was included in the $1,000.00 item "Overhauling the present equipment", supervision allowance, and in the costs of the subsequent development. If this supposition is in conflict with what was intended, it may be necessary to add an amendment to the contract.

With respect to Contract Ida-210, Docket No. DSA [illegible] with Sherwood E. Owen, we are enclosing maps which fully show the work to be performed and which we believe will clarify the language used in describing

the work to be performed under the contract. "Crosscutting and raising is to be done with the best interests of exploration rather than development in mind", as stated, is interpreted to consist of such work to be done on favorable indications encountered in the drifting with the object of further exploration rather than development, and subject to approval of the Field Team.

As to the use of the word "estimated" in connection with labor and supervision, that should be interpreted as indicating the rates per day at the time of application. The actual rates for this classification may be lower than the figures set forth in the contract, but the figures set forth in the contract are maximum figures as provided by Article 8 of the contract. In other words, payment is allowed for actual cost of the labor but is not to exceed the figures set forth in the contract for this type of work. If the figures shown are too low, an amendment to the contract will be required to increase those rates.

As to the use of the word "indirect" in connection with labor costs under Contract [illegible], Docket No. DMEA 110 with the Callahan Mineral Company, you will note that the costs are stated to be partly for work performed for purposes of exploration and partly for development. This is clarified by the sentence following which states that, "The cost to the exploration is based on the pro-rata tons of material handled". Accordingly, the only costs allowable in connection with labor would be the cost of exploration determined by pro-rating the cost incurred from work which benefits both exploration and production. No indirect costs are intended to be allowable in connection with this contract.

Sincerely yours,

C. O. Mittendorf

Acting Administrator
Defense Minerals Exploration
Administration

Enclosures

DEMoulds/mah 1/21/52
cc to: Adm. R. File
Docket File Copy
Mr. Selfridge
Mr. Moulds
Mr. McKnight
Mr. Bishop
Region IV
Copy for docket file DMEA 399X
Copy for docket file DMEA 110X

FILE COPY
SURNAME:

400
Mittendorf

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

AUG 20 1951

Q. E. C.

Memorandum

TO: Reports and Records

FROM: Production Expansion Division

SUBJECT: Docket No. 110
Contract I-DMA-E2
Callahan Zinc-Lead Company

Herewith please find copy of Landlord's Subordination Agreement and copy of letter from Mr. James Boyd, Administrator DMA, to Mr. Joseph T. Hall, President, Callahan Zinc-Lead Company relative to subject Exploration Project Contract.

Kindly attach documents to copy of contract previously sent to you.

C. O. Mittendorf (H. Sh.)

C. O. Mittendorf, Director
Production Expansion Division

Attachments-2

J.F. 8/20

DEMoulds/bjs
8/16/51
cc to: Mr. Mittendorf, Mr. Olund
Reports and Records
Mr. Moulds
Docket copy

FILE COPY
SURNAME:

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

AUG 20 1951

A.E.C.

Mr. Joseph T. Hall,
President
Callahan Zinc-Lead Company
100 Park Avenue
New York 17, New York

Re: Docket No. 110
Contract I-DMA-E2

Dear Mr. Hall:

Herewith please find copy of Landlord's Subordination Agreement covering subject exploration contract and approved as per letter of July 17, 1951 signed by Mr. James Boyd, Administrator.

Kindly attach to your copy of the contract.

Sincerely yours,

C. O. Mittendorf (J.M.)

C. O. Mittendorf, Director
Production Expansion Division

J.F. 8/20

Enclosure-1

DEMoulds/bjs
8/16/51
cc to: Adm. Reading File
Reports and Records
Moulds
Mittendorf-Olund
Region ~~VIII~~ IX (2)
Docket copy
Chron. copy

FILE COPY
SURNAME:

Moulds
Mittendorf
400

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

AUG 20 1951

a. E. C.

Contract Service Section
General Accounting Office
Washington 25, D. C.

Re: Docket No. 110
Contract I-DMA-E2
Callahan Zinc-Lead Company

Gentlemen:

Herewith please find one copy of Landlord's Subordination Agreement and a copy of letter from Mr. James Boyd, Administrator DMA, to Mr. Joseph T. Hall, President, Callahan Zinc-Lead Company, relative to the subject Exploration Project Contract.

Kindly attach documents to your copy of the contract.

Sincerely yours,

C. O. Mittendorf (J.M.)

C. O. Mittendorf, Director
Production Expansion Division

J.F. 8/20

Enclosures-2

DEMoulds/bjs
8/16/51
cc to: Adm. Reading File
Reports and Records
Mr. Mittendorf, Mr. Olund
Mr. Moulds
Region IV (2)
Docket copy
Chron. copy

FILE COPY
SURNAME:

Mittendorf
100

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

Mr. J. H. East, Jr.
Executive Officer
DMA Region IV
Bureau of Mines
224 New Customhouse Building
Denver 2, Colorado

AUG 20 1951

A. E. C

Re: Docket No.110
Contract I-DMA-E2
Callahan Zinc-Lead Company

Dear Mr. East:

Herewith please find two copies of Landlord's Subordination Agreement and copy of letter from Mr. James Boyd, Administrator DMA, to Mr. Joseph T. Hall, President, Callahan Zinc-Lead Company, relative to the subject Exploration Project Contract.

Kindly attach documents to your office copy of contract and transmit the other to the Regional Finance Officer.

Sincerely yours,

C. O. Mittendorf

C. O. Mittendorf, Director
Production Expansion Division

J.F. 8/20

Enclosures-4

DEMoulds/bjs
8/16/51
cc to: Adm. Reading File
Reports and Records
Mr. Mittendorf, Mr. Olund
Mr. Moulds
Region IV
Docket copy
Chron. copy

FILE COPY
SURNAME:

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

July 20, 1951

Memorandum

To: Administrator, DMA

From: Acting Chief, Housing and Utilities Branch, Requirements Division, DMA

Subject: Callahan Zinc-Lead Company

Yesterday afternoon I received from your office a letter dated July 13 from Mr. Joseph T. Hall, President, Callahan Zinc-Lead Company, addressed to you with a memorandum attached setting forth a plea for relief from the sale by the Government of lots on which the company has erected $70,000 worth of dwellings.

By conferences with Mr. William Zimmerman, Jr., Assistant Director, and Mr. William O. Hancock, Chief, Branch of Land Use of the Bureau of Land Management, I was able to have the sale scheduled for August 13, 1951 rescinded and am now working with Mr. Hillman of B.L.M. toward an equitable agreement whereby Callahan can acquire title to these lots and have reasonable assurance this can be done.

I advised Mr. Hall by phone of the sale rescission.

I thought you might like to know this in the event they further contact you.

SIGNED
7/20

Stanley M. Walker

SMWalker:mc

Copies to: Adm. Reading File
Mr. Strobel
Mr. Montag
Mr. Walker
Files

FILE COPY
SURNAME:

Hofflund
Mitt
Mittendorf
Strobel 7/18

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

July 17, 1951

Mr. Joseph T. Hall, President
Callahan Zinc-Lead Company
100 Park Avenue
New York 17, New York

My dear Mr. Hall:

Reference is made to your letter of July 2 to Defense Minerals Administration, relating to your exploration project contract DMA-110.

Inasmuch as you have now furnished the subordination agreements required under Article 2(b) of the contract form, you are therefore advised that Appendix II, which was given in lieu of such subordination agreements, is now null and void as provided in the terms and conditions thereof.

Sincerely yours,

JAMES BOYD

Administrator

JLHofflund/em

Copy to: Adm. Reading File
L. F. Strobel
C. O. Mittendorf
J. L. Hofflund
Files
Reg. IV (2)
GAO, Contract Service Section

FILE COPY
SURNAME:

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

July 17, 1951

Mr. Joseph T. Hall, President
Callahan Zinc-Lead Company, Inc.
100 Park Avenue
New York 17, New York

Dear Joe:

Reference is made to your letter to me of July 11 in reply to mine of June 12, which in turn was in reply to yours of June 5, relating to DMA-110 and DMA-1225X.

I regret that you think that the regulations governing Government aid in defense exploration projects (MO-5) are not all that they should be, but should be amended to allow as a credit work performed before the date of an exploration project contract. As indicated to you in my letter of June 12, I am unable to agree with you on this point.

In your letter of July 11 you refer to what seems to you ". . . a governmental attitude designed to discourage its friends . . ." I suppose that the best friends of the Government are its citizens--all of them; not merely those who desire to have or receive some special benefit from the Government.

If the Defense Minerals Administration should act upon the applications that involve large projects to the exclusion of the numerous small operators, this might leave many of the small operators out in the cold. Of course, the big operators are in better position than the small operators to present their applications in good shape and have them enacted upon; but Congress has made it plain that it desires the small operators to have special consideration and to have their applications acted upon as rapidly as possible. With this in view, this Administration is endeavoring to process the applications of small operators in due course, and particularly to give them preference over the applications of larger operators who already have one exploration project contract. This is not to say that applications are determined exclusively on the basis of whether they are large or small or whether the applicant already has a contract with the Government, but rather that these are necessary elements for consideration in carrying out the Defense Production Act for the promotion of the production and supply of

JLHofflund/em
Copy to: Administrator's reading file
L. F. Strobel
C. O. Mittendorf
J. L. Hofflund
Files

strategic and critical minerals and metals. Of course, the urgency for the supply of the particular metal or mineral which is the subject of the application is also a matter of prime consideration.

Sincerely yours,

Administrator

FILE COPY
SURNAME:

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

July 16, 1951

Memorandum

To: Mr. C. O. Mittendorf

From: General Counsel

Subject: Callahan Zinc-Lead Company, DMA-110

Reference is made to your memorandum to me of July 13 to which was attached the letter of Callahan Zinc-Lead Company of July 2, with subordination agreements offered for the purpose of replacing Appendix II. Attached is a form of letter for the signature of the Administrator to Callahan Zinc-Lead Company acknowledging the receipt of the subordination agreements and that their effect is to render Appendix II null and void,. copies of the letter to be attached to all copies of the contract inasmuch as the letter becomes a part of the contract.

J. L. Hofflund

J. L. Hofflund

Attachment

JLHofflund/em
Copy to: Adm. Reading File
L. F. Strobel
J. L. Hofflund
Files

DMA 110

Memorandum from
JOSEPH T. HALL

7-11-51

Jim:

I don't propose to drop this one — I think our position is equitable and the objections raised to date not tenable.

I know you are all busy and I hate to burden you further, but I feel strongly on the subject and think that from the Government's point of view there is a lot more to the situation than our case —. It is an attitude which will progressively stifle the very elements in the country which must thrive —.

Jo

LANDON F. STROBEL

CALLAHAN ZINC-LEAD COMPANY, INC.
100 PARK AVENUE
NEW YORK 17, N.Y.
OREGON 9-1300

ans. 7/18/5
GLH/lje
Jem

OFFICE OF THE PRESIDENT

July 11, 1951

Defense Minerals Administration
RECEIVED
JUL 13 1951

LANDON F. STROBEL
Executive Secretary

Mr. James Boyd, Director
Bureau of Mines
Interior Building
18th & 19th and E Streets
Washington 23, D.C.

Dear Jim:

We have given a great deal of thought to your letter of June 12, 1951 in which you set forth reasons for denying our request for a change in "Regulations governing Government Aid in Defence Exploration Porjects" to permit allowance of the cost of work performed at our Akron Unit prior to the date of our contract, DMA-110.

Your reason for denying our request appears to be that it is too difficult to determine the intent in such cases. You state that the "Government cannot tell what is in men's minds--." It can do so, I believe, with greater accuracy than it can tell what ore is beneath the surface of the earth. I cannot see that the determination of intent in the few cases involved is as difficult as the determination of the merit of the exploration programs presented. You further state "if the Government is to participate in the cost of work previously performed in one case it must participate in work previously performed in all cases." This seems as illogical to me as if you were to state "if the Government grants one exploration application, it must grant all applications." The evidence presented can surely be judged in the former as well as the latter instance.

In the case of our Akron project DMA-110, the record clearly shows that we called upon the Bureau office in Denver and that I phoned your office in Washington before the project was seriously considered and that both calls were made as a result of the Government announcement of exploration aid. We should not have proceeded as we did at the time without expectation of Government participation and the record is clear on this and can be amplified and presented.

It seems apparent to me that it would be a relatively simple matter to ascertain the intent in the few cases claiming such. This history as known to you surely does not support in our case the statement that "the fact that work has been performed or is in progress at the time an application for aid is filed is in itself a pretty good indication that such work would have been undertaken without the benefit of the program." Under the circumstances cited in my letter of June 5, 1951 to you, I cannot agree that the denial is fair.

BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.
JUL 13 1 19 PM '51

The answer you have given supports a growing feeling that the Government, domestically as well as abroad, has a decided policy of helping its enemies rather than its friends. Under the philosophy set forth we should have fared better had we sat in inactivity for six months and wasted the months required to formulate regulations. We took, as we told you, the risks that you might not approve our program and that the Government aid program might never jell. For patriotically risking ourselves, we now find a "regulation" is promulgated penalizing us for our troubles.

In further evidence of what seems to us a governmental attitude designed to discourage its friends, we now have a letter from Mr. Herres in answer to an inquiry about our Erie Project DMA-1225X stating "were notified----to set aside additional projects presented by applicants that already had received exploration contracts". This project was presented in Washington by our Mr. Flynn in May and was reviewed with several of your staff to be sure that it contained all required information. We have been assured that it would be studied "within the week" three times. And now we learn that because we have had one project approved, any others from us go to the bottom of the pile. Isn't it reasonable as you look for meritorious projects that those whose past presentations have proved acceptable are more likely to present others of merit and at least should receive equal treatment?

Our Erie project is at an elevation of over 10,000 feet and the indicated delay may well make it impossible of commencement this year, for preparatory work must start before Fall weather. In the light of our experience to date, we are certainly not going to take even preliminary steps to get ready until the papers are all signed and delivered.

It seems to me that your regulations are eminently unfair as is the office procedure of "setting aside" applications such as our Erie DMA-1225X. Such actions can be expected to discourage the cooperation of those elements in the industry who learn by experience that cooperation is one-sided and the laggard "play-it-safe" boys come off best.

I am sure that you desire the cooperation and good-will of the industry. I sincerely hope that the Government will review its position and take the steps necessary to correct what seem clearly serious inequities. The resolution presented by Mr. Bradley at the May 9th meeting of the National Minerals Advisory Council as quoted on Page 6 of the Minutes, and copy of which is attached for convenience, clearly points the way to correction of the problem we raise as to DMA-110.

Very truly yours,

Joseph T. Hall

JTH/g
Enc.

EXCERPT FROM NATIONAL MINERALS ADVISORY COUNCIL
MINUTES OF MEETING OF MAY 9, 1951

"Mr. Bradley, Chairman of the Committee, reported that the following resolution had been approved:

RESOLVED, That the Defense Minerals Administration's exploration financing program be amended to allow more flexibility and liberality in computing an applicant's "matching" share by permitting expenditures already made by the applicant for work in progress or work performed and suspended to be considered as a credit toward the applicant's "matching" amount: PROVIDED, That such work was started during or subsequent to September, 1950 as a result of Governmental publicity urging increased mineral production;

PROVIDED FURTHER, That such work must evidence a reasonable continuity with the work for which funds are requested; and

PROVIDED FURTHER, That no Government funds shall be used on any such project unless it meets with the approval of engineers of the Geological Survey or Bureau of Mines."

FILE COPY
SURNAME:

Moulds

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

July 13, 1951

Memorandum

TO: Mr. John L. Hofflund
General Counsel, DMA

FROM: C. O. Mittendorf, Director
Production Expansion Division

SUBJECT: Docket No. DMA-110
Callahan Zinc-Lead Company

The subject Docket covering Exploration Project Contract No. I-DMA-E2, executed May 25, 1951, contains Appendix II which was used in lieu of the Landlord's Subordination Agreement Form MF-202 due to unavoidable delay in securing landlord's signature to Form MF-202. Appendix II states that in event the Subordination Agreements are furnished and made a part of the contract, Appendix II shall be null and void.

The Callahan Zinc-Lead Company under date of July 2, 1951 have furnished Landlord Subordination Agreements covering the owners of the 46 mining claims on which, along with the 31 mining claims wholly owned by Callahan Zinc-Lead Company, the exploration project is to be conducted. The company also requests that Appendix II be declared null and void and to be so advised.

The company's letter of July 2, 1951, Subordination Agreements by The Hayden Mining Company and Lyyle Aho, Leo E. Oberto and S. J. Oberto all being co-owners of the property, along with copy of Lease and Option and file copy of Exploration Project Contract are herewith transmitted to you for the action required to fulfill the request of the subject company.

DMA 110

DEMoulds/ecl

C. O. Mittendorf

cc to: Messrs. Mittendorf
- Olund
Hofflund
Strobel
Herres
McKnight
Moulds
F I L E S

C. O. Mittendorf

2858

CALLAHAN ZINC-LEAD COMPANY, INC.
100 PARK AVENUE
NEW YORK 17, N.Y.
OREGON 9-1300

OFFICE OF THE PRESIDENT

July 2, 1951

ans. 7/16/51
G.H.Jem

Defense Minerals Administration
Department of the Interior
Washington 25, D.C.

Re: DMA-110

Gentlemen:

DMA-110 covering an exploration project at our Akron property was executed on May 25, 1951.

In the absence of an executed subordination agreement of lessor at the time of signature of DMA-110, Appendix II was included. We now have received and send you herewith three executed copies of Landlord's Subordination Agreements executed on the one hand by the Hayden Mining Company and on the other by Lyyle Aho, Leo E. Oberto, and S.J. Oberto.

Since we have now furnished you with the subordination agreements required under paragraph 2(b) of the contract, will you please advise us that Appendix II is null and void, as provided.

Yours very truly,

CALLAHAN ZINC-LEAD COMPANY

Joseph T. Hall

Joseph T. Hall
President

JTH/g
Enclosures

cc: Mr. J.E. Dunn
Mr. R.F. Mahoney
Haney & Howbert

FILE COPY
SURNAME:

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

Hoffman
Weidendorf
Strobel 6/13

June 12, 1951

Mr. Joseph T. Hall, President
Callahan Zinc-Lead Company, Inc.
100 Park Avenue
New York, 17, New York

Dear Joe:

In your letter to me of June 5 you recommend that our "Regulations governing Government Aid in Defense Exploration Projects" should be amended to permit the allowance of the cost of work performed prior to the date of the exploracontract, or else to allow exceptions or some other arrangements to correct what you consider to be inequities with respect to work previously performed.

You may be sure that in formulating the program due consideration was given as to whether credit should be allowed for work already performed or in progress. In this connection it should be noted that the purpose of the Defense Production Act and of the exploration program under the Act is to procure the performance of exploration that would not have been undertaken without the aid provided by the program. The fact that work has been performed or is in progress at the time an application for aid is filed, is in itself a pretty good indication that such work would have been undertaken without the benefit of the program. It might even be argued that no aid should be given to a project in progress or that apparently would have been performed without Government aid. We chose what seemed to be the more reasonable and fairer course of simply disallowing for credit work already performed.

It does not seem practicable to treat one applicant for aid under the exploration program any different from any other applicant. The Government cannot tell what is in men's minds when they start an exploration program; whether any given project was induced by Governmental publicity or by the urge to seek a profitable discovery of ore.

You yourself say, with respect to your conversation with Tom Miller on September 28; "He [Mr. Miller] could, of course, give no guarantees because regulations are not formulated . . . he saw nothing but gain in our proceeding since I told him that we did so at our own risk and would have no claim if the Government program failed to materialize or if our project was not approved".

