DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

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DMA Docket No. ~~1943~~

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EXPLORATION LOAN

Any action taken to change the type of request for assistance must be promptly reported to the Reports and Records Branch. Use DMA Form 2 for submitting these reports.

Routing Slip Code 340

To:	~~Tungsten Br.~~	Date	8-13-51
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400

APR 11 1952

Hon. George W. Malone
United States Senate
Washington 25, D. C.

Re: Docket No. DMA 1943X - Tungsten
Gerry W. Adam
Relief Mine
Pershing County, Nevada

Dear Senator Malone:

Pursuant to a recent request from your office, I am enclosing a copy of a letter to Mr. Gerry W. Adam, which informs him of the decision reached with regard to his application for exploration assistance.

If we can be of further aid in this matter, please call on us.

Sincerely yours,

(signed) FRANK E. JOHNSON

for Acting Administrator
Defense Minerals Exploration
Administration

Enclosure

GCSelfridge:ls
4/10/52

Docket
Admn. Reading File
Field Team, Region 3
G. C. Selfridge

400

400

April 8, 1952

Mr. Gerry W. Olen
801 Bridge Street
Yerington, Nevada

Re: Docket No. DMA 1943 - Tungsten
Relief Mine
Lyon County, Nevada

Dear Mr. Olen:

Your application for aid for an exploration project and other data referring to the above noted property available to us in Washington have been carefully reviewed.

The information indicates that, geologically, there is little probability of making a significant mineral discovery. We regret, therefore, to inform you that your application is denied.

We wish to thank you for your interest in the Defense Minerals Program and for your effort in this respect.

Sincerely yours,

C. O. Mittendorf

Acting Administrator
Defense Minerals Exploration
Administration

RLBrewer'lm
4/2/52

cc: Admn. Pending File
Docket
E. W. Geehan, USBM
D. M. Lemmon, USGS
G. C. Selfridge
R. L. Brewer — 400's file
Operating Committee
Field Team Reg. III

Acting Administrator, DMEA April 2, 1952

Iron and Ferro-Alloy Division, DMEA

Denial of exploration project in the amount of $50,000.00
Docket No. DMA 1943X - Tungsten
Gerry W. Eden
Relief Mine
Pershing County, Nevada

The denial of the subject application by this Division is based on the following information:

1. An examination made August 25 to 27, 1951, pursuant to a request for an access road (AR 74) by the U. S. Bureau of Mines reveals that the mine had an early day record of silver production but has been idle for 45 years. No tungsten was recovered in the early mining operations.

2. The ore occurs in quartz veins in limestone. The old silver workings are mainly along the footwall side of the vein in soft limonitic material. At places where the quartz vein shows thin quartz stringers extending from the main vein into the footwall, scheelite is observed. The mineralization is in fine seams with occasional masses occurring in the main vein.

3. Thus samples cut from underground workings showed an average of 0.03 per cent WO_3; one sample showed 1.02 per cent WO_3. Eleven samples taken from the tailings pond showed an average of 0.06 per cent WO_3.

4. There appears to be little or no ore reserves. A few tons may be inferred near the 1.02 per cent WO_3 sample on the first level.

5. The field team recommends that the access road application be denied because of lack of appreciable amounts of tungsten ore.

6. The Commodity Division of the U. S. Geological Survey recommends denial.

George C. Selfridge

QLBrewer'lm
4/2/52

G. C. Selfridge, Chief
Iron and Ferro-Alloy Division

cc: Admn. Reading File
Docket
G. C. Selfridge
Q. L. Brewer — 400

IN REPLY REFER TO:

G-MD-DHL

400's file

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

March 31, 1952

Memorandum

To: George C. Selfridge, DMEA

From: D. H. Lemmon, U.S.G.S.

Subject: Exploration application $50,000 DMEA 1943 - Tungsten
Garry W. Eden
401 Bridge St.
Winnemucca, Nevada

Property: Relief Mine
4 miles south of Rochester
Humboldt Range
Pershing County, Nevada

Proposal: In the application, Eden gives no information about what exploration he intends to do. In response to questions from DMA, he replied with similarly vague statements.

Mineralization: The deposit was examined August 25-27, 1951 by F. J. Wiebelt and E. F. Muller of the Bureau of Mines in connection with an application for an access road (AR-74).

The examining engineers determined that the property contains no appreciable amount of tungsten. Eleven samples of old mill tailings from silver operations assayed from 0.01 to 0.14 percent of WO_3. Of four vein samples taken in the best scheelite mineralization exposed in workings, only one contained more than 0.08 percent, and this one, assaying 1.02 percent, represented only a few tons in a lens one foot wide. The accessible workings were examined in ultraviolet light before samples were taken.

The tailings, of which about 300 tons appear to contain 0.10 percent of WO_3, presumably contain most of the scheelite originally present in ore that was milled for silver.

The applicant cited several high-grade assays from veins and tailings, but did not provide certificates. Presumably he was guessing from fluorescence, or his assayer was unreliable.

FILE COPY
SURNAME:

Selfridge.

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

APR 11 1952

~~pot~~ pre dated per. G.S.

