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DEFENSE MINERALS ADMINISTRATION
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DMA Docket No. 1892-249

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APPLICATION FOR INFORMATION PROJECT

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

224 New Customhouse
Denver 2, Colorado

June 23, 1952

Memorandum

To: Acting Administrator, Defense Minerals Exploration Administration
Attention: Code 210

From: Field Team, Region IV

Subject: Final Report, DMA Docket 249, (Lead-Zinc) Orphan Boy Mine, Park County, Colorado

Enclosed are three copies of the final report on DMA-249. One copy was forwarded you February 18, with copy of the letter of denial to the applicant.

The field examiner recommended that the application be approved, but a subsequent review by the Field Team indicated that it should be denied.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 27 1951

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

224 New Customhouse
Mining Division
Region IV

December 4, 1951

Memorandum

To: DMA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report, DMA Docket 249, M. J. Krolicki, applicant; Orphan Boy Lead-Zinc Mine, Park County, Colorado

The application of the subject docket was for an exploration loan of $25,000.

The proposed program of exploration consists of rehabilitation of equipment, buildings, and 850 feet of the Orphan Boy adit, track and ditch, this to be followed by extending the Orphan Boy adit 150 feet, raising on fissures and drifting 100 feet at the Peerless shale contact and the Cambrian quartzite contact.

The Orphan Boy ores occur as irregular replacement bodies of sphalerite-galena-chalcopyrite and pyrite. There are not any mineable reserves at present, but the geological probability of discovery is considered good.

The estimated cost of the proposed work is too low, and a revised estimate at a total cost of $31,000 is submitted by the examining engineer with the approval of the applicant.

The examining engineer recommends approval of this loan, with which we concur. An exploration project contract will be processed by this office.

Paul T. Allsman

Paul T. Allsman

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 27 1951

Reviewed by
DMEA OPERATING COMMITTEE

7-2-52
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20
Denver Federal Center
Denver 14, Colorado
November 29, 1951

Mining Division
Date Rec'd.
Nov 29 1951
BUREAU OF MINES
Denver, Colorado

Memorandum

To: Chief, Mining Division, Region IV

From: Chief, Colorado Branch, Mining Division

Subject: DMA 249, The Orphan Boy Mine, Park County, Colorado

Please find enclosed the original and seven copies of the "Summary, Conclusions, and Recommendations" and "Engineering Report" on the above docket by C. M. Harrer. As indicated in the review, the application was approved geologically in Washington and a geological examination was not requested. C. S. Robinson, of the United States Geological Survey, accompanied Harrer on the trip but did not participate in either the examination or the report.

The review refers to War Minerals Report 194, quoting a statement that the Orphan Boy mine contains important deposits of zinc and lead. Actual production from 1946-50 totalled 1,136 tons of good grade, sorted base-metal ore and there is, possibly, some mill ore left, but the ore developed and mined could hardly be called important.

Harrer's report originally suggested a program to be accomplished by three alternate methods: (1) operating two headings on a two-shift basis, costing $31,000.00 to complete in 90 working days; (2) operating two headings on a one-shift basis, costing $37,000.00 to complete in 180 working days; and (3) operating one heading one shift daily, costing $40,000.00 to complete in 255 working days. All were apparently agreeable to the applicant. I saw no need for straddling the fence and eliminated all but the first method which required only a slight revision. The report as submitted recommends a project costing $31,000.00, comprising rehabilitation of surface structures and the main Orphan Boy adit, repairing 93 feet of the Evening Star raise and advancing it 175 feet to the Peerless shale, extending the main adit 150 feet to the Honeycomb Spur fissure, raising 180 feet on the fissure, and exploring the favorable contacts reached by both raises with 100 feet of drifting--a rather elaborate project.

Maps were not prepared to accompany the report, but reference to the drawing submitted with the application, titled "Section along trend of main adit level, Orphan Boy Mine", reveals that it

would be possible to accomplish the same exploration as Harrer recommends with from 1,000 to 1,200 feet of diamond drill hole costing from $7,000.00 to $8,500.00. Of course, when you have finished, you have only a one-inch hole in the formations, but, if you fail to make a discovery, you have saved from $22,500.00 to $24,000.00. From some slight knowledge of the mine, I am inclined to think possibly we have missed the boat on this proposal.

The brochure and review submitted with the instructions for examination by the Region IV Field Team are returned also.

W. M. Traver, Jr.

W. M. Traver, Jr.

enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM

DMA-249, The Orphan Boy Mine

Park County, Colorado

Lead-Zinc

C. M. Harrer, Mining Engineer
Bureau of Mines

November 28, 1951

THE ORPHAN BOY MINE
PARK COUNTY, COLORADO

Summary, Conclusions, and Recommendations

By C. M. Harrer
Mining Engineer
Bureau of Mines

THE ORPHAN BOY MINE
PARK COUNTY, COLORADO

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

By C. M. Harrer

The Orphan Boy mine, located in secs. 9 and 10, T. 9 S., R. 78 W., Park County, Colo., has been a substantial producer of mill-grade zinc-lead-copper ore, with varying amounts of gold and silver.

M. J. Krolicki, of Denver, Colo., lessee, has requested an exploration loan of $25,000.00 to rehabilitate and explore promising productive horizons in the Orphan Boy mine for replacement bodies of sphalerite-galena-chalcopyrite ore containing gold and silver.

The applicant's estimate of $25,000.00 is believed too low to accomplish his program. It is estimated that it will require $31,000.00 to accomplish his proposed exploration, operating two headings on a 2-shift basis for 90 working days.

Part of the contingency fund should be spent for competent geologic service and mapping.

The revised exploration loan for $31,000.00 on the Orphan Boy mine is recommended for approval.

THE ORPHAN BOY MINE
PARK COUNTY, COLORADO

Engineering Report

By C. M. Harrer
Mining Engineer
Bureau of Mines

THE ORPHAN BOY MINE
PARK COUNTY, COLORADO

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ILLUSTRATIONS

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1. Location map, Orphan Boy Mine, Park County, Colorado ... 1

THE ORPHAN BOY MINE
PARK COUNTY, COLORADO

ENGINEERING REPORT

By

C. M. Harrer

INTRODUCTION

Examination of the Orphan Boy mine near Park City, Colo. (fig. 1), was made at the request of M. J. Krolicki, lessee, in connection with a proposed exploration loan of $25,000.00 under the Defense Production Act of 1950, Defense Minerals Administration Docket 249, to explore this inoperative mine for replacement bodies of zinc-lead-copper-gold-silver ore at favorable horizons.

The property was examined by the author and C. S. Robinson, of the U. S. Geological Survey, on October 22, 1951. A. E. Moynahan, consulting mining engineer-lessor, and R. L. Robeson, former operator, acted as guides.

ACKNOWLEDGMENTS

R. L. Robeson, local miner and former lessee residing in Alma, Colo., conducted the examining team through all accessible mine workings. A. E. Moynahan, consulting mining engineer representing the owner, Kennebec Mining Company, furnished data on the property. Production statistics were furnished by the Economics Division of Region IV, Bureau of Mines.

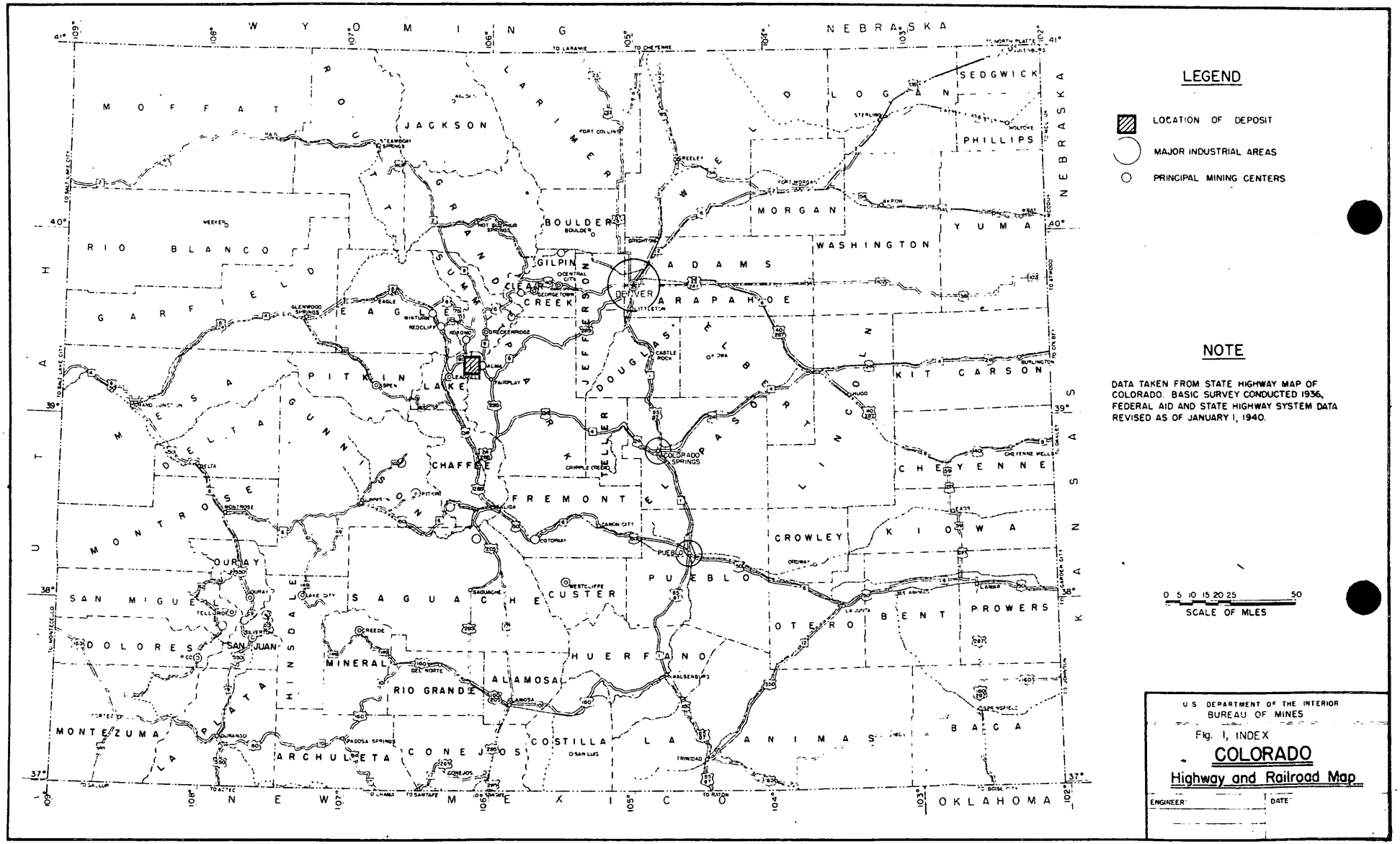

FIG. 1-ORPHAN BOY MINE, PARK COUNTY COLORADO D.M.A.-249

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The property is located in secs. 9 and 10, T. 9 S., R. 78 W., Alma Mining District, Park County, Colo., at an altitude of 10,800 feet. The Orphan Boy adit is on the lower southeast slope of Loveland Mountain, about 1 mile west of Park City and 2 1/4 miles west of Alma, Colo., on a rough ore haul road. Terrain is steep and rugged with pine and aspen trees on the slopes. Ample water is available in mine workings and nearby Cooper Creek. Communications, supply, and transportation facilities are readily available through nearby Alma, Colo., State Highway 9, and U. S. Highway 285. Alma is about 100 miles southwest of Denver and 76 miles by road from Leadville where the milling and smelting facilities of the American Smelting and Refining Company are located. Buena Vista is the nearest point on the Denver and Rio Grande Western Railroad, 41 miles to the south.

HISTORY AND PRODUCTION

A large group of patented mining claims was consolidated in 1890 in the holding company, Kennebec Mining Company. During 1901-06 the property was operated as the Orphan Boy Consolidated Mining Company, of Alma, and from 1907 to 1910 was idle. During 1911-12 it operated as the Success Mining Company; 1913-19 it was operated by Carl Mohr, of Alma; 1920-41 it reverted to Kennebec Mining Company. In 1942-44 the property was operated by the London Extension Mining Company under a Reconstruction Finance Corporation loan which was repaid only in part by salvage of equipment. The property has been under lease to M. J. Krolicki, of Denver, since May 5, 1945.

In the period 1901 to 1950, the property was operated intermittently and produced about 9,300 tons of ore with a recovered average assay of

0.25 ounce gold and 6.3 ounces silver per ton, 0.2 percent copper, 0.9 percent lead, and 5.0 percent zinc.

During the last operating period, 1946-50, the property produced 1,136 tons of ore which averaged 0.27 ounce gold and 3.7 ounces silver per ton, 0.6 percent copper, 3.1 percent lead, and 19.7 percent zinc. This production has been from the so-called "zinc stope" area along the Evening Star fissure. Ore has been shipped to various mills and smelters as gold-silver-pyrite ore, gold-silver-chalcopyrite-pyrite ore, galena-pyrite-gold-silver ore, and galena-sphalerite-pyrite-gold-silver ore.

OWNERSHIP AND EXTENT

The loan applicant, M. J. Krolicki, has a ten-year lease with option to purchase for $75,000.00, dated May 5, 1945, with date of expiration June 25, 1955. The lease option with Kennebec Mining Company, A. E. Moynahan, president, covers twenty patented mining claims having a total area of 113.6 acres which are listed in the application.

DESCRIPTION OF THE DEPOSITS

Ore occurs as irregular replacement bodies of sphalerite-galena-chalcopyrite and pyrite, with varying amounts of gold and silver, along nearly vertical faults and fractures in Cambrian quartzites which have been intruded by sheets and sills of quartz monzonite porphyry.

Walls are generally hard and firm, requiring little support. Very little gouge is found along faults. Fissures other than the Watercourse fault give up very little water and mine workings are slightly damp.

Replacement ore bodies already mined on various structures are in very hard Cambrian quartzite and this condition will continue to the prospect horizon, the Peerless shale.

Ore occurring along the fissures varies in thickness from 18 inches to 5 feet. It has been mined selectively to maintain a shipping grade, and narrow or low-grade zones have not been explored to any appreciable extent.

MINABLE ORE RESERVES

At present, extensions of the zinc stope ore body along the Evening Star fault, above present mine workings and to the southwest, are potential sources of sphalerite-galena-chalcopyrite ore which probably cannot be mined profitably under present conditions. The ore from the zinc stope was transferred four times to reach the Orphan Boy adit level and its portal.

No appreciable reserves of ore which can be mined profitably are presently exposed.

PRESENT STATUS

Exploration and Development

The Orphan Boy adit is driven 820 feet northwesterly from its portal. A 25-foot stub drift trending S. 70° W., and 74 feet from the end of the Orphan Boy adit is the location of a 93-foot raise to the Evening Star vein. The top of this raise will be advanced along the Evening Star fissure to intersect the Peerless shale. All underground development pertinent to the proposed exploration program was accessible to examination but requires rehabilitation. Operations during 1946-50, in the zinc stope on the Evening Star structure were accessible with difficulty. The mine is presently inoperative and requires rehabilitation.

Mining and Milling Equipment

There is no mining or milling equipment on the property.

PROJECT PROPOSAL

M. J. Krolicki, loan applicant, proposes to explore new horizons in the Orphan Boy mine for zinc-lead ore deposits with included copper-gold and silver by drifting and raising from the Orphan Boy adit level through pre-Cambrian granite-gneiss, the Cambrian quartzites, and the Peerless shale, at a cost of $25,000.00, to be expended as follows:

(1) Rehabilitate compressor and shop buildings.

(2) Rehabilitate 850 feet of Orphan Boy adit track and ditch.

(3) Recondition compressed air lines and extend them.

(4) Rehabilitate the Evening Star raise to its top (93 feet) and prepare the raise for driving to the Peerless shale.

(5) Advance the Evening Star raise from the present top 175 feet to the Peerless shale, and extend the Orphan Boy adit 150 feet, through the Honeycomb Spur fissure, simultaneously.

(6) Drive a raise at the end of the Orphan Boy adit extension on the Honeycomb Spur fissure 180 feet through the pre-Cambrian granite-gneiss and Cambrian quartzite.

(7) Explore the Peerless shale contact and the Cambrian quartzite contact which are the objectives of items 5 and 6, with a total of 100 feet of drifting.

ESTIMATED PROJECT COSTS

A. Equipment to be rented

Costs based on "Rental Rates for Construction Equipment, 1950 edition, Associated Equipment Distributors of Colorado."

Item	Monthly Rental
1 - 315 c.f.m. Gardner Denver air compressor, portable, skid mount	$ 475.00
2 - Pneumatic drifters, columns, hoses, etc.	200.00
2 - Pneumatic stopers	133.50
3 - Mine cars, 1-ton	60.00
1 - Mule	40.00
1 - Air hoist-tugger	73.00
2 - Drilling water tanks	10.00
1 - Bimco 12B loader (for one month)	250.00
1 - Portable Joy I-21 blower for raise (Air motor)	70.00
500 feet of fan tubing	43.00
Total monthly rental	$1,354.50
Total daily rental	$45.15

B. Supervision and Labor

The project is expected to be carried on in the Orphan Boy adit and the Evening Star raise simultaneously on a 2-shift basis.

	Per day
1 - Superintendent who will work days directing the project, keeping accounts, and engineering work at $450.00 per month; on a 25-working-day month	$ 18.00
1 - Foreman-compressor man, who will work nights at $1.65 per hour, with overtime on Saturdays	14.30
4 - Miners at $1.50 per hour; 6-day week, including overtime on Saturdays	52.00
4 - Miners' helpers at $1.35 per hour; 6-day week, including overtime	46.80
2 - Trammers at $1.35 per hour; 6-day week, including overtime	23.40
1 - Compressor man-mechanic at $1.50 per hour; 6-day week, including overtime	13.00
Total supervision and labor cost per day	$167.50

C. Supplies

400 feet of mine track, complete, and including some replacement at $3.86 per foot	$1,544.00
168 cases of dynamite at $11.88 per case	1,995.84
2,400 blasting caps at $26.15 per 100	627.60
16,000 feet of fuse at $13.25 per 1000	212.00
8 sets of drill steel	200.00
50 tungsten carbide bits at $15.00	750.00
Small tools	100.00
Timber and lumber, etc.	3,000.00
700 feet of 2-inch air line at $.32 per foot	224.00
Total cost of supplies	8,653.44

Estimated cost of project

Estimated cost of the project on a 2-shift basis, with two headings operating simultaneously wherever possible, is as follows:

Labor (2-shift basis, 90 working days)

(1)	Labor to rehabilitate compressor room and shop. Buildings now in disrepair. Two days at $167.50 per day	$ 335.00
(2)	Labor to rehabilitate 850 feet of Orphan Boy adit track, plank walk, and ditch. Whole crew. Three days at $167.50 per day	502.50
(3)	Labor to recondition and extend compressed air lines. Whole crew. Two days at $167.50 per day	335.00
(4)	Labor to rehabilitate 93 feet of the Evening Star raise preparatory to start raising to the Peerless shale. *Five days at $118.10 per day	590.50

(5) Labor to extend the Evening Star raise 175 feet to the Peerless shale and advance the Orphan Boy adit 150 feet, simultaneously on 2 shifts. Thirty-five days at $167.50 per day	$5,862.50	
(6) Labor to raise on the Honeycomb Spur fissure 180 feet. *Thirty-five days at $118.10 per day	4,133.50	
(7) Labor to drift a composite total of 100 feet on contact objectives. Thirteen days at $167.50 per day (This will be carried out in part simultaneously with item 5.)	2,177.50	
Total labor costs		$13,936.50

*Excludes 2 miners and 2 miners' helpers per day from $167.50 estimate.