It may be that yourself and some other producers would not have started a particular exploration project at the time they did start it if they could have been sure when the Government would promulgate an exploration program under which the particular exploration project would have been eligible for aid. This does not seem to provide a sufficient reason for the Government, after the promulgation of the exploration program, to participate in the cost of that work already performed, and not at the same time participate in the cost of every other exploration project that may have been started after the effective date of the Defense Production Act. In other words, it seems to me that if the Government is to participate in the cost of work previously performed in one case it must participate in work previously performed in all cases, on the same basis. I do not think that this would carry out the intents and purposes of the act, which as I understand them, are to induce and aid new exploration work, not work previously performed, or that would have been performed anyhow.

I thank you for your suggestions, although I am not able to agree with them, and will always be glad to hear from you on the administration of the program and also with respect to your own exploration project.

Sincerely yours,

JAMES BOYD

Administrator

JLHoflund/ema

Copy to: Administrator's Reading Files
L.F.Strobel
J.L.Hoflund
C.O.Mittendorf
Chron.
Files

LANDON F. STROBEL

Mr. Boyd

DMA 110X

CALLAHAN ZINC-LEAD COMPANY, INC.
100 PARK AVENUE
NEW YORK 17, N.Y.
OREGON 9-1300

Re-routed 6/8/51 Mr. Mattendorf

OFFICE OF THE PRESIDENT

June 5, 1951

ans. 6/12/51 JLH/ema

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 7 1951
LANDON F. STROBEL
Executive Secretary

Mr. James Boyd, Director
Bureau of Mines
Interior Building
Between 18th & 19th and E Sts.
Washington 23, D.C.

Dear Jim:

As you know, Project A for our Akron property was signed on May 25th after we had brought Jim Flynn East to complete all details in Washington.

As I understand it the regulations as now interpreted preclude government participation in exploration costs prior to the date of the contract. I have discussed with you our problem in this connection and feel that we have reasonable basis for stating that an inequity exists in this instance. In this letter I should like to place our position before you formally.

As soon as possible after the government announced its determination to encourage exploration by lending financial assistance to mine operators, Jim Dunn, our Colorado Superintendent, called upon the Bureau of Mines in Denver to present a project which was subsequently called Project A. He advised Frank Mahoney who wired me on September 27, 1950 as follows:

> "DUNN PHONED THAT BUREAU VERY RECEPTIVE SOUTH PROGRAM BUT NO DEFINITE WORD FROM WASHINGTON EXPECTED FOR THIRTY DAYS. DUNN WILL TRY SEE RUDER THURSDAY"

On the following day, September 28th, I telephoned Washington and, in your absence, talked to Tom Miller. Regarding this call I wrote Frank Mahoney a memo on September 29, 1950 from which I quote:

> "After receiving your encouraging telegram yesterday about Dunn's Denver visit, I telephoned Miller again. You have doubtless seen the press release describing the general organization of the Department of the Interior and the placing of the minerals program under Boyd.
>
> As expected, Miller told me that the operating details were in process of formulation and Bureau men were working with R.F.C. on regulations, etc. He was unable to make any prediction on when they would be ready to go into action.

MAIL ROOM
WASHINGTON, D.C.
JUN 6 2 10 PM '51

The chief purpose of my call, however, was to ask him whether we could get started on the Akron South program and not have this prejudice future action. Might we include in project funds expenditures made in anticipation of the government program? He said they'd been asked a thousand questions but never this one before.

He could, of course, give no guarantees because regulations are not formulated. He conferred with others in his office in answering me. He stated that certainly it was in the national interest to proceed with exploration to make metals available at the earliest possible date. He saw nothing but gain in our proceeding since I told him that we did so at our own risk and would have no claim if the government program failed to materialize or if our project was not approved. He said that he and his men would keep well in mind the problem I raised while working on regulations. Certainly such prior outlays on a project should be included in a subsequently approved program.

I believe that this conversation gives us a strong position and that we are warranted in proceeding on the assumption that whatever we spend in advance of a program approval will fall within a subsequently approved project."

We started placing orders for track, pipe, and equipment before mid-October. Actual work on the project commenced on October 22nd.

On October 13th, Mr. Allsman wrote to Jim Dunn indicating the type of information required in submitting a project. In a letter dated November 22, 1950, an application was made to the Bureau in Denver for government aid. We received acknowledgment of receipt of this application in a letter dated December 7, 1950 from Charles W. Merrill.

I doubt if it would add much to list here the information we received about the Project's going to Washington, being returned to Denver, returning to Washington etc. The governing fact in delay was, I believe, the time consumed in formulating policy and regulations governing the program. You will recall that I talked with you on the progress of the program on several occasions and advised that we were proceeding at Akron.

The purpose of this letter is not to criticize the Government for the months consumed in effectuating the policies established last September. It was far too long a process for a program to which such urgency was attached, but the obstacles to final agreement were great.

I do wish to express strongly our feeling that it is eminently inequitable to penalize by regulation a company such as ours for stepping out to do the job which was considered urgent. We recognize that we may have no legal grounds for claim but we feel that we have every moral ground for asserting that it is unfair to reward those who selfishly do nothing in time of stress as opposed to those, like ourselves, who take the risk for the national good.

While the regulations may not, as now written, make us eligible to request government participation in expenditures on Project A at Akron prior to May 25th, new regulations or exceptions or other arrangements should be made to correct such inequities. Unless the industry is made to feel that it is receiving a square deal, full cooperation cannot be expected. In such a case, the present regulation is designed to discourage the patriotic who are willing to risk in the nations interest.

I hope that you can soon write me that steps have been taken and that we may request participation of the government from the inception of Project A. I think we've done our part. The government should do its.

With best wishes.

Sincerely,

Joseph T. Hall

Joseph T. Hall

JTH/g

FILE COPY
SURNAME:

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

May 25, 1951

Memorandum

To: Mr. C. O. Hittendorf

From: General Counsel

Subject: Exploration project—Callahan Zinc-Lead Company, Docket No. DMA-110

This office has reviewed the above subject case and finds it to be in satisfactory form. Accordingly, contract may be presented to the Administrator for execution.

J. L. Hofflund

J. L. Hofflund
General Counsel

Attachment

CJKoontz/em

Copy to: J. L. Hofflund
C. J. Koontz
L. F. Strobel
Files

FILE COPY
SURNAME:

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

OCM Mittendorf

May 25, 1951

Mr. R. J. Hall, President
Callahan Zinc-Lead Company
100 Park Avenue
New York 7, New York

Re: Docket No. 110 - Lead-Zinc
Exploration Project Contract

Dear Mr. Hall:

Herewith is your copy of the duly executed contract for the Morning Star-Victor exploration project, Docket DMA-110, exploration project Contract I-DMA-E2.

Your representative, Mr. R. James Flynn, has been given copies of the Progress Report, which are to be filled out and presented to the Executive Officer, Defense Minerals Administration, Region IV, 224 New Customhouse Building, Denver 2, Colorado, as soon as possible after the first full calendar month of work and monthly thereafter. The expenditures certified on this report will constitute the basis for the payment of the Government's share to a maximum of $60,000.

Please notify Mr. J. H. East, Jr., Director of the Denver office, of the starting date of work under this contract.

Sincerely yours,

C. O. Mittendorf, Director
Production Expansion Division

Enclosure-1
DEMoulds/fw Admr Reading File
cc to: Field Team Reg. IV (2)
Mr. Mittendorf, Mr. Olund
Mr. Strobel
Mr. Herres
Mr. Rove
Mr. Moon
GAO
Finance Sec., Bu.Mines
Mr. Moulds
FILES

DMA 110

CALLAHAN ZINC-LEAD COMPANY, INC.
100 PARK AVENUE
NEW YORK 17, N.Y.
OREGON 9-1300

OFFICE OF THE PRESIDENT

May 24, 1951

Mr. James Boyd, Administrator
Defense Minerals Administration
Department of the Interior
Washington, D.C.

Dear Mr. Boyd:

The Board of Directors of Callahan Zinc-Lead Company, Inc. adopted and passed a resolution today, May 24, 1951, authorizing and directing Mr. R. James Flynn, Assistant Superintendent, Akron Unit of this firm to execute on behalf of our Company an exploration project contract designated Docket No. DMA-110, between the Government and this Company. You are accordingly advised that the execution of this contract by Mr. Flynn constitutes an authorized and binding act upon this Company.

Yours very truly,

CALLAHAN ZINC-LEAD COMPANY, INC.

Joseph T. Hall

Joseph T. Hall
President

JTH/g
cc: Mr. R.J. Flynn

FILE COPY
SURNAME:

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

May 18, 1951

Memorandum

To: C. O. Mittendorf, Director, Production Expansion Division

From: D. E. Moulds

Subject: Docket DMA-110 - Callahan Zinc-Lead Company
New York, N. Y.
Exploration Project, Akron Unit

The subject application was presented for a Government loan to assist in exploration and development of the Morning Star-Victor Mines and was dated November 22, 1950. The Field Team examined the project and forwarded recommendation under date of April 26, 1951. The Lead-Zinc Branch forwarded docket and recommendation to the Production Expansion Division under date of May 9, 1951, and it was received May 14, 1951. A call was made to Mr. J. T. Hall, President of the subject company, on May 15, advising him of additional information required for certification of the project.

Criteria

(a) Lead and zinc are strategic metals as defined under MO-5 for exploration project aid.

(b) The property consists of a producing unit (Akron-North Star-Erie) which is mining and concentrating 1,400 tons monthly of ore averaging 4.5 oz. silver, 4.2% lead, and 6.3% zinc and accomplishing critical metal production. The reasonably assured ore reserves remaining in this unit are stated to be 10,000 tons of slightly higher-average grade than present milling average. The ore bodies occur as replacement masses in limestone and dolomite along the axis of porphyry intrusives and fault planes. Approximately 2,000 feet south of the present producing area is another favorable ore zone which in early days was worked by shaft and tunnel with a production, from available records, of 5,256 tons of ore averaging 16.4 oz. silver, .60% copper, 15.7% lead, and 21.6% zinc. This production, all prior to 1925, was from workings to a depth of 324 feet and from two separate ore shoots.

FILE COPY
SURNAME:

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

Memorandum C. O. Mitchell

May 9, 1951

Re: Docket DMA-110

To: Production Expansion Division

From: Lead-Zinc Branch, D. M. A.

Subject: Approval of exploration loan
Callahan Zinc-Lead Company
100 Park Avenue
New York 7, New York

B. Akron Unit
Tomichi Mining District
Gunnison County, Colorado

C. Conclusions

(1) This project has good possibilities of discovering and developing zinc-lead reserves sufficient to keep the mill facilities supplied with ore, at a rate of 1200 to 1500 tons of ore per month, for a considerably longer period than can be anticipated from the presently known reserves. The continuous production from this mine will be important in the national zinc-lead supply by making an important contribution to the metal production expected from the Colorado region.

(2) The project proposed represents a logical approach to the possible production of inferred ore in this area. The past experience of the company in mining and exploring under similar conditions indicates that any technical problems that might be encountered can best be solved by this method of exploration.

(3) The list of additional equipment required for the project is small and it is assumed that the company is in a position to acquire the materials without difficulty.

(4) The project qualifies for the participating exploration program established by the Defense Minerals Administration.

(5) The company has a reputation in the mining industry as one indicative of good management.

D. This property was examined by engineers and geologists attached to the Field Team Office. Their respective recommendations are contained in the accompanying field report. The Lead-Zinc Branch concurs in part with the field team recommendation. The amount of the loan recommended for approval by the field team is $120,682. This being the part of the $205,874 requested, considered by them as exploration. The remainder $85,192, was interpreted as funds to be allocated for direct development purposes in the Victor-Morning Star area.

The Lead-Zinc Branch recommends that the total amount requested ($205,874) be approved as an exploration loan. The work to be done under item (3) of the proposal is interpreted as being in part exploration since at present the locations of ore bodies in this area are unknown. If ore is encountered on the Akron drift level, the work proposed in this area would be development. However, there is reason to believe, because of the irregular occurrence of the ore, that the extension of ore bodies to this level might not exist. Because of these circumstances the total amount requested should be considered for exploration. It is further recommended that a clause be inserted in the contract giving the Government the right to inspect the project upon completion of the Akron drift level to determine (1) if an ore body has been encountered; (2) if more exploration is desirable; (3) if the continuation of the project would be classed as development work. This inspection should provide the necessary data for use in determining if the $85,192 requested could be properly allocated as funds for exploration.

The Callahan Company representative stated in an oral communication that such an arrangement would meet with their approval.

E. The applicant requests a participating exploration loan of $205,874 to drive 1700 feet drift from the Akron mine to a point under the workings of the Victor-Morning Star mines; prospect the Star fault zone with 500 feet drifts and 500 feet of raise; drive 600 feet of raise and 700 feet of drifting to explore the area beneath the Victor-Morning Star mine.

F. It is not expected that this exploration project will increase the ~~total~~ production from the mine or area but will serve to assure a supply of ore sufficient to maintain the present production for a period longer than can now be anticipated.

G. (1) The property has a calculated inferred ore reserve of 64,000 tons, containing 15% Zinc, 11% Lead and 6 ozs. of Silver. The

geologic conditions are such that the success of the project is relatively assured. The inherent risk involved in exploration projects appears to be considerably less than for most projects of this type.

(2) Present production from the property is 1400 tons per month. This rate is expected to continue after the exploration program is completed.

(3) Details covered in engineering report.

(4) Details covered in engineering report.

(5) Lead concentrates are trucked to the American Smelting and Refining Company smelter at Leadville, Colorado. Zinc concentrates are trucked to Salida and then shipped via railroad to the American Smelting and Refining Company smelter at Amarillo, Texas.

(6) The company has assured the Lead-Zinc Branch that the proposed work can be completed within two years.

H. All items are covered in detail in the application and field team report.

I. (2) The amount requested is adequate but not excessive.

(4) Repayment under provisions stated in the exploration program rules.

J. Statements contained in field team report.

K. A conference with Mr. Hall, President of Callahan Zinc-Lead Company, 5/2/51, resulted in conclusions regarding the amount of the loan and the applicant's willingness to participate on an equal basis.

Tom Lyon
ad

Tom Lyon, Director
Supply Division

ALBrokaw:emp
G 5/9/51
Copies to: J. H. East, Jr.
Region IV (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
L. B. Moon
R. H. Mote

L. F. Strobel
T. Lyon
Directors reading file
4214 GSA
Br. reading files
4214 GSA
Files

Mr. Dennis
~~LANDON F. STROBEL~~
Dma-110X

CALLAHAN ZINC-LEAD COMPANY, INC.
100 PARK AVENUE
NEW YORK 17, N.Y.
OREGON 9-1300

OFFICE OF THE PRESIDENT

May 3, 1951

Mr. Thomas Lyons
Director of the Supply Division
Defense Minerals Administration
Department of the Interior
Washington 25, D.C.

Dear Mr. Lyons:

In accordance with our telephone conversation of yesterday, I hand you herewith copy of our letter to Mr. East of November 22, 1950 proposing an exploration program for our Akron property in Colorado. I trust that by the time you receive this you will also have received the original of the application from your Denver office and, if so, would appreciate return of the enclosed which is our New York Office copy.

We are most anxious, as you know, to complete this matter and have a contract in effect. From advices received from your staff, it would appear that we have furnished all necessary information and that there should be no delays in concluding the matter. Please feel free to call me collect if there are any missing items and if need be I should be glad to come to Washington on a moments notice to finalize the matter.

Very truly yours,

Joseph T. Hall
President

JTH/g
Enclosure
cc: Mr. R.F. Mahoney-SF
Mr. J.E. Dunn

MAY 9 1951

BUREAU OF MINES
WASHINGTON, D. C

MAY 4 11 27 AM '51

~~LANDON F. STROBEL~~
Mr. Herres
DMA-110

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

OFFICE OF
REGIONAL DIRECTOR

REGION IV

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

May 2, 1951

Memorandum

To: Otto Herres, Chief, Lead-Zinc Branch, Defense Minerals Administration

From: Executive Officer, DMA Field Team, Region IV

Subject: DMA Docket 110, Callahan Lead-Zinc Company, Akron Unit

As requested in your telegram of May 2, we are sending you the original docket on the above company.

J. H. East, Jr.

J. H. East, Jr.

Enclosure

MAY 9 1951

BUREAU OF MINES
WASHINGTON, D. C.

MAY 7 12 44 PM '51

McKnight 3268

Defense Minerals Administration
14-1110037 Expenses of Def. Prod.Exec
office of Pres. (allot to
Interior) 1951 10.1

McKnight
Herres
Mote

STRAIGHT WIRE

Mr. J. H. East, Jr.
Bureau of Mines
224 New Customhouse
Denver 2, Colorado

We need original docket DMA-110 Callahan Lead Zinc Akron unit to document recommendation for exploration loan.

Otto Herres

OTTO HERRES, Chief
Lead-Zinc Branch

ETMcKnight:emp
G 5/2/51
Copies to: J. H. EAST CONFIRMATION COPY
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
L. B. Moon
R. H. Mote
L. F. Strobel
T.Lyon
Files

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

OFFICE OF
REGIONAL DIRECTOR

REGION IV

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

April 26, 1951

Memorandum

To: Landon Strobel, Executive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: DMA Docket 110, Callahan Zinc-Lead Company, Akron Unit, Tomichi Mining District, Gunnison County, Colorado

On site exam.

We are enclosing the original and two copies of the report on Docket DMA 110.

The Field Team concurs with the findings and recommendations in the report.

P. T. Allsman, Alternate

A. H. Koschmann

Attachments
One copy by air mail
Two copies by regular mail

CALLAHAN ZINC-LEAD COMPANY
AKRON UNIT
VICTOR, MORNING STAR, AND AKRON MINES
GUNNISON COUNTY, COLORADO

DEFENSE MINERALS ADMINISTRATION REPORT
DMA DOCKET NO. 110

APPROVED:

J. H. East, Jr.

A. H. Koschmann

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
JAMES BOYD, ADMINISTRATOR

Mining Division
Region IV

April 26, 1951

Memorandum

To: DMA Field Team, Region IV

From: Chief, Mining Division

Subject: DMA 110, Callahan Zinc-Lead Company, Akron Unit, Tomichi Mining District, Gunnision County, Colorado

The report has been exhaustively reviewed. It is noted that (1) the area of proposed exploration is geologically favorable for finding ore that justify the proposed expenditure; (2) the management is competent; (3) the estimated costs are reasonable and adequate; and (4) the project can be completed in two years. It is, therefore, recommended that the government enter into a contract on a matching fund basis which it is anticipated that the management is willing and financially able to perform.

I concur in the conclusions as presented.

P. T. Allsman

Attachments

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
450 New Customhouse
Denver 2, Colo.

April 5, 1951

Memorandum

To : Field Team, DMA, Region IV

From : Supervising Geologist, Colorado-Wyoming

Subject: Docket DMA 110 - Akron, Morning Star, and Victor Mines, Tomichi District, Gunnison County, Colorado.

Attached is report on the Akron, Morning Star, and Victor Mines, Gunnison County, Colorado, Docket DMA 110.

Since there are no measured or indicated ore reserves and the work will be essentially exploration, the Callahan Zinc-Lead Company should be propositioned regarding a DMA exploration loan, later to be followed with a request for a development loan.

A. H. Koschmann
A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Attachment

COPY

To: P. T. Allsman

From: W. M. Traver, Jr.

