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DMA Docket No. 4333

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

SEP 20 1956

Mr. Whitney C. Hansen President
El Dorado Mining Company
816 Newhouse Building
Salt Lake City 11, Utah

Re: Docket No. DMEA-4333 (Copper)
El Dorado Mining Company
Dead Cedar Mine
Elko County, Nevada

Dear Mr. Hansen:

Your application for aid for an exploration project and other data available to us in Washington relating to the above-named property have been reviewed.

Projects approved by the Defense Minerals Exploration Administration must, in its judgment, show definite promise of yielding materials of acceptable grade in quantities that will significantly improve the mineral supply position for the National Defense Program.

Careful study of all our information, although noting a small amount of ore on your lease, indicates to us that the probability of disclosing significant ore reserves is not sufficiently promising to justify Government participation. We regret to advise you, under these circumstances, that your application for exploration assistance is denied.

We wish to thank you for your interest in the Defense Minerals Program and for bringing your property to our attention.

Sincerely yours,

C. O. Mittendorf

Administrator

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Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Pennington, USBM
Mr. Kiilsgaard, USGS
REgion II (2)
Chron

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

500

September 17, 1956

Memorandum

To: The Administrator

From: Chief, Base Metals Division

Subject: Denial of Application, Docket No. DMEA-4333 (Copper), El Dorado Mining Company, Dead Cedar Mine, Elko County, Nevada

The cited application, dated June 7, 1956 was received in this office June 13.

The Applicant proposed to explore for ore bodies by deepening the inclined shaft 200 feet and then driving 1,000 feet of drifts and crosscuts from the bottom of the shaft. The estimated cost of the work was $73,000.00.

With the proposed work the Applicant hoped to encounter one or more of the following:

(1) The thrust plane with or without ore.

(2) Secondary ores in limestone.

(3) Primary ores in limestone.

(4) An underlying intrusive with or without ore.

(5) A conduit which supplied the metal-bearing solutions.

The property was examined and some samples taken by H. W. Jones and Walter Bank, Bureau of Mines and H. K. Stager, Geological Survey, on June 27 and 28, 1956, accompanied by W. C. Hansen, President, and H. E. Havenor, geologist representing the Applicant.

The Dead Cedar mine contains small pods of secondary copper ore in limestone. Other small pods similar to those that have been mined are indicated, but there is little probability that a large body of copper ore will be found by the proposed exploration.

Recorded production consists of 304 tons ranging from 4.9 to 11.7 per cent copper, with up to 2.5 ounces of silver and 0.01 ounce of gold per ton.

The deposit is developed by a 222-foot inclined shaft, 1,000 feet of drifts and crosscuts, 200 feet of raises and winzes, and numerous prospect pits.

The deposit at this mine consists of small lenticular bodies of secondary copper minerals containing from a few pounds to several hundred tons of ore each. These bodies were formed along fractures in favorable limestone beds in the upper plate of a thrust fault. Most of the production has been obtained from a single ore body near the center of the deposit. The six samples which were taken during the examination were very low grade.

The inferred reserves are about 500 tons of ore with an average grade of about 6 per cent copper, 1 ounce of silver, and 0.01 ounce of gold per ton.

Consider the five possible targets as listed by the Applicant:

(1) The thrust plane: A possibility of ore here, but where exposed about 500 feet south of the deposit there are no indications of mineralization.

(2) Secondary ores in limestone: The gossan area containing the copper bodies is several hundred feet in diameter, but mineralogic evidence indicates that total copper content of deposit was small so large secondary deposits are unlikely.

(3) Primary ores in limestone: No evidence to indicate that they would be anything but small lenses or veinlets.

(4) An underlying intrusive: There are no intrusive dikes or other evidence of an underlying igneous mass.

(5) Conduit which supplied the metal-bearing solutions: The fracture system probably served as the conduit. The presence of a pipe-like ore body occupying a fracture zone beneath the deposit is not probable.

It is probable that any type of exploration will prove to be more costly than the value of the ore discovered.

We concur with the recommendations of the examiners, the Field Team, and the commodity members of the Bureau of Mines and the Geological Survey that the application be denied.

W. R. Griswold

W. R. Griswold

File Copy
Surname
Klugescheid,
Yokes
500 Kilegaard

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

September 17, 1956

Memorandum

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It is probable that any type of exploration will prove to be more costly than the value of the ore discovered.

We concur with the recommendations of the examiners, the Field Team, and the commodity members of the Bureau of Mines and the Geological Survey that the application be denied.

W. R. Griswold

WPKlugescheid:/er 9/17/56
Copy to: Docket
Base Metals
Chron.

W. R. Griswold

IN REPLY REFER TO:

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

Klugscheid

August 24, 1956

Re: DMEA 4333
El Dorado Mining Co.
Dead Cedar Group
Elko County, Nevada
$73,000 - Copper

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of Field Team report.

The applicant requested assistance in exploring for small bunchy copper ore bodies by shaft sinking, drifting and crosscutting. The ore bodies appear to be localized in the intersections of fractures and shear zones and beds of limestone of varying textures. No certain control has been worked out and no certain target exists.

The examiners conclude that the work already done indicates the ore bodies, if found, will be small and the expense of finding and mining them will exceed their value. The small production, 304 tons of about 6% copper ore, resulting from considerable work, supports the conclusion of the examiners.

I concur with the recommendation of the examiners and the Field Team that the application be denied.

N. E. Nelson

N. E. Nelson

RECEIVED
AUG 24 1956

IN REPLY REFER TO:

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

August 24, 1956

Re: DMEA 4333
El Dorado Mining Co.
Dead Cedar Group
Elko County, Nevada
$73,000 - Copper

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I concur with the recommendation of the examiners and the Field Team that the application be denied.

N. E. Nelson

N. E. Nelson

NENelson:iml
G-8/24/56

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. Pennington, 3623

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

Klungschlud

August 24, 1956

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: Commodity Specialist, Branch of Base Metals

Subject: Review of Field Team Examination Report, Docket No. DMEA - 4333 (copper), El Dorado Mining Company, Dead Cedar Mine, Elko County, Nevada. $73,000.00.

The applicant proposed to explore for copper mineralization by deepening the shaft 200 feet and 1000 feet of drifting and cross-cutting at an estimated total cost of $73,000.00.

Examination of the property revealed that previous exploration along the strike and dip of the favorable structure has indicated that the deposit consists of small erratically distributed concentrations of copper minerals. The exposed mineralized areas are believed to be representative of the average character and grade of the deposit and there is no geologic evidence to indicate the existence of large orebodies.

Although the property could be explored by drilling instead of the more costly method proposed, it is probable that any type of exploration would cost more than the value of ore discovered.

For these reasons, the Field Team recommends that the application for exploration assistance be denied.

I concur with this recommendation of denial.

J. W. Pennington

J. W. Pennington

Copy to: Division of Minerals
Branch of Base Metals (2)
Thor Kiilsgaard, U.S.G.S.
R. W. Geehan
F i l e s

RECEIVED
AUG 24 1956

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

Klingenheid

1605 Evans Avenue
Reno, Nevada

Aug. 20, 1956

Memorandum

To: Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-4333 (Copper)
El Dorado Mining Company
Dead Cedar Mine
Elko County, Nevada

Reference is made to your letter of July 10, 1956 relative to the above subject docket.

Enclosed are four copies of a report on subject property by H. W. Jones, U. S. Bureau of Mines, and H. K. Stager, U. S. Geological Survey, in which a denial of DMEA exploration assistance is recommended.

Roscoe Smith and I concur in the recommendation.

S. Ricker

Encls.

Reviewed by
DMEA OPERATING COMMITTEE
8/24/56
(date)

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION II

APPLICATION REPORT

DMEA 4333 (Copper)
El Dorado Mining Company
Dead Cedar mine
Elko County, Nevada

by

H. W. Jones
Walter Bank
U. S. Bureau of Mines

H. K. Stager
U. S. Geological Survey

August 16, 1956

Reviewed by
DMEA OPERATING COMMITTEE
8-24-56
(date)

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ILLUSTRATIONS

Figure 1 . . . . . Location map

INTRODUCTION

The El Dorado Mining Company, 816 Newhouse Building, Salt Lake City 11, Utah, applied for Government assistance in a $73,000 program under the Defense Minerals Exploration Administration, docket DMEA-4333, to explore for copper at the Dead Cedar mine, Ferguson mining district, Elko County, Nevada.

A field examination was made by H. W. Jones and Walter Bank, U. S. Bureau of Mines, and H. K. Stager, U. S. Geological Survey, on June 27 and 28, 1956, accompanied by Mr. W. C. Hansen, president, and Mr. H. E. Havenor, geologist, representing the applicant.