Rental		
1 month at $1,354.50	$1,354.50	
3 months at $1,104.50 (no Eimco loader)	3,313.50	
Total rental		4,668.00
Supplies		8,653.44
Contingencies		
(Fuel, labor taxes, possible additional rental on a second air hoist and fan for raises, delays, truck service, etc.)		3,742.06
Total cost of project		$31,000.00

Total time required to complete the project is estimated at 90 working days on a 2-shift basis, operating two headings simultaneously wherever possible.

PRODUCTION PLAN

M. J. Krolicki, lessee of the Orphan Boy mine, plans to start mining operations if commercial shipping-grade ores result from the exploration. These future operations will be governed entirely by the outcome of the exploration program.

PROPOSED FINANCING

M. J. Krolicki, lessee, and A. E. Moynahan, lessor, have indicated their willingness and ability to participate in an exploration program which they estimate will cost $25,000.00, or any other amount estimated to be required by the examining engineer. They understand their share of the total cost will be 50 percent. M. J. Krolicki is related to the lessor, A. E. Moynahan, president of Kennebec Mining Company.

CONCLUSIONS

The Orphan Boy mine has produced over 9,300 tons of mill and smelter grade zinc-lead-copper ores.

Exploration will be directed toward horizons proven productive elsewhere, and should be successful.

The estimate by the applicant, M. J. Krolicki, of the financial requirements is believed too low to complete the entire project as outlined.

It is estimated $31,000.00 will be required to complete the proposed exploration operating on a 2-shift, two-heading basis, for 90 working days. Operations on a two heading, single shift, or a one heading, single shift would show correspondingly higher costs.

Considerable work will be in pre-Cambrian granite-gneiss and hard Cambrian quartzite.

There is no equipment on the property other than track and air line which is in poor condition.

Mine and surface plant are in disrepair and will require rehabilitation.

RECOMMENDATIONS

The application for an exploration loan on the Orphan Boy mine, Defense Minerals Administration Docket 249, is recommended for approval on the amended estimates of $31,000.00.

Part of the contingency item should be spent for competent geologic service and mapping.

FEB 25 4 43 PM '52

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

224 New Customhouse
Denver 2, Colorado

February 18, 1952

Memorandum

To: Acting Administrator, Defense Minerals Exploration Administration, Attention: Code 210

From: Field Team, DMEA, Region IV

Subject: DMA Docket 249, Final Report, M. J. Krolicki, applicant; Orphan Boy Lead-Zinc Mine, Park County, Colorado

The application of M. J. Krolicki, DMA-249, has been denied. The application was formerly approved, but a subsequent review of the information by the field team indicated that it should be denied.

The original and one copy of Form 3b were sent to the Executive Secretary, DMA, on December 4, 1951.

We are enclosing the original and one copy of a revised Form 3b.

We are also enclosing a copy of the final report, and a copy of the letter of denial to the applicant.

for W. H. Keing
J. H. East, Jr.

A. H. Koschmann
A. H. Koschmann

Enclosures

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

224 New Customhouse
Denver 2, Colorado

February 15, 1952

Mr. M. J. Krolicki
2990 Locust Street
Denver, Colorado

Dear Mr. Krolicki:

Referring to your application for assistance on the Orphan Boy mine, DMA Docket 249.

Your proposal consists essentially of the following; rehabilitation of the Orphan Boy adit, repairing 93 feet of the Evening Star raise and advancing it 175 feet to the Peerless shale, extending the main adit 150 feet to the Honeycomb Spur fissure, raising 180 feet on the fissure, and exploring the favorable contacts reached by both raises with 100 feet of drifting. The estimated cost was $25,000.00.

The favorable contacts can be explored effectively by diamond drilling at considerably less cost. It is suggested that you submit a revised application as we must deny your application in its present form.

J. H. East, Jr.
Field Team, Region IV

A. H. Koschmann
Field Team, Region IV

cc: Acting Administrator,
DMEA - Wash.

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

224 New Customhouse
Denver 2, Colorado

February 18, 1952

Memorandum

To: Acting Administrator, Defense Minerals Exploration Administration, Attention: Code 210

From: Field Team, DMEA, Region IV

Subject: DMA Docket 249, Final Report, M. J. Krolicki, applicant; Orphan Boy Lead-Zinc Mine, Park County, Colorado

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for W. H. King
J. H. East, Jr.

A. H. Koschmann
A. H. Koschmann

Enclosures

OFFICE OF THE ADMINISTRATOR

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

224 New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 10 1951

December 4, 1951

Memorandum

To: Executive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: DMA Docket 249, Final Report, M. J. Krolicki, applicant; Orphan Boy Lead-Zinc Mine, Park County, Colorado

The subject report has been approved by us and an exploration loan of $31,000 is being processed.

Your copies of the report and brochure are being held here until the execution of the exploration project contract.

The original and one copy of DMA Form 3b is attached.

Paul T. Allsman

Paul T. Allsman, Alternate

A. H. Koschmann

A. H. Koschmann

Copy of memo. to Base Metals Div. - 2/13/52 - C.E.

DMA Form 3b.

DEFENSE MINERALS ADMINISTRATION

CONTROLLED DOCUMENT
Revised Abstract

DMA Docket No. 249

Change: From		To		
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I 2	☐	I 2	☐	
I 3	☒	I 3	☒	
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III 3	☐	III 3	☐	
III 4	☒	III 4	☐	

Add:

II 7 $ 25,000

II 8 $ 31,000

II 8a % 50

Initials of person preparing sheet W.D.M.

Date sheet prepared 12/3/51

DMA Form 3b.

DEFENSE MINERALS ADMINISTRATION

CONTROLLED DOCUMENT
Revised Abstract

DMA Docket No. 249

Change: From		To		
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I 2	☐	I 2	☐	
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III 1	☐	III 1	☒	12/3/51
III 2	☐	III 2	☐	
III 3	☐	III 3	☐	
III 4	☒	III 4	☐	

Add:

II 7 $ 25,000

II 8 $ 31,000

II 8a % 50

Initials of person preparing sheet W.D.M.

Date sheet prepared 12/3/51

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

224 New Customhouse
Denver 2, Colorado

December 4, 1951

Memorandum

To: Executive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: DMA Docket 249, Final Report, M. J. Krolicki, applicant; Orphan Boy Lead-Zinc Mine, Park County, Colorado

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Paul T. Allsman, Alternate

A. H. Koschmann

224 New Customhouse
Mining Division
Region IV

December 4, 1951

Memorandum

To: DMA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report, DMA Docket 249, M. J. Krolicki, applicant; Orphan Boy Lead-Zinc Mine, Park County, Colorado

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The Orphan Boy ores occur as irregular replacement bodies of sphalerite-galena-chalcopyrite and pyrite. There are not any mineable reserves at present, but the geological probability of discovery is considered good.

The estimated cost of the proposed work is too low, and a revised estimate at a total cost of $31,000 is submitted by the examining engineer with the approval of the applicant.

The examining engineer recommends approval of this loan, with which we concur. An exploration project contract will be processed by this office.

Paul T. Allsman

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20
Denver Federal Center
Denver 14, Colorado
November 29, 1951

Return to DMEA, Rm. 4007

Memorandum

To: Chief, Mining Division, Region IV

From: Chief, Colorado Branch, Mining Division

Subject: DMA 249, The Orphan Boy Mine, Park County, Colorado

Please find enclosed the original and seven copies of the "Summary, Conclusions, and Recommendations" and "Engineering Report" on the above docket by C. M. Harrer. As indicated in the review, the application was approved geologically in Washington and a geological examination was not requested. C. S. Robinson, of the United States Geological Survey, accompanied Harrer on the trip but did not participate in either the examination or the report.

The review refers to War Minerals Report 194, quoting a statement that the Orphan Boy mine contains important deposits of zinc and lead. Actual production from 1946-50 totalled 1,136 tons of good grade, sorted base-metal ore and there is, possibly, some mill ore left, but the ore developed and mined could hardly be called important.

Harrer's report originally suggested a program to be accomplished by three alternate methods: (1) operating two headings on a two-shift basis, costing $31,000.00 to complete in 90 working days; (2) operating two headings on a one-shift basis, costing $37,000.00 to complete in 180 working days; and (3) operating one heading one shift daily, costing $40,000.00 to complete in 255 working days. All were apparently agreeable to the applicant. I saw no need for straddling the fence and eliminated all but the first method which required only a slight revision. The report as submitted recommends a project costing $31,000.00, comprising rehabilitation of surface structures and the main Orphan Boy adit, repairing 93 feet of the Evening Star raise and advancing it 175 feet to the Peerless shale, extending the main adit 150 feet to the Honeycomb Spur fissure, raising 180 feet on the fissure, and exploring the favorable contacts reached by both raises with 100 feet of drifting--a rather elaborate project.

Maps were not prepared to accompany the report, but reference to the drawing submitted with the application, titled "Section along trend of main adit level, Orphan Boy Mine", reveals that it

would be possible to accomplish the same exploration as Harrer recommends with from 1,000 to 1,200 feet of diamond drill hole costing from $7,000.00 to $8,500.00. Of course, when you have finished, you have only a one-inch hole in the formations, but, if you fail to make a discovery, you have saved from $22,500.00 to $24,000.00. From some slight knowledge of the mine, I am inclined to think possibly we have missed the boat on this proposal.

The brochure and review submitted with the instructions for examination by the Region IV Field Team are returned also.

W. M. Traver, Jr.

W. M. Traver, Jr.

enclosures

Dear Ace
12/29/61
P.S.

would be possible to accomplish the same exploration as earlier recommended with from 1,000 to 1,200 feet of diamond drill holes costing from $7,000.00 to $11,000.00. Of course, when you have finished, you have only a one-inch hole in the formations, but, if you fail to make a discovery, you have saved from $4,500.00 to $4,[illegible]00.00. From some slight knowledge of the mine, I am inclined to think possibly we have blown the cost on this proposal.

The brochure and review submitted with the instructions for examination by the Mayor N. Field Tom. are returned also.

W. Scott Lawson

W. S. Lawson, Jr.

enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM

DMA-249, The Orphan Boy Mine

Park County, Colorado

Lead-Zinc

C. M. Harrer, Mining Engineer
Bureau of Mines

November 28, 1951

THE ORPHAN BOY MINE
PARK COUNTY, COLORADO

Summary, Conclusions, and Recommendations

By C. M. Harrer
Mining Engineer
Bureau of Mines

THE ORPHAN BOY MINE
PARK COUNTY, COLORADO

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

By C. M. Harrer

The Orphan Boy mine, located in secs. 9 and 10, T. 9 S., R. 78 W., Park County, Colo., has been a substantial producer of mill-grade zinc-lead-copper ore, with varying amounts of gold and silver.

M. J. Krolicki, of Denver, Colo., lessee, has requested an exploration loan of $25,000.00 to rehabilitate and explore promising productive horizons in the Orphan Boy mine for replacement bodies of sphalerite-galena-chalcopyrite ore containing gold and silver.

The applicant's estimate of $25,000.00 is believed too low to accomplish his program. It is estimated that it will require $31,000.00 to accomplish his proposed exploration, operating two headings on a 2-shift basis for 90 working days.

Part of the contingency fund should be spent for competent geologic service and mapping.

The revised exploration loan for $31,000.00 on the Orphan Boy mine is recommended for approval.

THE ORPHAN BOY MINE
PARK COUNTY, COLORADO

Engineering Report

By C. M. Harrer
Mining Engineer
Bureau of Mines

THE ORPHAN BOY MINE
PARK COUNTY, COLORADO

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Figure — Follows Page

1. Location map, Orphan Boy Mine, Park County, Colorado ... 1

THE ORPHAN BOY MINE
PARK COUNTY, COLORADO

ENGINEERING REPORT

By

C. M. Harrer

INTRODUCTION

Examination of the Orphan Boy mine near Park City, Colo. (fig. 1), was made at the request of M. J. Krolicki, lessee, in connection with a proposed exploration loan of $25,000.00 under the Defense Production Act of 1950, Defense Minerals Administration Docket 249, to explore this inoperative mine for replacement bodies of zinc-lead-copper-gold-silver ore at favorable horizons.

The property was examined by the author and C. S. Robinson, of the U. S. Geological Survey, on October 22, 1951. A. E. Moynahan, consulting mining engineer-lessor, and R. L. Robeson, former operator, acted as guides.

ACKNOWLEDGMENTS

R. L. Robeson, local miner and former lessee residing in Alma, Colo., conducted the examining team through all accessible mine workings. A. E. Moynahan, consulting mining engineer representing the owner, Kennebec Mining Company, furnished data on the property. Production statistics were furnished by the Economics Division of Region IV, Bureau of Mines.

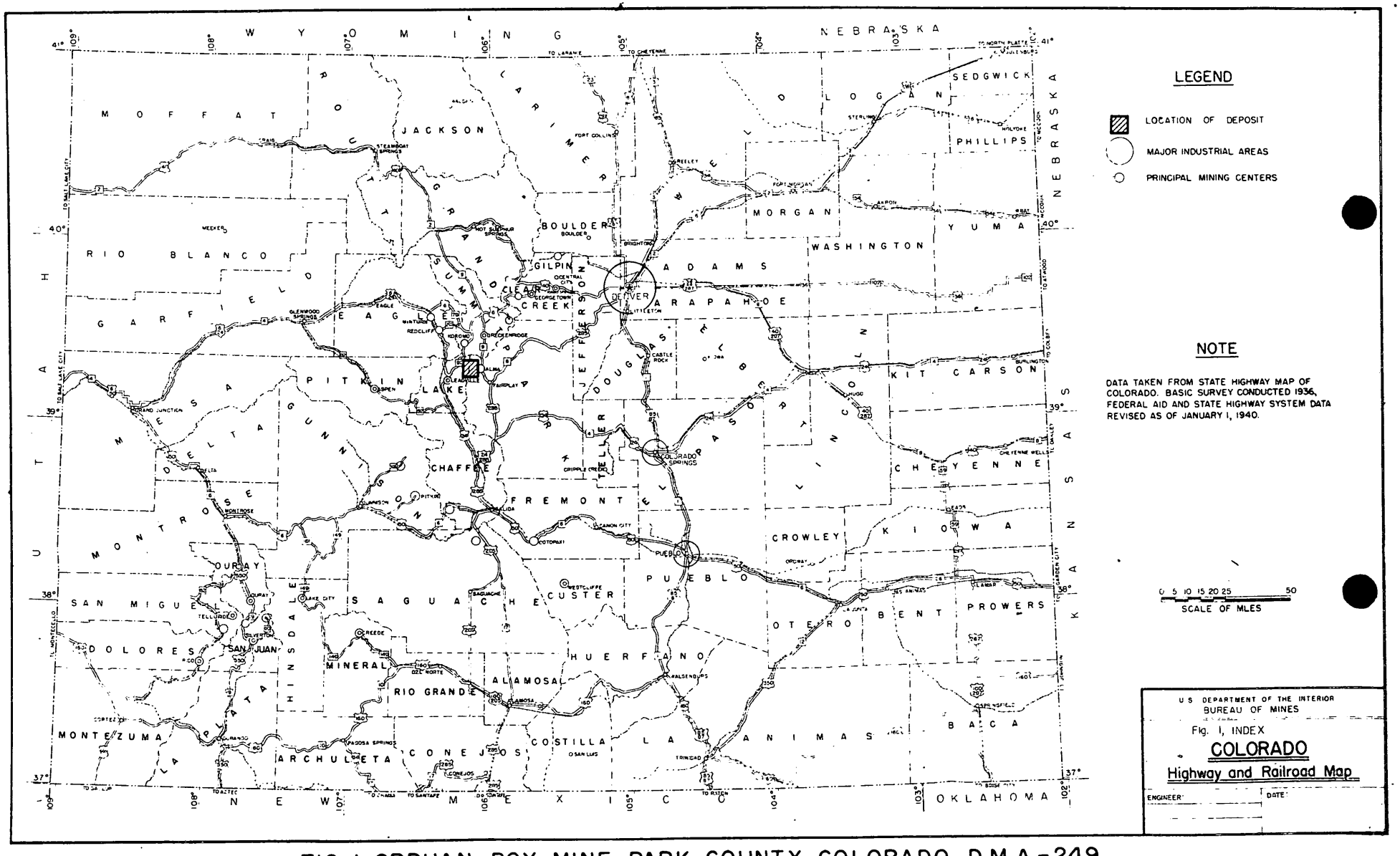

FIG. 1-ORPHAN BOY MINE, PARK COUNTY COLORADO D.M.A.-249

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The property is located in secs. 9 and 10, T. 9 S., R. 78 W., Alma Mining District, Park County, Colo., at an altitude of 10,800 feet. The Orphan Boy adit is on the lower southeast slope of Loveland Mountain, about 1 mile west of Park City and 2 1/4 miles west of Alma, Colo., on a rough ore haul road. Terrain is steep and rugged with pine and aspen trees on the slopes. Ample water is available in mine workings and nearby Cooper Creek. Communications, supply, and transportation facilities are readily available through nearby Alma, Colo., State Highway 9, and U. S. Highway 285. Alma is about 100 miles southwest of Denver and 76 miles by road from Leadville where the milling and smelting facilities of the American Smelting and Refining Company are located. Buena Vista is the nearest point on the Denver and Rio Grande Western Railroad, 41 miles to the south.

HISTORY AND PRODUCTION

A large group of patented mining claims was consolidated in 1890 in the holding company, Kennebec Mining Company. During 1901-06 the property was operated as the Orphan Boy Consolidated Mining Company, of Alma, and from 1907 to 1910 was idle. During 1911-12 it operated as the Success Mining Company; 1913-19 it was operated by Carl Mohr, of Alma; 1920-41 it reverted to Kennebec Mining Company. In 1942-44 the property was operated by the London Extension Mining Company under a Reconstruction Finance Corporation loan which was repaid only in part by salvage of equipment. The property has been under lease to M. J. Krolicki, of Denver, since May 5, 1945.

In the period 1901 to 1950, the property was operated intermittently and produced about 9,300 tons of ore with a recovered average assay of

0.25 ounce gold and 6.3 ounces silver per ton, 0.2 percent copper, 0.9 percent lead, and 5.0 percent zinc.

During the last operating period, 1946-50, the property produced 1,136 tons of ore which averaged 0.27 ounce gold and 3.7 ounces silver per ton, 0.6 percent copper, 3.1 percent lead, and 19.7 percent zinc. This production has been from the so-called "zinc stope" area along the Evening Star fissure. Ore has been shipped to various mills and smelters as gold-silver-pyrite ore, gold-silver-chalcopyrite-pyrite ore, galena-pyrite-gold-silver ore, and galena-sphalerite-pyrite-gold-silver ore.

OWNERSHIP AND EXTENT

The loan applicant, M. J. Krolicki, has a ten-year lease with option to purchase for $75,000.00, dated May 5, 1945, with date of expiration June 25, 1955. The lease option with Kennebec Mining Company, A. M. Moynahan, president, covers twenty patented mining claims having a total area of 113.6 acres which are listed in the application.