Subject: Report on DMA Docket 110, Callahan Zinc-Lead Company

Please find enclosed the original and eleven copies of Harrer's final report on DMA Docket 110, Callahan Zinc-Lead Company (Victor, Morning Star, and Akron mines), Gunnison County, Colorado.

The report recommending the property for a 50-50 exploration loan has my approval.

/s/ W. M. Traver, Jr.

Enclosures

CALLAHAN ZINC-LEAD COMPANY
AKRON UNIT
AKRON, MORNING STAR, AND VICTOR MINES
GUNNISON COUNTY, COLORADO

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SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

by C. S. Robinson and C. M. Harrer

The Callahan Zinc-Lead Company property, known as the Akron Unit, is in the Whitepine area of the Tomichi mining district, Gunnison County, Colorado, and includes all the properties of the Akron, Morning Star, and Victor mines. Most of the ore in the above mines occurs along the Star-Lost contact fault where it forms lenticular bodies in carbonate rocks along the footwall (west) side of porphyry dikes which follow the fault. The ore consists of sphalerite, galena, pyrite, and chalcopyrite with minor amounts of gold and silver.

No measured or indicated ore reserves could be calculated for the Victor or Morning Star mines as these properties were entirely inaccessible; inferred ore reserves are estimated at approximately 84,000 tons with an expected average grade of 15 percent zinc, 11 percent lead, and 6 ounces of silver per ton, based on table 2, and are the basis of all cost computations.

Callahan Zinc-Lead Company has applied for a loan of $205,874.00 of which $120,682.00 is intended for exploration and $85,192.00 for development. Exploration will include driving 1700 feet of drift from the lowest level of the Akron mine to below the old workings of the Morning Star and Victor mines, to prospect the Star fault with 500 feet of drift and 500 feet of raise, and to open the lower Morning Star tunnel. Development will include driving 600 feet of service raise, 6 stations, and 700 feet of drifting. (See figures 3, 4, and 5.) An estimated 13 months will be required to complete exploration. Concurrently, it will require 7 months to open the lower Morning Star tunnel. An additional 12 months will be required to develop and bring the mines into full production. The company is driving the drift from the Akron to the Morning Star-Victor mines and is opening the lower Morning Star tunnel.

This project has good possibilities of developing substantial zinc-lead ore reserves. It is concluded that (1) the grade and estimated tonnage of inferred ore reserves justify the cost of the proposed exploration and development program; (2) the management appears to be aggressive and competent; (3) the estimated cost of exploration, development, and operation are reasonable; (4) the project can be completed in about 2 years.

This application is recommended for favorable consideration on an exploration basis. Financial assistance to prepare the properties for production should be considered as a separate item based on a study of the results of the exploration program.

Akron, Morning Star, and Victor Mines

Tomichi District

Gunnison County, Colorado

By C. S. Robinson[1/]

Geology

1/ Geologist, U. S. Geological Survey

Geology

Introduction

The Akron, Morning Star, and Victor mines are in the southern or Whitepine area of the Tomichi mining district, on the west slope of the Sawatch Range, Gunnison County, Colorado. A detailed investigation of the Whitepine area was made by the writer in 1949 in conjunction with the mapping of the Garfield quadrangle, Colorado, by M. G. Dings. The area has been visited several times since then, and the Akron mine was revisited in March 1951. The Morning Star and Victor mines were inaccessible in March 1951. The information on these two mines is based on surface studies, old reports, and old mine maps compiled by the Callahan Zinc-Lead Company.

Geology

General: The sedimentary formations overlying the pre-Cambrian granite in the Whitepine area are successively, the Cambrian Sawatch quartzite, the Manitou dolomite, Harding quartzite, and Fremont dolomite of Ordovician age, the Devonian Chaffee formation, the Mississippian Leadville limestone, and the Pennsylvanian Belden shale. The sedimentary rocks are folded into a broad syncline with minor folds on the limbs. The formations have been faulted and intruded by the Princeton quartz monzonite, rhyolite, and rhyolite porphyry dikes. Replacement deposits of lead-zinc-silver ore occur in the limestones and dolomites along the axes of the folds and especially along the faults.

The ore bodies of the Akron, Morning Star, and Victor mines are in and along the footwall of the Star (Lost Contact) fault zone and generally in the footwall of rhyolite porphyry dikes that follow the fault zone. (See fig. 3.) The purpose of the Callahan Zinc-Lead Company's proposed drift is to explore the footwall of the Star fault zone from the southern end of the

Akron workings, south to the Morning Star and Victor mines, and especially to explore the favorable area below the old workings of the Morning Star and Victor mines. (See fig. 3.)

Akron mine: The Akron mine is worked through the Akron tunnel, the portal of which is about 800 feet south of the town of Whitepine. There are about 10,000 feet of drifts and crosscuts on the tunnel level, and six main levels above the tunnel with a total of about 6,000 feet. At present the Callahan Zinc-Lead Company is working on the upper levels south of the Akron tunnel. (See fig. 4.)

The ore occurs in the Manitou dolomite in the footwall of the Star (Lost Contact) fault. The dolomite is shattered, silicified, and locally mineralized. The beds are difficult to distinguish but in general strike northerly and dip 40° - 70° E. A rhyolite porphyry dike lies within the Star fault zone. It has gougey contacts and is commonly altered to a dark gray clay and thus requires heavy timbering. The Manitou dolomite in the footwall of the Star fault ranges in thickness from 20 to 100 feet. West of this is a body of rhyolite called the "Akron formation" by Shenon.[1]

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[1] Shenon, P. J., and Full, R. P., Akron mine, Callahan Zinc-Lead Company, Tomichi district, Gunnison County, Colorado: 1946. Unpublished report.

The Akron rhyolite is highly sericitized and silicified and is very difficult to distinguish from the silicified Manitou dolomite.

As exposed in the Akron tunnel, the Star fault is a 60-foot breccia and gouge zone containing 40 feet of altered rhyolite porphyry. It is a reverse fault that dip 40° - 80° E., with an average dip of 60° E. Minor faults formed at the time the Star fault formed, and some of these are mineralized. Small faults of later origin offset the ore bodies and the contacts of the rhyolite porphyry dike.

The ore occurs as lenticular bodies in the Manitou dolomite. It is found in two zones, one along or close to the Manitou-porphyry dike contact, and one 20 to 60 feet farther in the footwall, at or near the Manitou-Akron contact. Most of the production has come from the zone along the porphyry dike, but in the last year considerable ore has been found in the outer zone. In general, the ore bodies are elongated parallel to the Star fault and dip 40°- 80° E. They range from 50 to 150 feet long, 50 to 200 feet high, and 5 to 25 feet wide.

The ore in the zone near the porphyry dike is composed of large masses of sugary grained sphalerite and galena with small disseminated grains of pyrite and chalcopyrite. The ore in the zone near the contact of the Manitou and Akron formation is composed of bands of sulfides in a gangue of Manitou dolomite. Individual sulfide bands consist of layers of nearly pure galena and sphalerite alternating with layers of sphalerite mixed with pyrite and chalcopyrite. As shown by table 2, revised from figures given in Callahan Zinc-Lead Company's application, the average grade of ore mined during the last 25 years is 14.96 percent zinc, 11.43 percent lead, and 6.04 ounces of silver per ton.

Morning Star mine: The Morning Star mine workings are about 3,500 feet southeast of Whitepine and consist of an inclined shaft about 300 feet deep, two tunnels, and a winze level totaling about 4,500 feet of drifts and crosscuts. (See fig. 4.)

The ore is in the Leadville limestone which here is a dolomitic limestone marble. The Leadville limestone forms the footwall of the Star fault. It is cut at places by the rhyolite porphyry dike, which locally departs from the fault, leaving a thin slab of limestone between the dike and the fault.

Table 2

Metal Production & Assays Beginning 1925 & Including Complete Year 1950 /

Akron Ore

Year	Tons	Ag oz.	Pb %	Zn %	Cu %
1925	485.10	11.71	9.02	8.54	--
1926	178.10	18.93	12.27	12.10	--
1943-1945	5,777.00	7.93	8.75	12.49	.20
1946	1,397.00	7.45	14.83	18.09	.20
1947	8,138.00	7.18	19.49	22.00	.20
1948	15,810.00	5.07	12.41	15.80	--
1949	14,676.00	4.61	10.60	14.16	--
1950	12,342.00	6.75	6.80	11.27	--
	58,803.20	6.04	11.43	14.96	

/Revised by the Callahan Zinc-Lead Co. from figures given by them in their loan application.

Crawford[1] reports seeing lenticular sulfide ore bodies 1 to 15 feet thick

[1] Crawford, R. D., Geology and ore deposits of the Monarch and Tomichi districts, Colorado: Colo. Geol. Survey Bull. 4, pp. 300-302, 1913.

west of the dike, and an ore body east of the dike six feet thick and extending 100 feet upwards at 47 degrees. Crawford gained the impression that the shaft was sunk most of its distance in ore.

Only sulfide ore minerals are found on the dumps, although Crawford[1]

[1] Crawford, R. D., op. cit. p. 301

was informed that lead carbonate extended down 100 feet from the surface and that a body of oxidized ore, 1 to 5 feet thick, extended upwards 50 feet from the upper tunnel level. Ore from the dumps consists of small patches and fine grains of galena and sphalerite, with minor pyrite and chalcopyrite, in a white or gray dolomitic limestone marble. Crawford[1] reports that an

[1] Crawford, R. D., op. cit. p. 301

ore sample taken from near the bottom of the shaft, which at that time was about half way between the upper and lower tunnel levels, assayed 0.14 ounce of gold and 19.0 ounces of silver per ton, 22.7 percent lead, and 45.0 percent zinc.

Victor mine: The Victor mine workings are about 4,200 feet southeast of Whitepine. They comprise an inclined shaft and tunnel, both caved in 1951. They are in dolomitic limestone marble of the Leadville limestone on the footwall of the Star fault. As in the Morning Star mine, the fault contains a dike of rhyolite porphyry, and at places this cuts the Leadville limestone, leaving a thin plate of limestone between the dike and the fault.

Crawford[1] described the ore bodies as follows:

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[1] Crawford, R. D., op. cit. p. 300

"The largest ore body hitherto discovered in the mine extended from the surface to a depth of 182 feet and was just west of the porphyry dike that may be seen in the Morning Star mine. The longest drift on ore has a length of 300 feet. The greatest thickness of the ore body was eight feet. The ore was chiefly silver-bearing lead carbonate and averaged $62.00 a ton in value. A few years ago a tunnel, which was driven 200 or 300 feet, cut a body of sulphide ore about 75 feet below the surface on the east side of the porphyry dike - that is, between the porphyry and the granite. This ore was in or near the Star fault. Of the four carloads shipped from the tunnel the best ran 93 ounces silver per ton, 26 percent lead, and 6 percent copper."

The most abundant ore mineral found on the dumps is galena, which occurs as disseminated grains or small patches in dolomitic limestone marble. It is accompanied by minor sphalerite, pyrite, and chalcopyrite, or, in partly oxidized ore, by cerussite, calamine, and smithsonite. Crawford[1] reported

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[1] Crawford, R. D., op. cit. p. 300

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that specimens from the tunnel contained galena, tennantite, and pyrite.

Ore Reserves

There are no measured or indicated ore reserves in the Morning Star and Victor mines. Only inferred ore reserves could be calculated.

The geologic occurrence of the ore in the Akron, Morning Star, and Victor mines is essentially the same. In estimating the ore reserves of the Morning Star and Victor mines, an analogy with conditions in the Akron mine was presumed. No allowance was made for ore on the hanging-wall side of the dike as there is no information bearing on the continuity of the limestone on this side of the dike.

Production from the Akron mine from 1943 to 1950 was approximately 30,000 tons of ore averaging about 6 ounces of silver per ton, 11 percent lead, and 15 percent zinc. This came from a zone about 600 feet long, 360 feet high and 20 feet wide. (See fig. 4) As the 432,000 tons of rock in this block contained 30,000 tons of ore, about 7 percent of the zone was ore.

Information given by Crawford[1] for the Morning Star and Victor mines,

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[1] Crawford, R. D., op. cit. pp. 300-302

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as interpreted by the Callahan Zinc-Lead Co., is shown in figure 4. The writer believes, however, that in addition to the two shoots shown in figure 4, lenticular ore bodies similar to those found in the Akron mine might occur anywhere on the footwall of the porphyry dike from the Victor mine northward to the end of the dike, a distance of about 1,200 feet. As there is ore on the Akron tunnel level of the Akron mine, it is probably safe to assume that ore extends at least to this depth in the Morning Star and Victor mines, or to a depth of about 500 feet. The ore zone in the Morning Star and Victor mines should be as wide as that in the Akron mine, or about 20 feet wide. Thus a block of favorable ground, 1200 x 500 x 20, containing 1,200,000 tons, may be assumed. If 7 percent of this is ore, as it was in the Akron mine, an inferred reserve of roughly 84,000 tons of ore can be credited to the Morning Star and Victor mines. The grade should be approximately the same as that in the Akron, or 14.96 percent zinc, 11.43 percent lead, and 6.04 ounces of silver per ton.

Callahan Zinc-Lead Company
Akron Unit
Victor, Morning Star, and Akron mines
Gunnision Co., Colorado

Engineering Report

By C. M. Harrer, mining engineer,
Bureau of Mines

ENGINEERING REPORT

By

C. M. Harrer
Bureau of Mines

INTRODUCTION

During March 1951 an investigation was made by the Bureau of Mines and the Geological Survey of the Callahan Zinc-Lead Company's Colorado properties known as the Akron Unit in connection with a proposed exploration, rehabilitation, and development loan for $205,874 under the Defense Production Act of 1950, identified as DMA Docket 110.

Local operations of the Akron Unit are in charge of J. E. Dunn, Superintendent, R. J. Flynn, Assistant Superintendent, J. Botelho, Engineer and Geologist, and A. W. Emerson, Mine Foreman. They were contacted on March 12, 1951, by the author and C. S. Robinson, Geologist, U. S. Geological Survey, at the mine office near White Pine, Colorado.

The loan of $205,874 is requested to accomplish the following work.

1. A 1,700 foot drift to be driven parallel to and in the footwall of the Star fault to connect the lowest Akron mine level with the recently leased Victor-Morning Star ore bodies (figs. 4 and 5); 1,000 feet of crosscut to be driven to prospect the fault zone for replacement mineralization. Costs, including equipment needed, are estimated at $108,982.

2. The lowest Morning Star adit level to be rehabilitated for an aggregate length of 1,200 feet to explore for ore reserves existing above this level. Costs are estimated at $11,700.

3. Ore bodies encountered in the Victor-Morning Star area (figs. 4 and 5) above the Akron drift level to be developed through 600 feet of service raise, 6 stations, and 700 feet of drifting at a total estimated cost of $85,192.

ACKNOWLEDGMENTS

The local management's courtesy and cooperation in all details is gratefully acknowledged. Access to their cost data and engineering and production records was permitted without reservation.

LOCATION, ACCESSIBILITY, AND PHYSICAL FEATURES

The property is approximately one-quarter mile southeast of White Pine on West Point Hill in the White Pine area of the Tomichi Mining District of Gunnison County, Colo., in unsectionalized T. 50 N., R. 5 E., N. M. P. M. (fig. 1). It is reached by driving southwest from Denver 174 miles towards Sargents and the White Pine cutoff; thence 10.7 miles northerly to the company offices near the town of White Pine. The property is readily accessible to transportation, industrial, and supply facilities. Lead concentrates are trucked regularly to the American Smelting and Refining Company smelter at Leadville. Zinc concentrates are trucked to Salida and shipped by freight to the American Smelting and Refining Company smelter at Amarillo, Texas.

Mine workings are between 9,700 and 10,600 feet altitude. The terrain is steep and rugged and the mountain slopes are well wooded with pine timber suitable for mining purposes.

Ample water supply is available from nearby Tomichi Creek and an abundant flow from the mine workings for milling and domestic use.

Year around mining operations are readily maintained in spite of heavy snows and cold weather during the winter.

Fifty-seven men are employed at the property, most of whom live in the almost wholly company-owned town of White Pine. The company also operates a bunkhouse and messhall.

Labor rates are $1.36 per hour for miners, $1.28 per hour for muckers, and $1.28 to $1.36 per hour for mill operators. Practically all mining operations, lumbering, etc. are on a contract basis, an advantage to both employees and employer. There are adequate buildings to house all employees as well as company operations. Labor has been available locally to date. The present crew are classified as follows:

1	Superintendent	1	Skilled laborer at office
1	Assistant Superintendent	1	Hoistman, skilled
1	Engineer geologist	1	Chute blaster, skilled
1	Chemist	1	Skilled laborer on surface repairs
1	Mine Foreman	5	Motormen, skilled
7	Skilled laborers in the mill	20	Miners, skilled
2	Mechanics in shops	10	Muckers, semiskilled
1	Sawyer	1	Night shift boss
2	Skilled laborers framing timbers		

OWNERSHIP AND EXTENT

The Akron property is covered by 25 patented and 6 unpatented mining claims which are owned by Callahan Zinc-Lead Company and are listed in table 5 of the appendix.

In addition, a ten-year lease and option to purchase, dated February 2, 1951, is held by the company covering all mining claims in the Victor-Morning Star and other areas adjoining the Akron property where the exploration and development project will be conducted. The claims covered by lease and option agreement are listed in table 6 of the appendix. This purchase agreement was entered into by Callahan Zinc-Lead Company, Joseph T. Hall, President, with the Hayden Mining Company, R. E. Rude, President, and Lyyli Aho, Leo E. Oberto, and S. J. Oberto, co-owners.

Callahan Zinc-Lead Company is required to pay all taxes, amounting to $917.39 yearly, for the ten-year term of the lease or until the purchase price of $160,000 has been paid. A 10 percent royalty based on net smelter returns must be paid on all ores mined from the property. In addition, a minimum monthly royalty of $250 is to be paid by the company during the life of the lease and will apply towards the purchase price.

Figure 5 is a property map showing details of the exploration and development project and the location of pertinent mining claims.

HISTORY AND PRODUCTION

Ore was first discovered in the Tomichi district in 1879. The North Star claim was then located. In 1882 the Victor-Beta claims were located. During 1885-1893 the district was prosperous. Since 1893 only a few mines have produced ore in quantity.

The Akron property was acquired by Callahan Zinc-Lead Company in 1938 and was placed in production during 1940. On January 1, 1948, a new 80-ton lead-zinc differential flotation mill was started and has operated continuously to date.

Tables 1 to 4 in the appendix give available production records from the ore bodies under consideration. Table 1 summarizes available Bureau of Mines statistics on the Akron mine with other small properties included and is based on net smelter returns. Table 2 includes production of the same ore body furnished by Callahan Zinc-Lead Company and is limited to the Akron ore body alone. It is based on custom mill records prior to 1948 and Callahan Zinc-Lead Company's mill records during 1948, 1949, and 1950. Tables 3 and 4 summarize Bureau of Mines production statistics from the upper workings of the Morning Star and Victor ore bodies recently leased by the company and the objective of this exploration project.

PRESENT STATUS OF OPERATIONS

The lowest level of the Akron mine, at an altitude of 9,750 feet above sea level, is developed by a 3,450 foot crosscut to the Star-Lost Contact fault zone. Ore bodies in the fault zone making up the Akron mine have been developed through approximately 13,500 feet of workings over a strike length of 1,000 feet and an approximate vertical range of 500 feet (fig. 4).