The geology of the mine and surrounding area had been mapped in detail by company geologists and no attempt was made to remap the property. The maps, contained in the application, were carefully studied and compared with geologic exposures in the mine and on the surface.

The applicant proposes to deepen an inclined shaft 200 feet and drift and crosscut 1,000 feet to explore for copper ore.

CONCLUSIONS AND RECOMMENDATIONS

The Dead Cedar mine contains small pods of secondary copper ore in limestone. Other small pods similar to those that

have been mined are indicated; there is little probability that a large body of copper ore will be found by the proposed exploration.

It is recommended that Government assistance under the DMEA program be denied.

LOCATION, ACCESSIBILITY, AND LOCAL FACILITIES

The Dead Cedar claims are in secs. 28, 29, 32, and 33, T. 30 N., R. 70 E., M.D.B.&M., Ferguson mining district, Elko County, Nevada (fig. 1) at the south end of the Toana range at an altitude of 6,400 to 7,000 feet. They are about 27 miles southwest of Wendover, Utah, and are reached by traveling south 24 miles along U. S. Alternate 50 to Ferguson Springs turnoff, turning right for 0.4 mile to the maintenance station, then left for 1.0 mile, then right up a dry wash (dirt road) for 1.0 mile, then right 0.3 mile to the mine workings.

HISTORY, PRODUCTION, PROPERTY, AND OWNERSHIP

Mr. Clark Kimball and his brother originally located the area in 1916 and shipped one car of low-grade ore. The claims were relocated in 1933 for the Dead Cedar Mining Company. They are recorded in Elko, Nevada, as follows: Dead Cedar, Dead Cedar No. 1 through 25 inclusive, with file numbers 53898 to 53910, 63713 to 63719, and 63745, 63720, 63747, 63746, 63744, 63743.

Recorded production consisted of 304 tons ranging from 4.9 to 11.7 percent copper, with up to 2.5 ounces of silver and 0.01 ounce of gold per ton.

The claims are owned by Copper Valley Mining Company and are leased to Unified Uranium and Oil, Inc., and El Dorado Mining Company. The latter company, acting as the applicant, has some experienced mining men for its officers.

DEVELOPMENT

The deposit is developed by a 222-foot incline shaft, 1,000 feet of drifts and crosscuts, 200 feet of raises and winzes, and numerous prospect pits.

GENERAL GEOLOGY

The Dead Cedar mine is in an area of moderate relief and the rocks and geologic structures are well exposed. The rocks in the mine area are chiefly limestones and are tentatively correlated with the Ely formation of Pennsylvanian age, or with the upper part of the Oquirrh formation of Pennsylvanian-Permian age as applied by Nolan in the Gold Hill district[1/]. These rocks

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1/ Nolan, T. B., 1955: The Gold Hill Mining District, Utah, U. S. Geol. Survey Prof. Paper 177.

---

are part of a thrust plate several hundred feet thick that rests on other undifferentiated Paleozoic limestones, shales, and quartzites.

In the mine area thin gray to brown sandy limestones are interbedded with massive, gray, highly fossiliferous limestones. These beds strike about N 20° W and dip about 45° SW. They rest in thrust fault contact on gently folded dark shales, thin quartzite beds, purplish thin shaly limestone and blue-gray limestones that strike about N 40° W and dip about 40° SW. Small patches of andesitic volcanic rocks crop out several thousand feet to the north and west of the mine area.

Except for the low angle thrust fault which strikes north and dips 10° west that underlies the mine area most of the faulting and fracturing is high angle and normal with little displacement on the faults. Two sets of fractures cut the limestone of the upper plate in the mine area, a N 25° E set that dips about 70° SE, and a N 80° E set that dips 80° SE. An area of intense fracturing about 400 feet long and 200 feet wide near the center of the area was highly mineralized by abundant iron sulfide and sparse copper sulfide minerals. Most of these sulfides have been oxidized and leached to form a dark red-brown gossan. It is within this gossan area that the copper ore bodies occur.

ORE DEPOSITS

The deposit at the Dead Cedar mine consists of small lenticular bodies of secondary copper minerals containing from a few pounds to several hundred tons of ore each. These ore bodies were formed along fractures in favorable limestone beds in the upper plate of the thrust fault.

Malachite, azurite, tenorite, and chalcopyrite are the copper minerals and occur as thin veinlets and small lenses along fractures in sandy limestone. Gangue minerals are limonite, goethite, barite, calcite, gypsum, and pyrite. The copper content of the mineralized material ranges from a trace to about 12 percent and averages about 6 percent in the ore bodies. The silver content ranges from a trace to as much as 25 ounces per ton and averages about 1 ounce. The gold content averages about 0.01 ounce per ton.

The lenses of copper ore range in size from small concentrations of copper minerals a few inches across and containing a few pounds of ore to irregular masses about 4 feet thick, 15 feet wide, and 75 feet long containing about 300 tons of ore.

Most of the production has been obtained from a single ore body near the center of the deposit. This ore body occurred along a fracture of the N 25° E set in a limestone bed that strikes about N 25° W and dips about 50° SW.

SAMPLING

Six samples were taken from the most favorable locations in the inclined shaft, as follows:

Sample No.	Length feet	% Cu	Oz./ton Au	Oz./ton Ag	Remarks
334	5.0	0.20	Trace	1.35	Near bottom of shaft, across top of cave, mostly gossan, slightly sandy in places. No Cu. minerals showing.
335	3.5	0.10	Trace	0.45	12 ft. from bottom of shaft, across water course, Mostly oxidized breccia and limonite. No Cu. minerals noted.
336	4.0	0.40	Trace	0.20	38 ft.-42 ft. from bottom of shaft across beds above small water course. Some barite, malachite and calcite in limonite.
337	8.0	0.45	Trace	0.85	86 ft.-94 ft. from bottom of shaft across beds. Some Cu minerals, mostly limonite.
338	6.5	0.25	Trace	0.20	111 ft.-117.5 ft. from bottom of shaft. No Cu observed, but barite and limonite are present.
339	8.0	0.25	Trace	0.20	186 ft.-194 ft. from bottom of shaft. Upper bed with considerable barite.

ORE RESERVES

There are no measured or indicated ore reserves. Inferred reserves are about 500 tons of ore with an average grade of about 6 percent copper, 1 ounce of silver, and 0.01 ounce of gold per ton. These reserves are inferred to be in small widely scattered bodies similar in size and grade to those that have been mined. They can be found by exploration in the favorable limestones along the

intersections of the north- and east-trending fractures above and below the old stopes and winzes from which the known ore bodies have been mined.

The ore bodies that have yielded the production to date have been small and have been found at or near the surface. The discovery of new reserves will require more extensive exploration and be increasingly costly, with the probability that the cost of the exploration will greatly exceed the value of the ore.

The rocks of the lower plate are less favorable and no increase in size or grade is inferred.

PROPOSED EXPLORATION

The applicant proposed to explore for ore bodies by deepening the shaft 200 feet and driving 1,000 feet of drifts and crosscuts from the bottom of the shaft. The Government's share of the total estimated cost of $73,000 would be $36,500.

With the proposed work the applicant hopes to encounter one or more of the following:

(1) The thrust plane with or without ore.

(2) Secondary ores in limestone.

(3) Primary ores in limestone.

(4) An underlying intrusive with or without ore.

(5) A conduit which supplied the metal-bearing solutions.

There is no geologic evidence to indicate the existence of the large ore bodies that are the target of the proposed exploration. All previous exploration, both along the strike and down the dip of the favorable structures, has indicated that the deposit consists of small erratically distributed concentrations of copper minerals sparsely disseminated in a fracture zone cutting limestone. The existing shaft, drifts, crosscuts, and pits are adequate tests of the deposit and are believed to have exposed mineralized material which is representative of the average character and grade of the deposit.

Considering the 5 possible targets as listed by the applicant; although there is a possibility of an ore deposit at the thrust plane below the known deposit (1) there are no indications of copper mineralization along the thrust contact where it is exposed about 500 feet south of the deposit. Although the gossan area containing the copper bodies is several hundred feet in diameter mineralogic evidence indicates that the original total copper content of the deposit was low and secondary ore bodies (2) formed by the redeposition of the leached material could not be large. There is no evidence to indicate that primary ore bodies in the limestone (3) would be larger than the small ore lenses that have been mined or the thin veinlets of copper sulfide minerals that are exposed in the underground workings. There are

no intrusive dikes or other evidence of the presence of an underlying, post-thrusting, igneous body (4). The fracture system that localized the ore bodies in the deposit also served as the conduit (5) through which the metal-bearing solutions were introduced into the favorable limestone beds where they formed small replacement type ore bodies. The presence of a pipe-like ore body, occupying a "conduit" or fracture zone beneath the deposit is not probable.