DESCRIPTION OF THE DEPOSITS

Ore occurs as irregular replacement bodies of sphalerite-galena-chalcopyrite and pyrite, with varying amounts of gold and silver, along nearly vertical faults and fractures in Cambrian quartzites which have been intruded by sheets and sills of quartz monzonite porphyry.

Walls are generally hard and firm, requiring little support. Very little gouge is found along faults. Fissures other than the Watercourse fault give up very little water and mine workings are slightly damp.

Replacement ore bodies already mined on various structures are in very hard Cambrian quartzite and this condition will continue to the prospect horizon, the Peerless shale.

Ore occurring along the fissures varies in thickness from 18 inches to 5 feet. It has been mined selectively to maintain a shipping grade, and narrow or low-grade zones have not been explored to any appreciable extent.

MINABLE ORE RESERVES

At present, extensions of the "zinc stope" ore body along the Evening Star fault, above present mine workings and to the southwest, are potential sources of sphalerite-galena-chalcopyrite ore which probably cannot be mined profitably under present conditions. The ore from the zinc stope was transferred four times to reach the Orphan Boy adit level and its portal.

No appreciable reserves of ore which can be mined profitably, are presently exposed.

PRESENT STATUS

Exploration and Development

The Orphan Boy adit is driven 820 feet northwesterly from its portal. A 25-foot stub drift trending S. 70° W., and 74 feet from the end of the Orphan Boy adit is the location of a 93-foot raise to the Evening Star vein. The top of this raise will be advanced along the Evening Star fissure to intersect the Peerless shale. All underground development pertinent to the proposed exploration program was accessible to examination but requires rehabilitation. Operations during 1946-50, in the zinc stope on the Evening Star structure were accessible with difficulty. The mine is presently inoperative and requires rehabilitation.

Mining and Milling Equipment

There is no mining or milling equipment on the property.

PROJECT PROPOSAL

M. J. Krolicki, loan applicant, proposes to explore new horizons in the Orphan Boy mine for zinc-lead ore deposits with included copper-gold and silver by drifting and raising from the Orphan Boy adit level through pre-Cambrian granite-gneiss, the Cambrian quartzites, and the Peerless shale, at a cost of $25,000.00, to be expended as follows:

(1) Rehabilitate compressor and shop buildings.

(2) Rehabilitate 850 feet of Orphan Boy adit track and ditch.

(3) Recondition compressed air lines and extend them.

(4) Rehabilitate the Evening Star raise to its top (93 feet) and prepare the raise for driving to the Peerless shale.

(5) Advance the Evening Star raise from the present top 175 feet to the Peerless shale, and extend the Orphan Boy adit 150 feet, through the Honeycomb Spur fissure, simultaneously.

(6) Drive a raise at the end of the Orphan Boy adit extension on the Honeycomb Spur fissure 180 feet through the pre-Cambrian granite-gneiss and Cambrian quartzite.

(7) Explore the Peerless shale contact and the Cambrian quartzite contact which are the objectives of items 5 and 6, with a total of 100 feet of drifting.

ESTIMATED PROJECT COSTS

A. Equipment to be rented

Costs based on "Rental Rates for Construction Equipment, 1950 edition, Associated Equipment Distributors of Colorado."

Item	Monthly Rental
1 - 315 c.f.m. Gardner Denver air compressor, portable, skid mount	$ 475.00
2 - Pneumatic drifters, columns, hoses, etc.	200.00
2 - Pneumatic stopers	133.50
3 - Mine cars, 1-ton	60.00
1 - Mule	40.00
1 - Air hoist-tugger	73.00
2 - Drilling water tanks	10.00
1 - Eimco 12B loader (for one month)	250.00
1 - Portable Joy I-21 blower for raise (Air motor)	70.00
500 feet of fan tubing	43.00
Total monthly rental	$1,354.50
Total daily rental	$45.15

B. Supervision and Labor

The project is expected to be carried on in the Orphan Boy adit and the Evening Star raise simultaneously on a 2-shift basis.

	Per day
1 - Superintendent who will work days directing the project, keeping accounts, and engineering work at $450.00 per month; on a 25-working-day month	$ 18.00
1 - Foreman-compressor man, who will work nights at $1.65 per hour, with overtime on Saturdays	14.30
4 - Miners at $1.50 per hour; 6-day week, including overtime on Saturdays	52.00
4 - Miners' helpers at $1.35 per hour; 6-day week, including overtime	46.80
2 - Trammers at $1.35 per hour; 6-day week, including overtime	23.40
1 - Compressor man-mechanic at $1.50 per hour; 6-day week, including overtime	13.00
Total supervision and labor cost per day	$167.50

C. Supplies

400 feet of mine track, complete, and including some replacement at $3.86 per foot	$1,544.00
168 cases of dynamite at $11.88 per case	1,995.84
2,400 blasting caps at $26.15 per 100	627.60
16,000 feet of fuse at $13.25 per 1000	212.00
8 sets of drill steel	200.00
50 tungsten carbide bits at $15.00	750.00
Small tools	100.00
Timber and lumber, etc.	3,000.00
700 feet of 2-inch air line at $.32 per foot	224.00
Total cost of supplies	8,653.44

Estimated cost of project

Estimated cost of the project on a 2-shift basis, with two headings operating simultaneously wherever possible, is as follows:

Labor (2-shift basis, 90 working days)

(1)	Labor to rehabilitate compressor room and shop. Buildings now in disrepair. Two days at $167.50 per day	$ 335.00
(2)	Labor to rehabilitate 850 feet of Orphan Boy adit track, plank walk, and ditch. Whole crew. Three days at $167.50 per day	502.50
(3)	Labor to recondition and extend compressed air lines. Whole crew. Two days at $167.50 per day	335.00
(4)	Labor to rehabilitate 93 feet of the Evening Star raise preparatory to start raising to the Peerless shale. *Five days at $118.10 per day	590.50

(5) Labor to extend the Evening Star raise 175 feet to the Peerless shale and advance the Orphan Boy adit 150 feet, simultaneously on 2 shifts. Thirty-five days at $167.50 per day	$5,862.50	
(6) Labor to raise on the Honeycomb Spur fissure 180 feet. *Thirty-five days at $118.10 per day	4,133.50	
(7) Labor to drift a composite total of 100 feet on contact objectives. Thirteen days at $167.50 per day (This will be carried out in part simultaneously with item 5.)	2,177.50	
Total labor costs		$13,936.50

*Excludes 2 miners and 2 miners' helpers per day from $167.50 estimate.

Rental		
1 month at $1,354.50	$1,354.50	
3 months at $1,104.50 (no Bimco loader)	3,313.50	
Total rental		4,668.00
Supplies		8,653.44
Contingencies		
(Fuel, labor taxes, possible additional rental on a second air hoist and fan for raises, delays, truck service, etc.)		3,742.06
Total cost of project		$31,000.00

Total time required to complete the project is estimated at 90 working days on a 2-shift basis, operating two headings simultaneously wherever possible.

PRODUCTION PLAN

M. J. Krolicki, lessee of the Orphan Boy mine, plans to start mining operations if commercial shipping-grade ores result from the exploration. These future operations will be governed entirely by the outcome of the exploration program.

PROPOSED FINANCING

M. J. Krolicki, lessee, and A. E. Moynahan, lessor, have indicated their willingness and ability to participate in an exploration program which they estimate will cost $25,000.00, or any other amount estimated to be required by the examining engineer. They understand their share of the total cost will be 50 percent. M. J. Krolicki is related to the lessor, A. E. Moynahan, president of Kennebec Mining Company.

CONCLUSIONS

The Orphan Boy mine has produced over 9,300 tons of mill and smelter grade zinc-lead-copper ores.

Exploration will be directed toward horizons proven productive elsewhere, and should be successful.

The estimate by the applicant, M. J. Krolicki, of the financial requirements is believed too low to complete the entire project as outlined.

It is estimated $31,000.00 will be required to complete the proposed exploration operating on a 2-shift, two-heading basis, for 90 working days. Operations on a two heading, single shift, or a one heading, single shift would show correspondingly higher costs.

Considerable work will be in pre-Cambrian granite-gneiss and hard Cambrian quartzite.

There is no equipment on the property other than track and air line which is in poor condition.

Mine and surface plant are in disrepair and will require rehabilitation.

RECOMMENDATIONS

The application for an exploration loan on the Orphan Boy mine, Defense Minerals Administration Docket 249, is recommended for approval on the amended estimates of $31,000.00.

Part of the contingency item should be spent for competent geologic service and mapping.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM

DMA-249, The Orphan Boy Mine

Park County, Colorado

Lead-Zinc

C. M. Harrer, Mining Engineer
Bureau of Mines

November 28, 1951

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THE ORPHAN BOY MINE
PARK COUNTY, COLORADO

Summary, Conclusions, and Recommendations

By C. M. Harrer
Mining Engineer
Bureau of Mines

THE ORPHAN BOY MINE
PARK COUNTY, COLORADO

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

By C. M. Harrer

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THE ORPHAN BOY MINE
PARK COUNTY, COLORADO

Engineering Report

By C. M. Harrer
Mining Engineer
Bureau of Mines

THE ORPHAN BOY MINE
PARK COUNTY, COLORADO

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ILLUSTRATIONS

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THE ORPHAN BOY MINE
PARK COUNTY, COLORADO

ENGINEERING REPORT

by

C. M. HARRER

INTRODUCTION

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Total daily rental	$ 45.15

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4 - Miners at $1.50 per hour; 6-day week, including overtime on Saturdays	52.00
4 - Miners' helpers at $1.35 per hour; 6-day week, including overtime	46.80
2 - Trammers at $1.35 per hour; 6-day week, including overtime	23.40
1 - Compressor man-mechanic at $1.50 per hour; 6-day week, including overtime	13.00
Total supervision and labor cost per day	$167.50

C. Supplies

400 feet of mine track, complete, and including some replacement at $3.86 per foot	$ 1,544.00
168 cases of dynamite at $11.88 per case	1,995.84
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50 tungsten carbide bits at $15.00	750.00
Small tools	100.00
Timber and lumber, etc.	3,000.00
700 feet of 2-inch air line at $0.32 per foot	224.00
Total cost of supplies	$ 8,653.44

Estimated cost of project

Estimated cost of the project on a 2-shift basis, with two headings operating simultaneously wherever possible, is as follows:

Labor (2-shift basis, 90 working days)

(1)	Labor to rehabilitate compressor room and shop. Buildings now in disrepair. Two days at $167.50 per day.	$ 335.00
(2)	Labor to rehabilitate 850 feet of Orphan Boy adit track, plank walk, and ditch. Whole crew. Three days at $167.50 per day	502.50
(3)	Labor to recondition and extend compressed air lines. Whole crew. Two days at $167.50 per day	335.00
(4)	Labor to rehabilitate 93 feet of the Evening Star raise preparatory to start raising to the Peerless shale. *Five days at $118.10 per day	590.50

(5) Labor to extend the Evening Star raise 175 feet to the Peerless shale and advance the Orphan Boy adit 150 feet, simultaneously on 2 shifts. Thirty-five days at $167.50 per day	$5,862.50	
(6) Labor to raise on the Honeycomb Spur fissure 180 feet. *Thirty-five days at $118.10 per day	4,133.50	
(7) Labor to drift a composite total of 100 feet on contact objectives. Thirteen days at $167.50 per day (This will be carried out in part simultaneously with item 5.)	2,177.50	
Total labor costs		$ 13,936.50

*Excludes 2 miners and 2 miners' helpers per day from $167.50 estimate.

Rental		
1 month at $1,354.50	$ 1,354.50	
3 months at $1,104.50 (no Bimco loader)	3,313.50	
Total rental		4,668.00
Supplies		8,653.44
Contingencies		
(Fuel, labor taxes, possible additional rental on a second air hoist and fan for raises, delays, truck service, etc.)		3,742.06
Total cost of project		$31,000.00

Total time required to complete the project is estimated at 90 working days on a 2-shift basis, operating two headings simultaneously wherever possible.

PRODUCTION PLAN

M. J. Krolicki, lessee of the Orphan Boy mine, plans to start mining operations if commercial shipping-grade ores result from the exploration. These future operations will be governed entirely by the outcome of the exploration program.

PROPOSED FINANCING

M. J. Krolicki, lessee, and A. E. Moynahan, lessor, have indicated their willingness and ability to participate in an exploration program which they estimate will cost $25,000.00, or any other amount estimated to be required by the examining engineer. They understand their share of the total cost will be 50 percent. M. J. Krolicki is related to the lessor, A. E. Moynahan, president of Kennebec Mining Company.

CONCLUSIONS

The Orphan Boy mine has produced over 9,300 tons of mill and smelter grade zinc-lead-copper ores.

Exploration will be directed toward horizons proven productive elsewhere, and should be successful.

The estimate by the applicant, M. J. Krolicki, of the financial requirements is believed too low to complete the entire project as outlined.

It is estimated $31,000.00 will be required to complete the proposed exploration operating on a 2-shift, two-heading basis, for 90 working days. Operations on a two heading, shingle shift, or a one heading, single shift would show correspondingly higher costs.

Considerable work will be in pre-Cambrian granite-gneiss and hard Cambrian quartzite.

There is no equipment on the property other than track and air line which is in poor condition.

Mine and surface plant are in disrepair and will require rehabilitation.

RECOMMENDATIONS

The application for an exploration loan on the Orphan Boy mine, Defense Minerals Administration Docket 249, is recommended for approval on the amended estimates of $31,000.00.

Part of the contingency item should be spent for competent geologic service and mapping.

DEFENSE MINERALS
ADMINISTRATION
WASHINGTON, D. C.

OCT 4 3 55 PM '51

(Signed) HOWARD I. YOUNG

[illegible]/af
10/3/51 - 2[illegible]01
Copy to: Adm. Files
Administrator
Mr. Thos. H. Miller, Asst. Dir. Bureau of Mines
Mr. [illegible], Ch. Mines, Denver, Colo.
Mr. [illegible]ttendorf, Acting Dir. DMA
Mr. Tom Lyon, Director, Supply Division
Mr. Young
Mr. Weiss

FILE COPY
SURNAME 250

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

Lyons (ETK)
McKnight
Bishop
Bryant
Thayer
Moon

OCT 3 1951
Re: DMA-249

Mr. [illegible] J. Krolicki
[illegible] Locust Street
Denver, Colorado

Dear Mr. Krolicki:

The Lead-Zinc Branch has reviewed your application for a lease to explore the [illegible] land. Geologically the exploration appears warranted, however certain regard [illegible] costs are necessary before action can be taken. We believe this determination can best be obtained by a field examination and, therefore, we are referring your application to Mr. J. H. East, Jr., Executive Officer, DMA Field Team, [illegible], [illegible], Denver, Colorado for further information and advice.

Very truly yours,

SIGNED

10/3

Tom Lyon, Director
Supply Division

EJLyons:emp
G 9-27-51
Copies to: J. H. East, Jr. Region IV (2)
Chief, Lead-Zinc Branch
E. T. McKnight 4204 GSA
O. M. Bishop
Directors r. files 4214 GSA
Br. r. files 4214 GSA
Administrators r. file
DMA docket files

McKnight
Pillinger
Bishop

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

OCT 3 1951

Mr. J. H. East, Jr.
Executive Officer, DMA Field Team
Region IV
224 New Customhouse
Denver 2, Colorado

Dear Sir:

We attach "Review of Application for Exploration Assistance" on:

Docket No. 249

Commodity Lead-zinc

Applicant M. J. Krolicki, 2990 Locust Street, Denver, Colorado

Please expedite the consideration of this application with particular reference to the points raised in the attached "Review."

Very truly yours,

Chairman
Coordinating Committee

For Bureau of Mines

For Geological Survey

6/5/51

Defense Minerals Administration

Review of Application for Exploration Assistance

Docket No. DMA-249

Commodity Lead, zinc

Total Amount $25,000

Govt. Participation 50%

1. Name and Address of Applicant H. J. Krolicki, 2990 Locust Street, Denver, Colorado

2. Location of Property Orphan Boy Mine, Alma District, Park County, Colorado

3. Mineral or metal Lead-Zinc Is it listed in Section 9 of MO-5? Yes

If not, application will be rejected.

4. Geologic probability of discovery—based on data in application (question #16, 17, 18, 20 and 22)*

Mines or Survey reports, etc., do you rate chances:

a) Good Yes. See attached statement

b) Poor

c) None

d) Don't know—needs field examination

e) Is there an alternative and favorable project? No
(If so, attach an explanation)

5. Is the applicant's right to the property clearly stated? Yes
(question 5, 6, 7)*

6. If applicant is a lessee, is a copy of the lease attached? Yes

Does the lease have sufficient time to run to cover a future productive period? Yes, expires May 5, 1955

*question numbers are those of MF-103

4. (a) The following reports were reviewed for geological background information: U. S. Bureau of Mines War Minerals Report 194, "Alma District, Park County, Colorado", 1943; and "Geology and Ore Deposits of the Alma District, Park County, Colorado", Colorado Geological Survey Bulletin 3, 1912.

The formations of the Alma District consist of igneous and metamorphic pre-Cambrian rocks; quartzites, shales, and limestones of Paleozoic age; and porphyries of Tertiary age. The sections with the docket show the relationships between the easterly dipping sedimentary rocks and the porphyry intrusives. The formations are cut by nearly vertical fault fissure veins. At places where they cross a contact between quartzite below and a porphyry sheet above, the veins widen out and form replacement deposits in the quartzite. The most important of these replacement veins is known as the "Orphan Boy Contact".

In the past, the Orphan Boy mine was worked primarily for gold and silver values and the lead and zinc ores were left unmined where possible. The applicant has worked the mine for lead and zinc since World War II. In U.S. Bureau of Mines War Minerals Report, 194, 1943, it is stated that the Orphan Boy mine contains important deposits of zinc and lead. (pp. 13, 15. 16). It is reported that the Star vein averages 18 inches in width with an average metal content for this width of 35% zinc, 10% lead, 0.30 oz. gold, and 10 oz. silver. (War Minerals Report, P. 15).