Ore bodies within the heavy shear zone are mined by square-set stoping and top slicing methods with the ore transferred to chutes by power scrapers. Approximately 30 board feet of timber are used for every ton of ore mined. All development drifts, crosscuts, and raises require close timbering and continuous maintenance due to severe swelling of ground opened up and the generally soft shear zone enclosing the ore bodies. This results in extremely high costs.

Ore and supplies are transported in 2-ton (24 cu. ft.) cars with battery locomotive haulage on the main and upper levels.

Access to upper levels is through cribbed manways. An electric hoist has been installed underground at the "04" raise as the main supply and passageway to the upper levels. All ore is transferred to the main haulage level through development raises. Two air compressors are located at the surface plant and one underground. The surface plant includes a timber shop, sawmill, combined machine and repair shop, warehouse, garages, and a combination change and lamp house which equips all underground employees with electric cap lamps. A mine office building is located near the portal of the Akron adit. The camp is completely electrified with power furnished by the Public Service Company of Colorado. The company also owns and operates a bunkhouse and boarding house and rents most of the town of White Pine to its employees.

On January 1, 1948, a new 80-ton lead-zinc differential flotation mill was placed in operation at a cost of $175,000 and is in first class operating condition. Figure 2 is a flowsheet of the present mill. The Akron mine and mill are well equipped to maintain continuous operation at 1,000 to 1,500 tons of ore monthly. At present the Akron operations are processing profitably 1,400 tons of ore per month, averaging 4.5 ounces silver per ton, 4.2 percent lead, and 6.3 percent zinc.

Callahan Zinc-Lead Company has advanced the proposed exploration drift approximately 400 feet through very bad ground in the fault zone, requiring close timbering and spiling. This advance is part of the initial exploration program as described in the loan application.

All development at the objective end of this project was inaccessible to examination; however, the company has started a 2-man crew rehabilitating the lower Morning Star level which is also an item in the loan application.

Early reports[2/] indicate the Victor mine was worked through a footwall shaft (collar altitude 10,590 feet) approximately 285 feet deep and dipping 45° to the east. Extensive development was carried out on at least five levels. A hanging wall shaft 75 feet deep and dipping 50° east is connected to the footwall shaft. The lowest level of the Victor mine was connected to the lower Morning Star level. Old maps of doubtful accuracy showing these developments are in the files of Callahan Zinc-Lead Company.

The Morning Star ore bodies were developed by a 365 foot shaft (collar altitude 10,597 feet) and two adit levels at altitudes of 10,496 feet and 10,305 feet above sea level. The upper level was developed by 640 feet and the lower by 2,500 feet of drifts and crosscuts. A 45° winze below the lower level opened the lowest level 100 feet vertically below the lower Morning Star adit (altitude 10,305 feet). This level was developed by 1,250 feet of drifts and crosscuts. The lower Morning Star level and the lowest winze level are 560 feet and 460 feet, respectively, above the proposed Akron drift project.

2/ Crawford, R. D., Geology and ore deposits of the Monarch and Tomichi Mining Districts, Colo., Colo. Geol. Survey Bull. 4, 1913; Shenon, P. J., and Full, R. P., Report on the Akron mine, Callahan Zinc-Lead Company, Tomichi Mining District, Gunnison County, Colo., December, 1946.

DESCRIPTION OF THE DEPOSITS

The ore occurs as lenticular masses of sphalerite, galena, pyrite, and chalcopyrite along the Star-Lost Contact fault which is a wide zone of considerable displacement in which the rocks have been intensely sheared, crushed, shattered, and altered. The lenticular masses have a roughly layered pattern with gangue over widths of from 1 foot to more than 25 feet. The fault zone presents a sheared and gougy width of 20 to 60 feet which contains the ore bodies. It trends about north-south with dips ranging between 40° to 80° east.[3/] Past mineral movement along the fault is evidenced by drag ore at various places.[4/] The above conditions result in generally heavy ground which swells considerably where penetrated by mine workings.

The oxide zone extends downwards 300 feet or more with minor oxidation evident as deep as the Akron level. Lead carbonate ores have been mined to a depth of 375 feet.[5/] Ore bodies generally are not large, as shown at the Akron mine on figure 4. Early records mention the largest known Victor ore body as 300 feet long by 182 feet wide by 8 feet thick. Most stopes are small and irregular, requiring considerable timbering to prevent excessive dilution by caving ground. All permanent openings must be cribbed and frequently relieved.

3/ Robinson, C. S., Geologist, U. S. Geol. Survey, accompanying section on geology.
4/ Shenon, P. J., reference cited in footnote 2.
5/ Crawford, R. D., reference cited in footnote 2.

Stopes in the Akron mine are damp but operations are not noticeably affected by the water. The ore breaks fine with few large lumps. Fines are sufficiently moist and clayey to wad and set in chutes if not frequently drawn.

The abundant flow of fissure drainage water is discharged from the Akron level by gravity and has discouraged plans of sinking to depths requiring pumping facilities. It is inferred that similar water conditions will exist in the Victor-Morning Star ore bodies.

ORE RESERVES

All mine workings on the Victor-Morning Star ore bodies were inaccessible and information meager except for early records[6/] and production statistics[7/] from the upper workings of the properties. These ore bodies, approximately 1,000 feet south of the Akron-North Star ore bodies, which are the source of present production, occur under identical geologic circumstances as lenticular bodies of sphalerite, galena, pyrite, and chalcopyrite with minor amounts of gold and silver along the footwall of the Star-Lost Contact fault. Accordingly, it was agreed by the examiners that the only means of comparison between the two major ore bodies was on a basis of actual ore mined in the positively delineated block of geologically favorable host rock in the Akron-North Star fault zone (fig. 4).

As a basis for the estimate, a block of geologically favorable host rock was outlined in the Akron-North Star mine 600 feet long by 360 feet high by 20 feet wide. This block was accessible to examination and represents part of the mining activity for the

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6/ Crawford, R. D., reference cited in footnote 2.
7/ Tables 3 and 4 in appendix.

period 1943-1950. Ore recovered from this block was estimated from engineering data, mine sections, and maps as 29,780 tons, using a tonnage factor of 10. The ore occurrs as lenses within this zone.

Rock in above block $\frac{600 \times 360 \times 20}{10} = 432{,}000$ tons

Ore recovered from this block 29,780 tons

Ratio of ore recovered to favorable host rock $\frac{29{,}780}{432{,}000} = 7\% \pm$

Similarly, a block of geologically favorable host rock was outlined for the Victor-Morning Star ore bodies (fig. 4) based on all available data and the recoverable ore factor of 7 percent applied to determine inferred ore reserves. The estimated grade of ore reserves is assumed to have the average assay value of all ores mined from the Akron-North Star ore bodies between the years 1925-1950, as determined from table 2 of the appendix.

No measured or indicated ore reserves could be calculated from available data for the Victor-Morning Star ore bodies. Inferred ore reserves for the ore bodies are estimated as 84,000 tons averaging 6 ounces silver per ton, 11 percent lead, and 15 percent zinc (table 2).

Reasonably assured ore reserves for the Akron-North Star-Erie mines for 1951 have been determined by Callahan Zinc-Lead Company management as about 10,000 tons with an expected grade of 5.7 ounces silver per ton, 4.1 percent lead, and 7.9 percent zinc, chiefly from low-grade footwall ore bodies. The estimate is reasonable.

PROPOSED EXPLORATION AND DEVELOPMENT

Management of the Akron Unit is proceeding with the exploration and development plans known as "Project A" which is separated into three unit operations, two of which are already started (figs. 4 and 5).

In their order of sequence, the present program, Unit 1, is to drive a drift with a cross section of from 7 by 9 feet to 8 by 10 feet from the Akron level southerly towards the Morning Star-Victor ore bodies a distance of 1,700 feet. The proposed drift has presently passed through the Star-Lost Contact fault zone where spiling was necessary, followed by heavy, closely-spaced support timber which has to be relieved repeatedly. This fault zone is marked by intense shearing and alteration and swells wherever penetrated. The drift will be driven in the footwall after crossing the fault zone outside the influence of and parallel to the fault. The fault zone will be prospected at favorable intervals by an estimated 500 feet of cross-cutting and a probable total of 500 feet of exploration raises. This unit operation is purely exploration for the purpose of establishing ore reserves. A crew of five men were advancing this phase of the project at the time of the examination.

Unit 2 operation under "Project A" will be the rehabilitation of 1200 feet of the lower Morning Star level which is presently blocked by an unknown number of caves. The company has reason to believe[8/] that a considerable tonnage of low-grade lead-zinc-silver

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8/ References cited in footnote 2.

ore may be developed above this level at minimum expense. This operation is also entirely exploration. Ore produced from this level will be trucked one mile from the portal to the Akron mill. The company has a crew of two men opening and repairing this adit portal.

The final Unit 3 operation under "Project A" is classed as development of ore bodies in the Morning Star-Victor area and includes driving a 600-foot service raise from the end of the Akron level project to the lower Morning Star level with level stations at 100-foot intervals and 700 feet of aggregate development drifting from the stations to open up probable ore bodies and place the Victor-Morning Star ore bodies in full production at 1,000 to 1,500 tons per month.

The local management estimates that it will require 7 months to place the lower Morning Star in production and, working concurrently, 13 months to complete the exploration units of the project. An additional 12 months will be necessary to develop the inferred, lower horizon ore bodies for full production. This time estimate appears reasonable.

METAL AND CONCENTRATE ESTIMATES

Operating data and costs at the Akron Unit for the year 1950 are incorporated in table 7 of the appendix and serve as the most feasible basis for estimating costs at the Victor-Morning Star project. The ore mined and milled so far in 1951 has been considerably lower grade than the average produced during the years from 1943 to 1950 (table 2) and the same production sequence will probably develop at the Victor-Morning Star operations.

During 1950, mill results compiled from daily data were as follows:

Current Mill Operating Data

	Tons milled	Oz./Ton Ag.	Percent Pb.	Percent Zn.
Heads	12,331	6.30	6.7	10.3
Tails	9,499	0.86	1.1	1.5
Lead concentrate	826.5	60.00	67.8	8.7
Zinc concentrate	2,005.4	8.30	6.7	51.2

Average mill recovery for the first two months of 1951 used as a basis for the calculation is as follows:

Average Mill Recoveries, January-February, 1951

	Percent Silver	Percent Lead	Percent Zinc
Heads	100.00	100.00	100.00
Tails	8.59	17.20	13.33
Lead concentrate	66.28	67.90	5.70
Zinc concentrate	25.14	14.90	80.97

The ratio of concentration of Akron-North Star ores for 1950 was 4.35 to 1. The estimated ratio of concentration for the reserves expected at the Victor-Morning Star will be 2.6 to 1 on the basis of the assumed recoveries for 1951.

Inferred ore reserves of the Victor-Morning Star ore bodies are estimated at 84,000 tons with an average assay value of 6.04 ounces silver per ton, 11.43 percent lead and 14.96 percent zinc (table 2) and form the basis for all the following calculations.

From the profit and loss statement of the Akron Unit in table 7, gross smelter payment based on a ton of crude ore for 1950 was $27.13 which amounts to $118.02 per ton of concentrates using the composite concentration ratio of 4.35 to 1. The average inferred ore reserve should concentrate at a ratio of 2.6 to 1,

using the same concentrate assay and recovery. The gross smelter settlement per ton for inferred Victory-Morning Star crude ore will then be $45.74 at present rates and prices which may be expected to remain about the same or improve as long as a shortage exists. From the above inferences the following data are tabulated:

Inferred Metal and Concentrate Data
Victor-Morning Star Mines

Gross metal content - silver	507,360	ounces
Gross metal content - lead	9,601.2	tons
Gross metal content - zinc	12,566.4	tons
Metal content of lead concentrates - silver	336,278	ounces
Metal content of lead concentrates - lead	6,519	tons
Metal content of lead concentrates - zinc	1,093	tons
Metal content of zinc concentrates - silver	127,550	ounces
Metal content of zinc concentrates - lead	1,430.6	tons
Metal content of zinc concentrates - zinc	10,175	tons
Estimated lead concentrates to be marketed	10,700	tons
Estimated zinc concentrates to be marketed	21,600	tons
Total estimated recoverable concentrates	32,300	tons

ESTIMATED COST OF PROJECT

Costs of exploration and development for 1950, shown in table 7, are used in estimating probable costs of the projects. The following financial requirements to explore, develop, and place the recently leased Victor-Morning Star properties of Callahan Zinc-Lead Company's Akron Unit are taken from data in the loan request, substantiated by an examination of the cost and operating records, and explained in detail in the section of this report on "Proposed Exploration and Development."

Cost of "Project A"

Initial Exploration Cost

Unit 1	Cost per foot	Total
Main level extension, 1700 feet, and crosscutting, 500 feet.		
Labor	$17.00	
Supplies	9.20	
Other*	11.86	
2200 feet @	$38.06	$ 83,732.00
Raising 500 feet of 2-compartment raises.		
Labor	$19.75	
Supplies	7.25	
Other*	7.50	
500 feet @	$34.50	17,250.00
Total Cost, Unit 1		$100,982.00

Unit 2	Cost per foot	
Rehabilitation of 1200 feet of the lower Morning Star level.		
Labor	$ 4.00	
Supplies	3.00	
Other*	2.75	
Total Cost, Unit 2, 1200 feet @	$ 9.75	11,700.00

New Equipment required for initial exploration				
1 Battery charger (on order)	$1,000.00	19		
1 Battery case (on order)	400.00	19		
8 24-cu.ft. Gondolas (on order) @ $400.00	3,200.00	11		
2 Small tuggers @ $550.00	1,100.00	5		
2 Stopers @ $650.00	1,300.00	5		
1 Small slusher	1,000.00	5	8,000.00	$2175.00

Total Initial Exploration Cost $120,682.00

Development Cost

Unit 3, Development of ore bodies in the Morning Star-Victor area.

	Cost per foot	Total
Raising 600 feet from Akron level to lower Morning Star level.		
Labor	$27.60	
Supplies	12.90	
Other*	10.50	
600 feet @	$51.00	$ 30,600.00
Level stations (six)		
Labor	$2,050.00	
Supplies	950.00	
Other*	300.00	
6 stations @	$3,300.00	19,800.00
Drifting, 700 feet, for development from the raise stations.	Cost per foot	
Labor	$17.00	
Supplies	9.20	
Other*	11.86	
700 feet @	$38.06	26,642.00
Total Cost, Unit 3		$ 77,042.00

New Equipment required to complete development.

1 30 HP Hoist	$2,500.00	
2 Small tuggers @ $550.00	1,100.00	
1 5 HP Fan	250.00	
2 Stopers @ $650.00	1,300.00	
1 Small slusher	1,000.00	
2000 feet power cable @ $1.00 per ft.	2,000.00	8,150.00

Total Development Cost	$ 85,192.00
Total Exploration and Development Costs	$205,874.00

*Other includes tramming, hoisting, timber framing, shop and drill repairs, administration, and overhead.

The following equipment is on hand at the property and available for use on "Project A".

1 Locomotive with 2 batteries and 1 battery case
8 25-cu.ft. Gondolas
1 15 HP Coppus blower
1 2½ HP Coppus blower
1 12 B Eimco mucker
2 Boiler feed pumps
3 3-inch Automatic drifters
Miscellaneous small tools

OPERATING COST ESTIMATES

The estimated net profit per ton of crude ore from the inferred ore reserves of the Victor-Morning Star ore bodies which are the objective of this project follow:

Inferred ore reserves	84,000 tons
Inferred lead concentrates	10,700 tons
Inferred zinc concentrates	21,600 tons
Total inferred concentrates	32,300 tons

Gross Income based on table 7

	Per ton crude ore
Gross smelter payments (1950)	$45.74
Less hauling (1950)	1.67
Net income after deducting haulage, freight and treatment (1950 rates)	$44.07

Operating Expenses based on table 7, 1950 costs

Mining	$ 6.77
Incidental mining	5.47
Milling	3.89
Camp	1.19
Administration	2.68
Total operating expense before depletion, depreciation, and amortization	$20.00

Other Expenses

Depreciation continued at 1950 rate	$ 2.68
Depletion continued at 1950 rate	0.50
Akron amortization continued at 1950 rate	0.05
Combined exploration and development loan for "Project A". Loan amortization of $205,874.00 for 9 years at 3% interest, using a factor of 1.3047732	3.20

	Per ton crude ore
Retirement of cost of property, $160,000.00, by 10% of net smelter returns or otherwise, without interest.	$ 1.91
Present Akron depletion at 1950 rate	0.37
Taxes on mining claims	0.09
Total other expenses	$ 8.80
Total Expenses	$28.80
Net smelter payments, 1950 rate	$44.07
Total expenses	28.80
Estimated net profit on inferred ore from the Victor-Morning Star area, the ultimate objective of the project	$15.27

PROPOSED FINANCING

No mention is made of proposed financing of the project and the local management has no plans on this subject due to the confusion of requirements. It appears that financing can be most efficiently carried on by a joint participation or matching funds arrangement with the Government. The Callahan Zinc-Lead Company is progressive, financially responsible, and well staffed for efficient operation.

CONCLUSIONS AND RECOMMENDATIONS

It is impossible to estimate measured or indicated ore reserves from available data and the merit of the project is based solely on inferred ore reserves estimated as 84,000 tons assaying 6 ounces silver per ton, 11 percent lead and 15 percent zinc.

The future of the Akron Unit rests on establishing the ore reserves expected in the Victor-Morning Star area. The company has already started the exploration program. The local Akron Unit management appears progressive, sound, and well staffed. The property is equipped and able to mill 1,000 to 1,500 tons of ore monthly.

This project should result in proving a substantial lead-zinc reserve of milling-grade ore.

On the basis of 1950-1951 data, the project appears sound geologically and financially with exploration and development well planned.

It will require an estimated 7 months to explore the Morning Star mine through the lower level at a cost of $11,700 and, concurrently, 13 months to complete exploration on the Akron level at a cost of $108,982. An additional $85,192 and 12 months are estimated as necessary to complete development and place the Victor-Morning Star ore bodies on a full production basis.

This application is recommended for favorable consideration for an exploration loan. Financial assistance to prepare the Victor-Morning Star properties for production should be considered as a separate item based on a study of the results of the exploration program.

APPENDIX

The following tables relate to the preceding subject matter referred to in the text of the report. Tables 1 to 4 cover production of the Akron, Morning Star, and Victor mines; tables 5 and 6 list company owned and leased claims; and table 7 reports the 1950 profit and loss of the Akron Unit operations.

TABLE 1. - Production of the Akron mine, 1901-1950.[1/]

Year	Crude Ore dry tons	Ounces Gold	Ounces Silver	Pounds Copper	Pounds Lead	Pounds Zinc
*1901	1,500	75	12,000	- -	- -	- -
1903	163	9	1,102	- -	229	- -
1905	700	52	7,000	- -	210,000	- -
1906	85	-	1,354	- -	22,632	- -
1916	3,301	14	7,490	4,931	216,926	143,205
1919	1,500	1	444	- -	17,455	- -
1920	5,523	-	11,713	- -	997,448	521,800
1927	1,167	19	9,206	3,263	494,183	353,934
1928	1,427	20	10,207	2,641	514,031	725,983
1929	389	7	2,943	526	125,986	159,804
1930	108	1	293	28	33,740	51,520
1931	118	1	1,608	611	81,155	- -
1941	92	2	805	- -	34,386	45,791
**1942	380	3	1,865	1,379	105,521	144,981
1943	3,941	40	21,597	20,681	597,870	910,479
**1944	5,768	68	21,545	43,794	794,269	1,151,837
**1945	6,176	63	22,896	24,035	782,659	1,083,396
**1946	4,220	28	14,266	47,746	730,251	1,071,976
1947	8,001	58	48,554	12,607	2,853,740	3,315,862
**1948	18,158	89	85,312	31,468	4,016,293	5,153,685
1949	14,676	67	60,578	39,073	2,737,872	3,755,978
1950	12,342	-	72,836	- -	1,578,650	2,426,660
Totals	89,735	617	415,614	232,783	16,945,296	21,016,891

*Mint report.
**Akron, Erie, and other ore combined.