One or all of the possible targets could be adequately, and more economically, explored by the drilling of several test holes. Because of the fractured and leached nature of the rock containing the deposit churn drilling would probably be more satisfactory than diamond drilling. However, it is probable that any type of exploration will prove to be more costly than the value of the ore discovered.

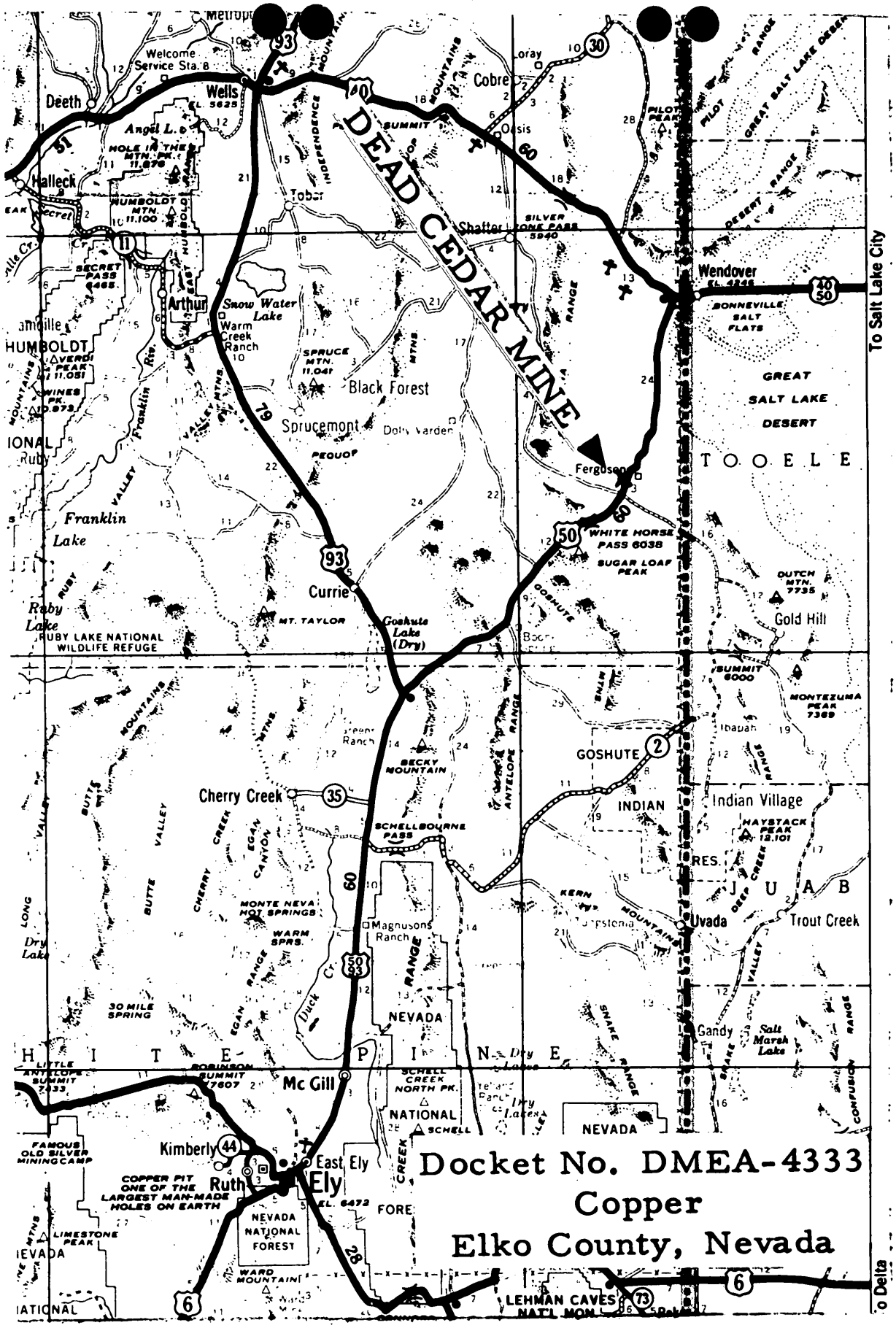

FIG. 1 LOCATION MAP NEVADA

CONFIDENTIAL

RmEa

Klugescheid

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

1605 Evans Avenue
Reno, Nevada

Aug. 20, 1956

Memorandum

To: Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-4333 (Copper)
El Dorado Mining Company
Dead Cedar Mine
Elko County, Nevada

Reference is made to your letter of July 10, 1956 relative to the above subject docket.

Enclosed are four copies of a report on subject property by H. W. Jones, U. S. Bureau of Mines, and H. K. Stager, U. S. Geological Survey, in which a denial of DMEA exploration assistance is recommended.

Roscoe Smith and I concur in the recommendation.

S. Ricker

Encls.

RECEIVED
AUG 23 1956

Reviewed by
DMEA OPERATING COMMITTEE
8-24-56
(date)

BUREAU OF MINES
WASHINGTON, D.C.
AUG 22 8 44 AM '56

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION II

APPLICATION REPORT

DMEA 4333 (Copper)
El Dorado Mining Company
Dead Cedar mine
Elko County, Nevada

by

H. W. Jones
Walter Bank
U. S. Bureau of Mines

H. K. Stager
U. S. Geological Survey

August 16, 1956

Reviewed by
DMEA OPERATING COMMITTEE
8-24-56
(date)

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CONCLUSIONS AND RECOMMENDATIONS

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have been mined are indicated; there is little probability that a large body of copper ore will be found by the proposed exploration.

It is recommended that Government assistance under the DMEA program be denied.

LOCATION, ACCESSIBILITY, AND LOCAL FACILITIES

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Mr. Clark Kimball and his brother originally located the area in 1916 and shipped one car of low-grade ore. The claims were relocated in 1933 for the Dead Cedar Mining Company. They are recorded in Elko, Nevada, as follows: Dead Cedar, Dead Cedar No. 1 through 25 inclusive, with file numbers 53898 to 53910, 63713 to 63719, and 63745, 63720, 63747, 63746, 63744, 63743.

Recorded production consisted of 304 tons ranging from 4.9 to 11.7 percent copper, with up to 2.5 ounces of silver and 0.01 ounce of gold per ton.

The claims are owned by Copper Valley Mining Company and are leased to Unified Uranium and Oil, Inc., and El Dorado Mining Company. The latter company, acting as the applicant, has some experienced mining men for its officers.

DEVELOPMENT

The deposit is developed by a 222-foot incline shaft, 1,000 feet of drifts and crosscuts, 200 feet of raises and winzes, and numerous prospect pits.

GENERAL GEOLOGY

The Dead Cedar mine is in an area of moderate relief and the rocks and geologic structures are well exposed. The rocks in the mine area are chiefly limestones and are tentatively correlated with the Ely formation of Pennsylvanian age, or with the upper part of the Oquirrh formation of Pennsylvanian-Permian age as applied by Nolan in the Gold Hill district[1/]. These rocks

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1/ Nolan, T. B., 1955: The Gold Hill Mining District, Utah, U. S. Geol. Survey Prof. Paper 177.

---

are part of a thrust plate several hundred feet thick that rests on other undifferentiated Paleozoic limestones, shales, and quartzites.

In the mine area thin gray to brown sandy limestones are interbedded with massive, gray, highly fossiliferous limestones. These beds strike about N 20° W and dip about 45° SW. They rest in thrust fault contact on gently folded dark shales, thin quartzite beds, purplish thin shaly limestone and blue-gray limestones that strike about N 40° W and dip about 40° SW. Small patches of andesitic volcanic rocks crop out several thousand feet to the north and west of the mine area.

Except for the low angle thrust fault which strikes north and dips 10° west that underlies the mine area most of the faulting and fracturing is high angle and normal with little displacement on the faults. Two sets of fractures cut the limestone of the upper plate in the mine area, a N 25° E set that dips about 70° SE, and a N 80° E set that dips 80° SE. An area of intense fracturing about 400 feet long and 200 feet wide near the center of the area was highly mineralized by abundant iron sulfide and sparse copper sulfide minerals. Most of these sulfides have been oxidized and leached to form a dark red-brown gossan. It is within this gossan area that the copper ore bodies occur.

ORE DEPOSITS

The deposit at the Dead Cedar mine consists of small lenticular bodies of secondary copper minerals containing from a few pounds to several hundred tons of ore each. These ore bodies were formed along fractures in favorable limestone beds in the upper plate of the thrust fault.