7. Are subordination agreements necessary? Yes MF-202

a) MF-201? _____

b) MF-202 Five copies accompany report

8. From the data presented, does the proposed project appear feasible from the point of view of:

a) Available manpower Yes

b) Equipment and supplies ~~Pipe and track, 2 mine cars only equipment on job~~
(Question 14 plus general knowledge of availability)*

c) Accessibility (question 12)* Yes

d) Water (question 13)* Yes

e) Power (question 13)* Yes

Is a field check needed on any of these points? No

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4)* Yes

_____

Is a field check needed on this point? No

10. Exhibit A. (questions 21 and 22)*

a) Is the project adequately described? Yes

If not, are there sufficient data given so that you can describe the project? _____ If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? Yes

_____

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? Yes

If not, what part of it is? _____

_____

_____

_____

Is this part a worthwhile exploration project?_____

d) Are the cost estimates detailed? Yes

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data?_____ If so, attach a draft.

e) Are the cost estimates reasonable? Seem somewhat high

f) Should more information be requested from applicant?_____

g) Is a field examination necessary to complete Exhibit A? No

11. Exhibit B (question 23-d)*

a) Is it applicable? No

b) If so, are sufficient data furnished?_____ If so, attach a draft.

c) Is a field check needed?_____

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable? Yes

b) Sufficient data? No If so, attach a draft.

c) Are rents and charges reasonable? No breakdown of items

d) Is a field check needed? No

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data? Yes

b) Is the schedule adequate for the work proposed? Yes

c) Is the schedule excessive for the work proposed?_____

d) Are the proposed wages and salaries reasonable? Yes

e) Is a field check needed? No

14. Exhibit E (question 23-c)*

a) Is it applicable? Yes

b) Sufficient data? No

c) Reasonable?

d) Field check needed? Further information needed

15. In your judgment, can the proposed work be done in the proposed time? Yes, should be completed sooner with proposed number of miners

(All exploration must be completed within two years)

16. If field examination is not needed, attach your recommendation.
Recommended geologically, see attached statement.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question? No geological examination of this property is required. Information should be obtained on the engineering and cost phases of this docket as indicated in this review and in the attached memorandum by Mr. O. M. Bishop

Attached hereto are:

1 copy of report by A. E. Moynahan
4 letters from M. J. Krolicki dated Dec. 12, 1950
April 26, May 16, June 14, 1951
7 maps and sections of Orphan Boy Mine
1 copy of MP-103
1 copy of lease
1 copy of Form MP-202

Reviewed by: B. Gildersleeve GS-8-13-51

O. M. Bishop B.M. 9-17-51

Date 9-27-51

INT.-DUP. SEC., WASH., D.C. 99009

16. The project is recommended geologically on a basis of published reports and unpublished material in the files of the Geological Survey, describing the Orphan Boy Mine and Alma District.

D. Gildersleeve - GS

Docket-DMA-249

In reviewing docket DMA-249 (Orphan Boy Mine) I note proposed 150 feet of drifting and 355 feet of raising is estimated to cost $25,000 or about $49.50 per foot. This cost seems excessive on the bases of the data given, and comparative costs elsewhere.

Item 23 (c) should be broken down to show which items need repair and the estimated cost of each repair job.

Item 23 (f) should be fully explained so that the committee may know which items are to be rented and at what rate per month.

Field examination is needed. At time of examination, need of the above items could be explained to applicant.

O. M. Bishop
Bureau of Mines
Lead-Zinc Section

FILE COPY
SURNAME:

adams

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

August 21, 1951

A.E.C.

Mr. M. J. Kwolicki
6735 Manhattan Place
Denver 20, Colorado

My dear Mr. Kwolicki:

This will acknowledge receipt of your letter dated August 17, 1951 regarding your application for an exploration loan on the Orphan Boy Mine.

Please be advised that your application was inadvertently docketed as a new application rather than being received as additional information to docket DMA No. 2[illegible]. Under the circumstances the docket number for your exploration loan on Orphan Boy Mine will remain DMA No. 2[illegible].

Sincerely yours,

SIGNED BJ 8/21

Robert E. Adams, Chief
Reports and Records Unit

READAMS/hb

Copy to: DMA File ✓

Bernadette

Bielinski

answered by Adams 8/21/51

D E N V E R
Colorado
August 17
1 9 5 1

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 20 1951

Mr. Robert E. Adams
Chief, Reports and Records Unit
Defense Minerals Administration
Department of the Interior
Washington 25, D. C.

Dear Sir:

Your letter dated July 30, 1951, has me baffled.

Mr. Otto Herres requested additional data on Docket No. D.M.A. 249 and I sent it to him.

According to your letter this additional information has been given Docket Number D.M.A. 1892.

Does this mean that my application for an exploration loan at the Orphan Boy Mine has a new Docket Number, or does the old Docket Number D.M.A. 249 still prevail?

Thanking you most sincerely for a prompt reply, I remain

Sincerely yours,

M. J. Krolicki

M. J. Krolicki
6935 Richthofen Place
Denver 20, Colorado

P.S. Please note the new address, as above.

FILE COPY
SURNAME:

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

July 30, 1951

Mr. H. J. Krolicki
2990 Locust Street
Denver, Colorado

Subject: DMA-1892 249
Re: Exploration Loan -
Orphan Boy

My dear Mr. Krolicki:

Receipt is acknowledged of your application and attachments of July 23, 1951 for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number DMA-1892 and referred to Mr. Thomas Billings, Chief, Lead-Zinc Branch on July 30, 1951.

In any future correspondence relating to your application, kindly refer to DMA-~~1892~~. 249

Sincerely yours,

SIGN JF 7/30

Robert E. Adams
Chief, Reports and Records Unit

R. E. Adams:jc
cc: Adams
✓ File
Billings
Lyon

Billings

2990 Locust Street
Denver, Colorado
July 23, 1951.

Mr. Otto Herres, Chief,
Lead-Zinc Branch,
Department of the Interior,
Defense Minerals Administration,
Washington 25, D. C.

Dear Mr. Herres;-

I am mailing to you under separate cover two sections which I believe will show the situation and the work contemplated better than any of the sections out of Mr. Moynahan's report. I am returning his sections to you herewith.

I have, I believe, given you all the information that you requested and the proper number of copies of each.

Sincerely yours,

M. J. Krolicki

M. J. Krolicki.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 26 1951
LANDON F. STROBEL
Executive Secretary

FILE COPY
SURNAME:

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

Thanks
Brahan
for McKnight
Herres

EJLyoms: emp
G 6/21/51
Copies to: J. H. East, Jr. Region IV (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
R. H. Mote
L. F. Strobel
Directors r. file 4214 GSA
Br. r. file 4214 GSA
Files

June 21, 1951

Re: Docket DMA-249

Mr. W. J. Krolicki
2990 Locust Street
Denver 7, Colorado

Dear Mr. Krolicki:

In reply to your letter of June 14:

Although the project you are proposing appears favorable from a geologic viewpoint, before further action can be taken on your application it will be necessary to have further information regarding operating costs, purchase price or rental value of equipment, etc. We are enclosing the following for your convenience:

(1) Form MF-103 on which are marked those items upon which more information is required. These should be answered in as much detail as possible. If the question does not apply, indicate this by "Does not apply" or "None".

(2) The map and sections removed from Mr. [illegible] Moynahan's report on the Orphan Boy mine. Please indicate on the map and on those sections the work you are proposing to do under this project. If the sections are used, their location on the map should be shown. Six copies of each of these will be required.

(3) Seven copies of Form MF-202, "Landlord's Subordination Agreement" six copies of which must be completed and returned to us.

(4) Seven copies of Form MF-201, "Mortgagor's Subordination Agreement", six copies of which must be completed and returned to us if there are any mortgages, claims, liens, or encumberances against the property.

If you should need any advice on the above, please see Mr. J. H. East, Jr, Executive Officer of the Field Team, Region IV, 224 New Customhouse, Denver 2, Colorado.

Very truly yours,

Otto Herres

Otto Herres, Chief
Lead-Zinc Branch

Enclosures

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

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

DO NOT FILL IN THIS BLOCK

Docket No. DMA/ ~~MF-100~~ 249

Date received

Participation

M. J. Krolicki
2990 Locust Street
Denver, Colorado

Name and address of applicant

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 26 1951
LANDON F. STROBEL
Executive Secretary

Date

FILL IN THIS BLOCK

Date of application

Estimated cost $25,000.00

Mineral or metal Zinc

Percentage of Government participation 50%

Location of mine Alma, Colorado

Date of filing MF-100

DMA Docket Number, if available 249

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.
    (*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

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

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:
    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
    (*b*) State briefly the known history and production of adjoining and neighboring properties.
    (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:
    (*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)
    (*a*) Describe the ore or mineral deposits briefly.
    (*b*) Submit available maps and assay data.
    (*c*) Give estimated tonnage and grade of each class of ore reserves.

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

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

    NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:
    (*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.
    (*b*) Supervisors, by numbers and positions, with salaries of each.
    (*c*) Cost of necessary repairs to existing facilities, structures, and buildings.
    (*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.
    (*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.
    (*f*) Cost of rental for equipment which the operator proposes to rent.
    (*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.
    (*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.
    (*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

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

(Name of company)

By M. J. Krolicki (Jesse)
(Signature of authorized official)

(Date)

(Title)

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

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

Information requested on N. T. 103.

A P P L I C A N T.

* 4 --- The applicant is M. J. Krolicki, who has operated the Orphan Boy Mine ever since the end of World War II, when theLondon Extension Mining Company cancelled the lease it held on this property. The work now planned will be under the direction of Rolf H. Luckenbach, who has had charge of the London Extension operation during World War II. A. E. Moynahan, Engineer of Mines and Metallurgy, will be General Manager of this operation as he also was of the London Extension Mining Company's activities. He is President of the Kennebec Mining Company, owner of the Orphan Boy Mine.

* 7 --- The lease is in good standing. Copies enclosed.

* 9 --- The applicant is able and intends to subscribe one half of the twenty five thousand dollars estimated as necessary to carry this Exploration Project to a successful conclusion.

P R O P E R T Y

*10 --- The Orphan Boy Group consists of twenty three lode claims, comprising 132.82 acres of patented land, situated on the foot of Loveland Mountain, in Park County, Colorado. The ore is sent to Leadville, Colorado, by haulage in trucks. Distance about 80 miles.

* 14 --- The Main tunnel is equipped with twelve pound tee rails and two inch compressor air pipe, but there is no other rail or pipe that can be used on the Exploration Project.

There is an ore bin at the portal of the main tunnel of sixty tons capacity. A compressor room and blacksmith shop. Neither of the two last mentioned are equipped. Equipment used during World War II and since, was rented and has been removed. Since the end of World War II the mine has been operated by the present lessee, W. J. Krolicki, until the slump in the price of lead and zinc made the operation unprofitable.

This development project consists of driving the main Orphan Boy Adit Tunnel a distance of one hundred and fifty feet on westerly to cut the Honey Comb Spur Vein, and to raise on that vein a distance of 180 feet to the quartz monzonite porphyry. The contact of this porphyry and the underlying Cambrian Quartzite is known as Orphan Boy Contact. This contact has been the locus of a very large percentage of the commercial ore produced from the Orphan Boy Property. By this work the Orphan Boy contact will become available for ore production west of the faulting that caused the mine workings to follow the wrong contact a distance of a thousand feet. (See Colorado State Bullotin No. 3) and both the Honey Comb and Honey Comb Spur veins will be opened at a recognized productive geological horizon.

The second and most important part of this development program is the continuation of the raise of 93 feet which has been used as an ore chute on one side and as a waste chute on the other side of a double two inch plank partition.

This chute reaches from the Level of the Adit Tunnel to the bottom of the Cambrian Quartzite and the output of the productive area on the Evening Star Vein has been mined and brought to surface through it.

This raise was made on the Water Course Faulting slightly west of the Evening Star Vein and by deflecting the continuation of it until it reaches the Evening Star Fissure and then following the vein a distance of one hundred and seventy five feet; the Peerless Shale Horizon will be encountered and with one handling the rock and ore mined can be sent to the main tunnel level through thisraise, a total distance of 93 x 175 = 268 feet.

The Peerless Shale (i.e.) the contact between the Silurian White Limestone, with the underlying Cambrian Quartzite could be reached through the Evening Star Shaft (old and in poor condition) or by continuing the Purcell Raise, a distance of seventy (70) feet. However, the mined material would need be handled twice to get it to the adit tunnel level: which, at the rate ofpay and the inefficiency of labor now prevailing, renders the first mentioned continuation of the lower raise decidedly best.

The importance of opening thePeerless Shale on the Evening Star Vein must not be discounted. The Evening Star Vein is, and has been, a producer of high grade zinc ore, and the Peerless Shale Horizon on Loveland Mountain has been found to have large replacement deposits of zinc ore in the Buckskin Joe

Mines, Inc. property. At least two veins there have been found productive in the Peerless Shale. One of these, the Phillips vein projects to the Honey Comb Spur vein in the workings of the Orphan Boy. However, the distance of this projection is excessive and the Evening Star vein has several features corresponding to the Phillips Vein.

REQUIREMENTS AND COSTS.

(A) Labor --- (Daily)

4 Drillmen @ $1.50 per hour per 8 hr. day	48.00
4 Drill Helpers @ $1.25 per hour, 8 hr. day	40.00
4 Trammers @ $1.25 per hr. per 8 hr. day	40.00
2 Compressor Men @ $1.50 per hr. 8 Hr. day	24.00
1 Machanic @ $1.50 per hr. per 8 hr. day	12.00
2 Laborers @ $1.00 per hr per 8 hr. day	16.00
1 Foreman @ $1.50 per hr. per 8 hr. day	12.00

(B) 1 Superintendent & Accountant -- per month $400.00
1 Manager and Mining Engineer -- per month 400.00

(C) Estimated at a Thousand dollars 1000 .00

(D) None

(E) Will be rented

(F) Five Hundred Dollars per Month 500.00

(G) Has no equipment.

(H) Including powder, fuse caps, carbide, sharpening bits, etc, estimated at Ten Thousand dollars 10,000.00

(I) Gasoline Power will cost $10.00 per day or $1.25 a foot

* 24 --- Two months to get organized and start work. Six months m ore to finish the project.

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

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

DO NOT FILL IN THIS BLOCK

Docket No. 249

Date received

Participation

M. J. Krolicki
2990 Locust Street
Denver, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 26 1951
LAWSON F. STROBEL
Executive Secretary
Date

Name and address of applicant

FILL IN THIS BLOCK

Date of application

Estimated cost 25,000.00

Mineral or metal Zinc

Percentage of Government participation 50%

Location of mine Alma, Colorado

Date of filing MF-100

DMA Docket Number, if available 249

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.
    (*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

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

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:
    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
    (*b*) State briefly the known history and production of adjoining and neighboring properties.
    (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:
    (*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)
    (*a*) Describe the ore or mineral deposits briefly.
    (*b*) Submit available maps and assay data.
    (*c*) Give estimated tonnage and grade of each class of ore reserves.

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

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

    NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:
    (*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.
    (*b*) Supervisors, by numbers and positions, with salaries of each.
    (*c*) Cost of necessary repairs to existing facilities, structures, and buildings.
    (*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.
    (*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.
    (*f*) Cost of rental for equipment which the operator proposes to rent.
    (*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.
    (*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.
    (*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

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

(Name of company)

By M. J. Wolicki (Jesse)
(Signature of authorized official)

(Date)

(Title)

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

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

Information requested on M. S. 101.

A P P L I C A N T.

¶ 1 --- The applicant is M. J. Mollett, who has operated the Orphan Boy Mine ever since the end of World War II, when the London Intermontane Mining Company cancelled the lease it held on this property. The work now planned will be under the direction of Rolf H. Bachmann, who has had charge of the London Intermontane operation during World War II. A. S. Reynolds, Engineer of Mines and Metallurgy, will be General Manager of this operation as he also was of the London Intermontane Mining Company's activities. He is President of the Kanobee Mining Company, owner of the Orphan Boy Mine.

¶ 2 --- The lease is in good standing. Copies enclosed.

¶ 3 --- The applicant is able and intends to subscribe one half of the twenty five thousand dollars estimated as necessary to carry this Exploration Project to a successful conclusion.

P R O P E R T Y

¶10 --- The Orphan Boy Group consists of twenty three lode claims, comprising 132.92 acres of patented land, situated on the foot of Loveland Mountain, in Park County, Colorado. The one is open to Leadville, Colorado, by haulage in trucks. Distance about 60 miles.

¶ 11 --- The main tunnel is equipped with twelve pound tee rails and two inch compressor air pipe, but there is no other rail or pipe that can be used on the Exploration Project.

There is an ore bin at the portal of the main tunnel of sixty tons capacity. A compressor room and blacksmith shop. Neither of the two last mentioned are equipped. Equipment used during World War II and since, was sorted and has been removed. Since the end of World War II the mine has been operated by the present lessee, H. J. Brallett, until the sharp in the price of lead and zinc made the operation unprofitable.

This development project consists of driving the main Orphan Boy Adit Tunnel a distance of one hundred and fifty feet on westerly to cut the Honey Comb Spar Vein, and to raise on that vein a distance of 100 feet to the gently inclined periphery. The contact of this periphery and the underlying Precambrian quartzite is known as Orphan Boy Contact. This contact has been the locus of a very large percentage of the commercial ore produced from the Orphan Boy Property. By this work the Orphan Boy contact will become available for ore production west of the faulting that caused the mine workings to follow the wrong contact a distance of a thousand feet. (See Colorado State Bulletin No. 9) and both the Honey Comb and Honey Comb Spar veins will be opened at a recognized productive geological horizon.

The second and most important part of this development program is the continuation of the raise of 93 feet which has been used as an ore chute on one side and as a waste chute on the other side of a double two inch plank partition.

This ground reaches from the level of the 1610 tunnel to the bottom of the Dominion Quarrying and the output of the productive area on the Morning Star Vein has been mined and brought to surface through it.

This raise was made on the Victor Cooper Building slightly west of the Morning Star Vein and by deflecting the continuation of it until it reached the Morning Star Fissure and then following the vein a distance of one hundred and seventy five feet; the Peerless Gold Mines will be encountered and with one handling the rock and ore mined can be sent to the main tunnel level through bin-raise, a total distance of 93 x 1/5 = 261 feet.

The Peerless Gold (i.e.) the contact between the Silurian White Limestone, with the underlying Dolomite formation could be reached through the Morning Star Shaft (old and in poor condition) or by continuing the Merrill Raise, a distance of seventy (70) feet. However, the mined material would need to handled twice to get it to the adit tunnel level; which, at the rate offpay and the inefficiency of labor now prevailing, renders the first mentioned continuation of the lower raise decidedly best.

The importance of opening the Peerless Gold on the Morning Star Vein must not be discounted. The Morning Star Vein is, and has been, a producer of high grade zinc ore, and the Peerless Gold Mines on Loveland Mountain has been found to have large replacement deposits of zinc ore in the Dolomite for

Mines, Inc. property. At least two veins there have been found productive in the Pourtales Mine. One of these, the Phillips vein projects to the Honey Comb Mine vein in the vicinity of the Orphan Boy. However, the distance of this projection is excessive and the Honey Comb vein has several features corresponding to the Phillips Vein.

ESTIMATES OF COST.

(A) Labor ---- (Daily)

4 Drillers @ $1.50 per hour per 8 hr. day	$48.00
4 Drill Helpers @ $1.25 per hour, 8 hr. day	40.00
1 Foreman @ $2.00 per hr. per 8 hr. day	16.00
2 Compressor Men @ $1.50 per hr.8 hr. day	24.00
1 Mechanic @ $3.50 per hr. per 8 hr. day	28.00
2 Laborers @ $1.00 per hr per 8 hr. day	16.00
1 Foreman @ $1.50 per hr. per 8 hr. day	12.00

(B) 1 Superintendent & Mechanic -- per month $300.00
1 Engineer and Hoist Engineer -- per month 100.00

(C) Estimated at a Thousand Dollars 1000 .00

(D) None

(E) Will be needed

(F) Five Hundred Dollars per Month 500.00

(G) Has no equipment.

(H) Including powder, fuse caps, caddis, sharpening bits, etc, estimated at Ten Thousand Dollars 10,000.00

(I) Gasoline Power will cost $10.00 per day or $1.25 a foot

(J) ---- Two months to get organized and start work. Six months in one to finish the project.