Based on the above table totals of recovered metals, crude ore assayed an average of 0.007 ounce gold and 4.6 ounces silver per ton, 0.13 percent copper, 9.4 percent lead, and 11.7 percent zinc.

1/ Compiled by Economics Division, U. S. Bureau of Mines, Region IV, Denver, Colo., on metal content of concentrates and smelter settlements.

TABLE 2. - Production of the Akron mine, 1925-1950.[2/]

Year	Crude Ore dry tons	Oz./T. Silver	Percent Copper	Percent Lead	Percent Zinc	Remarks
1925	485.10	11.71	-	9.02	8.54	
1926	178.10	18.93	-	12.27	12.10	
1943-45	5,777.00	7.93	0.20	8.75	12.49	Custom mill assays at Leadville, Colo.
1946	1,397.00	7.45	0.20	14.83	18.09	"
1947	8,138.00	7.18	0.20	19.49	22.00	"
1948	15,810.00	5.07	-	12.41	15.30	80-ton flotation mill in operation. Concentrates shipped to Leadville, Colo., and Amarillo, Texas.
1949	14,676.00	4.61	-	10.60	14.16	Low-grade footwall ore bodies mined.
1950	12,342.00	6.75	-	6.80	11.27	"
Total and Averages	58,803.20	6.04	0.2	11.43	14.96	

Year	Crude Ore dry tons	Ounces Silver	Pounds Copper	Pounds Lead	Pounds Zinc
1925	485.10	5,683	-	87,531	82,862
1926	178.10	3,372	-	43,722	43,084
1943-45	5,777.00	45,820	6,234	1,011,212	1,443,719
1946	1,397.00	10,403	5,546	414,459	505,667
1947	8,138.00	58,462	32,975	3,172,950	3,582,148
1948	15,810.00	80,157	27,399	3,924,042	4,995,960
1949	14,676.00	67,752	42,414	3,110,300	4,153,890
1950	12,342.00	83,366	-	1,680,380	2,783,791
Totals	58,803.20	355,015	114,568	13,444,596	17,591,121

From the above table totals, crude ore is estimated to average 6.04 ounces silver per ton, 0.2 percent copper, 11.43 percent lead, and 14.96 percent zinc. These analyses are the basis of ore reserve grade and all estimates.

2/ Compiled by Callahan Zinc-Lead Company, White Pine, Colo., and based on gross metal content at mill (mill heads - dry).

TABLE 3. - Production of the Morning Star mine, 1901-1950.[3/]

Year	Crude ore dry tons	Ounces Gold	Ounces Silver	Pounds Copper	Pounds Lead	Pounds Zinc
1901-06	No production	-	-	-	-	-
1907	117	-	3,394	-	51,472	49,137
1908	350	-	10,151	-	154,000	147,000
1909	No production	-	-	-	-	-
1910	463	10	8,960	3,181	171,773	176,815
1911	803	12	13,800	3,564	281,157	508,569
1912	360	2	6,850	1,159	125,039	255,752
1913	75	2	1,806	763	23,063	39,425
1914	677	8	10,912	79	21,226	345,500
1915	No production	-	-	-	-	-
1916	136	3	2,072	-	38,908	68,172
1917-25	No production	-	-	-	-	-
1926	163	70	1,376	484	55,942	68,964
1927	424	4	5,768	1,494	127,308	183,340
1928	No production	-	-	-	-	-
1929	40	-	495	199	15,878	22,431
1930-32	No production	-	-	-	-	-
1933	194	1	771	-	17,953	-
1934	79	-	1,064	391	34,150	41,794
1935-50	No production	-	-	-	-	-
Totals	3,881	112	67,419	11,314	1,117,869	1,906,899

Based on the above table totals, crude ore assayed an average of 0.03 ounce gold and 17.5 ounces silver per ton, 0.14 percent copper, 14.4 percent lead, and 24.6 percent zinc.

3/ See footnote 1 of the appendix.

TABLE 4. - Production of the Victor mine, 1901-1950.[4/]

Year	Crude ore dry tons	Ounces Gold	Ounces Silver	Pounds Copper	Pounds Lead	Pounds Zinc
1901-05	No production	-	-	-	-	-
1906	100	-	1,800	-	40,000	37,508
1907-08	No production	-	-	-	-	-
1909	74	2	4,640	48,324	17,425	-
1910-15	No production	-	-	-	-	-
1916	41	-	285	84	3,983	10,998
1917	47	1	458	474	4,082	11,000
1918	No production	-	-	-	-	-
1919	221	-	2,175	309	75,764	149,592
1920	251	-	-	-	55,344	106,840
1921-22	No production	-	-	-	-	-
1923	475	5	6,889	1,642	262,485	24,168
1924	166	2	2,220	1,462	76,078	24,883
1925-50	No production	-	-	-	-	-
Totals	1,375	10	18,467	52,295	535,161	364,989

Based on the above table totals, crude ore assayed an average of 0.007 ounce gold and 13.4 ounces silver per ton, 1.9 percent copper, 19.4 percent lead, and 13.3 percent zinc.

TABLE 5. - Mining claims owned by Callahan Zinc-Lead Company in the Tomichi Mining District, Gunnison County, Colo.

Name	Type	Survey Number
Bandit Lode	patented	1871
Yellow Jacket Lode	"	18965
Nimrod Lode	"	18861
Paymaster Lode	"	18861
Mazeppa Lode	"	2497
Little May Lode	"	2333
Lost Contact Lode	"	2332
North Star Lode	"	847A
North Star Millsite	"	847B
Number Three Lode	"	850
Muldoon Lode	"	849

4/ See footnote 1 of the appendix.

Name	Type	Survey Number
Narrow Gauge Lode	patented	848
Deadwood Lode	"	1872
Haverford Lode	"	1606
Erie Lode	"	2070
Sunset Lode	"	1981
Trowell Lode	"	1982
Bob Lee Lode	"	2494
Ensign Lode	"	4508
Flirt Millsite	"	2073A
Tomichi Millsite	"	11525
Leonora Lode	"	5872
Wolverine Lode	"	5872
Jersey Lode	"	2305
Snowden Lode	"	2415
Little Don	unpatented claim	
Aviator	" "	
Hillside	" "	
Akron	" "	
Akron Tunnelsite	"	
Ohio	" "	

TABLE 6. - Mining claims covered by a 10-year lease and option to purchase entered into by Callahan Zinc-Lead Company with Hayden Mining Company and Lyyli Aho, L. E. Oberto, and S. J. Oberto, dated February 2, 1951.

Name	Type	Survey Number
Belvidere	patented claim	17383
Comstock, Jr.	" "	17383
Gopher	" "	17384
David H.	" "	1941
Denver City	" "	1940
John G.	" "	1966
Little Iron	" "	1967
Little Giant	" "	6692
Mattie E.	" "	13295
W. A.	" "	13295
Little Alice	" "	15553
Black Diamond	" "	15554
Inspiration	" "	19137
Last Chance	" "	19137
Helen	" "	20006
Evening Star	" "	20007

Name	Type	Survey Number
Good Hope	patented claim	20008
John C.	" "	20008
Lucky Boy	" "	20008
Magnolia No. 1	" "	20008
Washington	" "	20008
Columbus	" "	20008
Bryan	" "	20008
Morning Star	" "	6575
Victor	" "	17173
Isabel	" "	4540
Dusky Belle	" "	2615
Excelsior	" "	2615
Hartford	" "	18876
Mary Campbell	" "	1986
Sam T.	" "	1985
Vulcan	" "	8312
Iron Mask	" "	8312
Annie Hudson	" "	1695
Hutchinson	" "	1906
Starlight	unpatented claim	
Lonestar	" "	
Estrellita	" "	
Dog Star	" "	
Polar Star	" "	
Bright Star	" "	
Lucky Star	" "	
Little Star	" "	
Double Star	" "	
Twin Star	" "	
Nova	" "	

TABLE 7. - Statement of profit and loss for 1950, Akron Unit, Callahan Zinc-Lead Company.

		Per ton of ore
Income		
Concentrates, gross smelter payment	$27.13	
Less haulage	1.67	
Net return after deducting trucking, freight, and treatment	$25.46	
Rent income	.12	
Miscellaneous income	.15	
Total Income		$25.73
Operating Expenses (see following page)		
Mining - Akron	$ 6.77	
Mining - Erie	.42	
Incidental mining - Akron	5.47	
Incidental mining - Erie	.48	
Milling	3.85	
Camp	1.19	
Administration	2.68	
Total Operating Expenses		20.86
Profit before depreciation, depletion, and amortization		$ 4.87
Other Expenses		
Depreciation	$ 2.68	
Amortization	.05	
Depletion	.37	
Total Other Expenses		3.10
Total income	$25.73	
Total deductions	23.96	
Net Profit	$ 1.77	$ 1.77

Ore milled during 1950 (tables 1 and 2)	12,342 tons
Ore mined during 1950, Akron and Erie	12,441 tons
Development drifting during 1950	883 feet
Development crosscutting during 1950	88 feet
Development raising during 1950	813 feet
Exploration drift, "Project A" (7 x 9 ft. to 8 x 10 ft. cross section)	250 feet
Average cost, development and exploration	$21.30 per foot
Direct stoping costs	$4.05 per ton
Trucking costs to Leadville	$7.00 per wet ton
Trucking costs to Salida, including loading on boxcars	$6.00 per wet ton

Operating expense definitions of Callahan Zinc-Lead Company, Akron Unit:

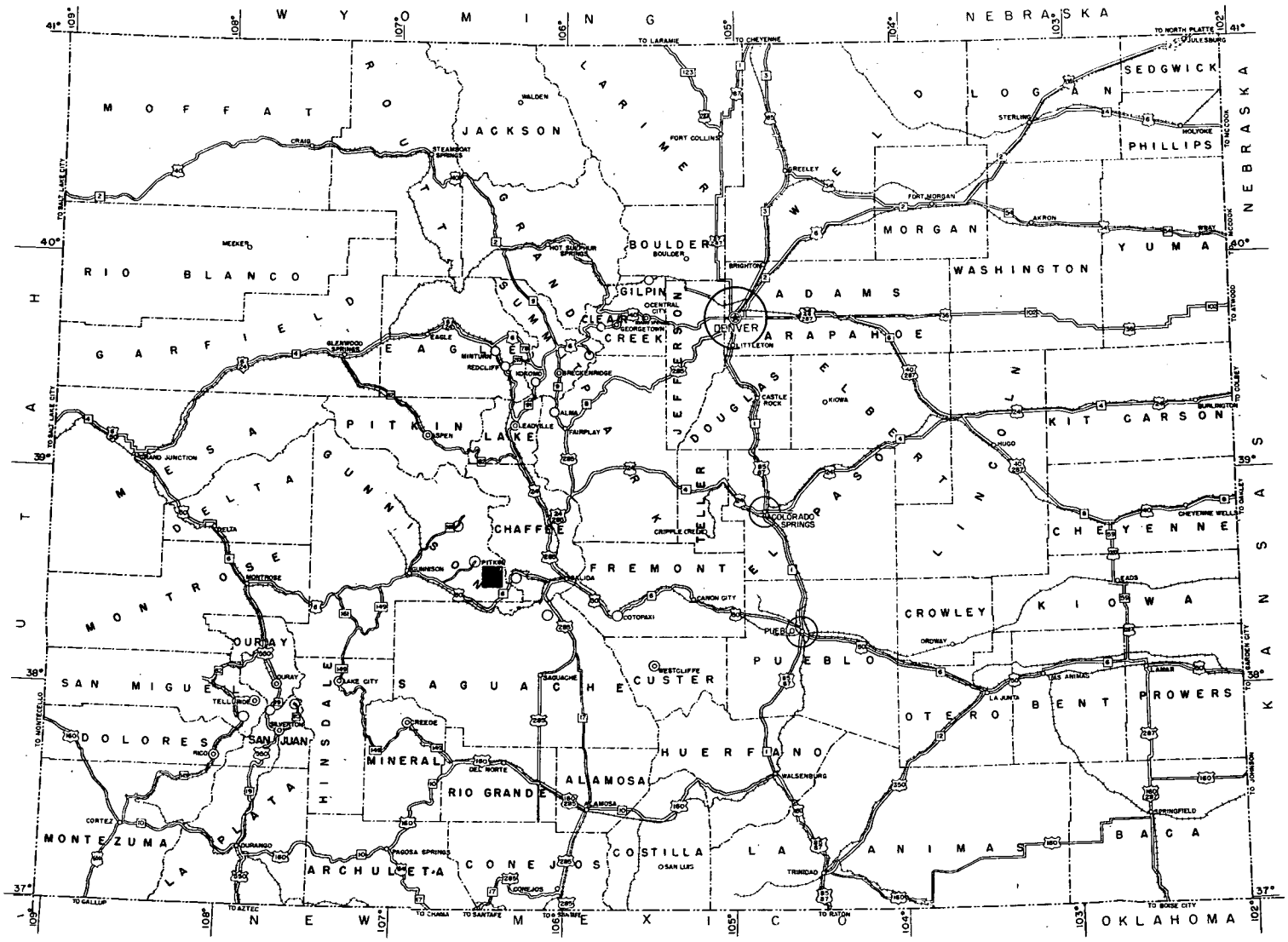
Mining includes direct costs of exploration, development, and stoping, i.e., drifting, raising, crosscutting, and stoping.

Incidental mining includes tramming, hoisting, timber shop, maintenance, mine lamps, warehouse, sawmill, sorting, sublevel tramming, waste dump, power, surveying, and administration.

Milling includes crushing, grinding, flotation, tailing disposal, water system, repairs, maintenance, assaying, power, concentrate haulage, smelter fees, and supervision.

Camp includes yard, boarding house, dwellings, water system, power, truck, tractor, and claims.

Administration includes supervision, mine office, legal, insurance, travel, taxes, and interest.



LEGEND

- LOCATION OF DEPOSIT
- MAJOR INDUSTRIAL AREAS
- PRINCIPAL MINING CENTERS

NOTE

DATA TAKEN FROM STATE HIGHWAY MAP OF COLORADO. BASIC SURVEY CONDUCTED 1936, FEDERAL AID AND STATE HIGHWAY SYSTEM DATA REVISED AS OF JANUARY 1, 1940.

CALLAHAN ZINC-LEAD CO.

AKRON UNIT

0 5 10 15 20 25 50
SCALE OF MILES

DMA-110

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

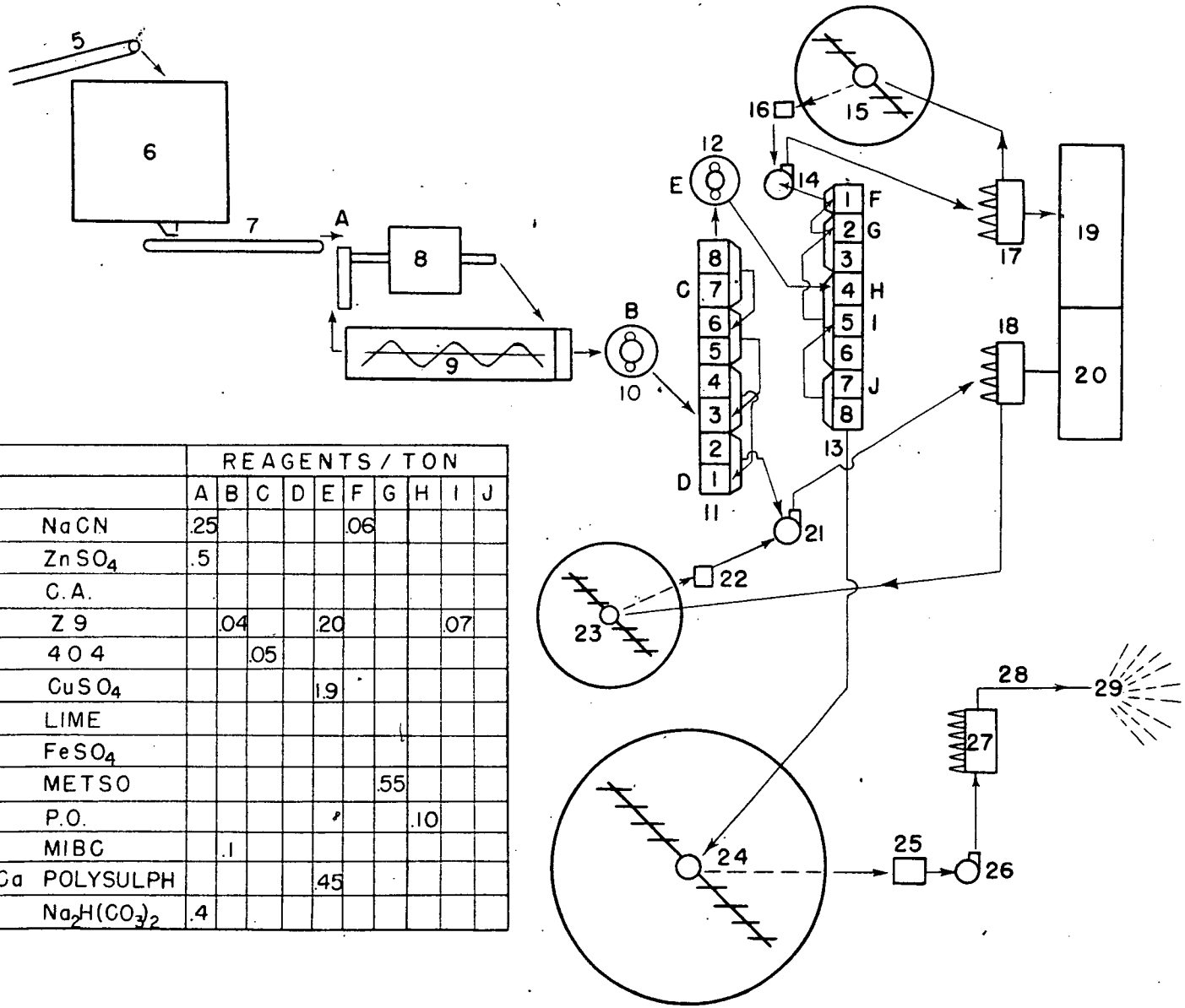
Fig. 1, INDEX

COLORADO

Highway and Railroad Map

ENGINEER:	DATE:

FLOWSHEET AKRON MILL



	REAGENTS / TON									
	A	B	C	D	E	F	G	H	I	J
NaCN	.25					.06				
$ZnSO_4$	.5									
C.A.										
Z 9		.04			.20				.07	
404			.05							
$CuSO_4$					1.9					
LIME										
$FeSO_4$										
METSO							.55			
P.O.								.10		
MIBC		.1								
Ca POLYSULPH					.45					
$Na_2H(CO_3)_2$	.4									

	EQUIPMENT
1	100 TON COARSE ORE BIN
2	24" BELT FEED
3	24"X60" SHAKER SCREEN 1"
4	10"X20" JAW CRUSHER
5	18" CONVEYOR BELT
6	150 TON FINE ORE BIN
7	18" V.S. BELT FEEDER
8	64 1/2 MARCY BALL MILL
9	36" SCREW CLASSIFIER
10	3'X 5' CONDITIONER
11	8 CELL 18S FLOTATION
12	5'X5' CONDITIONER
13	8 CELL 18S FLOTATION
14	2" SAND PUMP
15	18' THICKENER Zn
16	DIAPHRAGM PUMP
17	4'X4' FILTER Zn
18	4'X4' FILTER Pb
19	150 TON CONC. BIN
20	125 TON CONC. BIN
21	2" SAND PUMP
22	DIAPHRAGM PUMP
23	18' THICKENER Pb
24	30' THICKENER, TAILS
25	DIAPHRAGM PUMP
26	2" SAND PUMP
27	6'X6' FILTER, TAILS
28	TAILS CONVEYOR
29	TAILS DUMP

Fig.2, Callahan Zinc-Lead Co. White Pine, Colo. (DMA-110)

Docket No. DMA-110

CALLAHAN ZINC-LEAD COMPANY, INC.