Malachite, azurite, tenorite, and chalcopyrite are the copper minerals and occur as thin veinlets and small lenses along fractures in sandy limestone. Gangue minerals are limonite, goethite, barite, calcite, gypsum, and pyrite. The copper content of the mineralized material ranges from a trace to about 12 percent and averages about 6 percent in the ore bodies. The silver content ranges from a trace to as much as 25 ounces per ton and averages about 1 ounce. The gold content averages about 0.01 ounce per ton.

The lenses of copper ore range in size from small concentrations of copper minerals a few inches across and containing a few pounds of ore to irregular masses about 4 feet thick, 15 feet wide, and 75 feet long containing about 300 tons of ore.

Most of the production has been obtained from a single ore body near the center of the deposit. This ore body occurred along a fracture of the N 25° E set in a limestone bed that strikes about N 25° W and dips about 50° SW.

SAMPLING

Six samples were taken from the most favorable locations in the inclined shaft, as follows:

Sample No.	Length feet	% Cu	Oz./ton Au	Oz./ton Ag	Remarks
334	5.0	0.20	Trace	1.35	Near bottom of shaft, across top of cave, mostly gossan, slightly sandy in places. No Cu. minerals showing.
335	3.5	0.10	Trace	0.45	12 ft. from bottom of shaft, across water course, Mostly oxidized breccia and limonite. No Cu. minerals noted.
336	4.0	0.40	Trace	0.20	38 ft.-42 ft. from bottom of shaft across beds above small water course. Some barite, malachite and calcite in limonite.
337	8.0	0.45	Trace	0.85	86 ft.-94 ft. from bottom of shaft across beds. Some Cu minerals, mostly limonite.
338	6.5	0.25	Trace	0.20	111 ft.-117.5 ft. from bottom of shaft. No Cu observed, but barite and limonite are present.
339	8.0	0.25	Trace	0.20	186 ft.-194 ft. from bottom of shaft. Upper bed with considerable barite.

ORE RESERVES

There are no measured or indicated ore reserves. Inferred reserves are about 500 tons of ore with an average grade of about 6 percent copper, 1 ounce of silver, and 0.01 ounce of gold per ton. These reserves are inferred to be in small widely scattered bodies similar in size and grade to those that have been mined. They can be found by exploration in the favorable limestones along the

intersections of the north- and east-trending fractures above and below the old stopes and winzes from which the known ore bodies have been mined.

The ore bodies that have yielded the production to date have been small and have been found at or near the surface. The discovery of new reserves will require more extensive exploration and be increasingly costly, with the probability that the cost of the exploration will greatly exceed the value of the ore.

The rocks of the lower plate are less favorable and no increase in size or grade is inferred.

PROPOSED EXPLORATION

The applicant proposed to explore for ore bodies by deepening the shaft 200 feet and driving 1,000 feet of drifts and crosscuts from the bottom of the shaft. The Government's share of the total estimated cost of $73,000 would be $36,500.

With the proposed work the applicant hopes to encounter one or more of the following:

(1) The thrust plane with or without ore.

(2) Secondary ores in limestone.

(3) Primary ores in limestone.

(4) An underlying intrusive with or without ore.

(5) A conduit which supplied the metal-bearing solutions.

There is no geologic evidence to indicate the existence of the large ore bodies that are the target of the proposed exploration. All previous exploration, both along the strike and down the dip of the favorable structures, has indicated that the deposit consists of small erratically distributed concentrations of copper minerals sparsely disseminated in a fracture zone cutting limestone. The existing shaft, drifts, crosscuts, and pits are adequate tests of the deposit and are believed to have exposed mineralized material which is representative of the average character and grade of the deposit.

Considering the 5 possible targets as listed by the applicant; although there is a possibility of an ore deposit at the thrust plane below the known deposit (1) there are no indications of copper mineralization along the thrust contact where it is exposed about 500 feet south of the deposit. Although the gossan area containing the copper bodies is several hundred feet in diameter mineralogic evidence indicates that the original total copper content of the deposit was low and secondary ore bodies (2) formed by the redeposition of the leached material could not be large. There is no evidence to indicate that primary ore bodies in the limestone (3) would be larger than the small ore lenses that have been mined or the thin veinlets of copper sulfide minerals that are exposed in the underground workings. There are

no intrusive dikes or other evidence of the presence of an underlying, post-thrusting, igneous body (4). The fracture system that localized the ore bodies in the deposit also served as the conduit (5) through which the metal-bearing solutions were introduced into the favorable limestone beds where they formed small replacement type ore bodies. The presence of a pipe-like ore body, occupying a "conduit" or fracture zone beneath the deposit is not probable.

One or all of the possible targets could be adequately, and more economically, explored by the drilling of several test holes. Because of the fractured and leached nature of the rock containing the deposit churn drilling would probably be more satisfactory than diamond drilling. However, it is probable that any type of exploration will prove to be more costly than the value of the ore discovered.

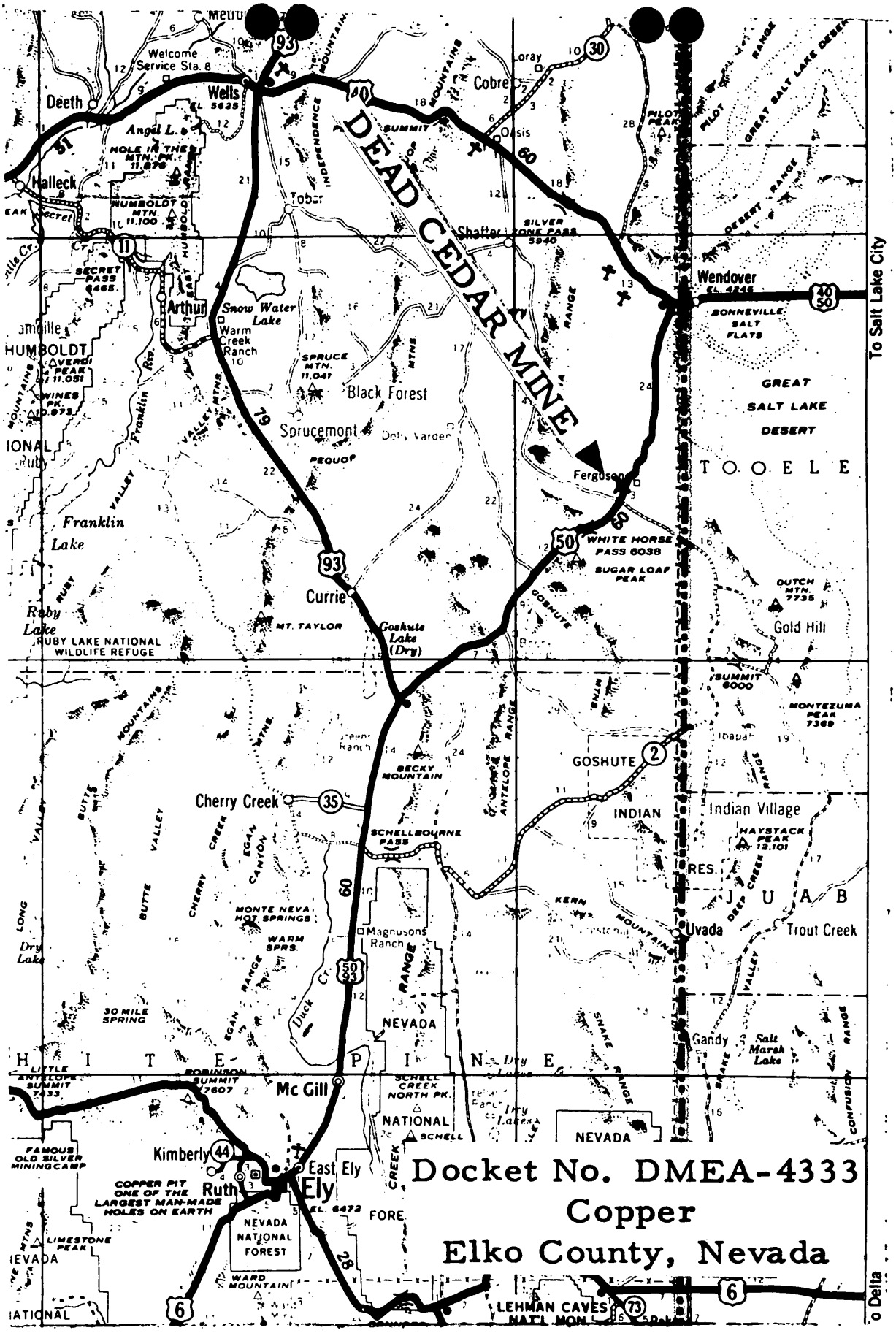


FIG. 1 LOCATION MAP NEVADA

CONFIDENTIAL

File Copy
Surname
Klugescheid
Kramer
Selfridge
Pennington
Weithendorf

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

JUL 10 1956

Mr. Spangler Ricker, Executive Officer
DMEA Field Team, Region II
1605 Evans Avenue
Reno, Nevada

Re: Docket No. DMEA-4333 (Copper)
El Dorado Mining Company
Dead Cedar Mine
Elko County, Nevada

Dear Mr. Ricker:

The cited application for exploration assistance is being referred to your office for consideration, a field examination of the property if warranted, and recommendation.