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

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

DO NOT FILL IN THIS BLOCK

Docket No. DMA DS-Tol 249

Date received

Participation

M. J. Krolicki
2990 Locust Street
Denver, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 26 1951
LANDON F. STROBEL
Executive Secretary

Date

Name and address of applicant

FILL IN THIS BLOCK

Date of application

Estimated cost $25,000.00

Mineral or metal Zinc

Percentage of Government participation 50%

Location of mine Alma, Colorado

Date of filing MF-100

DMA Docket Number, if available 249

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.
    (*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

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

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:
    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
    (*b*) State briefly the known history and production of adjoining and neighboring properties.
    (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:
    (*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)
    (*a*) Describe the ore or mineral deposits briefly.
    (*b*) Submit available maps and assay data.
    (*c*) Give estimated tonnage and grade of each class of ore reserves.

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

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

    NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:
    (*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.
    (*b*) Supervisors, by numbers and positions, with salaries of each.
    (*c*) Cost of necessary repairs to existing facilities, structures, and buildings.
    (*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.
    (*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.
    (*f*) Cost of rental for equipment which the operator proposes to rent.
    (*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.
    (*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.
    (*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

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

(Name of company)

By M. J. Kolicki (Jesse)
(Signature of authorized official)

(Date)

(Title)

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

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

Information requested on M. T. 103.

A P P L I C A N T.

* 4 --- The applicant is M. J. Krolicki, who has operated the Orphan Boy Mine ever since the end of World War II, when the London Extension Mining Company cancelled the lease it held on this property. The work now planned will be under the direction of Rolf H. Luckenbach, who has had charge of the London Extension operation during World War II. A. E. Moynahan, Engineer of Mines and Metallurgy, will be General Manager of this operation as he also was of the London Extension Mining Company's activities. He is President of the Kennebec Mining Company, owner of the Orphan Boy Mine.

* 7 --- The lease is in good standing. Copies enclosed.

* 9 --- The applicant is able and intends to subscribe one half of the twenty five thousand dollars estimated as necessary to carry this Exploration Project to a successful conclusion.

P R O P E R T Y

* 10 --- The Orphan Boy Group consists of twenty three lode claims, comprising 132.82 acres of patented land, situated on the foot of Loveland Mountain, in Park County, Colorado. The ore is sent to Leadville, Colorado, by haulage in trucks. Distance about 80 miles.

* 14 --- The main tunnel is equipped with twelve pound tee rails and two inch compressor air pipe, but there is no other rail or pipe that can be used on the Exploration Project.

There is an ore bin at the portal of the main tunnel of sixty tonscapacity. A compressor room and blacksmith shop. Neither of the two last mentioned are equipped. Equipment used during World War II and since, was rented and has been removed. Since the end of World War II the mine has been operated by the present lessee, M. J. Krolicki, until the slump in the price of lead and zinc made the operation unprofitable.

This development project consists of driving the main Orphan Boy Adit Tunnel a distance of one hundred and fifty feet on westerly to cut the Honey Comb Spur Vein, and to raise on that vein a distance of 180 feet to the quartz monzonite porphyry. The contact of this porphyry and the underlying Cambrian Quartzite is known as Orphan Boy Contact. This contact has been the locus of a very large percentage of the commercial ore produced from the Orphan Boy Property. By this work the Orphan Boy contact will become available for ore production west of the faulting that caused the mine workings to follow the wrong contact a distance of a thousand feet. (See Colorado State Bulletin No. 3) and both the Honey Comb and Honey Comb Spur veins will be opened at a recognized productive geological horizon.

The second and mostimportant part of this development program is the continuation of the raise of 93 feet which has been used as an ore chute on one side and as a waste chute on the other side of a double two inch plank partition.

This chute reaches from the Level of the Adit Tunnel to the bottom of the Cambrian Quartzite and the output of the productive area on the Evening Star Vein has been mined and brought to surface through it.

This raise was made on the Water Course Faulting slightly west of the Evening Star Vein and by deflecting the continuation of it until it reaches the Evening Star Fissure and then following the vein a distance of one hundred and seventy five feet; the Peerless Shale Horizon will be encountered and with one handling the rock and ore mined can be sent to the main tunnel level through this raise, a total distance of 93 x 175= 268 feet.

The Peerless Shale (i.e.) the contact between the Silurian White Limestone, with the underlying Cambrian Quartzite could be reached through the Evening Star Shaft (old and in poor condition) or by continuing the Purcell Raise, a distance of seventy (70) feet. However, the mined material would need be handled twice to get it to the adit tunnel level; which, at the rate of pay and the inefficiency of labor now prevailing, renders the first mentioned continuation of the lower raise decidedly best.

The importance of opening the Peerless Shale on the Evening Star Vein must not be discounted. The Evening Star Vein is, and has been, a producer of high grade zinc ore, and the Peerless Shale Horizon on Loveland Mountain has been found to have large replacement deposits of zinc ore in the Buckskin Joe

Mines, Inc. property. At least two veins there have been found productive in the Peerless Shale. One of these, the Phillips vein projects to the Honey Comb Spur Vein in the workings of the Orphan Boy. However, the distance of this projection is excessive and the Evening Star vein has several features corresponding to the Phillips Vein.

REQUIREMENTS AND COSTS.

(A) Labor --- (Daily)

4 Drillmen @ $1.50 per hr. per 8 hr day	48.00
4 Drill Helpers @ $1.25 per Hr. 8 Hr. day	40.00
4 Trammers @ $125. per hr. per 8 hr. day	40.00
2 Compressor Men @ $1.50 per Hr. 8 hr. day	24.00
1 Mechanic @ $1.50 per hr. per 8 hr. day	12.00
2 Laborers @ $1.00 per hr. per 8 hr. day	16.00
1 Foreman @ $1.50 per hr. per 8 hr. day	12.00

(B) 1 Superintendent & Accountant -- per month $400.00
1 Manager and Mining Engineer -- per month 400.00

(C) repairs Estimated at a Thousand dollars 1000.00

(D) None.

(E) Will be rented.

(F) rentals Five Hundred Dollars per month 500.00

(G) Has no equipment.

(H) Including powder, fuse caps, carbide, sharpening bits etc. estimated at Ten Thousand Dollars 10,000.00

(I) Gasoline Power will cost $10.00 per day or $1.25 a foot.

* 24 --- Two months to get organized and start work. Six months more to finish the project.

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

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

DO NOT FILL IN THIS BLOCK

Docket No. DMA 249

Date received

Participation

M. J. Krolicki
2990 Locust Street
Denver, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 26 1951
LANDON F. STROBEL
Executive Secretary

Name and address of applicant

Date

FILL IN THIS BLOCK

Date of application

Estimated cost $25,000.00

Mineral or metal Zinc

Percentage of Government participation 50%

Location of mine Alma, Colorado

Date of filing MF-100

DMA Docket Number, if available 249

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.
    (*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

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

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:
    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
    (*b*) State briefly the known history and production of adjoining and neighboring properties.
    (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:
    (*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)
    (*a*) Describe the ore or mineral deposits briefly.
    (*b*) Submit available maps and assay data.
    (*c*) Give estimated tonnage and grade of each class of ore reserves.

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

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

    NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:
    (*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.
    (*b*) Supervisors, by numbers and positions, with salaries of each.
    (*c*) Cost of necessary repairs to existing facilities, structures, and buildings.
    (*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.
    (*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.
    (*f*) Cost of rental for equipment which the operator proposes to rent.
    (*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.
    (*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.
    (*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

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

(Name of company)

By M. J. Kolicki (Jesse)
(Signature of authorized official)

(Date)

(Title)

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

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

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

DO NOT FILL IN THIS BLOCK

Docket No. ~~Alma 1950~~ 249

Date received

Participation

M. J. Krolicki
2990 Locust Street
Denver, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 26 1951
LAWRENCE F. STROBEL
Executive Secretary

Date

Name and address of applicant

FILL IN THIS BLOCK

Date of application

Estimated cost $25,000.00

Mineral or metal Zinc

Percentage of Government participation 50%

Location of mine Alma, Colorado

Date of filing MF-100

DMA Docket Number, if available 249

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.
    (*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

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

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:
    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
    (*b*) State briefly the known history and production of adjoining and neighboring properties.
    (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:
    (*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)
    (*a*) Describe the ore or mineral deposits briefly.
    (*b*) Submit available maps and assay data.
    (*c*) Give estimated tonnage and grade of each class of ore reserves.

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

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

    NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:
    (*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.
    (*b*) Supervisors, by numbers and positions, with salaries of each.
    (*c*) Cost of necessary repairs to existing facilities, structures, and buildings.
    (*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.
    (*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.
    (*f*) Cost of rental for equipment which the operator proposes to rent.
    (*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.
    (*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.
    (*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

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

By M. J. Kolicki (Jesse)

(Name of company) (Signature of authorized official)

(Date) (Title)

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

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

Information requested on R. P. 102.

A P P L I C A N T.

¶ 4 --- The applicant is R. J. Bellotti, who has operated the Orphan Boy Mine over since the end of World War II, when the London Extension Mining Company cancelled the lease it held on this property. The work now planned will be under the direction of Rolf H. Lauenbach, who has had charge of the London Extension operation during World War II. A. E. Hyatten, Engineer of Mines and Metallurgy, will be General Manager of this operation as he also was of the London Extension Mining Company's activities. He is President of the Ramshoe Mining Company, owner of the Orphan Boy Mine.

¶ 7 --- The lease is in good standing. Copies enclosed.

¶ 9 --- The applicant is able and intends to subscribe one half of the twenty five thousand dollars estimated as necessary to carry this Exploration Project to a successful conclusion.

P R O P E R T Y

¶ 10 --- The Orphan Boy Group consists of twenty three lode claims, comprising 152.32 acres of patented land, situated on the foot of Loveland Mountain, in Park County, Colorado. The ore is sent to Leadville, Colorado, by tramway in trucks. Distance about 80 miles.

¶ 14 --- The main tunnel is equipped with twelve pound two rails and two inch compressor air pipe, but there is no other rail or pipe that can be used on the Exploration Project.

There is an ore bin at the portal of the main tunnel of sixty tonnecapacity. A compressor room and blacksmith shop. Holdings of the two last mentioned are equipped. Equipment used during World War II and since, was pooled and has been removed. Since the end of World War II the mine has been operated by the present lessee, E. J. Lofland, until the slump in the price of lead and mine made the operation unprofitable.

This development project consists of driving the main Orphan Boy Adit Tunnel a distance of one hundred and fifty feet on westerly to cut the Honey Comb Spur Vein, and to raise on that vein a distance of 100 feet to the quartz monzonite porphyry. The contact of this porphyry and the underlying Cambrian Quartzite is known as Orphan Boy Contact. This contact has been the locus of a very large percentage of the commercial ore produced from the Orphan Boy Property. By this work the Orphan Boy contact will become available for ore production west of the faulting that caused the mine workings to follow the wrong contact a distance of a thousand feet. (See Colorado State Bulletin No. 3) and both the Honey Comb and Honey Comb Spur veins will be opened at a recognized productive geological horizon.

The second and no-less-important part of this development program is the combination of the raise of 93 feet which has been used as an ore chute on one side and as a waste chute on the other side of a double two inch plank partition.

this shale section from the level of the adit tunnel to the bottom of the Cambrian sandstone and the output of the productive area on the Breaking Star Vein has been mined and brought to surface through it.

This raise was made on the Peter Grace Building slightly west of the Breaking Star Vein and by collaring the continuation of it until it reaches the Breaking Star Fissure and then following the vein a distance of one hundred and seventy five feet; the Peerless Shale Horizon will be encountered and with one handling the rock out one shaft can be sent to the main tunnel level through this raise, a total distance of 95 + 175= 268 feet.

The Peerless Shale (i.e.) the contact between the Siluarian Shale Limestone, with the underlying Cambrian Sandstone could be reached through the Breaking Star Shaft (old and in poor condition) or by continuing the Lowell Raise, a distance of seventy (70) feet. However, the ethod selected would need be handled twice to get it to the adit tunnel level; which, at the rate of pay and the inefficiency of labor now prevailing, endures the first mentioned continuation of the lower raise decidedly best.

The importance of opening the Peerless Shale on the Breaking Star Vein must not be discounted. The Breaking Star Vein is, and has been, a producer of high grade zinc ore, and the Peerless Shale Horizon on Lowland Mountain has been found to have large replacement deposits of zinc ore in the Brookside Zoo

Mines, Inc. property. At least two veins have been found productive in the Fourteen Mile. One of these, the Phillips vein projects to the Rocky Gold Star Vein in the workings of the Orphan Boy. Moreover, the direction of this projection is executive and the Lucky Star vein has several features corresponding to the Phillips Vein.

EQUIPMENT AND COST.

(A) Labor --- (Daily)

4	Drillmen @ $1.50 per hr. per 8 hr day	$12.00
4	Drill helpers @ $1.25 per hr. 8 hr. day	10.00
4	Trammers @ $1.25 per hr. per 8 hr. day	10.00
1	Compressor Man @ $1.50 per hr. 8 hr. day	12.00
1	Blacksmith @ $2.50 per hr. per 8 hr. day	20.00
2	Laborers @ $1.00 per hr. per 8 hr. day	16.00
1	Foreman @ $1.50 per hr. per 8 hr. day	12.00

(B) 1 Superintendent & Accountant --- per month $400.00
1 Manager and Mining Engineer --- per month 600.00

(C) Estimated at a Thousand Dollars 1000.00

(D) None.

(E) Will be rented.

(F) Five Hundred Dollars per month 500.00

(G) Has no equipment.

(H) Including powder, fuse caps, carbide, sharpening bits etc. estimated at Ten Thousand Dollars 10,000.00

(I) Gasoline lamp will cost $10.00 per day or $0.25 a foot.

* 2, --- Two months to get organized and start work. Six months more to finish the project.

FILE COPY
SURNAME:

Lyons (E JM)
McKnight
Hoop

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

May 25, 1951

Airmail

Re: Docket DMA-249

Mr. M. J. Krolicki
2490 Locust Street
Denver 7, Colorado

Dear Mr. Krolicki:

In reply to your letter of May 16:

When a final decision has been made on your application you will be notified. If the decision is favorable, the Government will enter into an exploration contract with you, but the Government cannot pay or give credit for any work done or any costs incurred by you before that contract is completed and signed.

In order to more readily act upon your application, we would like more information regarding the costs of the project. This can be presented as suggested under item 23 of Form DF-103, a copy of which is enclosed for your convenience, or you can give an estimated cost for each of the separate parts of your proposal, such as the cost of rehabilitating the Evening Star shaft, of extending the Orphan Boy tunnel, etc., listing separately, however, the cost of rental of any equipment you may need.

We also would like to know if your contribution to the project will be in the form of cash, your labor, rental of equipment now owned by you, or some other form. If in the form of cash, please give the amount, and if in the form of your labor, or rental of your equipment, please state the value of these. The Government's contribution will be made as a repayment at the end of each month after the operator has submitted to the Government a statement of the work done and the costs incurred during that month. Hence, it is not necessary for you to have all the cash needed on hand at the beginning of the project, but it is necessary for you to contract for your full contribution to insure that the proposed exploration is completed.

An estimate of the time required to complete the project is also needed.

As removal of the geologic report in your application would delay consideration of your application, it is not feasible to get it photostated at the present time, although this might be done after the application is processed.

We regret this delay in processing your application, but will act upon it as soon as possible after we receive information on the above items.

Very truly yours,

Otto Herres

Otto Herres, Chief
Lead-Zinc Branch

Enclosure

EJLyons:emp
G 5/25/51
Copies to: J. H. East, Jr. Region IV (2)
Chief, Lead-Zinc Branch
E. T. McKnight 4204 GSA
L. B. Moon
R. H. Mote
L. F. Strobel
Tom Lyon
Directors reading file 4214 GSA
Br. reading file 4214 GSA
Files

FILE COPY
SURNAME:

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

APR 12 1951

A. B. Campbell
per Evans
McKnight
Evans
Mitt

In reply please
refer to D A-24

Mr. [illegible] J. Brolliati
[illegible] Locust Street
Denver 7, Colorado

Dear Mr. Brolliati:

One of the purposes of the Defense Production Act of 1950 is the encouragement of exploration, development and mining of strategic and critical minerals. Where an applicant has proven reserves of strategic materials, Federal aid in mining can be given through procurement contracts for such materials as are in short supply. On the strength of these contracts, the applicant can obtain private financing in most cases.

The program recently approved for encouragement of exploration of strategic materials calls for participation on the part of the applicants. For zinc, lead and copper deposits it will be necessary to match Government funds on an equal basis. Funds made out by the Government will be considered a loan, to be repaid by the operator out of profitable, but not out of cost of insurance. The details of the plan, explaining the projects that will be eligible for assistance, the terms and schedules of financing, repayment, and other pertinent information, are enclosed.

Provided your application (D A-24) for financial aid in an exploration program for zinc, copper, lead, and manganese in Colorado indicates that your property may be considered under this exploration program. Details concerning expenditures which will be reimbursed chargeable to exploration aid will be subject to a final determination by the Government, but as a preliminary approach we believe that the program will apply to the total amount of your exploration, $[illegible],000.00.

Before we can proceed further with consideration of your application, however, or if you require a field examination, please advise us your [illegible] and provide your estimate of the funds needed to carry out the proposed exploration. Any additional data of your proposed program, which you may wish to submit, should be submitted concurrently with your reply to this letter.

Very truly yours,

[illegible]

[illegible], Chief
Non-Ferrous Branch

ABCampbell:emp
G 3/21/51 Copies to:
2 copies to J. H. East, Jr.
Exec. Officer Region IV
Chief, Lead-Zinc Br.

Enclosures

McKnight 4205 GSA
L. B. Moon
R. H. Note
L. F. Strobel
C. O. Mittendorf
Files

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

Obsolete

January 30, 1951

Memorandum

To: Production Expansion Division

From: Lead-Zinc Branch, DMA

Subject: Docket DMA 249
Orphan Boy Mine
Park County, Colorado

The subject docket has been reviewed by the Lead-Zinc Branch, DMA. The following are the pertinent facts outlined in the loan proposal:

The Orphan Boy Mine is an old property, noted primarily for gold and silver production. The workings to date have exploited veins cutting contacts between Cambrian quartzites and porphyry sills. Recent discovery of high grade zinc ore bodies in the Peerless shales on adjacent properties (Buckskin Joe Mines, Inc.) has led the operators of the Orphan Boy Mine to believe similar ore bodies exist on their property. Sampling of dumps from two caved shafts shows high zinc values, but such samples are not considered reliable. It is possible that this ore was cut at the Peerless shale horizon while sinking to the lower quartzite ore bodies.

The main development work in the Orphan Boy Mine during the past ten years has been on the Evening Star vein, which still contains ore of commercial grade, but total tonnage is small. The Evening Star vein could be investigated at the Peerless shale horizon by removing a bulkhead from the shaft and rehabilitating the shaft as a working compartment. Continued raising on the Purcell raise another 70 feet would also cut the favorable horizon. On yet another vein (Vein No. 1) a drift of 250 feet to the northeast would also intersect the Peerless shale.

The applicant proposes to do the above exploratory work if government funds are made available. The mine is now inactive.

The Lead-Zinc Branch, therefore, recommends: that the application be considered for a grant-for-exploration loan in amount of $25,000 and on a participating basis. The Government's share to be 50% of the exploration costs and the amount allocated not to exceed $12,500.