Exploration Project Contract

"Exhibit A"

Question 3 Form MF-200

This project will consist of the following:

(1) 2200 feet of drifting and crosscutting on the Akron Tunnel Level south into the Morning Star-Victor ore shoots. The main drift south would parallel the shear zone in the footwall of the fault. The fault zone would be checked periodically by crosscuts.

2200 feet at estimated cost of $34.96 per foot	$76,912.00

(2) 500 feet of 2-compartment exploration raise considered necessary to complete the exploration in this area.

500 feet at estimated cost of $47.89 per foot	23,945.00

(3) 1200 feet of rehabilitation of the lower Morning Star tunnel.

1200 feet at estimated cost of $10.519 per foot	12,623.00

(4) Equipment rental, 13 months @ $501.50	6,520.00
	$120,000.00

Attached hereto are sheets showing estimated cost breakdown and maps indicating the exploration project.

LEASE AND OPTION

THIS LEASE AND OPTION, Made and entered into in triplicate as of the 2nd day of February, 1951, by and between LYYLE AHO, LEO E. OBERTO, and S. J. OBERTO, the sole surviving heirs of Gio Oberto, deceased, parties of the first part, and THE HAYDEN MINING COMPANY, a Colorado corporation, party of the second part (the party of the first and second part are sometimes hereinafter called the "lessors"), and the CALLAHAN ZINC-LEAD COMPANY, INC., an Arizona corporation authorized to do business in the State of Colorado, party of the third part, hereinafter called "lessee",

WITNESSETH:

WHEREAS, the parties of the first part are the owners of the properties hereinafter described and indicated as the property of the parties of the first part, and the party of the second part is the owner of other properties hereinafter described and indicated as the property of the party of the second part, and

WHEREAS, it is the desire of all the parties hereto that all the properties hereinafter described be included herein as a unit, and be dealt with by the lessee herein as a unit, provided that the parties of the first part shall not be responsible for such obligations as are herein imposed upon party of the second part as to the ownership of the property herein indicated as being owned by the party of the second part, or otherwise herein imposed upon party of the second part, and the party of the second part shall not be responsible for such obligations as are herein imposed upon the parties of the first part as to the ownership of the property herein indicated as being owned by the parties of the first part, or otherwise herein imposed upon parties of the first part;

NOW, THEREFORE, for and in consideration of the premises and the sum of One Dollar ($1.00) to them in hand paid by the lessee, and other valuable considerations, the rec

of which is hereby acknowledged, and for and in consideration of the rentals and royalties to be paid by the lessee, and of the covenants and agreements of the lessee hereinafter set forth, the parties hereto agree as follows:

1. The lessors do hereby lease, give and grant to the lessee, its successors or assigns, the sole and exclusive right, privilege and option to purchase for the price and upon the terms and conditions hereinafter set forth, free and clear of all liens and encumbrances, all those certain patented and located mining claims, situate, lying and being in the Tomichi Mining District, Gunnison County, Colorado, to-wit:

PATENTED CLAIMS:

Description	Survey No.
Belvidere	17383
Comstock Jr.	17383
Gopher	17384
David H.	1941
Denver City	1940
John C.	1966
Little Iron	1967
Little Giant	6692
Mattie E.	13295
W. A.	13295
Little Alice	15553
Black Diamond	15554
Inspiration	19137
Last Chance	19137
Helen	20006
Evening Star	20007
Good Hope	20008
John C.	20008
Lucky Boy	20008
Magnolia No. 1	20008
Washington	20008
Columbus	20008
Bryan	20008
Morning Star	6575
Victor	17173
Isabel	4540
Dusky Belle	2615
Excelsior	2615
Hartford	18876
Mary Campbell	1986
Sam T.	1985
Vulcan	8312
Iron Mask	8312
Annie Hudson	1695
Hutchinson	1906

UNPATENTED CLAIMS:

Starlight
Lone Star
Estrellita
Dog Star
Polar Star
Bright Star
Lucky Star
Little Star
Double Star
Twin Star
Nova

It is understood and agreed that the patented claims above described beginning with the claim "Belvidere, Survey No. 17383" and ending with the claim "Morning Star, Survey No. 6575" are the properties of the parties of the first part herein, and that all other claims herein before described, both patented and unpatented, are the properties of the party of the second part.

It is further understood and agreed by and between the parties hereto that the parties of the first part shall not be responsible for such obligations as are herein imposed upon the party of the second part as to the ownership of the property herein indicated as being owned by the party of the second part, or otherwise herein imposed upon party of the second part and that the party of the second part shall not be responsible for such obligations as are herein imposed upon the parties of the first part as to the ownership of the property herein indicated as being owned by the parties of the first part, or otherwise herein imposed upon parties of the first part.

2. The term of this lease and option, unless sooner forfeited, cancelled, terminated or surrendered as hereinafter provided, shall be for Ten (10) years from the date hereof.

3. The purchase price for which the lessors agree to sell the above described property to the lessee shall be the sum of One Hundred Sixty Thousand Dollars ($160,000.00). A payment of Five Hundred Dollars ($500.00) by the lessee to the lessors is hereby acknowledged by the lessors, and this amount has been applied on the aforesaid purchase price, and is an advance royalty paid hereunder. There shall be applied on the afore-

said purchase price all royalty payments made hereunder, whether earned or advance royalties as hereinafter defined.

4. During the term of this Lease and Option and as additional considerations to the lessors, the lessee agrees to pay all general taxes levied on the patented mining claims herein described, beginning with the 1951 taxes payable in 1952, and to pay all taxes on account of the unpatented claims hereinbefore described if and when the same become subject to assessment for taxes. Such payments shall be made prior to said taxes becoming delinquent and receipts for such payments shall be furnished to lessors. Lessee has heretofore paid general taxes for lessors on some of said mining claims in the amount of $ 917.39, and lessors agree that such amount shall be applied as a credit first on the Five Hundred Dollars ($500.00) payment acknowledged as provided for in Paragraph 3 above, and the remainder to be applied on amounts that become due after all other credits have been applied, for the minimum monthly royalty as provided for in Paragraph 7 below. The lessee may retain in its possession all tax certificates that it holds as a result of the payment of general taxes in the aforesaid amount of $ 917.39 until such amount has been applied in full as heretofore in this paragraph provided for, at which time such tax certificates shall be assigned and delivered by lessee to lessors. Lessee agrees that it will take no steps and will permit no steps to be taken to the end that any of said tax certificates ripen into a tax deed so long as this instrument is in effect.

5. The lessee shall pay to the lessors a ten per cent (10%) royalty on all ores mined from the properties leased under this agreement based on net mill or smelter returns, and all amounts so paid shall be classified as earned royalties and applied as a credit in favor of lessee upon the purchase price heretofore provided for.

6. Net smelter returns are hereby defined to be the net amount received from the smelter in payment for direct smelting ores, less cost of transportation from the mine to the smelter, and less smelter charges. Net mill returns are hereby

defined to be the net amount of the value of all ore concentrated at lessee's mill based on the ore purchase schedule known as Schedule 7-B, a copy of which is attached hereto, of the American Smelting and Refining Company Arkansas Valley Plant, Leadville, Colorado. The treatment charge for such ore will be the actual milling cost at lessee's mill plus the cost of freight on concentrates from lessors' ore to smelters from lessee's mill. Royalty settlements are to be made monthly and payment to be paid by the 25th day of the second following month as to ore delivered to a smelter or other purchaser during the second preceeding month thereto, to the lessors at Colorado Springs, Colorado, by the lessee direct. The lessors shall have sixty days to examine settlement statements, and if no objection is made within sixty days the statements shall be considered as correct. Payment of one-half of the proceeds of all payments herein required to be made by lessee to lessors shall be made to The Hayden Mining Company, and one-half of such proceeds shall be remitted to the parties of the first part by making checks or drafts payable to S. J. Oberto and such checks or drafts may be delivered to The Hayden Mining Company, Colorado Springs, Colorado, (P. O. Box 1071). Lessee shall not be obligated to see to the distribution of said proceeds except as herein provided for, and payments as herein provided for shall be accepted by the lessors respectively as their proper share of all payments that become due hereunder.

7. Beginning for the month of November, 1951, and for every month thereafter during the term of this agreement the lessee shall pay to the lessors the sum of Two Hundred and Fifty and no/100 ($250.00) Dollars by the 25th day of the second following month, as a minimum monthly royalty, and as advance royalties, which payments shall be applied as a credit in favor of lessee upon the purchase price heretofore provided for.

8. All payments as advance royalties as so defined in this agreement shall be credited in the aggregate to lessee on aggregate amounts that become due for earned royalties; provided that such credit shall not be taken in any one month in an amount exceeding fifty per cent (50%) of the amount of earned royalties earned for that month. At any time that lessee has paid earned royalties in an aggregate amount in excess of the aggregate amount due for advance royalties, such excess shall be applied as a credit in favor of lessee upon amounts due for minimum royalties under this agreement, during the next succeeding twelve months and not thereafter.

9. In order to determine amounts payable as earned royalties on ores taken from the properties herein described, which may be mixed in the mill with ores taken from other properties which belong to lessee, it is mutually understood that each carload of ore taken from the properties described in this agreement shall be sampled and the samples combined, crushed, and assayed in accordance with common and accepted standard procedures. Lessors shall have the right to select and employ a representative to be present upon the property from which the ore is being shipped, who shall have the priviledge of observing all such sampling.

10. The lessee is hereby given and granted the right to enter upon and take over immediately the sole and exclusive possession and control of said property and the whole or any part thereof, and during the term of this lease and option, to remain in the sole and exclusive possession and control thereof, and to investigate, measure, sample, examine, test, develop, work, mine, operate, use, manage and control the same, and to mine, extract, and remove from said property the ores and minerals therein, and to treat, mill, ship, sell or otherwise dispose of the same and receive the full proceeds therefrom, less the aforesaid royalties.

11. The lessee agrees to take possession of said property immediately, and beginning six months after the date hereof with reasonable diligence and continuity, to enter upon

a mining or development program consisting of at least 500 shifts of work during every six months period, each shift to consist of 8 hours labor of one man. Such shifts of work may be performed on the premises leased hereby or on the other premises of lessee in development of the premises leased hereby. If in any six months period provided for in this paragraph lessee performs more than 500 shifts of work, any such excess may be credited on the number of shifts required for the next ensuing six months period, notwithstanding anything to the contrary provided for in this paragraph.

12. Lessee agrees to do all annual labor that is necessary and to file all annual statements that are required in order to hold the unpatented claims that are hereinbefore listed. Such statements are to be made in the name of The Hayden Mining Company, copies thereof forwarded to lessors.

13. TIMBERING - The lessee agrees to well and sufficiently timber all workings on the premises hereby leased at all points where proper, and in accordance with good mining; to repair old timberings wherever it may be necessary to insure the permanency and safety of these workings which are currently used; to keep the timbering of such workings at all times in good, safe and servicable condition.

14. MINING - The lessee agrees to do all work in a thorough and workmanlike manner and in accordance with the rules of good mining; to keep all drifts, shafts and workings in a safe and secure condition at all times (unless prevented by extra-ordinary casualty).

15. INSPECTION, SAMPLING AND SURVEYING - The lessors, or any duly authorized agent or representative shall have the right at any or all times, to enter and visit all parts of said mining premises and the workings thereon, for the purpose of inspection and taking of samples; to sample any ore awaiting shipment, or to have surveys made of the workings. The lessee further agrees, upon demand of the lessors to have surveys and maps made of their workings and to furnish the lessors with

copies or blue prints of same and generally to facilitate in every way the inspection of the premises by the lessors or their agent or representative.

16. APEX RIGHTS - The lessors hereby expressly reserve the right in case of apex litigation or controversy, to prosecute such development work either on the leased property or adjacent premises as may be necessary, provided always that the same shall not interfere more than is reasonably necessary with the mining operations of the lessee, and that all ore mined in the prosecution of such development work shall belong to the lessee, insofar as the same shall be taken from the ground hereby leased, subject to the royalty hereinbefore provided, and lessee will pay to lessors the reasonable value of the work required to mine and deliver such ore, but such payment shall not exceed the value of the ore mined after deduction of royalty.

17. ACCOUNTS AND STATEMENTS - Lessee agrees to keep accurate accounts and to render monthly written statements to the lessors, showing the amount of ore taken from the premises, the assay value of the same, and the value of such ores computed in accordance with the schedule attached hereto known as Schedule 7-E.

18. The lessee shall keep said property and the whole and every part thereof free and clear of liens for labor done or performed upon said property or for materials furnished to it on or for said property or for the operation thereof under this lease and option or any sub-lease thereof and while the same is in force and effect, and will save and keep harmless the lessors from all costs, loss or damage which may arise by reason of any injury to any persons, livestock or other property as the result of any work or operation of said lessee, or its possession or occupancy of said property.

19. The lessee agrees to carry at all times during the term of this lease and option Workmen's Compensation Insurance and any other insurance that may be required by the laws and mining regulations of the State of Colorado.

20. The failure of the lessee to make or cause to be made any of the payments herein provided for or keep any agree-

ments on its part to be kept and performed according to the terms and provisions hereof, shall, at the election of the lessors, work a forfeiture hereof and any and all monies which have been paid by the lessee to the lessors, as rentals, royalties or otherwise, shall be deemed forfeited to the lessors. Provided, however, that in the event of a default on the part of the lessee and the election of the lessors to terminate this lease and option on account thereof, the lessors shall give to the lessee a written notice of intention to declare a forfeiture of this lease and option and to terminate the same on account thereof, specifying the particular default or defaults relied upon and the lessee shall have sixty (60) days after the receipt of said notice in which to make good such defaults, and in that event there shall be no forfeiture thereof.

21. The lessee expressly reserves the right to cancel, terminate and surrender this lease and option and to relinquish and surrender said property to the lessors at any time during the term of this lease and option even though it has made a partial payment or payments on the purchase price, upon giving thirty (30) day's notice to the lessors of its intention so to do, and delivering to the lessors upon said cancellation a written relinquishment of this lease and option. In the event of a valid forfeiture, surrender or other termination of this lease and option, the lessee will surrender peaceable possession of said property and the whole and every part thereof to the lessors immediately and any and all payments made as rental or royalties or otherwise shall remain the property of the lessors.

22. The lessee shall have ninety (90) days after a valid forfeiture, surrender or other termination of this lease and option, to remove from said property any and all warehouse stocks, merchandise, materials, tools, machinery and equipment erected or placed upon said property by it except mine timbers in place and permanent improvements.

23. Upon the written request of the lessee made at any time after the lessee has completed the payment of one-half of

the option purchase price for the property, the lessors will make, execute and acknowledge or cause to be made, executed and acknowledged a good and sufficient deed covering the above described property to the lessee free and clear of encumbrances and place same in escrow in a bank to be designated by lessee together with proper instructions and copy of this Lease and Option. Also the lessors will furnish and deposit with the deed a complete abstract of title to said property brought down to the date of the execution of the deed. Within six months from the date hereof lessors will furnish lessee an opinion from a member of the Colorado Bar Association that the title of the lessors to the leased properties is marketable, free and clear of all liens and encumbrances except general taxes for the year 1951 payable in 1952.

24. Lessors agree to protect lessee and the properties covered by this agreement against all adverse claims, suits, actions, or proceedings, initiated by others based upon any alleged invalidity or defect in the rights of the lessors, provided that if lessors so desire they may decline to so defend any such action and notify the lessee that they do decline, in which event the lessee may defend any such action and the reasonable costs, charges and expenses of lessee in so doing may be by lessee applied against the advance royalties herein provided for as such royalties thereafter accrue and lessors shall not be liable or responsible for any such costs or expenses beyond such future royalties.

25. If questions or disputes arise under this contract, which the parties cannot settle between themselves, either party may, by notice in writing to the other party, request that said questions or disputes be settled by arbitration, in which event each party shall appoint one arbitrator within ten days from the request for arbitration, and the arbitrators thus appointed shall agree upon the third, but in the event of failure of the said two arbitrators to agree upon a third, a third arbitrator shall be appointed by the presiding judge of the District Court of the State of Colorado, in and for the

Seventh Judicial District. Any decision of the arbitrators to be final must be by a majority thereof. Expenses of any arbitration must be divided equally between the parties hereto, unless the arbitrators otherwise specify. Any award made in favor of any party by the arbitrators may be filed with the clerk of said District Court who may enter judgment thereon and issue execution therefor in accordance with Rule 109 of the Colorado Rules of Civil Procedure.

26. It is mutually understood that no payments provided for in this agreement shall be paid if such payments are in violation of any laws, rules, or regulations of any Governmental agency.

27. It is understood and agreed by the parties hereto that any period of delay either in beginning the work hereinabove mentioned or in continuously carrying it on, occasioned by strikes, acts of God, war, rebellion, or other cause (except financial) reasonably beyond the control of either of the parties hereto shall be excepted and such delay shall not be considered a default hereunder by such party, but such party shall exert every reasonable effort to overcome any such cause of delay.

28. All notices herein provided for, unless otherwise specified in writing by the respective parties, shall be given by mail at the following addresses:

TO THE LESSORS: P. O. BOX 1071, COLORADO SPRINGS, COLO.

TO THE LESSEE: 100 PARK AVENUE, NEW YORK 17, N.Y.

29. Time is of the essence of this Lease and Option. The terms, provisions, convenants and agreements herein contained shall extend to, be binding upon and inure to the benefit of the successors and assigns of the parties hereto.

IN WITNESS WHEREOF, the parties hereto have hereunder set their hands, all in duplicate originals as of the day and year first written above.

Lyyli Aho

Leo E. Oberto

S. J. Oberto

PARTIES OF THE FIRST PART

THE HAYDEN MINING COMPANY

By _____ President

Attest:

John Gardner
Secretary

PARTY OF THE SECOND PART

CALLAHAN ZINC-LEAD COMPANY, INC.

By _____ President

Attest:

James G. McIntosh
Ass't. Secretary

PARTY OF THE THIRD PART

AMERICAN SMELTING AND REFINING COMPANY
Leadville Milling Unit

Schedule No. 7-E

All schedules on ore not under contract for a definite period of time are subject to change or termination without notice.

Quotations for Akron (Lost Contact) Ore Date Nov. 18, 1947

Name Callahan Zinc-Lead Co.

Shipping Point Sargents, Colo.

Effective Shipments on or after Dec. 1st, 1947 B/L date to govern. Cancels and supersedes Schedule 7-D dated June 20, 1947

PAYMENTS

GOLD: If 0.03 Troy oz. per dry ton or over, pay for 70% at $19.00 per Troy oz. plus 90% of the amount by which the "Realized price" exceeds the former Mint price of $20.67 plus per oz. (At the present realized price of $34.9125 per oz., this is equivalent to paying for 70% at $31.81825.)