It may be observed that although Item I and the signature on Form MF-103 and paragraph I(a) of the sheets attached thereto listed only the El Dorado Mining Company, the heading on page 1 of the attached sheets lists both the El Dorado Mining Company and Unified Uranium and Oil, Inc., and that the lease of November 1, 1955, by Copper Valley Mining Company, also attached to the application, is to both El Dorado and Unified.

If the project is favorably considered by the Field Team, it will be necessary to inform the El Dorado Mining Company that, as the lease is in the names of both Unified Uranium and Oil, Inc. and El Dorado Mining Company, they will either (1) have to participate jointly in the DMEA project, (2) Unified Uranium and Oil, Inc. will have to assign its interest in the lease to El Dorado Mining Company and furnish either a Subordination Agreement or an Owner's Consent to Lien according to the conditions of the assignment, or (3) Unified Uranium and Oil, Inc. must submit an agreement permitting El Dorado Mining Company to do the DMEA work alone and also an Owner's Consent to Lien.

Copies of memoranda dated June 14 and 15, 1956, by J. W. Pennington, Bureau of Mines, and N. E. Nelson, Geological Survey, respectively, relating to the project, are enclosed for your information.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Enclosures

APPROVED:

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

Thor H. Kiilsgaard (THK)
Member, Geological Survey

WPKlugescheid/er (7/3 & 6/56)

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

File Copy
Surname
Klugescheid

500

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

Mr. Spangler Ricker
Executive Officer
DMEA Field Team, Region II
1605 Evans Avenue
Reno, Nevada

Re: Docket No. DMEA-4333 (Copper)
El Dorado Mining Company
Dead Cedar Mine
Elko County, Nevada

Dear Mr. Ricker:

The cited application for exploration assistance is being referred to your office for consideration, a field examination of the property if warranted, and recommendation.

If the project is favorably considered by the Field Team, it will be necessary to inform the Applicant that, as the lease is in the names of both "Unified Uranium and Oil, Inc." and "El Dorado Mining Company", they will also have to participate jointly in the DMEA project. An Owner's Consent to Lien would also be necessary.

Copies of memoranda dated June 14 and 15, 1956, by J. W. Pennington, Bureau of Mines, and N. E. Nelson, Geological Survey, respectively, relating to the project, are enclosed for your information.

Sincerely yours,

Chairman, Operating Committee

APPROVED:

WPKlugescheid/bjl (7/3/56)

Member, Bureau of Mines

Member, Geological Survey

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Pennington
Mr. Kiilsgaard
Chron.

File Copy
Surname
Klugescheid
Kiilsgaard
Kiilsgaard
Luhn
Selfridge
Johnson

500

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

JUL 10 1956

Mr. Whitney C. Hansen, President
El Dorado Mining Company
816 Newhouse Building
Salt Lake City 11, Utah

Re: Docket No. DMEA-4333 (Copper)
El Dorado Mining Company
Dead Cedar Mine
Elko County, Nevada

Dear Mr. Hansen:

Your application for Government assistance to explore the cited property has been reviewed by the Base Metals Division of the Defense Minerals Exploration Administration and has been referred to:

Mr. Spangler Ricker
Executive Officer
DMEA Field Team, Region II
1605 Evans Avenue
Reno, Nevada

If the Field Team requires additional information concerning your application, they will contact you at an early date.

Sincerely yours,

C. O. Mittendorf

Administrator

WPKlugescheid/bjl (7/3/56)

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

A.C.h.

IN REPLY REFER TO:

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

RECEIVED
JUN 18 1956

June 15, 1956

Re: DMEA 4333
El Dorado Mining Co.,
Dead Cedar Group
Elko Co., Nevada
$73,000.00 - Copper

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of application.

The applicant requests assistance in exploring by shaft sinking, drifting, and crosscutting, a series of shear zones, (or one big zone) which, as mapped, cuts at an angle to dip and strike beds of sandy limestone. The limestone, due to low-dip thrust fault, rests unconformably on another sedimentary series. At some points where the shearing cuts favorable beds small copper deposits are found.

From the information at hand the structural control is not discernible. At one place 303.98 tons of good copper ore (4.91% to 11.73%) was mined from an area adjacent to a fissure. The main shaft which it is proposed to deepen, appears to follow at an angle a similar and parallel fissure. Little or no ore seems to have been found in the shaft, but it is hoped ore will be found below the zone of oxidation, in which all openings have been driven.

The main shaft is 222 feet deep and bottoms in a caved zone. It is proposed to sink an additional 200 feet or to the thrust plane, and do 1000 feet of crosscutting and drifting at the new bottom.

If the section AB is more or less correct and the leached zone can be drilled, two or three drill holes should indicate whether or not the general theory prompting the work is valid. Perhaps an examination will suffice.

Referral to the Field Team for appropriate action is recommended.

N. E. Nelson

N. E. Nelson

IN REPLY REFER TO:

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

RECEIVED
JUN 18 1956

June 15, 1956

Ref: DMEA 4333
Colorado Mining Co.,
Lead cedar group
White Pine Co., Nevada
$73,000.00 - Copper

Memorandum

To: [illegible] Griswold, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of application.

The applicant requests assistance in exploring by shaft sinking, drifting, and crosscutting, a series of shear zones, (or one big zone) which, as mapped, cuts at an angle to dip and strike beds of sandy limestone. The limestone, due to low-dip thrust fault, rests unconformably on another sedimentary series. At some points where the shearing cuts favorable beds small copper deposits are found.

From the information at hand the structural control is not discernible. At one place 303.92 tons of good copper ore (4.91% to 11.73%) was mined from an area adjacent to a fissure. The main shaft which it is proposed to deepen, appears to follow at an angle a similar and parallel fissure. Little or no ore seems to have been found in the shaft, but it is hoped ore will be found below the zone of oxidation, in which all openings have been driven.

The main shaft is 222 feet deep and bottoms in a caved zone. It is proposed to sink an additional 200 feet or to the thrust plane, and do 1000 feet of crosscutting and drifting at the new bottom.

If the section [illegible]B is more or less correct and the leached zone can be drilled, two or three drill holes should indicate whether or not the general theory prompting the work is valid. Perhaps an examination will suffice.

Referral to the Field Team for appropriate action is recommended.

N. E. Nelson

NENelson:btr
C 6/15/56
cc: Director's reading file (4212)
Branch file (4212)
DMEA (3)
Chron. File
Docket File
J. W. Pennington, 3623

N. E. Nelson

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

RECEIVED
JUN 14 1956

June 14, 1956

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: Commodity Industry Analyst, Branch of Base Metals

Subject: Review of application, Docket No. DMEA - 4333 (copper), El Dorado Mining Company, Dead Cedar Mine, Elko County, Nevada $73,000.00

The applicant proposes to explore the property by about 200 feet of shaft sinking, approximately 1000 feet of drifting and crosscutting at an estimated total cost of $73,000.00.

Apparently most of the material is low-grade as the copper assays range from 0.20 to 0.81 percent. Selected samples assay higher but in neither case is the extent of sampled area given.

I believe that it would be well to consider exploration by drilling instead of the more expensive method proposed. Especially because the exploration and objective are indefinite.

It is recommended that the application be referred to the Field Team for appropriate action.

J. W. Pennington

J. W. Pennington

Copy to: Division of Minerals
Branch of Base Metals (2)
Thor Kiilsgaard, U.S.G.S.
R. W. Geehan
F i l e s

RECEIVED
JUN 14 1956

June 14, 1956

Memorandum

To: W. R. Grimwald, Defense Minerals Exploration Administration

From: Commodity Industry Analyst, Branch of Base Metals

Subject: Review of application, Docket No. DMEA - 4333 (copper), El Dorado Mining Company, Dead Cedar Mine, Elko County, Nevada $73,000.00

The applicant proposes to explore the property by about 200 feet of shaft sinking, approximately 1000 feet of drifting and crosscutting at an estimated total cost of $73,000.00.