OTTO HERRES, Chief
Lead-Zinc Branch, DMA

Approved:
DMA Operating Committee

_____
Chairman

_____
J. H. Hedges

_____
Olaf N. Rove

Mr. Horres

249
~~1892~~

DMA - ~~275~~ 249.

lead zinc

Dor

M. J. Krolicki

2990 Locust Street
Denver 7, Colorado

Orphan Boy Mine

Park County, Colorado

Loan of $25,000

12/12/50

12/27/50

NONFERROUS METALS

12/29/50

Information requested on M. T. 103.

A P P L I C A N T.

* 4 --- The applicant is M. J. Krolicki, who has operated the Orphan Boy Mine ever since the end of World War II, when the London Extension Mining Company cancelled the lease it held on this property. The work now planned will be under the direction of Rolf H. Luckenbach, who has had charge of the London Extension operation during World War II. A. E. Moynahan, Engineer of Mines and Metallurgy, will be General Manager of this operation as he also was of the London Extension Mining Company's activities. He is President of the Kennebec Mining Company, owner of the Orphan Boy Mine.

* 7 --- The lease is in good standing. Copies enclosed.

* 9 --- The applicant is able and intends to subscribe one half of the twenty five thousand dollars estimated as necessary to carry this Exploration Project to a successful conclusion.

P R O P E R T Y

* 10 --- The Orphan Boy Group consists of twenty three lode claims, comprising 132.82 acres of patented land, situated on the foot of Loveland Mountain, in Park County, Colorado. The ore is sent to Leadville, Colorado, by haulage in trucks. Distance about 80 miles.

* 14 --- The main tunnel is equipped with twelve pound tee rails and two inch compressor air pipe, but there is no other rail or pipe that can be used on the Exploration Project.

There is an ore bin at the portal of the main tunnel of sixty tonscapacity. A compressor room and blacksmith shop. Neither of the two last mentioned are equipped. Equipment used during World War II and since, was rented and has been removed. Since the end of World War II the mine has been operated by the present lessee, M. J. Krolicki, until the slump in the price of lead and zinc made the operation unprofitable.

This development project consists of driving the main Orphan Boy Adit Tunnel a distance of one hundred and fifty feet on westerly to cut the Honey Comb Spur Vein, and to raise on that vein a distance of 180 feet to the quartz monzonite porphyry. The contact of this porphyry and the underlying Cambrian Quartzite is known as Orphan Boy Contact. This contact has been the locus of a very large percentage of the commercial ore produced from the Orphan Boy Property. By this work the Orphan Boy contact will become available for ore production west of the faulting that caused the mine workings to follow the wrong contact a distance of a thousand feet. (See Colorado State Bulletin No. 3) and both the Honey Comb and Honey Comb Spur veins will be opened at a recognized productive geological horizon.

The second and mostimportant part of this development program is the continuation of the raise of 93 feet which has been used as an ore chute on one side and as a waste chute on the other side of a double two inch plank partition.

This chute reaches from the Level of the Adit Tunnel to the bottom of the Cambrian Quartzite and the output of the productive area on the Evening Star Vein has been mined and brought to surface through it.

This raise was made on the Water Course Faulting slightly west of the Evening Star Vein and by deflecting the continuation of it until it reaches the Evening Star Fissure and then following the vein a distance of one hundred and seventy five feet; the Peerless Shale Horizon will be encountered and with one handling the rock and ore mined can be sent to the main tunnel level through this raise, a total distance of 93 x 175= 268 feet.

The Peerless Shale (i.e.) the contact between the Silurian White Limestone, with the underlying Cambrian Quartzite could be reached through the Evening Star Shaft (old and in poor condition) or by continuing the Purcell Raise, a distance of seventy (70) feet. However, the mined material would need be handled twice to get it to the adit tunnel level; which, at the rate of pay and the inefficiency of labor now prevailing, renders the first mentioned continuation of the lower raise decidedly best.

The importance of opening the Peerless Shale on the Evening Star Vein must not be discounted. The Evening Star Vein is, and has been, a producer of high grade zinc ore, and the Peerless Shale Horizon on Loveland Mountain has been found to have large replacement deposits of zinc ore in the Buckskin Joe

Mines, Inc. property. At least two veins there have been found productive in the Peerless Shale. One of these, the Phillips vein projects to the Honey Comb Spur Vein in the workings of the Orphan Boy. However, the distance of this projection is excessive and the Evening Star vein has several features corresponding to the Phillips Vein.

REQUIREMENTS AND COSTS.

(A) Labor --- (Daily)

	4 Drillmen @ $1.50 per hr. per 8 hr day	48.00
	4 Drill Helpers @ $1.25 per Hr. 8 Hr. day	40.00
	4 Trammers @ $125. per hr. per 8 hr. day	40.00
	2 Compressor Men @ $1.50 per Hr. 8 hr. day	24.00
	1 Mechanic @ $1.50 per hr. per 8 hr. day	12.00
	2 Laborers @ $1.00 per hr. per 8 hr. day	16.00
	1 Foreman @ $1.50 per hr. per 8 hr. day	12.00
(B)	1 Superintendent & Accountant -- per month	$400.00
	1 Manager and Mining Engineer -- per month	400.00
(C)	Estimated at a Thousand dollars	1000.00
(D)	None.	
(E)	Will be rented.	
(F)	Five Hundred Dollars per month	500.00
(G)	Has no equipment.	
(H)	Including powder, fuse caps, carbide, sharpening bits etc. estimated at Ten Thousand Dollars	10,000.00
(I)	Gasoline Power will cost $10.00 per day or $1.25 a foot.	

* 24 --- Two months to get organized and start work. Six months more to finish the project.

AGREEMENT OF LEASE

THIS AGREEMENT OF LEASE, Made this 5th day of May, 1945, by and between the Kennebec Mining Company, a Colorado corporation, party of the first part, hereinafter called the Lessor, and M. J. Krolicki, party of the second part, hereinafter called the Lessee.

W I T N E S S E T H:

That the said lessor, for and in consideration of the royalties, covenants andagreements, hereinafter reserved and by said lessee to be paid, kept and performed, has granted, demised and let, and by these presents does grant, demise and let unto the said lessee, all the right, title, and interest of the said lessor in the following described property, situated in Park County, State of Colorado, to-wit:

The "Orphan Boy" lode mining claim, being United States Mineral Survey Lot No. 37, the United States patent for which is recorded in Book 38, at Page 208, of the records of the office of the Clerk and Recorder of Park County, State of Colorado.

The "DeMary lode mining claim being United States Mineral Survey Lot No. 38, A, B, and C, the United States patent for whidh is recorded in Book 38, at Page 212, of the records of said Park County.

The "Honey Comb" lode mining claim, being United States Mineral Survey Lots No. 39 A. and B, the United States patent for which is recorded in Book 38, at Page 212, of the records of said Park County.

The "Evening Star" lode mining claim, being United States Mineral Survey Lot No. 1415, the United States patent for which isrecorded in Book 24, at Page 337, of the records of said Park County.

The "Senate" lode mining claim, being United States Mineral Survey Lot No. 366, the United States patent for which is recorded in Book 24, at Page 333 of the records of said Park County.

The "Silver", "Iroquois","Strip", and "Ridge" lode mining claims being United States Mineral Survey Lot No. 6945, the United States patent for which is recorded in Book 48, at Page 253, of the records of said Park County.

The "Double Standard"lode mining claim, being United States Mineral Survey Lot No. 3034, the United States patent for which is recorded in Book 38, at Page 222, of the records of said Park County.

The "Buncombe" lode mining claim, being United States Mineral Survey Lot No. 13336, the United States patent for which is recorded in Book 56, at Page 96, of the records of said Park County, less the west 450 feet.

The "Forest" lode mining claim, being United States Mineral Survey Lot No. 6547, the United States patent for which is recorded in Book 56, at Page 38, of the records of said Park County, less the West 450 feet.

The "Evangelist" lode mining claim, being United States Mineral Survey Lot No. 4661, the United States patent for which is recorded in Book 56, at Page 60, of the records of said Park County.

The "Southwood" lode mining claim, being United States Mineral Survey Lot No. 4396, the United States patent for which is recorded in Book 56, at Page 65, of the records of said Park County.

The "Kennebec" lode mining claim being United States Mineral Survey Lot No. 9034, the United States patent for which is recorded in Book 56, at Page 6, of the records of said Park County.

The "Vincent", "Lockridge", and "Midland" lode mining claims, being United States Mineral Survey Lot No. 5823, the United States patent for which is recorded in Book 37, at Page 315, of the records of said Park County.

The "Good Samaritan" lode mining claim, being United States Mineral Survey Lot No. 4296, the United States patent for which is recorded in Book 56, at Page 135, of the records of said Park County.

The "January" lode mining claim, the location certificate of which is recorded in Book 10, at Page 29, of the records of the said Park County.

And such surface rights, rights of way and tunnel rights owned by the said lessor as may be necessary to operate the foregoing lodes, and also all railroads and tram tracks, air pipes, improvements and fixtures of every kind now located upon said leased lodes.

TO HAVE AND TO HOLD unto the said lessee from the 5th day of May, 1945, for and during and until the 5th day of June, 1955, unless sooner forfeited or determined through the violation of any covenant and hereinafteragainst the said lessee reserved.

And, in consideration of such demise the said lessee does covenant and agree with the said lessor as follows, to-wit:

To enter upon thesaid mine or mines or premises and work the same in mine fashion in manner necessary to good and economical mining so as to take out the greatest amount of ore possible with due regard to the development and preservation of the same as a workable mine or mines, and to the special covenants hereinafter reserved.

To work and mine the said premises, as aforesaid, steadily and continuously from the 1st day of August, 1945, and that any failure to work the said premises with at least fifty shifts of work per calendar month may be considered a violation of this covenant.

To properly pay all persons who shall do work or shall furnish material or mining, milling, or other machinery or other fixtures for working, preservation, prospecting, or development of any mine, lode, or deposit located on any portion of said leased premises, and a failure to do so shall be considered a forfeiture of this lease.

To well and sufficiently timber the said mine or mines at all points where proper, in accordance with good mining, and to repair all old timbering wherever it may become necessary.

To allow the said lessor, its officers and its agents from time to time, to enter upon and into all parts of the said property for the purpose of inspection, and to take samples of any and all ores that may be mined for assay or other use, but not to allow any person not in privity with the parties hereto

to take or hold possession of the said premises, or any part thereof, under any pretense whatever.

To occupy and hold all cross or parallel lodes, spurs, or mineral deposits of any kind which may be discovered by the said lessee, or any person under him, in any manner within the boundaries of any of said lodes as the property of the said lessor, with the privilege to said lessee of working the same as a parcel of the said demised premises.

To keep at all times the drifts, shafts, tunnels, and other workings where the said lessee may operate, thoroughly drained and clear of loose rock and rubbish unless prevented by extraordinary mining casualty.

If labor strikes shall arise preventing the said lessee from working said demised premises, or any part thereof, or if railroad strikes shall interfere with the transportation interests of the lessee as connected with the work under this lease, or if there shall arise any unforseen contingencies connected with the workings or machinery, then the lessee shall not be required to do work while such cause exists, and shall have a reasonable time for repair ing, for replacing, or adding to the plant, and if any unforeseen contingency connected with the works or machinery is not removed or remedied within a reasonable time, this lease shall terminate.

To comply in all regards with all provisions of the law of the State of Colorado in regard to mining and the prosecution ofmining work upon the said mining claims.

To pay and deliver to the said lessor as royalty the following per cents of the net smelter, mill, or mint returns values of all ore extracted from the said demised premises, or any part thereof:

On all ores of the value of under $20.00 per ton 5% royalty;
On all ores of the value of $20.00 per ton and not above $50.00 per ton, 10% royalty;
On all ores of the value of $50.00 and not above $100.00 per ton, 15% royalty;
On all ores of the value of over $100.00 per ton 20% royalty.

Upon the request of the lessor all ores shall be sold, sampled and settled for jointly by the lessor or its agents, and the lessee, and shall be sold to the person or corporation who will pay the highest price thereof.

The royalties to which the lessor shall be entitled as aforesaid shall be left with the purchaser of the ores, and shall be paid to the lessor and be subject to the order of the lessor.

The lessor shall be furnished with a duplicate statement of all ores at the time each lot is settled for.

The lessee shall pay or cause to be paid such proportion of the output tax which shall be assessed against the said leased premises, during the term of this lease, as the amount of the said lessee retains of the smelter returns value of the ore extracted from the said premises bears to the gross smelter returns of ore extracted from the said premises, and the lessee shall return that amount of the output to the tax officers as taxable to such lessee.

To deliver to the said lessor the said premises with the appurtenances and all improvements except the machinery put upon the said premises by the lessee, in good order and condition, with all drifts, shafts, tunnels and other passages where the said lessee shall have worked thoroughly clear of loose rock and rubbish and drained, and the mine or mines ready for immediate and continued working (accidents not arising from

negligence alone excusing) without demand or further notice on the said 15th day of June 1955, at noon or at any time previous upon demand for forfeiture.

And finally, that upon the violation of any covenant or covenants hereinbefore reserved, the term of this lease shall, at the option of the said lessor, expire, and the same and the said premises, with the appurtenances and improvements except the machinery put thereon by the lessee, shall become forfeiting to the said lessor, and the said lessor or its agent may thereupon, with or without notice, enter upon said premises and dispossess all persons occupying the same with or without process of law, and with or without force or at the option of the said lessor, the said lessee and all persons found in occupancy may be proceeded against as guilty of unlawful detainer.

And the said lessor expressly reserves to itself the property and right of property in all mineral to be extracted from said premises during the term of this lease.

At the expiration of this lease a copy of all working maps of the said premises shall be delivered to the lessor.

O P T I O N

In consideration of the acceptance of the foregoing lease, the expenditures to be made thereunder and the well and faithful keeping of the covenants thereof, the said lessee shall have the right to purchase the said demised premises, by the payment of Seventy-five Thousand Dollars ($75,000.00) to the said lessor on or before the 15th day of June, 1955, provided this lease is then in full force and effect, time being the essence of the contract as to such payment.

Upon written notice from the said lessee to the said lessor that the purchase money above mentioned is to be paid, the said lessor agrees to ratify and confirm the terms of this lease and option at a duly called stockholders meeting, and to place in escrow, within sixty days after date of said written notice, a good and sufficient mining deed to all the above described property, in the Colorado Notional Bank, of Denver, showing a clear and merchantable title in the said lessor, with instructions for delivery upon payment of the full purchase price. It is also agreed that any and all royaltics paid under the terms of this lease are to apply on the purchase price and to be deducted therefrom.

Each and every clause and covenant of this agreement of lease shall extend to the successors, heirs, executors, administrators and lawful assigns of all parties hereto.

IN WITNESS WHEREOF, said party of the first part has caused these presents to be signed to its name by its President and its corporate seal to be hereunto affixed, attested by its Secretary, and the saidparty of the second part has signed these presents, in triplicate, the day and year first above written.

THE KENNEBEC MINING COMPANY

By A. E. Moynahan
President

ATTEST:

E. H. Roberts
Secretary

L E S S O R

M. J. Krolicki
M. J. Krolicki

L E S S E E

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of Park, State of Colorado, described in a certain Exploration Project Contract dated _____, 195__, between M. J. Krolicki, the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated May 5, 1945, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

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

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

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

Dated this 18th day of July, 1951

KEWEENAW MINING CO.

D. E. Monnahan
President

G. H. Roberts
Secretary

U. S. GOVERNMENT PRINTING OFFICE 940768

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of Mesa, State of Colorado, described in a certain Exploration Project Contract dated _____, 195__, between M. F. Kneisel, the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated May 9, 1955, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

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

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

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

Dated this 18th day of July, 195_1

MATHEWS DRILLING CO.

R. E. Vaughan

President

G. H. Roberts

Secretary

U. S. GOVERNMENT PRINTING OFFICE 940768

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of Park, State of Colorado, described in a certain Exploration Project Contract dated _____, 195__, between E. J. Krollock,

the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated May 5, 1955, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

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

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

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

Dated this 18th day of July, 1951

G. H. Roberts
Secretary

Kennecott Mining Co.
A. E. Moynahan
President

U. S. GOVERNMENT PRINTING OFFICE 940768

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of Park, State of Colorado, described in a certain Exploration Project Contract dated _____, 195__, between M. J. Krolicki, the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated May 5, 1945, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

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

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

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

Dated this 18th day of July, 1951.

KENNEBEC MINING CO.

A. E. Murnahan
President

G. H. Robeck
Secretary

U. S. GOVERNMENT PRINTING OFFICE 940768

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of Park, State of Colorado, described in a certain Exploration Project Contract dated _____, 195__, between M. J. Krolicki, the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated May 5, 1945, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

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

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

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

Dated this 18th day of July, 1951

KENNEBEC MINING CO.

A. E. Moynahan
President

G. H. Roberts
Secretary

U. S. GOVERNMENT PRINTING OFFICE 940768

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of Park, State of Colorado, described in a certain Exploration Project Contract dated _____, 195__, between M. J. Krokicki, the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated May 5, 1945, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

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

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

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

Dated this 18th day of July, 1951

KENNEBEC MINING CO.

G. H. Roberts
Secretary

A. E. Maynahan
President

U. S. GOVERNMENT PRINTING OFFICE 940768

MF-201

MORTGAGOR'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the owner is the holder of a mortgage, claim, lien, or encumbrance dated ----------, ----------, recorded in Book ----------, page ----------, of the records of the county of ----------, State of ----------, upon that certain parcel of ground described in a certain Exploration Project Contract dated ----------, 195---, between ----------

---,

the owner of said property and the United States of America;

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

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

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

Dated this ---------- day of ----------, 195---

U. S. GOVERNMENT PRINTING OFFICE 940767

MF-201

MORTGAGOR'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the owner is the holder of a mortgage, claim, lien, or encumbrance dated ....., ..., recorded in Book ....., page ....., of the records of the county of ....., State of ....., upon that certain parcel of ground described in a certain Exploration Project Contract dated ....., 195...., between .....

.....,

the owner of said property and the United States of America;

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

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

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

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

.....

U. S. GOVERNMENT PRINTING OFFICE 940767

MF-201

MORTGAGOR'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the owner is the holder of a mortgage, claim, lien, or encumbrance dated ----------, ----------, recorded in Book ----------, page ----------, of the records of the county of ----------, State of ----------, upon that certain parcel of ground described in a certain Exploration Project Contract dated ----------, 195---, between ----------

---,

the owner of said property and the United States of America;

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

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

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

Dated this ---------- day of ----------, 195---

U. S. GOVERNMENT PRINTING OFFICE 940767

MF-201

MORTGAGOR'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the owner is the holder of a mortgage, claim, lien, or encumbrance dated ----------, ----------, recorded in Book ----------, page ----------, of the records of the county of ----------, State of ----------, upon that certain parcel of ground described in a certain Exploration Project Contract dated ----------, 195---, between ----------

---

the owner of said property and the United States of America;

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

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

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

Dated this ---------- day of ----------, 195----

U. S. GOVERNMENT PRINTING OFFICE 940767

MF-201

MORTGAGOR'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the owner is the holder of a mortgage, claim, lien, or encumbrance dated ----------, ----------, recorded in Book ----------, page ----------, of the records of the county of ----------, State of ----------, upon that certain parcel of ground described in a certain Exploration Project Contract dated ----------, 195---, between ----------

---------- ,

the owner of said property and the United States of America;

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

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

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

Dated this ---------- day of ----------, 195---

U. S. GOVERNMENT PRINTING OFFICE 940767

MF-201

MORTGAGOR'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the owner is the holder of a mortgage, claim, lien, or encumbrance dated ----------, ----------, recorded in Book ----------, page ----------, of the records of the county of ----------, State of ----------, upon that certain parcel of ground described in a certain Exploration Project Contract dated ----------, 195---, between ----------

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the owner of said property and the United States of America;

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

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

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

Dated this ---------- day of ----------, 195---

U. S. GOVERNMENT PRINTING OFFICE 940767

ASSIGNMENT OF LEASE

THIS ASSIGNMENT, made this 5th day of May, 1945, by and between the Homestake Mining Company, a Colorado corporation, party of the first part, hereinafter called the Lessor, and [illegible] J. Neffield, party of the second part, hereinafter called the Lessee.