SILVER: If 1.0 Troy oz. per dry ton or over, pay for 75% at the realized Mint price ($0.90 per oz. at present), provided silver qualifies for Government purchase and affidavit is furnished, or, if Seller so elects in advance, at the Handy and Harman New York quotation for silver. Minimum deduction 1.0 Troy oz. per ton.

LEAD: If the sulphide lead assay is 3.0% or over, deduct from the sulphide lead assay 0.5 and pay for 80% of the remainder at the A. S. & R. Co. New York quotation for common desilverized domestic lead less 2.45 cents per pound. No payment will be made for non-sulphide lead, or sulphide lead less than 3.0% assay.

ZINC: If the sulphide zinc assay is 3.0% or over, deduct 1.5 from the sulphide zinc assay and pay for 47% of the remainder at the E. & M. J. East St. Louis quotation for Prime Western zinc less 2.75 cents per pound.

No payment will be made for any metal or content except as above specified.

QUOTATIONAL PERIOD: For the purpose of determining metal payments, cash quotation specified for Silver, Lead and Zinc shall be the average of the daily published quotations for the calendar week including the date of delivery at Buyer's Mill.

PHOTO-COPY
BY PICK
FOR EXTRA COPIES, CALL KE. 2876
FEB 10 1951
PICK PHOTOGRAPH & BLUEPRINT CO.
1015 - 17th ST. DENVER, COLO.
CERTIFIED ON REQUEST

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned LYYLE AHO, LEO E. OBERTO and S. J. OBERTO are the owners of a portion of those patented mining claims situate, lying and being in the Tomichi Mining District, Gunnison County, State of Colorado, described in a certain Exploration Project Contract dated May 25, 1951, between CALLAHAN ZINC-LEAD COMPANY, INC. and THE UNITED STATES of AMERICA. The portion of said mining claims owned by the undersigned is fully set forth and described in that certain lease and option dated the 2nd day of February, 1951 by and between LYYLE AHO, LEO E. OBERTO and S. J. OBERTO, parties of the first part, THE HAYDEN MINING COMPANY, party of the second part and the CALLAHAN ZINC-LEAD COMPANY, INC., party of the third part. The parties of the first part are lessors of the claims shown by said lease and option to be owned by them, the party of the second part is the owner of the claims shown by said lease and option to be owned by it, and the party of the third part is the lessee. Said lease and option is hereby especially referred to and is to be considered as a part hereof for all of the purposes hereof.

NOW, THEREFORE, the undersigned, as Lessors of said property owned by them under said lease dated as aforesaid, do by these presents subordinate all of their 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 agree 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 agree 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 do hereby assume, insofar as the claims owned by them are concerned, 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 agree 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 xploration Project Contract.

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

Dated this 29th day of June, 1951.

Lyyle Aho

Lyyle Aho

Leo E. Oberto

Leo E. Oberto

S. J. Oberto

S. J. Oberto

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned LYYLE AHO, LEO E. OBERTO and S. J. OBERTO are the owners of a portion of those patented mining claims situate, lying and being in the Tomichi Mining District, Gunnison County, State of Colorado, described in a certain Exploration Project Contract dated May 25, 1951, between CALLAHAN ZINC-LEAD COMPANY, INC. and THE UNITED STATES of AMERICA. The portion of said mining claims owned by the undersigned is fully set forth and described in that certain lease and option dated the 2nd day of February, 1951 by and between LYYLE AHO, LEO E. OBERTO and S. J. OBERTO, parties of the first part, THE HAYDEN MINING COMPANY, party of the second part and the CALLAHAN ZINC-LEAD COMPANY, INC., party of the third part. The parties of the first part are lessors of the claims shown by said lease and option to be owned by them, the party of the second part is the owner of the claims shown by said lease and option to be owned by it, and the party of the third part is the lessee. Said lease and option is hereby especially referred to and is to be considered as a part hereof for all of the purposes hereof.

NOW, THEREFORE, the undersigned, as Lessors of said property owned by them under said lease dated as aforesaid, do by these presents subordinate all of their 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 agree 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 agree 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 do hereby assume, insofar as the claims owned by them are concerned, 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 agree 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 xploration Project Contract.

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

Dated this 29th day of June, 1951.

Lyyle Aho

Lyyle Aho

Leo E. Oberto

Leo E. Oberto

S. J. Oberto

S. J. Oberto

APPENDIX I. OPERATORS PROPERTY RIGHTS

A. Claims owned wholly by Callahan Zinc-Lead Company in Tomichi Mining District, Gunnison County, Colorado.

Name	Type	Survey Number
Bandit Lode	patented	1871
Yellow Jacket Lode	"	18965
Nimrod Lode	"	18861
Paymaster Lode	"	18861
Mazeppa Lode	"	2497
Little May Lode	"	2333
Lost Contact Lode	"	2332
North Star Lode	"	847A
North Star Millsite	"	847B
Number Three Lode	"	850
Muldoon Lode	"	849
Narrow Gauge Lode	"	848
Deadwood Lode	"	1872
Haverford Lode	"	1606
Erie Lode	"	2070
Sunset Lode	"	1981
Trowell Lode	"	1982
Bob Lee Lode	"	2494
Ensign Lode	"	4508
Flirt Millsite	"	2073A
Tomichi Millsite	"	11525
Leonora Lode	"	5872
Wolverine Lode	"	5872
Jersey Lode	"	2305
Snowden Lode	"	2415
Little Don	located claim	
Aviator	" "	
Hillside	" "	
Akron	" "	
Akron Tunnelsite	"	
Ohio	" "	

B. Claims owned by Hayden Mining Company in Tomichi Mining District, Gunnison County, Colorado, on which Callahan Zinc-Lead Company have 10-year lease and option to purchase and covered by attached Subordination Agreement MF-202.

Name	Type	Survey Number
Belvidere	patented claim	17383
Comstock, Jr.	" "	17383

Name	Type		Survey Number
Gopher	patented	claim	17384
David H.	"	"	1941
Denver City	"	"	1940
John G.	"	"	1966
Little Iron	"	"	1967
Little Giant	"	"	6692
Mattie E.	"	"	13295
W. A.	"	"	13295
Little Alice	"	"	15553
Black Diamond	"	"	15554
Inspiration	"	"	19137
Last Chance	"	"	19137
Helen	"	"	20006
Evening Star	"	"	20007
Good Hope	"	"	20008
John C.	"	"	20008
Lucky Boy	"	"	20008
Magnolia No. 1	"	"	20008
Washington	"	"	20008
Columbus	"	"	20008
Bryan	"	"	20008
Morning Star	"	"	6575
Victor	"	"	17173
Isabel	"	"	4540
Dusky Belle	"	"	2615
Excelsior	"	"	2615
Hartford	"	"	18876
Mary Campbell	"	"	1986
Sam T.	"	"	1985
Vulcan	"	"	8312
Iron Mask	"	"	8312
Annie Hudson	"	"	1695
Hutchinson	"	"	1906
Starlight	located	claim	
Lonestar	"	"	
Estrellita	"	"	
Dog Star	"	"	
Polar Star	"	"	
Bright Star	"	"	
Lucky Star	"	"	
Little Star	"	"	
Double Star	"	"	
Twin Star	"	"	
Nova	"	"	

APPENDIX II

WHEREAS, the subordination agreement of the lessor, required by paragraph numbered 2(b) of the annexed contract, has not been obtained; and

WHEREAS, the United States of America has agreed to waive requirement of the lessor's subordination agreement.

NOW THEREFORE, in consideration of said exploration project contract and of the foregoing, the Operator hereby undertakes and agrees to pay all sums that may fall due and owing to the United States of America under the terms of said contract in the same manner and to the same extent as if the subordination agreement of the lessor had been given. If for any reason the net smelter returns from operations that would be subject under said contract to such payments to the Government are not available as a means of measuring the amount of such payments, than the Operator agrees and undertakes to make such payments according to the best estimates of the amounts that can reasonably be made, and in the event of dispute as to such estimates, the Operator agrees that the determination thereof be either by the Administrator of Defense Minerals Administration or by the Director of the United States Bureau of Mines, and shall be final and binding upon the Operator, provided, however, that should the Operator furnish to the United States the subordination agreement required by paragraph 2(b) of this contract then, in that event, this covenant shall be null and void.

CALLAHAN ZINC-LEAD COMPANY
AKRON UNIT
VICTOR, MORNING STAR, AND AKRON MINES
GUNNISON COUNTY, COLORADO

DEFENSE MINERALS ADMINISTRATION REPORT
DMA DOCKET NO. 110

APPROVED:

J. H. East, Jr.

A. H. Koschmann

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
JAMES BOYD, ADMINISTRATOR

Docket No. DMA-110

CALLAHAN ZINC-LEAD COMPANY, INC.

EXPLORATION PROJECT CONTRACT

"Exhibit E"

Question 9 Form MF-200

No rehabilitation or repairs to existing facilities, buildings, installations and fixtures are necessary, and any such cost is specifically excluded in this contract.

Docket No. DMA-110

CALLAHAN ZINC-LEAD COMPANY, INC.

EXPLORATION PROJECT CONTRACT

"Exhibit B"

Question 5 Form MF-200

No additional facilities, buildings or fixtures need be purchased, installed or erected for this project, and any such cost is specifically excluded in this contract.

Callahan Zinc-Lead Co., Inc.

Docket No. DMA-110
E. 2

CALLAHAN ZINC-LEAD COMPANY, INC.

Exploration Project Contract

"Exhibit C"

Question 6 Form MF-200

1 Eimco Mucking Machine Model 12-B	$2,967.00
1 2-column Jumbo W/3 - Lyners DA-30	3,955.00
16 Mine cars 25 cu. ft. side dump	6,000.00
1 Greensburg Locomotive w/2 batteries and 2 battery cases	8,370.00
1 Copus blower 15 H.P.	1,175.00
2 Pumps Worthington air	400.00
1 Canton Car Transfer	450.00
1 Battery Charger	1,520.00
2 Air hoists tuggers	1,070.00
3 Stoping Drills 591	1,830.00
1 Copus Blower 2-1/2 HP	450.00
1 Slusher double drum 5211	777.00
2 16 cu. ft. mine cars	322.00
1 Army Ambulance Dodge (used value)	750.00
1 Blasting Machine	55.00
Total	$30,091.00
Rental per mo. on a 60 month basis	501.50

Above equipment owned by Operator and is to be used on the Exploration Project. Rental rate has been determined from new equipment prices with amortization on a 5-year average operating life. No other purchase or rental of equipment for this exploration project is contemplated.

Docket No. DMA-110

CALLAHAN ZINC-LEAD COMPANY, INC.

Exploration Project Contract

"Exhibit D"

Question 8 Form MF-200

Labor No.	Class	Maximum days pay rate guaranteed
4 to 10	Miners	$10.88 *

*This work to be done on contract or piece work basis determined on regional standards, and maximum rate of pay above normal days pay is based on work performed.

3	Trammers	10.88
2	Timber framers and compressor men	10.56
2	Shop men	12.80
2	Tunnel Maintenance Men	10.88
2	Waste dump men	10.88
1	Electrician and mine lamp man	12.80

The work performed by the above men is an indirect mining cost for the benefit of both production and the exploration project. The cost to the exploration project is based on the pro-rata tons of material handled.

Supervision and Accounting

1	Mine foreman	$456.30 per mo.
1	Engineer	424.70 " "
1	Clerk	9.00 per day

The salaries of the above shall be distributed between the project and our other work on the basis of man shifts of work on each.

PROJECT A - Estimated Costs

1. 2200 feet of drifting and crosscutting at an average rate of 200 feet per month:

   Labor (4 men at estimated contract earnings of $600 per month plus 6.08% comp. ins., Social Security taxes and unemployment ins.) $12.72 per foot - 2200 ft. — $27,984.00

   Tramming air, power, shop and drill repair, tunnel maintenance and waste disposal costs will be actual costs for this work distributed between the project and our other work on the basis of tons of material handled from each and estimated to be $9.87 per foot. — 21,714.00

   Supplies including repair parts and small tools estimated to be $10.25 per foot. — 22,550.00

   Direct Supervision, engineering, surveying, employee living quarters, boarding house subsidy, mine office and accounting, estimated to be $2.12 per foot. — 4,664.00

2. 500 feet Raising, 2 compartment, to be done at an average rate of 100 feet per month.

   Labor: 4 men at an estimated contract earnings of $500 per month plus 6.08% compensation insurance, Social Security taxes and unemployment insurance, $20.60 per foot - 500 feet — 10,300.00

   Tramming, air, power, shop and drill repair, tunnel maintenance and waste disposal costs will be actual costs for this work distributed between the project and our other work on the basis of tons of material handled from each and estimated to be $13.80 per foot. — 6,900.00

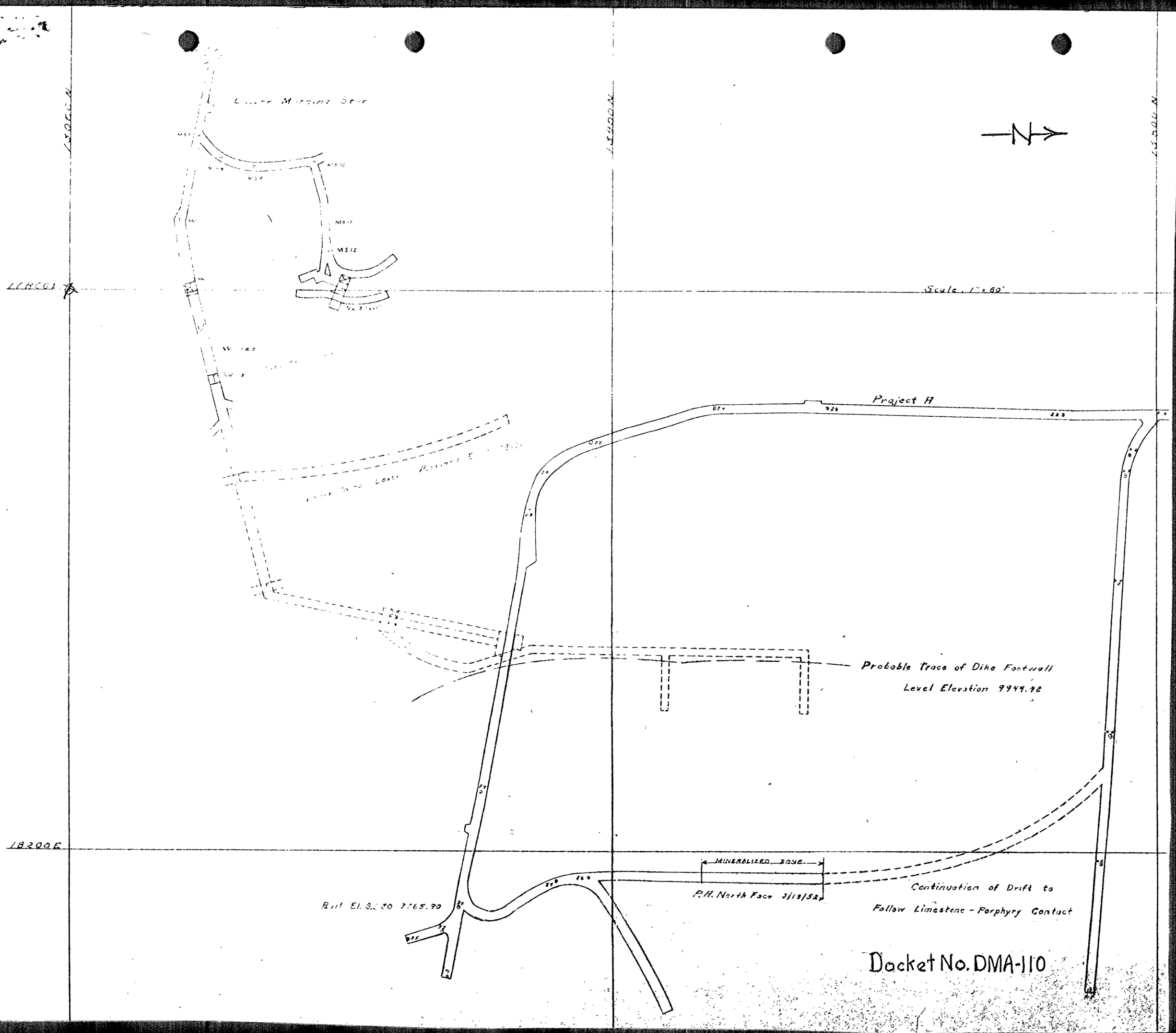
   Supplies, including repair parts and small tools estimated to be $9.25 per foot - 500 ft. — 4,625.00

   Direct supervision, engineering, surveying, employee living quarters, boarding house subsidy, mine office and accounting, estimated to be $4.24 per foot. — 2,120.00

3. 1200 feet rehabilitation of Morning Star Tunnel at an estimated rate of 200 feet per month.