Apparently most of the material is low-grade as the copper assays range from 0.20 to 0.81 percent. Selected samples assay higher but in neither case is the extent of sampled area given.

I believe that it would be well to consider exploration by drilling instead of the more expensive method proposed. Especially because the exploration and objective are indefinite.

It is recommended that the application be referred to the Field Team for appropriate action.

J. W. Pennington

J. W. Pennington

Copy to: Division of Minerals
Branch of Base Metals (2)
Thor Killegaard, U.S.G.S.
R. W. Shafer
Files

D M E A

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

RECEIVED
JUN 13 1956

1605 Evans Avenue
Reno, Nevada

June 11, 1956

Memorandum

To: Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region II

Subject: Loan Application (Copper)
El Dorado Mining Company
Dead Cedar Mine
Elko County, Nevada

Attached are three sets of MF-103, Application for Aid forms relative to above subject. The fourth set has been retained in our files.

S. Ricker

Attach.

SRicker:gh
cc: R. M. Smith
File

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

RECEIVED
JUN 13 1956

1605 Evans Avenue
Reno, Nevada

June 11, 1956

Memorandum

To: Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region II

Subject: Loan Application (Copper)
El Dorado Mining Company
Dead Cedar Mine
Elko County, Nevada

Attached are three sets of MF-103, Application for Aid forms relative to above subject. The fourth set has been retained in our files.

S. Ricker

Attach.

SRicker:gh
cc: R. M. Smith
File

June 13, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region II

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

There is listed below the assigned docket number to an application recently received from Region II.

DMEA - 4333 El Dorado Mining Company

Robert E. Adams
Chief, Operation's Control
and Statistics Division

June 13, 1956

El Dorado Mining Company
816 Newhouse Bldg.
Salt Lake City 11, Utah

Subject: DMEA-4333
Re: Exploration Assistance
Dead Cedar Mine

Gentlemen

The receipt of your application dated June 7, 1956 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-4333 and referred to the Nonmetallic Minerals Division.

Kindly identify all future correspondence relating to your application by this docket number.

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED
JUN 13 1956

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

Not to be filled in by applicant

Docket No. DMEA-4333
Metal or Mineral COPPER
Date Received JUN 13 1956
Estimated Cost $73,000.00
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: El Dorado Mining Company
816 Newhouse Bldg.,
Salt Lake City, 11, Utah.

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

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

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

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

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

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

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

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

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

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

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

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

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

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

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

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

.....

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

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

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

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

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

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

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

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

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

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

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

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

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

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

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

☐ Money ☐ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated June 7, 196

El Dorado Mining Company
(Applicant)

By Whitney C. Bonham

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

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

EL DORADO MINING COMPANY
AND
UNIFIED URANIUM AND OIL, INC.
Salt Lake City, Utah

APPLICATION FOR AID

DEAD CEDAR EXPLORATION PROJECT

The following pages answer the questions listed in MF-103, Application for Aid for an Exploration Project, Pursuant to DMEA Order 1, under the Defense Production Act of 1950,

1. (a) El Dorado Mining Company
816 Newhouse Building
Salt Lake City 11, Utah

(b) Utah Corporation

(c) Whitney C. Hansen, Director, President and Manager
816 Newhouse Building
Salt Lake City, Utah

Albin M. Ross, Director and Vice President
c/o Utah Bit & Steel Company
285 North Main
Midvale, Utah

Alvin G. Pack, Director and Secretary
1212 East 2nd South Street
Salt Lake City, Utah

Sherman B. Jensen, Director
529 Koneta Court
Salt Lake City, Utah

2. ---

3. (a) Parts of Secs. 28-29-32 & 33
Tp 30 N - R 70 E
Mt. Diablo B & M

3. (b) Dead Cedar

(c) Lessee

(d) Attached hereto

(e) ---

(f) Elko, Nevada

Claim	File No.
Dead Cedar	53898
Dead Cedar No. 1	53899
Dead Cedar No. 2	53900
Dead Cedar No. 3	53901
Dead Cedar No. 4	53902
Dead Cedar No. 5	53903
Dead Cedar No. 6	53904
Dead Cedar No. 7	53905
Dead Cedar No. 8	53906
Dead Cedar No. 9	53907
Dead Cedar No. 10	53908
Dead Cedar No. 11	53909
Dead Cedar No. 12	53910
Dead Cedar No. 13	63713
Dead Cedar No. 14	63714
Dead Cedar No. 15	63715
Dead Cedar No. 16	63716
Dead Cedar No. 17	63717
Dead Cedar No. 18	63718
Dead Cedar No. 19	63719
Dead Cedar No. 20	63745
Dead Cedar No. 21	63720
Dead Cedar No. 22	63747
Dead Cedar No. 23	63746
Dead Cedar No. 24	63744
Dead Cedar No. 25	63743

4. (a) Mr. Clark Kimball says that he and his brother through the Kimball Mining Company located this area in 1916 and shipped one car of low grade ore.

Prior to the subsequent location of these claims in 1933 for the Dead Cedar Mining Company, several small adits and shafts were completed.

4. (a) (cont'd). The Dead Cedar Mining Company undertook to explore the major outcrops by driving an adit easterly on the Dead Cedar No. 1 claims, to crosscut the beds and intersect the various fissures and shear zones. This adit, drifts and crosscuts, together with winzes and a rise are shown on the white print enclosed.

The applicant corporation began work in January, 1956 at the bottom of an incline shaft sunk 40 feet at an angle of 45 degrees. The collar is 42 feet southeasterly from the portal of the adit. At present, the corporation has completed 182 feet of sinking, making the total depth of the incline 222 feet.

All mine workings are open for inspection and are dry.

(b) There are no ore reserves. That which was mined came largely from pockets within beddings and fissures in a leached mineralized zone.

Dead Cedar Mine Crude Ore Shipments
To Tooele Copper Smelter 1937 to 1951, Incl.

Date	Lot. No.	Dry Tons	% Copper	Ounces Silver	Ounces Gold
6/6/37	2/4699	11.97	10.0	1.04	.01
7/9/37	2/4873	67.31	5.6	.74	.01
7/12/37	3/4892	48.46	5.3	.64	.01
7/28/37	4/4931	37.55	8.7	.90	.005
8/27/37	5/5121	39.38	9.3	2.15	.005
10/24/37	6/5441	27.48	8.02	2.49	.01
7/10/39	1/6059	3.44	11.73	2.13	.005
8/16/40	1/5255	2.50	8.50	1.39	.010
8/24/40	2/5294	1.86	6.50	1.19	.01
5/22/41	1/6706	24.74	6.20	1.29	.01
7/15/53	1/1812	39.29	4.91	.5	---
		303.98			

4. (c) Reference is made to the enclosed photostat of a plane table survey of the property. In the center of the map, just north of the Section A-B in a gossan which shows mineralization extending over a large area. The pattern also shows outcrops along an apparently easterly-westerly zone.

An examination of the Section A-B shows a series of limestone resting upon a thrust fault. Thrusting is typical of western Utah and eastern Nevada.

The adit which is shown by projection in Section A-B is detailed on the enclosed white print which also shows a plan of the incline shaft in which the recent work was done.

4. (c) (cont'd.) Every opening shows leached material. It is believed that originally the ores were sulphides. One eminent geologist who has seen the property thinks there were two periods of mineralization, the first a high temperature pyrite and chalcopyrite mineralization and the second of lower temperature with barite and silver.

(d) A paved highway is shown at the southeast corner of the plane table survey. This connects with the new highway about one half mile distant, There is a fair road which is in use for about 1 mile from the highway to the mine.

The property is about 25 miles southerly from Wendover, Utah which is a rail and shipping point some 112 miles west of the Salt Lake Valley copper smelter. Another copper smelter is at McGill, Nevada, some 100 miles southerly over a paved highway.

Enough water for culinery and mining purposes comes from a spring on the property and this can be supplemented from Ferguson Springs about a mile easterly from the mine.

A cabin for miners has been in recent use.

(e) Manpower, equipment, supplies and water are available. Power is gasoline or diesel.

5. (a) Copper, silver, gold and lead and zine, if any.

(b) The enclosed white print indicates some of the proposed work. It is postulated that a section of limestone some 100 feet thick from the portal of the adit easterly to the sandy limestone below the bed which contains a small stope contained primary copper and perhaps other ores in certain sections and that leaching has robbed the upper levels of their values. This same reasoning suggests that the metals be sought at a greater depth where they are concentrated. A similar condition has existed in many of the mines in desert areas.

From the size and nature of the outcrops and the exposed sections in the mine workings, the original mineralization must have been extensive. Unknown is the percentage of iron and copper and/or other minerals in the original deposition.