WITNESSETH:

That the said Lessor, for and in consideration of the royalties, covenants and agreements hereinafter reserved and by said Lessee to be paid, kept and performed, has granted, demised and let, and by these presents does grant, demise and let unto the said Lessee, all the right, title, and interest of the said Lessor in the following described property, situated in Park County, State of Colorado, to-wit:

The "Golden Star" lode mining claim, being United States Mineral Survey Lot No. 37, the United States patent for which is recorded in Book 38, at Page 288, of the records of the office of the Clerk and Recorder of Park County, State of Colorado.

The "Mallory lode mining claim being United States Mineral Survey Lot No. 38, A, B, and C, the United States patent for which is recorded in Book 38, at Page 212, of the records of said Park County.

The "Honey Comb" lode mining claim, being United States Mineral Survey Lots No. 39 A and B, the United States patent for which is recorded in Book 38, at Page 212, of the records of said Park County.

The "Evening Star" lode mining claim, being United States Mineral Survey Lot No. 1[illegible], the United States patent for which is recorded in Book [illegible], at Page 337, of the records of said Park County.

The "Bonanza" lode mining claim, being United States Mineral Survey Lot No. 306, the United States patent for which is recorded in Book [illegible], at Page 333 of the records of said Park County.

The "Silver", "Evergreen", "Keeler", and "Bigelow" lode mining claims being United States Mineral Survey Lot No. 6[illegible]5, the United States patent for which is recorded in Book [illegible], at Page 353, of the records of said Park County.

The "Double Headed" lode mining claim, being United States Mineral Survey Lot No. 30[illegible], the United States patent for which is recorded in Book [illegible], at Page 222, of the records of said Park County.

The "Dreadnaught" lode mining claim, being United States Mineral Survey Lot No. 2333[illegible], the United States patent for which is recorded in Book [illegible], at Page [illegible], of the records of said Park County, lying the West [illegible] feet.

The "Forest" lode mining claim, being United States Mineral Survey Lot No. 6[illegible]7, the United States patent for which is recorded in Book [illegible], at Page [illegible], of the records of said Park County, lying the East [illegible] feet.

The "Evergreen" lode mining claim, being United States Mineral Survey Lot No. [illegible], the United States patent for which is recorded in Book [illegible], at Page [illegible], of the records of said Park County.

The "Southwood" lode mining claim, being located under Mineral Survey Lot No. [illegible], the United States patent for which is recorded in Book [illegible], at Page [illegible], of the records of said Park County.

The "Lookout" lode mining claim being located under Mineral Survey Lot No. [illegible], the United States patent for which is recorded in Book [illegible], at Page [illegible], of the records of said Park County.

The "Vincent", "Pocahontas", and "Lincoln" lode mining claims, being located under Mineral Survey Lot No. [illegible], the United States patent for which is recorded in Book [illegible], at Page [illegible], of the records of said Park County.

The "Mand Frazelina" lode mining claim, being located under Mineral Survey Lot No. [illegible], the United States patent for which is recorded in Book [illegible], at Page [illegible], of the records of said Park County.

The "Stanford" lode mining claim, the location certificate of which is recorded in Book [illegible], at Page [illegible], of the records of the said Park County.

In such excepted rights, rights of way and tunnel rights granted by the said lease as may be necessary to operate the Stanford, Irwin, and also all mining claims and mill sites, site plans, transversals and flumes of every kind now located upon said leased lands.

[illegible] the said lease from the 1st day of May, 1945, for ten years and until the 1st day of June, 1955, unless sooner forfeited or determined through the violation of any covenant and/or stipulation in the said lease reserved.

And, in consideration of such demise the said lessee does covenant and agree with the said lessor as follows, to-wit:

To enter upon should mine or mines or premises and work the same in mine fashion in manner necessary to good and scientific mining so as to take out the greatest amount of ore possible with due regard to the development and preservation of the same as a workable mine or mines, and to the general covenants hereinafter reserved.

To work and mine the said premises, as aforesaid, steadily and continuously from the 1st day of August, 1911, and that any failure to work the said premises with at least fifty miners or more per calendar month may be considered a violation of this covenant.

To promptly pay all persons who shall do work or shall furnish material or supplies, skilled, or other machinery or other diffices for working, preservation, prospecting, or development of any mine, lode, or deposit located on any portion of said leased premises, and a failure to do so shall be considered a forfeiture of this lease.

To well and sufficiently timber the said mine or mines at all points where proper, in accordance with good mining, and to provide all old timbering whenever it may become necessary.

To allow the said lessor, its officers and its agents free access to this, to enter upon and into all parts of the said property for the purpose of inspection, and to take samples of any and all ores that may be mined for assay or other use, but not to allow any person not in privity with the parties hereto

to the said premises of the said premises, or any part thereof, under any pretense whatever.

To occupy and hold all stone or precious lodes, mines, or mineral deposits of any kind which may be discovered by the said lessee, or any person under him, in any mines within the boundaries of any of said lodes as the property of the said lessee, with the privilege to said lessee of working the same as a parcel of the said rented premises.

To keep at all times the drains, ditches, culverts, and other drainage upon the said lands and operate, free and clear of loose rock and stones which unless prevented by ordinary care may damage.

If labor strikes shall cause preventing the said lessee from working said rented premises, or any part thereof, or if unusual strikes shall interfere with the transportation interests of the lessee as connected with the work under this lease, or if there shall come any unforeseen contingencies connected with the carriage or machinery, then the lessee shall not be required to do work while such cause exists, and shall have a reasonable time for repair by, for replacing, or adding to the plant, and if any unforeseen contingency connected with the work or machinery is not removed or remedied within a reasonable time, this lease shall terminate.

To comply in all regards with all regulations of the law of the State of Colorado in regard to mining and the representation obligations now that the said mining claims.

To pay and deliver to the said lessor as royalty the following per cent of the net smelter, mill, or other return value of all ore extracted from the said leased premises, or any part thereof:

In all ores of the value of under $20.00 per ton 5% royalty;
In all ores of the value of $20.00 per ton and not above $50.00 per ton, 10% royalty;
In all ores of the value of $50.00 and not above $100.00 per ton, 15% royalty;
In all ores of the value of over $100.00 per ton 20% royalty.

Upon the request of the lessee an ore assay shall be sold, sampled and sealed for jointly by the lessee or his agents, and the lessor, and shall be sold to the person or corporation who will pay the highest price thereof.

The royalties for which the lessee shall be entitled as aforesaid shall be left with the manager of the ores, and shall be paid to the lessee and be subject to the order of the lessor.

The lessee shall be furnished with a duplicate statement of all ores as the time each lot is sampled for.

The lessee shall pay or cause to be paid such proportion of the annual tax which shall be assessed against the said leased premises, during the term of this lease, as the amount of the said lessee retains of the gross returns value of the ore extracted from the said premises bears to the gross million returns of ore extracted from the said premises, and the lessee shall submit that amount of the output to the tax officers as taxable on such lessee.

To deliver to the said lessor the said premises with the appurtenances and all improvements except the machinery put upon the said premises by the lessee, in good order and condition, with all fences, shafts, tunnels and other openings where the said lessee shall have worked thoroughly clear of loose rock and rubbish and ordered, and the mine or mines ready for immediate and continued working (accidents not arising from

negligence alone excepted) without demand or further notice on the said 7th day of June 1955, or sooner or at any time previous upon demand for forfeiture.

And finally, that upon the violation of any covenant or covenants hereinbefore reserved, the term of this lease or oil, at the option of the said lessor, expires, and the same and the said premises, with the appurtenances and improvements except the machinery put thereon by the lessee, shall become forfeiting to the said lessor, and the said lessor or its agent may thereupon, with or without notice, enter upon said premises and dispossess all persons occupying the same with or without process of law, and with or without force as at the option of the said lessor, the said lessee and all persons found in possession may be prosecuted against as guilty of unlawful detainer.

But the said lessor expressly reserves to itself the property and right of property in all mineral to be extracted from said premises during the term of this lease.

At the expiration of this lease a copy of all working maps of the said premises shall be delivered to the lessor.

OPTION

In consideration of the acceptance of the foregoing lease, the expenditures to be made thereunder and the well and faithful keeping of the covenants thereof, the said lessee shall have the right to purchase the said described premises, by the payment of Twenty-Five Thousand Dollars ($25,000.00) to the said lessor on or before the 7th day of June, 1955, provided this lease is then in full force and effect, time being the essence of the contract as to said payment.

Upon written notice from the said lessee to the said lessor that the purchase money above mentioned is to be paid, the said lessor agrees to notify and convene the lessee of said lease and option at a duly called stockholders meeting, and to cause to be issued, within sixty days after date of said written notice, a good and sufficient mineral deed to all the above described property, in the Colorado National Bank, or Denver, showing a clear and merchantable title in the said lessor, with instructions for delivery upon payment of the full purchase price. It is also agreed that any and all royalties paid under the terms of this lease are to apply on the purchase price and to be deducted therefrom.

That and every clause and covenant of this agreement of lease shall extend to the successors, heirs, executors, administrators and lawful assigns of all parties hereto.

IN WITNESS WHEREOF, said party of the first part has caused these presents to be signed by its duly by its President and its corporate seal to be hereunto affixed, attested by its Secretary, and the undersigned of the second part has signed these presents, in duplicate, the day and year first above written.

THE MERRILL MINES COMPANY

By A. E. Moynahan
President

ATTEST:

G. Roberts
Secretary

LESSOR

M. J. Krolicki
LESSEE

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AGREEMENT OF LEASE

THIS AGREEMENT OF LEASE, Made this 5th day of May, 1945, by and between the Kennebec Mining Company, a Colorado corporation, party of the first part, hereinafter called the Lessor, and M. J. Krolicki, party of the second part, hereinafter called the Lessee.

WI T N E S S E T H:

That the said lessor, for and in consideration of the royalties, covenants and agreements, hereinafter reserved and by said lessee to be paid kept, and performed, has granted, demised and let, and by these presents does grant, demise and let unto the said lessee, all the right, title, andinterest of the said lessor in the following described property, situated in Park County, State of Colorado, to-wit:

The "Orphan Boy" lode mining claim, being United States Mineral Survey lot No. 37, the United States patent for which is recorded in Book 38, at Page 208, of the records of the office of the Clerk and Recorder of Park County, State of Colorado.

The "DeMary lode mining claim being United States Mineral Survey Lot No. 38, A, B, and C, the United States patent for which is recorded in Book 38, at Page 212, of the records of said Park County.

The "Honey Comb" lode mining claim, being United States Mineral Survey Lots No. 39 A, and B, the United States patent for which is recorded in Book 38, at Page 212, of the records of said Park County.

The "Evening Star" lode mining claim, being United States Mineral Survey Lot No. 1415, the United States patent for which is recorded in Book 24, at Page 337, of the records of said Park County.

The "Senate" lode mining claim, being United States Mineral Survey Lot No. 366, the United States patent for which is recorded in Book 24, at Page 333 of the records of said Park County.

The "Sliver", "Iroquois", "Strip" and "Ridge" lode mining claims being United States Mineral Survey Lot No. 6945, the United States patent for which is recorded in Book 48, at Page 253, of the records of said Park County.

The "Double Standard" lode mining claim, being United States Mineral Survey Lot No. 3034, the United States patent for which is recorded in Book 38, at Page 222, of the records of said Park County.

The "Buncombe" lode mining claim, being United States Mineral Survey Lot No. 13336, the United States patent for which is recorded in Book 56, at Page 96, of the records of said Park County, less the west 450 feet.

The "Forest" lode mining claim, being United States Mineral Survey Lot No. 6547, the United States patent for which is recorded in Book 56, at Page 38, of the records of said Park County, less the West 450 feet.

The "Evangelist" lode mining claim, being United States Mineral Survey Lot No. 4661, the United States patent for which is recorded in Book 56, at Page 60, of the records of said Park County.

The "Southwood" lode mining claim, being United States Mineral Survey Lot No. 4396, the United States patent for which is recorded in Book 56, at Page 65, of the records of said Park County.

The "Kennebec" lode mining claim being United States Mineral Survey Lot No. 9034, the United States patent for which is recorded in Book 56, at Page 6, of the records of said Park County.

The "Vincent", "Lockridge", and "Midland" lode mining claims, being United States Mineral Survey Lot No. 5823, the United States patent for which is recorded in Book 37, at Page 315, of the records of said Park County.

The "Good Samaritan" lode mining claim, being United States Mineral Survey Lot No. 4296, the United States patent for which is recorded in Book 56, at Page 135, of the records of said Park County.

The "January" lode mining claim, the location certificate of which is recorded in Book 10, at Page 29, of the records of the said Park County.

And such surface rights, rights of way and tunnel rights owned by the said lessor as may be necessary to operate the foregoing lodes, and also all railroads and tram tracks, air pipes, improvements and fixtures of every kind now located upon said leased lodes.

TO HAVE AND TO HOLD unto the said lessee from the 5th day of May, 1945, for and during and until the 15th day of June 1955, unless sooner forfeited or determined through the violation of any covenant and hereinafter against the said lessee reserved.

And, in consideration of such demise the said lessee does covenant and agree with the said lessor as follows, to-wit:

To enter upon the said mine or mines or premises and work the same in mine fashion in manner necessary to good and economical mining so as to take out the greatest amount of ore possible with due regard to the development and preservation of the same as a workable mine or mines, and to the special covenants hereinafter reserved.

To work and mine the said premises, as aforesaid, steadily and continuously from the 1st day of August, 1945, and that any failure to work the said premises with at least fifty shifts of work per calendar month may be considered a violation of this covenant.

To properly pay all persons who shall do work or shall furnish material or mining, milling, or other machinery or other fixtures for working, preservation, prospecting, or development of any mine, lode or deposit located on any portion of said leased premises, and a failure to do so shall be considered a forfeiture of this lease.

To well and sufficiently timber the said mine or mines at all points where proper, in accordance with good mining, and to repair all old timbering wherever it may become necessary.

To allow the said lessor, its officers and its agents from time to time, to enter upon and into all parts of the said property for the purpose of inspection, and to take samples of any and all ores that may be mined for assay or other use, but not to allow any person not in privity with the parties hereto

To take or hold possession of the said premises, or any part thereof, under any pretence whatever.

To occupy and hold all cross or parallel lodes, spurs, or mineral deposits of any kind which may be discovered by the said lessee, or any person under him, in any manner within the boundaries of any of said lodes as the property of the said lessor, with the privilege to said lessee of working the same as a parcel of the said demised premises.

To keep at all times the drifts, shafts, tunnels, and other workings where the said lessee may operate, thoroughly drained and clear of loose rock and rubbish unless prevented by extraordinary mining casualty.

If labor strikes shall arise preventing the said lessee from working said demised premises, or any part thereof, or if railroad strikes shall interfere with the transportation interests of the lessee as connected with the work under this lease, or if there shall arise any unforeseen contingencies connected with the workings or machinery, then the lessee shall not be required to do work while such cause exists, and shall have a reasonable time for repairing, for replacing, or adding to the plant, and if any unforeseen contingency connected with the works or machinery is not removed or remedied within a reasonable time, this lease shall terminate.

To comply in all regards with all provisions of the law of the State of Colorado in regard to mining and the prosecution of mining work upon the said mining claims.

To pay and deliver to the said lessor as royalty the following per cents of the net smelter, mill, or mint returns values of all ore extracted from the said demised premises, or any part thereof:

On all ores of the value of under $20.00 per ton 5% royalty;
On all ores of the value of $20.00 per ton and not above $50.00 per ton, 10% royalty;
On all ores of the value of $50.00 and not above $100.00 per ton, 15% royalty;
On all ores of the value of over $100.00 per ton 20% royalty.

Upon the request of the lessor all ores shall be sold, sampled and settled for jointly by the lessor or its agents, and the lessee, and shall be sold to thoperson or corporation who will pay the highest price thereof.

The royalties to which the lessor shall be entitled as aforesaid shall be left with the purchaser of the ores, and shall be paid to the lessor and be subject to the order of the lessor.

The lessor shall be furnished with a duplicate statement of all ores at the time each lot is settled for.

The lessee shall pay or cause to be paid such proportion of the output tax which shall be assessed against the said leased premises, during the term of this lease, as the amount of the said lessee retains of the smelter returns value of the ore extracted from the said premises bears to the gross smelter returns of ore extracted from the said premises, and the lessee shall return that amount of the output to the tax officers as taxable to such lessee.

To deliver to the said lessor the said premises with the appurtenances and all improvements except the machinery put upon the said premises by the lessee, in good order and condition, with all drifts, shafts, tunnels and other passages where the said lessee shall have worked thoroughly clear of loose rock and rubbish and drained, and the mine or mines ready for immediate and continued working (accidents not arising from

negligence alone excusing) without demand or further notice on the said 5th day of June, 1955, at noon or at any time previous upon demand for forfeiture.

And finally, that upon the violation of any covenant or covenants hereinbefore reserved, the term of this lease shall, at the option of the said lessor, expire, and the same and the said premises, with the appurtenances and improvements except the machinery put thereon by the lessee, shall become forfeiting to the said lessor, and the said lessor or its agent may thereupon, with or without notice, enter upon said premises and dispossess all persons occupying the same with or without process of law, and with or without force or at the option of the said lessor, the said lessee and all persons found in occupancy may be proceeded against as guilty of unlawful detainer.

And the said lessor expressly reserves to itself the property and right of property in all mineral to be extracted from said premises during the term of this lease.

At the expiration of this lease a copy of all working maps of the said premises shall be delivered to the lessor.

O P T I O N

In consideration of the acceptance of the foregoing lease, the expenditures to be made thereunder and the well and faithful keeping of the covenants thereof, the said lessee shall have the right to purchase the said demised premises, by the payment of Seventy-five Thousand Dollars ($75,000.00) to the said lessor on or before the 5th day of June, 1955, provided this lease is then in full force and effect, time being the essence of the contract as to such payment.

Upon written notice from the said lessee to the said lessor that the purchase money above mentioned is to be paid, the said lessor agrees to ratify and confirm the terms of this lease and option at a duly called stockholders meeting, and to place in escrow, within sixty days after date of said written notice, a good and sufficient mining deed to all the above described property, in the Colorado National Bank, of Denver, showing a clear and merchantable title in the said lessor, with instructions for delivery upon payment of the full purchase price. It is also agreed that any and all royalties paid under the terms of this lease are to apply on the purchase price and to be deducted therefrom.

Each and every clause and covenant of this agreement of lease shall extend to the successors, heirs, executors, administrators and lawful assigns of all parties hereto.

IN WITNESS WHEREOF, said party of the first part has caused these presents to be signed to its name by its President and its corporate seal to be hereunto affixed, attested by its Secretary, and the said party of the second part has signed these presents, in triplicate, the day and year first above written.