   Labor (2 men at an estimated contract earnings of $600.00 per month plus 6.08% compensation insurance, Social Security taxes, and unemployment insurance - $6.36 per foot. — 7,632.00

Supplies including repair parts and small tools $3.10 per foot.	$3,720.00
Direct supervision, engineering, surveying, employee living quarters, boarding house subsidy, mine office and accounting, estimated to be $1.059 per foot.	1,271.00
4. Equipment rental as per Exhibit C - $501.50 per month for 13 months.	6,520.00
	$ 120,000.00


Lower Mining Stoir
MS7
MS10
MS9
MS11
MS12
Scale. 1" = 60'
Project A
Probable Trace of Dike Footwall
Level Elevation 9944.42
MINERALIZED ZONE
P.A. North Face 3/19/52
Continuation of Drift to
Follow Limestone - Porphyry Contact
Rail El. S. 20 7.65.90
Docket No. DMA-110

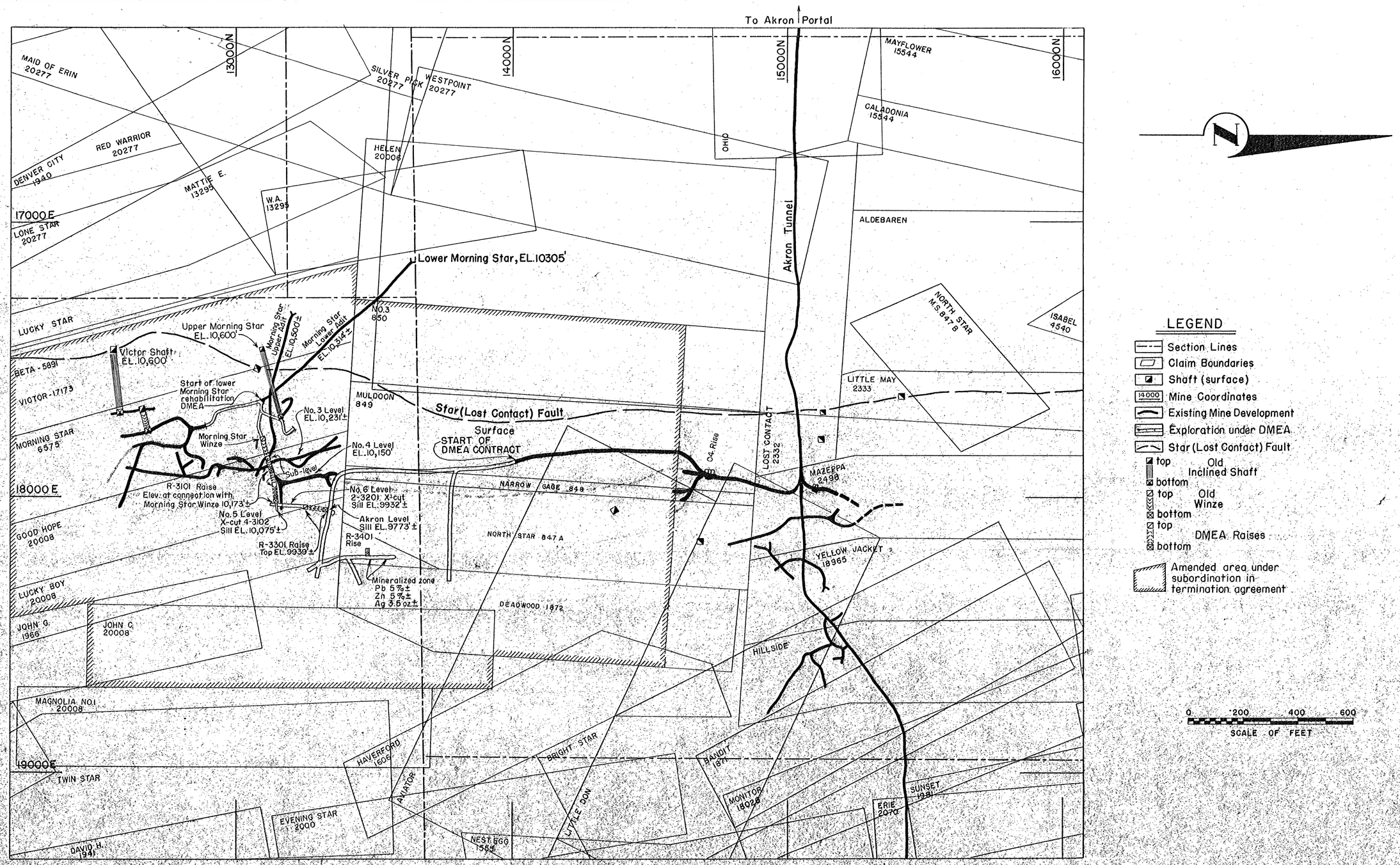
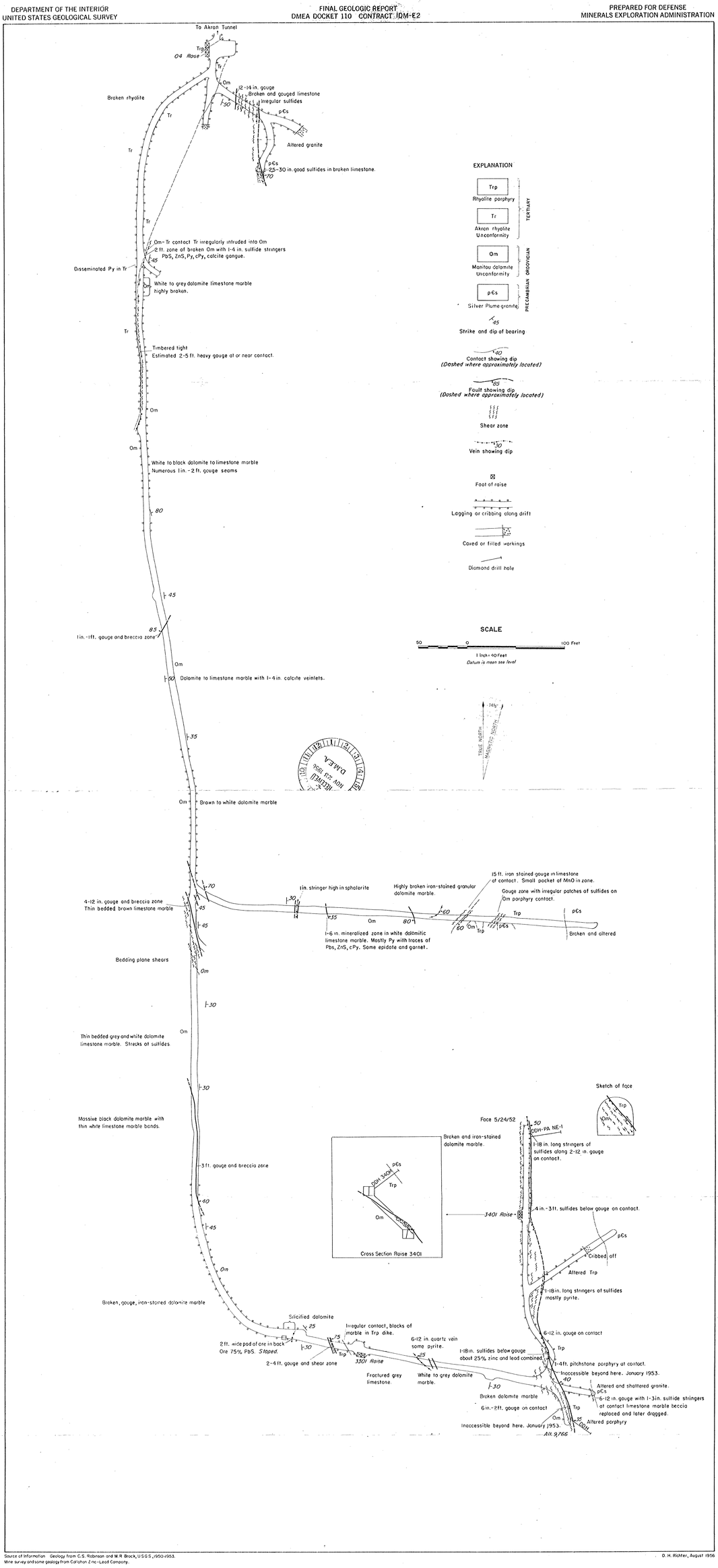


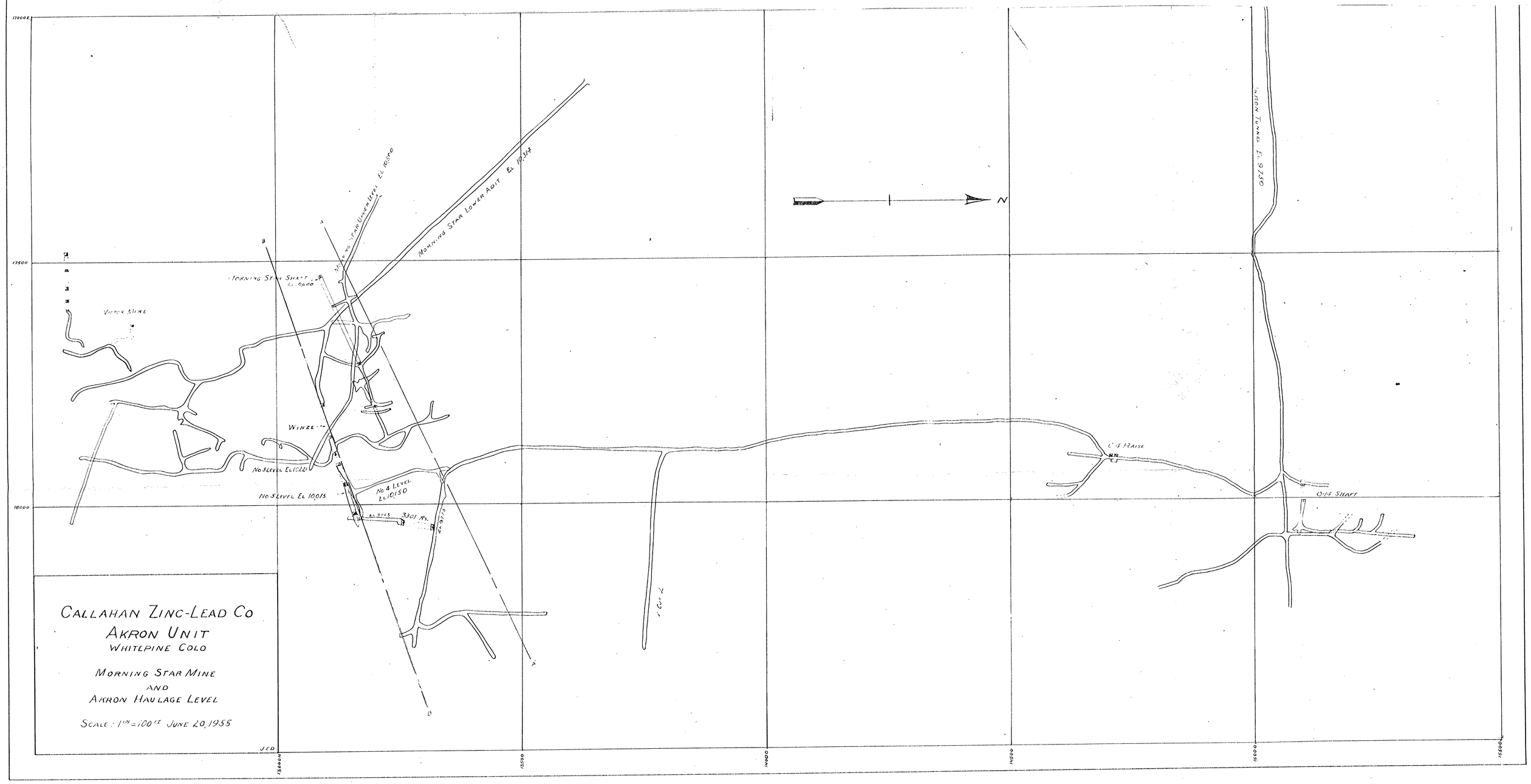
FIGURE 2 - CLAIM AND EXPLORATION MAP, AKRON AND MORNING STAR MINES, CALLAHAN ZINC-LEAD CO., GUNNISON COUNTY, COLO. DMEA 110, CONTRACT Idm-E2



Source of Information: Geology from C.S. Robinson and M.R. Brock, U.S.G.S., 1950-1953.
Mine survey and some geology from Callahan Zinc-Lead Company.

D. H. Richter, August 1956

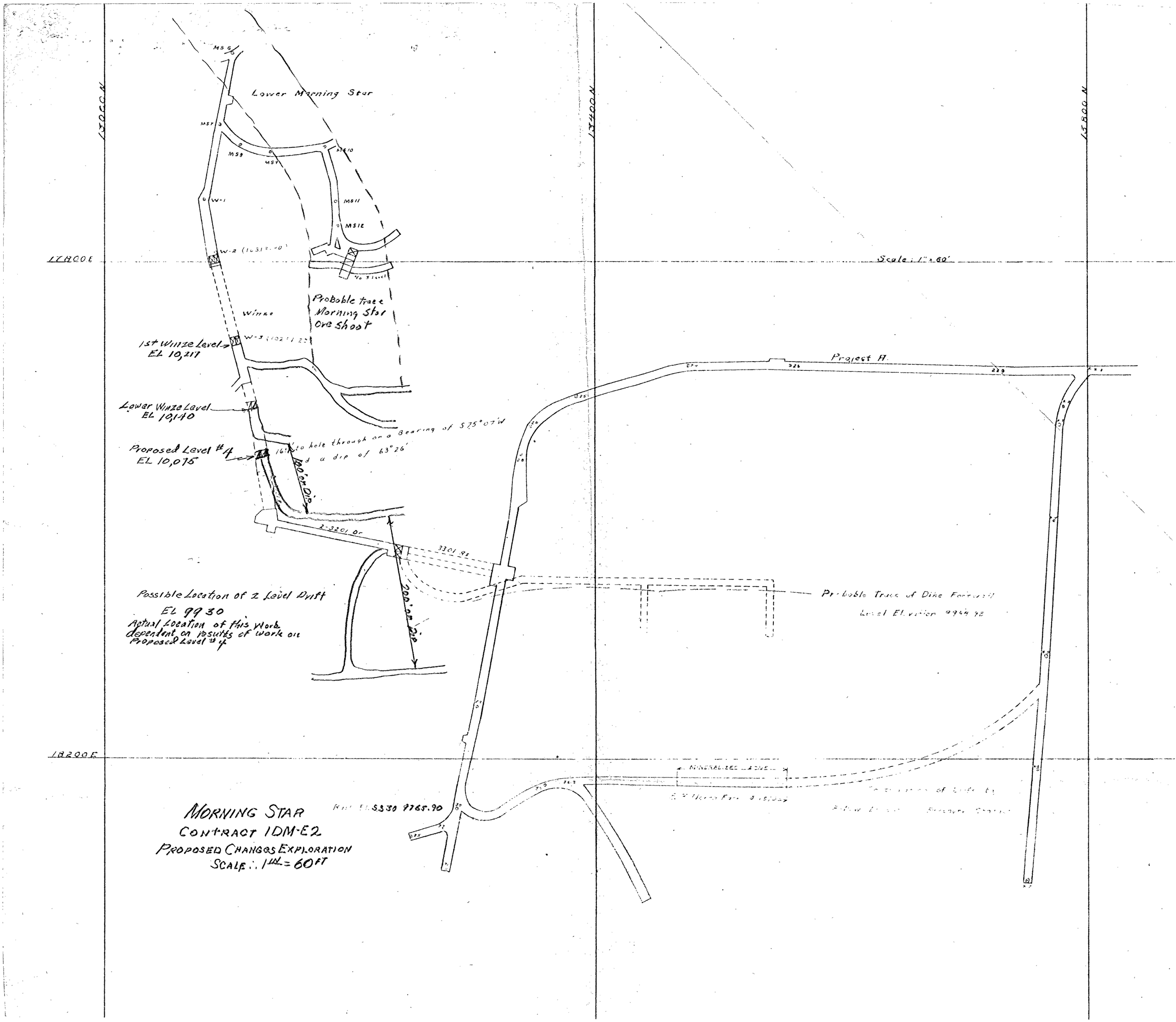
FIGURE 3.-GEOLOGIC MAP OF A PORTION OF THE AKRON LEVEL, AKRON MINE, WHITE PINE AREA, GUNNISON COUNTY, COLORADO.

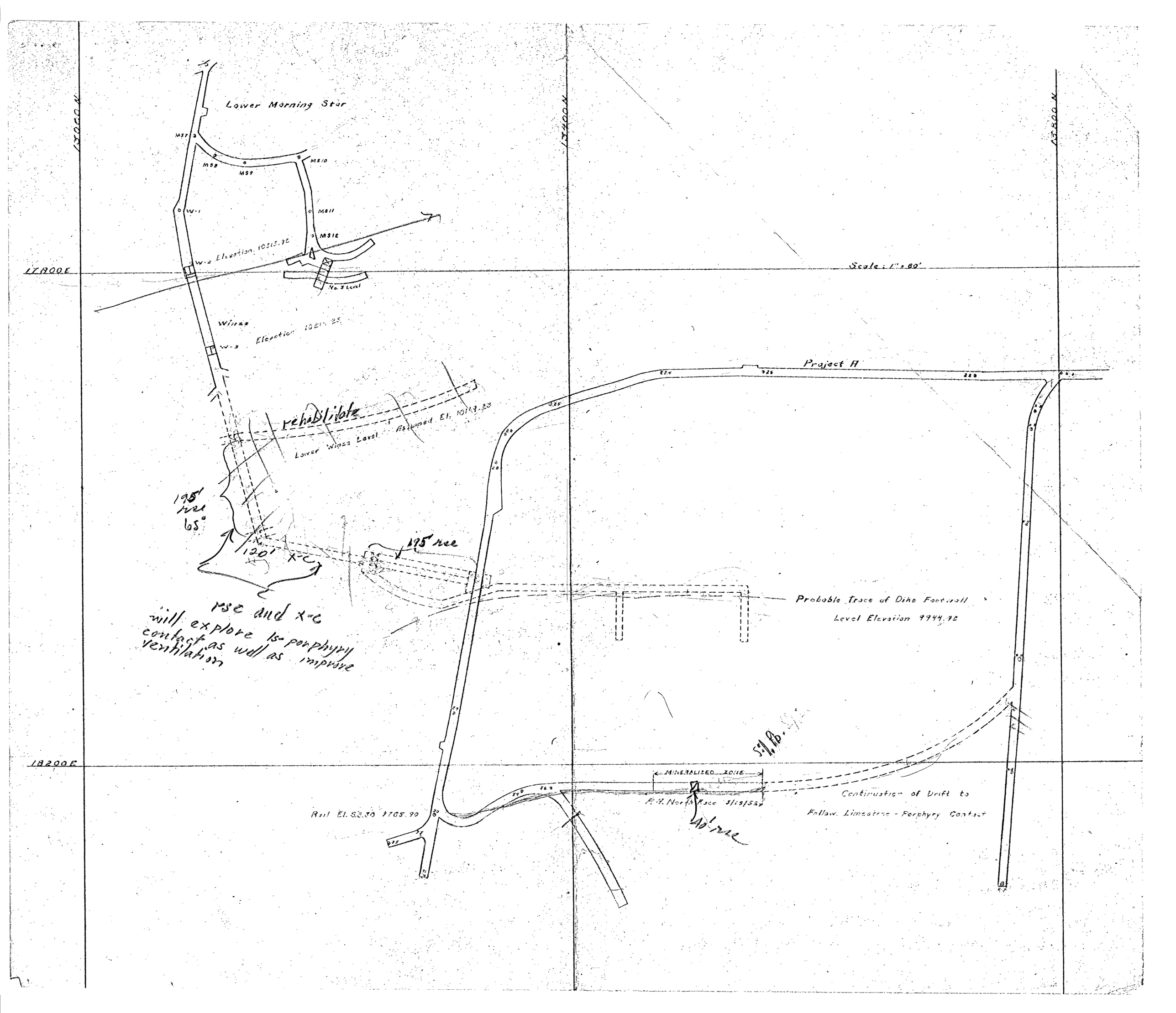


CALLAHAN ZINC-LEAD CO
AKRON UNIT
WHITEPINE COLO

MORNING STAR MINE
AND
AKRON HAULAGE LEVEL

SCALE: 1IN = 100FT JUNE 20, 1955


13000 N
13400 N
13800 N
17800 E
18200 E
Scale: 1" = 60'
Lower Morning Star
MS 6
MS7
MS8
MS9
MS10
MS11
MS12
W-1
W-2
No 3 Level
Probable trace Morning Star Ore Shoot
Winze
1st Winze Level
EL 10,217
Lower Winze Level
EL 10,140
Proposed Level #4
EL 10,075
16' to hole through on a Bearing of S 75°07'W
and a dip of 63°26'
100' on Dip
2-3201 Dr
3301 Dr
200' on Dip
Possible Location of 2 Level Drift
EL 9930
Actual Location of this Work dependent on results of work on Proposed Level #4
Project A
Probable trace of Dike Footwall
Level Elevation 9944.92
MINERALIZED ZONE
MORNING STAR
CONTRACT 1DM-E2
PROPOSED CHANGES EXPLORATION
SCALE: 1" = 60 FT


Lower Morning Star
MS7
MS8
MS9
MS10
MS11
MS12
W-1
W-2 Elevation 10515.76
No. 3 Level
Winze
W-3 Elevation 10 Elev. 25
rehabilitate
Lower Winze Level Assumed El. 10149.23
195' rse 65°
1201' X-C
195' rse
rse and x-c will explore Is-porphyry contact as well as improve ventilation
Scale: 1" = 60'
Project A
Probable trace of Dike Footwall
Level Elevation 9944.92
MINERALIZED ZONE
P.H. North Face 5/13/53
40' rse
Continuation of Drift to
Fallow. Limestone - Porphyry Contact
Rail El. 9830 9765.90
13600 N
13400 N
13800 N
17800 E
18200 E