The shaft sunk by the applicant to a depth of 222 feet was largely in leached and porous material. One stringer containing chalcopyrite was found and it contained 12.5 per cent copper and 25 ounces silver, assay by Crismon and Nichols, Salt Lake City, Utah. Most of the assays from the leached and porous material in the shaft ranged from .2% to .4% copper.

5. (b) (cont'd.) A car sample at 65 feet was

Oz. Gold	Oz. Silver	% Lead	% Copper
.01	.40	.15	.20

A wall sample at 108 feet assayed

.02	.30	.10	.80

Near the bottom of the shaft the copper content was .7% on one side and .3% on the other. Gypsum occured in vugs and on cleaverage planes as did also some copper stains. Near the bottom of the shaft spots of a whitish metallic material was found. The United States Bureau of Mines at Salt Lake City identified this as secondary marcasite.

At 222 feet the shaft broke into a cave believed to be from slumpage. The siliceous limestone perviously mentioned as being below favorable limestone in which the stope is found, appears to have had the lime eaten out by acid so thoroughly that only the silica skeleton remains. This of course broke away and fell into the cave.

The proposed plan after due consideration to alternatives is to continue the shaft at the same angle (63°) 200 feet more or less to the thrust plane unless something occurs which warrants a change of plan. Exact distances cannot be estimated when an exploration of this kind if undertaken. The shaft could encounter

1. The thrust plane with or without ore.
2. Secondary ores.
3. Primary ores in limestone.
4. The underlying intrusive with or without ore.
5. An unexpected conduit which supplied the mineralization.

As a matter of fact, the entire easterly-westerly zone could denote the direction of mineralization in the underlying intrusive.

When the shaft work is completed, then some 1000 feet of drifing and crosscutting should be undertaken to explore the mineralized area, but the direction of each piece of work should not be laid out until the management and the Bureau Engineers concur in the best approach after interpretation of the geological features uncovered by the then completed work.

5. (c) The work will start within 30 days and be completed within 20 months from the date of an exploration project contract.

(d) The applicant corporation is relatively new but the management has had mining experience. Within the past year the applicant has completed about 1400 feet of tunnel work at its own expense in the Bingham area. The manager at one time operated the Quad Metals property and later he was with the Howell Mining Company which merged with the Federal Corporation of Nevada. All work will be under his supervision. Geological and engineering supervision will be by H. E. Havenor who has been in the mining business since 1908. At one time he was geologist for the Tintic Standard Mining Company and is now manager of the Unified Uranium & Oil, Inc., a Nevada Corporation.

6. (a) The applicant will contract the shaft sinking at $80.00 per foot and drifting for $45.00 per foot and will furnish equipment, labor, supplies and taxes of all kinds.

(b) There will be no supervision cost if applicant is contractor. There will be consultant fees for geological and engineering services of $300.00 monthly.

(g) Accounting, assaying, etc., $150.00 monthly.

(h) Damage from desert storms and flodds, and unforeseen contingencies, $150.00 monthly.

6. (a)	Shaft sinking	$16,000.00
	Drifting and crosscutting	45,000.00
(b)	Geological and Engineering	6,000.00
(g)	Accounting, assaying, etc.	3,000.00
(h)	Contingencies	3,000.00
		$73,000.00

7. (a) Yes, we are prepared to furnish our share of the cost of the proposed project in accordance with the regulations on Government participation.

(b) Money.

LEASE

THIS LEASE, entered into this 1st day of November, 1955, by and between COPPER VALLEY MINING COMPANY, a Utah corporation, hereinafter referred to as Lessor, and UNIFIED URANIUM AND OIL, INC., a Nevada corporation, and EL DORADO MINING COMPANY, a Utah corporation, hereinafter referred to as Lessees,

WITNESSETH:

WHEREAS, Lessor is the owner of the following unpatented lode mining claims located in the Ferguson Mining District, Elko County, Nevada, recorded in said county, and more fully described as follows:

Dead Cedar
Dead Cedar No. 1 to 25 inclusive, and

WHEREAS, Lessees desire to enter upon and develop and mine the said premises under a lease from the Lessor.

NOW THEREFORE, in consideration of the covenants mutually to be performed, Lessor leases the above described premises to the Lessees, as joint tentants, for a period of ten years from the date hereof and under the following terms and conditions:

1. Lessees agree to enter upon the premises and to commence work there on within thirty (30) days from the signing of the lease agreement.

2. Lessees agree to work the premises 40 man shifts per month, unless prohibited by inclement weather, or acts of God, in which case they agree to make up as rapidly as possible the work shifts lost through such reasons beyond their control.

3. Lessees agree to do sufficient work upon the premises to satisfy the annual assessment requirements, and further agree to file all necessary notices in connection therewith.

4. Lessees agree to pay Lessor a royalty of 10% net smelter or mill returns on all ore up to 10% copper and further agrees to pay 12-1/2% of the net smelter or mill returns on all ores 10% and above. On ore other than copper, Lessees agree to pay Lessor 10% of the net smelter or mill returns.

5. Lessees agree to operate the property in good minerlike fashion, comply with all of the laws, both Federal and State, post all necessary notices and to save the Lessor harmless in the event of any liability arising out of the operation of the premises.

6. It is mutually understood and agreed that the violation of any provision contained herein shall constitute a forfeiture of this lease and Lessor agrees to give Lessees 30 days written notice of an intent to declare a forfeiture, and Lessees shall have 30 days within which to correct such violation. In the event a violation is not corrected within 30 days after written notice is received from Lessor by Lessees then this lease and agreement shall be forfeited and the Lessees shall have an additional 30 days within which to remove their machinery and equipment from the premises.

7. Lessees shall have the option to renew this lease for an additional ten years upon written notification within 60 days prior to the termination of this lease.

IN WITNESS WHEREOF, all the parties hereto have set their hands and seals the day and year first above written.

COPPER VALLEY MINING COMPANY

By_____

Lessor

UNIFIED URANIUM AND OIL, INC.

By_____

EL DORADO MINING COMPANY

By_____

Lessees

Salt Lake City, Utah

May 15, 1956

Eldorado Mining Company and

Unified Uranium and Oil, Inc.

Salt Lake City, Utah

Dear Sirs:

At a meeting of the Board of Directors of the Copper Valley Mining Company held today in Salt Lake City, a resolution was duly adopted to grant your Companies, as lessees of the Dead Cedar and Dead Cedar Nos. 1 to 25 inclusive the moratorium vervally requested by your Mr. H. E. Havenor. During this time it will not be necessary for you to do any work on the aforesaid claims in order to keep your lease in good standing.

Yours respectfully

R. B. Beck /s/

Secretary Copper Valley Mining Company

56 "B" Street

Salt Lake City, Utah

PROOF OF ANNUAL LABOR
FOR THE ASSESSMENT YEAR ENDING JUNE 30, 1956.

State of Utah)
: ss
County of Salt Lake)

Personally appeared before me this 23rd day of May, 1956, R. B. Peck who being duly sworn on oath deposes and says that he is director, secretary and treasurer of the Copper Valley Mining Company and that the said corporation which owns the Dead Cedar and Dead Cedar Nos. 1 to 25 inclusive mining claims by virtue of a deed from the Dead Cedar Mining Company, has caused the annual assessment work to be performed on the said claims, situated in the Ferguson Mining District, Elko County, Nevada.

CLAIMS

Dead Cear, Dead Cedar Nos. 1 to 25 inclusive

The work consists of shaft sinking on the Dead Cedar No. 1 Mining Claim and was performed by the Eldorado Mining Company and the Unified Uranium and Oil, Inc., lessees of the property, and the amount expended was in excess of $2600.00. The said work was performed in February, March and April of 1956.