THE KANSAS MINING COMPANY

By A. E. Moynahan
President

ATTEST:

G. W. Roberts
Secretary

L E S S O R.

M. J. Krolicki

L E S S E E

AGREEMENT OF LEASE

THIS AGREEMENT OF LEASE, Made this 5th day of May, 1945, by and between the Kennebec Mining Company, a Colorado corporation, party of the first part, hereinafter called the Lessor, and M. J. Krolicki, party of the second part, hereinafter called the Lessee.

WII T N E S S E T H:

That the said lessor, for and in consideration of the royalties, covenants and agreements, hereinafter reserved and by said lessee to be paid kept, and performed, has granted, demised and let, and by these presents does grant, demise and let unto the said lessee, all the right, title, andinterest of the said lessor in the following described property, situated in Park County, State of Colorado, to-wit:

The "Orphan Boy" lode mining claim, being United States Mineral Survey lot No. 37, the United States patent for which is recorded in Book 38, at Page 208, of the records of the office of the Clerk and Recorder of Park County, State of Colorado.

The "DeMary lode mining claim being United States Mineral Survey Lot No. 38, A, B, and C, the United States patent for which is recorded in Book 38, at Page 212, of the records of said Park County.

The "Honey Comb" lode mining claim, being United States Mineral Survey Lots No. 39 A, and B, the United States patent for which is recorded in Book 38, at Page 212, of the records of said Park County.

The "Evening Star" lode mining claim, being United States Mineral Survey Lot No. 1415, the United States patent for which is recorded in Book 24, at Page 337, of the records of said Park County.

The "Senate" lode mining claim, being United States Mineral Survey Lot No. 366, the United States patent for which is recorded in Book 24, at Page 333 of the records of said Park County.

The "Sliver" , "Iroquois", "Strip" and "Ridge" lode mining claims being United States Mineral Survey Lot No. 6945, the United States patent for which is recorded in Book 48, at Page 253, of the records of said Park County.

The "Double Standard" lode mining claim, being United States Mineral Survey Lot No. 3034, the United States patent for which is recorded in Book 38, at Page 222, of the records of said Park County.

The "Buncombe" lode mining claim, being United States Mineral Survey Lot No. 13336, the United States patent for which is recorded in Book 56, at Page 96, of the records of said Park County, less the west 450 feet.

The "Forest" lode mining claim, being United States Mineral Survey Lot No. 6547, the United States patent for which is recorded in Book 56, at Page 38, of the records of said Park County, less the West 450 feet.

The "Evangelist" lode mining claim, being United States Mineral Survey Lot No. 4661, the United States patent for which is recorded in Book 56, at Page 60, of the records of said Park County.

The "Southwood" lode mining claim, being United States Mineral Survey Lot No. 4396, the United States patent for which is recorded in Book 56, at Page 65, of the records of said Park County.

The "Kennebec" lode mining claim being United States Mineral Survey Lot No. 9034, the United States patent for which is recorded in Book 56, at Page 6, of the records of said Park County.

The "Vincent", "Lockridge", and "Midland" lode mining claims, being United States Mineral Survey Lot No. 5823, the United States patent for which is recorded in Book 37, at Page 315, of the records of said Park County.

The "Good Samaritan" lode mining claim, being United States Mineral Survey Lot No. 4296, the United States patent for which is recorded in Book 56, at Page 135, of the records of said Park County.

The "January" lode mining claim, the location certificate of which is recorded in Book 10, at Page 29, of the records of the said Park County.

And such surface rights, rights of way and tunnel rights owned by the said lessor as may be necessary to operate the foregoing lodes, and also all railroads and tram tracks, air pipes, improvements and fixtures of every kind now located upon said leased lodes.

TO HAVE AND TO HOLD unto the said lessee from the 5th day of May, 1945, for and during and until the 5th day of June 1955, unless sooner forfeited or determined through the violation of any covenant and hereinafter against the said lessee reserved.

And, in consideration of such demise the said lessee does covenant and agree with the said lessor as follows, to-wit:

To enter upon the said mine or mines or premises and work the same in mine fashion in manner necessary to good and economical mining so as to take out the greatest amount of ore possible with due regard to the development and preservation of the same as a workable mine or mines, and to the special covenants hereinafter reserved.

To work and mine the said premises, as aforesaid, steadily and continuously from the 1st day of August, 1945, and that any failure to work the said premises with at least fifty shifts of work per calendar month may be considered a violation of this covenant.

To properly pay all persons who shall do work or shall furnish material or mining, milling, or other machinery or other fixtures for working, preservation, prospecting, or development of any mine, lode or deposit located on any portion of said leased premises, and a failure to do so shall be considered a forfeiture of this lease.

To well and sufficiently timber the said mine or mines at all points where proper, in accordance with good mining, and to repair all old timbering wherever it may become necessary.

To allow the said lessor, its officers and its agents from time to time, to enter upon and into all parts of the said property for the purpose of inspection, and to take samples of any and all ores that may be mined for assay or other use, but not to allow any person not in privity with the parties hereto

To take or hold possession of the said premises, or any part thereof, under any pretense whatever.

To occupy and hold all cross or parallel lodes, spurs, or mineral deposits of any kind which may be discovered by the said lessee, or any person under him, in any manner within the boundaries of any of said lodes as the property of the said lessor, with the privilege to said lessee of working the same as a parcel of the said demised premises.

To keep at all times the drifts, shafts, tunnels, and other workings where the said lessee may operate, thoroughly drained and clear of loose rock and rubbish unless prevented by extraordinary mining casualty.

If labor strikes shall arise preventing the said lessee from working said demised premises, or any part thereof, or if railroad strikes shall interfere with the transportation interests of the lessee as connected with the work under this lease, or if there shall arise any unforeseen contingencies connected with the workings or machinery, then the lessee shall not be required to do work while such cause exists, and shall have a reasonable time for repairing, for replacing, or adding to the plant, and if any unforeseen contingency connected with the works or machinery is not removed or remedied within a reasonable time, this lease shall terminate.

To comply in all regards with all provisions of the law of the State of Colorado in regard to mining and the prosecution of mining work upon the said mining claims.

To pay and deliver to the said lessor as royalty the following per cents of the net smelter, mill, or mint returns values of all ore extracted from the said demised premises, or any part thereof:

On all ores of the value of under $20.00 per ton 5% royalty;
On all ores of the value of $20.00 per ton and not above $50.00 per ton, 10% royalty;
On all ores of the value of $50.00 and not above $100.00 per ton, 15% royalty;
On all ores of the value of over $100.00 per ton 20% royalty.

Upon the request of the lessor all ores shall be sold, sampled and settled for jointly by the lessor or its agents, and the lessee, and shall be sold to theperson or corporation who will pay the highest price thereof.

The royalties to which the lessor shall be entitled as aforesaid shall be left with the purchaser of the ores, and shall be paid to the lessor and be subject to the order of the lessor.

The lessor shall be furnished with a duplicate statement of all ores at the time each lot is settled for.

The lessee shall pay or cause to be paid such proportion of the output tax which shall be assessed against the said leased premises, during the term of this lease, as the amount of the said lessee retains of the smelter returns value of the ore extracted from the said premises bears to the gross smelter returns of ore extracted from the said premises, and the lessee shall return that amount of the output to the tax officers as taxable to such lessee.

To deliver to the said lessor the said premises with the appurtenances and all improvements except the machinery put upon the said premises by the lessee, in good order and condition, with all drifts, shafts, tunnels and other passages where the said leasee shall have worked thoroughly clear of loose rock and rubbish and drained, and the mine or mines ready for immediate and continued working (accidents not arising from

negligence alone excusing) without demand or further notice on the said 5th day of June, 1955, at noon or at any time previous upon demand for forfeiture.

And finally, that upon the violation of any covenant or covenants hereinbefore reserved, the term of this lease shall, at the option of the said lessor, expire, and the same and the said premises, with the appurtenances and improvements except the machinery put thereon by the lessee, shall become forfeiting to the said lessor, and the said lessor or its agent may thereupon, with or without notice, enter upon said premises and dispossess all persons occupying the same with or without process of law, and with or without force or at the option of the said lessor, the said lessee and all persons found in occupancy may be proceeded against as guilty of unlawful detainer.

And the said lessor expressly reserves to itself the property and right of property in all mineral to be extracted from said premises during the term of this lease.

At the expiration of this lease a copy of all working maps of the said premises shall be delivered to the lessor.

O P T I O N

In consideration of the acceptance of the foregoing lease, the expenditures to be made thereunder and the well and faithful keeping of the covenants thereof, the said lessee shall have the right to purchase the said demised premises, by the payment of Seventy-five Thousand Dollars ($75,000.00) to the said lessor on or before the 15th day of June, 1955, provided this lease is then in full force and effect, time being the essence of the contract as to such payment.

Upon written notice from the said lessee to the said lessor that the purchase money above mentioned is to be paid, the said lessor agrees to ratify and confirm the terms of this lease and option at a duly called stockholders meeting, and to place in escrow, within sixty daysafter date of said written notice, a good and sufficient mining deed to all the above described property, in the Colorado National Bank, of Denver, showing a clear and merchantable title in the said lessor, with instructions for delivery upon payment of the full purchase price. It is also agreed that any and all royaltiespaid under the terms of this lease are to apply on the purchase price and to be deducted therefrom.

Each and every clause and covenant of this agreement of lease shall extend to the successors, heirs, executors, administrators and lawful assigns of all parties hereto.

IN WITNESS WHEREOF, said party of the first part has caused these presents to be signed to its name by its President and its corporate seal to be hereunto affixed, attested by its Secretary, and the said party of the second part has signed these presents, in triplicate, the day and year first above written.

THE KENNEBEC MINING COMPANY

BY A. E. Moynahan
President

ATTEST:

G. H. Roberts
Secretary

L E S S O R.

M. J. Krolicki
M. J. Krolicki

L E S S E E

AGREEMENT OF LEASE.

THIS AGREEMENT OF LEASE, Made this 5th day of May, 1945, by and between the Kennebec Mining Company, a Colorado corporation, party of the first part, hereinafter called the Lessor, and H. J. Pollichi, party of the second part, hereinafter called the Lessee.

WITNESSETH:

That the said lessor, for and in consideration of the royalties, covenants and agreements, hereinafter reserved and by said lessee to be paid kept, and performed, has granted, demised and let, and by these presents does grant, demise and let unto the said lessee, all the right, title, and interest of the said lessor in the following described property, situated in Park County, State of Colorado, to-wit:

The "Orphan Boy" lode mining claim, being United States Mineral Survey lot No. 37, the United States patent for which is recorded in Book 38, at Page 200, of the records of the office of the Clerk and Recorder of Park County, State of Colorado.

The "Bobby lode mining claim being United States Mineral Survey Lot No. 38, A, B, and C, the United States patent for which is recorded in Book 38, at Page 212, of the records of said Park County.

The "Nancy Gomb" lode mining claim, being United States Mineral Survey Lots No. 39 A, and B, the United States patent for which is recorded in Book 38, at Page 212, of the records of said Park County.

The "Evening Star" lode mining claim, being United States Mineral Survey Lot No. 1415, the United States patent for which is recorded in Book 24, at Page 337, of the records of said Park County.

The "Jennie" lode mining claim, being United States Mineral Survey Lot No. 366, the United States patent for which is recorded in Book 24, at Page 333 of the records of said Park County.

The "Silver", "Reynolds", "Stella" and "Mike" lode mining claims being United States Mineral Survey Lot No. 6945, the United States patent for which is recorded in Book 48, at Page 293, of the records of said Park County.

The "Double Standard" lode mining claim, being United States Mineral Survey Lot No. 3034, the United States patent for which is recorded in Book 38, at Page 222, of the records of said Park County.

The "Buncombe" lode mining claim, being United States Mineral Survey Lot No. 13336, the United States patent for which is recorded in Book 56, at Page 96, of the records of said Park County, lone the west 450 feet.

The "Forest" lode mining claim, being United States Mineral Survey Lot No. 6947, the United States patent for which is recorded in Book 56, at Page 38, of the records of said Park County, lone the East 450 feet.

The "Yellowstone" lode mining claim, being United States Mineral Survey Lot No. 4661, the United States patent for which is recorded in Book 55, at Page 60, of the records of said Park County.

The "Southwood" lode mining claim, being United States Mineral Survey Lot No. 4396, the United States patent for which is recorded in Book 56, at Page 65, of the records of said Park County.

The "Kennebec" lode mining claim being United States Mineral Survey Lot No. 5034, the United States patent for which is recorded in Book 56, at Page 6, of the records of said Park County.

The "Vincent", "Lookalike", and "Midland" lode mining claims, being United States Mineral Survey Lot No. 5823, the United States patent for which is recorded in Book 37, at Page 315, of the records of said Park County.

The "Good Samaritan" lode mining claim, being United States Mineral Survey Lot No. 4396, the United States patent for which is recorded in Book 56, at Page 135, of the records of said Park County.

The "January" lode mining claim, the location certificate of which is recorded in Book 10, at Page 29, of the records of the said Park County.

And such surface rights, rights of way and tunnel rights owned by the said lessor as may be necessary to operate the foregoing lodes, and also all railroads and tram tracks, air pipes, improvements and fixtures of every kind now located upon said leased lands.

TO HAVE AND TO HOLD unto the said lessee from the 5th day of May, 1945, for and during and until the 5th day of June 1955, unless sooner forfeited or determined through the violation of any covenant and hereinafter against the said lessee reserved.

And, in consideration of such demise the said lessee does covenant and agree with the said lessor as follows, to-wit:

To enter upon the said mine or mines or premises and work the same in mine fashion in manner necessary to good and economical mining so as to take out the greatest amount of ore possible with due regard to the development and preservation of the same as a workable mine or mines, and to the special covenants hereinafter reserved.

To work and mine the said premises, as aforesaid, steadily and continuously from the 1st day of August, 1945, and that any failure to work the said premises with at least fifty shifts of work per calendar month may be considered a violation of this covenant.

To properly pay all persons who shall do work or shall furnish material or mining, milling, or other machinery or other fixtures for working, preservation, prospecting, or development of any mine, lode or deposit located on any portion of said leased premises, and a failure to do so shall be considered a forfeiture of this lease.

To well and sufficiently timber the said mine or mines at all points where proper, in accordance with good mining, and to repair all old timbering wherever it may become necessary.

To allow the said lessor, its officers and its agents from time to time, to enter upon and into all parts of the said property for the purpose of inspection, and to take samples of any and all ores that may be mined for assay or other use, but not to allow any person not in privity with the parties hereto

to take or hold possession of the said premises, or any part thereof, under any pretense whatever.

To occupy and hold all cross or parallel lodes, veins, or mineral deposits of any kind which may be discovered by the said lessee, or any person under him, in any manner within the boundaries of any of said lodes, as the property of the said lessee, with the privilege to said lessee of working the same as a parcel of the said demised premises.

To keep at all times the drifts, shafts, tunnels, and other workings there the said lessee may operate, thoroughly drained and clear of loose rock and rubbish unless prevented by extraordinary mining casualty.

If labor strikes shall arise preventing the said lessee from working said demised premises, or any part thereof, or if railroad strikes shall interfere with the transportation interests of the lessee as connected with the work under this lease, or if there shall arise any unforeseen contingencies connected with the workings or machinery, then the lessee shall not be required to do work while such cause exists, and shall have a reasonable time for repairing, for replacing, or adding to the plant, and if any unforeseen contingency connected with the works or machinery is not removed or remedied within a reasonable time, this lease shall terminate.

To comply in all regards with all provisions of the law of the State of Colorado in regard to mining and the prosecution of mining work upon the said mining claims.

To pay and deliver to the said lessor as royalty the following per cents of the net smelter, mill, or mint returns values of all ore extracted from the said demised premises, or any part thereof:

On all ores of the value of under $20.00 per ton 5% royalty;
On all ores of the value of $20.00 per ton and not above $50.00 per ton, 10% royalty;
On all ores of the value of $50.00 and not above $100.00 per ton, 15% royalty;
On all ores of the value of over $100.00 per ton 20% royalty.

Upon the request of the lessor all ores shall be sold, sampled and settled for jointly by the lessor or his agents, and the lessee, and shall be sold to whomever or corporation who will pay the highest price thereof.

The royalties to which the lessor shall be entitled as aforesaid shall be left with the purchaser of the ores, and shall be paid to the lessor and be subject to the order of the lessor.

The lessor shall be furnished with a duplicate statement of all ores at the time each lot is settled for.

The lessee shall pay or cause to be paid such proportion of the output tax which shall be assessed against the said leased premises, during the term of this lease, as the amount of the said lessee retains of the smelter returns value of the ore extracted from the said premises bears to the gross smelter returns of ore extracted from the said premises, and the lessee shall return that amount of the output to the tax officers as taxable to such lessee.

To deliver to the said lessor the said premises with the appurtenances and all improvements except the machinery put upon the said premises by the lessee, in good order and condition, with all drifts, shafts, tunnels and other passages where the said lessee shall have worked thoroughly clear of loose rock and rubbish and drained, and the mine or mines ready for immediate and continued working (accidents not arising from

negligence alone ceasing) without demand or further notice on the said 7th day of June, 1955, at noon or at any time previous upon demand for forfeiture.

And finally, that upon the violation of any covenant or covenants hereinbefore reserved, the term of this lease shall, at the option of the said lessor, expire, and the same and the said premises, with the appurtenances and improvements except the machinery put thereon by the lessee, shall become forfeiting to the said lessor, and the said lessor or its agent may thereupon, with or without notice, enter upon said premises and dispossess all persons occupying the same with or without process of law, and with or without force or at the option of the said lessor, the said lessee and all persons found in occupancy may be proceeded against as guilty of unlawful detainer.

And the said lessor expressly reserves to itself the property and right of property in all mineral to be extracted from said premises during the term of this lease.

At the expiration of this lease a copy of all working maps of the said premises shall be delivered to the lessor.

OPTION

In consideration of the acceptance of the foregoing lease, the expenditures to be made thereunder and the full and faithful keeping of the covenants thereof, the said lessee shall have the right to purchase the said demised premises, by the payment of Seventy-Five Thousand Dollars ($75,000.00) to the said lessor on or before the 7th day of June, 1955, provided this lease is then in full force and effect, time being the essence of the contract as to such payment.

Upon written notice from the said lessee to the said lessor that the purchase money above mentioned is to be paid, the said lessor agrees to notify and confirm the terms of this lease and option at a duly called stockholders meeting, and to place in escrow, within sixty days after date of said written notice, a good and sufficient mining deed to all the above described property, in the Colorado National Bank, of Denver, showing a clear and merchantable title in the said lessor, with instructions for delivery upon payment of the full purchase price. It is also agreed that any and all royalties paid under the terms of this lease are to apply on the purchase price and to be deducted therefrom.

Each and every clause and covenant of this agreement of lease shall extend to the successors, heirs, executors, administrators and lawful assigns of all parties hereto.

IN WITNESS WHEREOF, said party of the first part has caused these presents to be signed in its name by its President and its corporate seal to be hereunto affixed, attested by its Secretary, and the said party of the second part has signed these presents, in triplicate, the day and year first above written.

THE KANSAS MINES COMPANY

By M. E. Moynahan
President

ATTEST:

E. V. Roberts
Secretary

LESSOR.

M. J. Kolicki
M. J. Kolicki

LESSEE