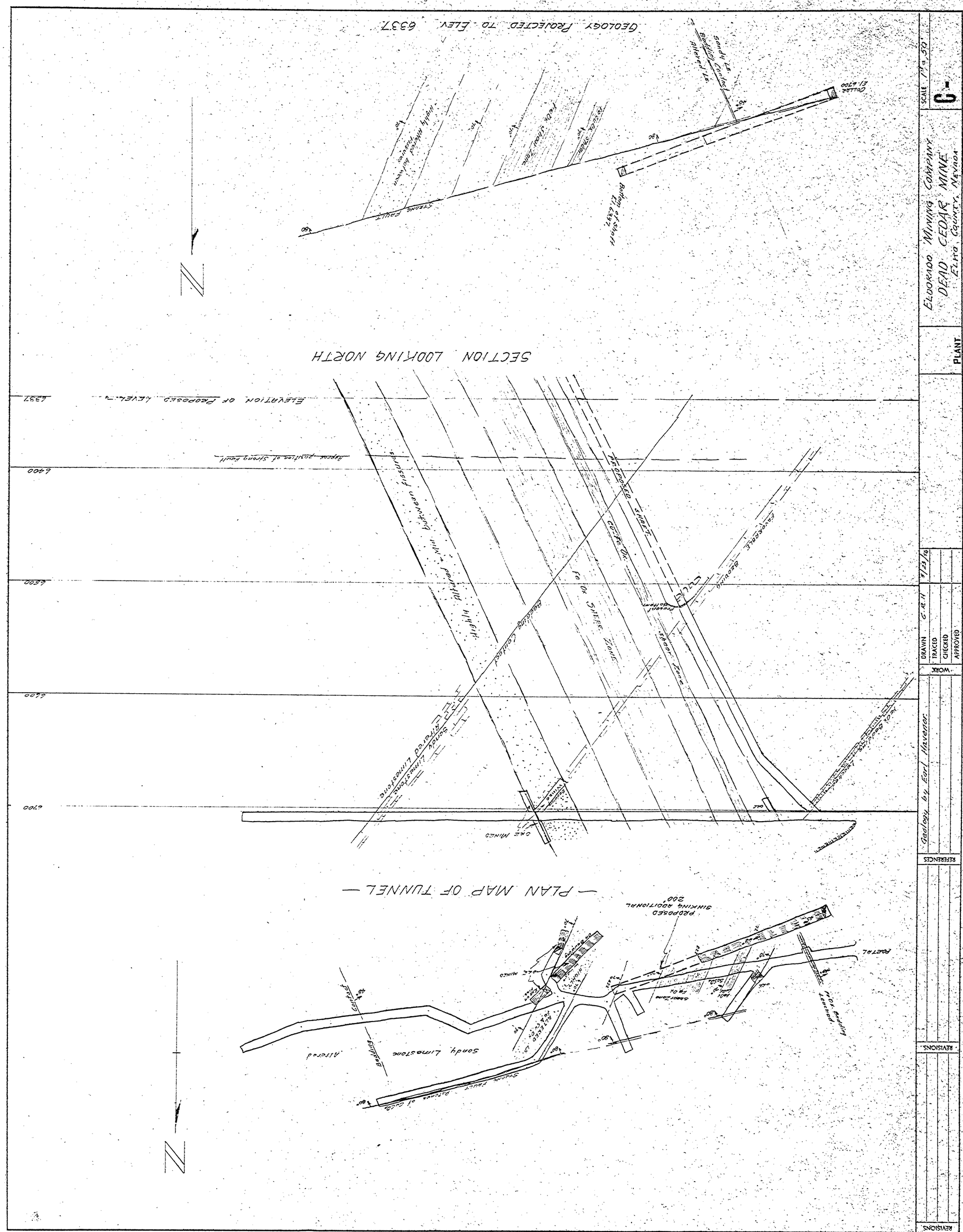
s/ R. B. Peck

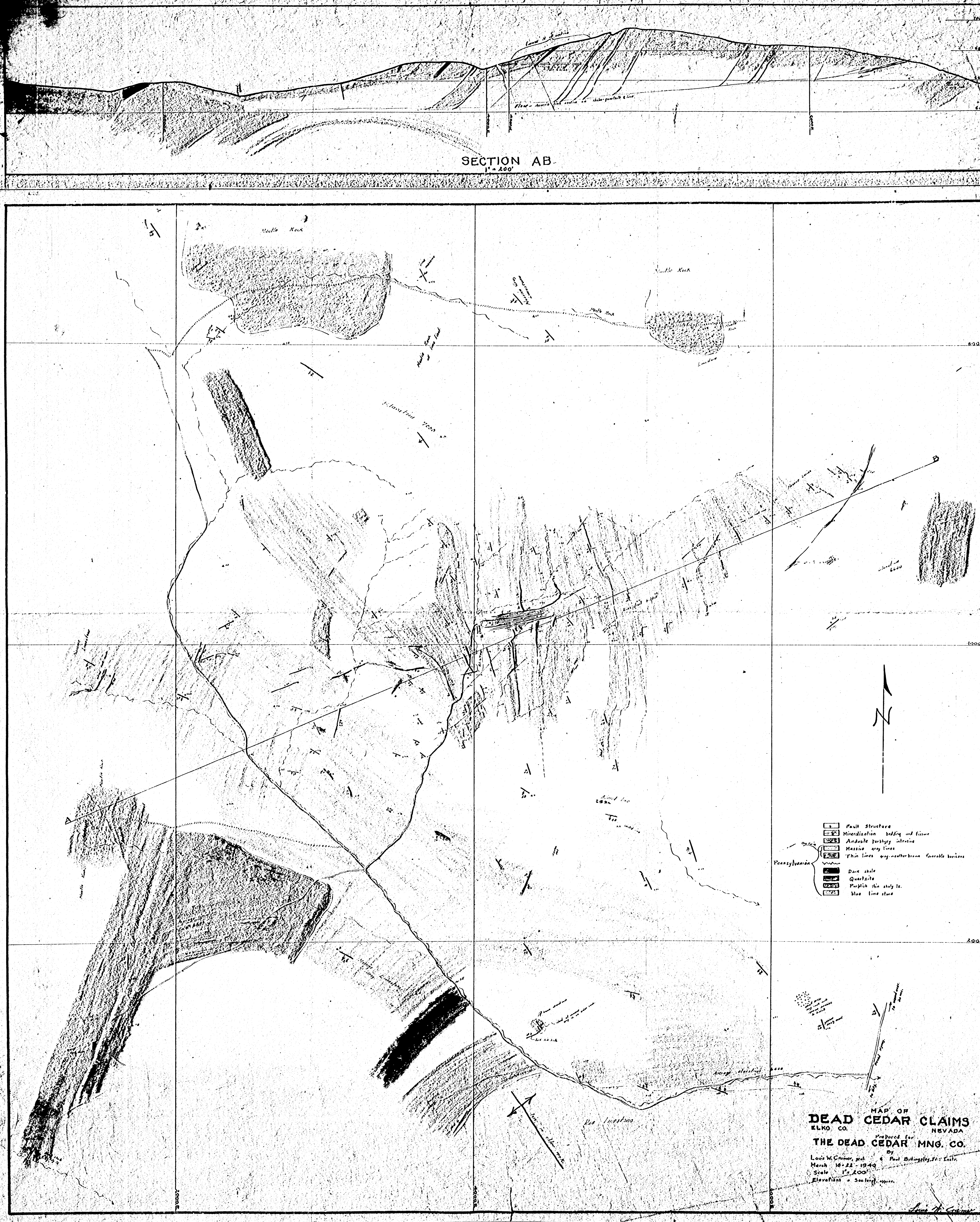
Subscribed and sworn to before me this 23rd day of May, 1956.

s/ James M. Duke
Notary Public
Residing at Salt Lake, Utah

SEAL

My Commission Expires 2/10/57


GEOLOGY PROJECTED TO ELEV. 6337
SECTION LOOKING NORTH
ELEVATION OF PROPOSED LEVEL
6337
6400
6500
6600
6700
PROPOSED SHAFT
PROPOSED DRIFT
ORE MINED
Highly Altered & Mineralized Fissures
Sandy Limestone
Altered Limestone
Fault
Sandy Limestone
Altered
Fault
ORE MINED
PROPOSED SINKING ADDITIONAL 200'
PORTAL
— PLAN MAP OF TUNNEL —
ELDORADO MINING COMPANY
DEAD CEDAR MINE
ELKO COUNTY, NEVADA
PLANT
SCALE 1" = 50'
6
DRAWN
TRACED
CHECKED
APPROVED
WORK
REFERENCES
Geology by Earl Havenor
REVISIONS
REVISIONS


SECTION AB
1" = 200'
7000
6800
6600
6400
Floor - massive lime section on shales quartzite & lime
Mantle Rock
Limestone
6000N
4000N
2000N
Fault Structure
Mineralization bedding and fissure
Andesite porphyry intrusive
Massive gray limes
Thin limes gray-weather brown favorable horizons
Pennsylvanian
Dark shale
Quartzite
Purplish thin shaly ls.
blue lime stone
Average elevation 6400
N
A
B
MAP OF
DEAD CEDAR CLAIMS
ELKO CO. NEVADA
Prepared for
THE DEAD CEDAR MNG. CO.
By
Louis W. Cramer, geol. & Paul Billingsley, Jr. Instr.
March 18-22-1940
Scale 1" = 200'
Elevations = Sea-level, approx.
Louis W. Cramer