Hon. George W. Malone
United States Senate
Washington 25, D. C.

Re: Docket No. DMA 1943X - Tungsten
Gerry W. Eden
Relief Mine
Pershing County, Nevada

Dear Senator Malone:

Pursuant to a recent request from your office, I am enclosing a copy of a letter to Mr. Gerry W. Eden, which informs him of the decision reached with regard to his application for exploration assistance.

If we can be of further aid in this matter, please call on us.

Sincerely yours,

(signed) FRANK E. JOHNSON (for)
for Acting Administrator
Defense Minerals Exploration
Administration

FN 4-14-52

Enclosure
GCSelfridge:ls
4/10/52
CC: Docket
Admn. Reading File
Field Team, Region 3
G. C. Selfridge

COPY

April 8, 1952

Mr. Gerry W. Eden
401 Bridge Street
Winnemucca, Nevada

Re: Docket No. DMA 1943X - Tungsten
Relief Mine
Pershing County, Nevada

Dear Mr. Eden:

Your application for aid for an exploration project and other data referring to the above noted property available to us in Washington have been carefully reviewed.

The information indicates that, geologically, there is little probability of making a significant mineral discovery. We regret, therefore, to inform you that your application is denied.

We wish to thank you for your interest in the Defense Minerals Program and for your effort in this respect.

Sincerely yours,

Signed: C. O. Mittendorf

Acting Administrator
Defense Minerals Exploration
Administration

FILE COPY
SURNAME:

Brewer
Selfridge
Geehan
Johnson
Thayer
F. Johnson

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

APR 8 1952

Mr. Gerry W. Wien
401 Bridge Street
Winnemucca, Nevada

Re: Docket No. DMA 1943X - Tungsten
Relief Mine
Pershing County, Nevada

Dear Mr. Wien:

Your application for aid for an exploration project and other data referring to the above noted property available to us in Washington have been carefully reviewed.

The information indicates that, geologically, there is little probability of making a significant mineral discovery. We regret, therefore, to inform you that your application is denied.

We wish to thank you for your interest in the Defense Minerals Program and for your effort in this respect.

Sincerely yours,

C. O. Mittendorf (for) 4/8

Acting Administrator
Defense Minerals Exploration
Administration

QLBrewer'lm
4/2/52

cc: Admn. Reading File
Docket
R. W. Geehan, USBM
D. M. Lemmon, USGS
G. C. Selfridge
Q. L. Brewer
Operating Committee
Field Team Reg. III

FILE COPY
SURNAME:

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

Acting Administrator, DMMA

April 2, 1952

Brewer
Guhm

Iron and Ferro-Alloy Division, DMMA

Denial of exploration project in the amount of $50,000.00
Docket No. DMA 1943X - Tungsten
Gerry W. Eden
Relief Mine
Pershing County, Nevada

The denial of the subject application by this Division is based on the following information:

1. An examination made August 25 to 27, 1951, pursuant to a request for an access road (AR 74) by the U. S. Bureau of Mines reveals that the mine had an early day record of silver production but has been idle for 45 years. No tungsten was recovered in the early mining operations.

2. The ore occurs in quartz veins in limestone. The old silver workings are mainly along the footwall side of the vein in soft limonitic material. At places where the quartz vein shows thin quartz stringers extending from the main vein into the footwall, scheelite is observed. The mineralization is in fine seams with occasional masses occurring in the main vein.

3. Thus samples cut from underground workings showed an average of 0.03 per cent WO_3; one sample showed 1.02 per cent WO_3. Eleven samples taken from the tailings pond showed an average of 0.06 per cent WO_3.

4. There appears to be little or no ore reserves. A few tons may be inferred near the 1.02 per cent WO_3 sample on the first level.

5. The field team recommends that the access road application be denied because of lack of appreciable amounts of tungsten ore.

6. The Commodity Division of the U. S. Geological Survey recommends denial.

George C. Selfridge

4/8

QLBrewer:lm
4/2/52

G. C. Selfridge, Chief
Iron and Ferro-Alloy Division

cc: Admn. Reading File
✓ Docket
G. C. Selfridge
Q. L. Brewer

Office Memorandum • UNITED STATES GOVERNMENT

TO : Acting Administrator, DMEA DATE: April 2, 1952

FROM : Iron and Ferro-Alloy Division, DMEA

SUBJECT: Denial of exploration project in the amount of $50,000.00
Docket No. DMA 1943X - Tungsten
Gerry W. Eden
Relief Mine
Pershing County, Nevada

The denial of the subject application by this Division is based on the following information:

1. An examination made August 25 to 27, 1951, pursuant to a request for an access road (AR 74) by the U. S. Bureau of Mines reveals that the mine had an early day record of silver production but has been idle for 45 years. No tungsten was recovered in the early mining operations.

2. The ore occurs in quartz veins in limestone. The old silver workings are mainly along the footwall side of the vein in soft limonitic material. At places where the quartz vein shows thin quartz stringers extending from the main vein into the footwall, scheelite is observed. The mineralization is in fine seams with occasional masses occuring in the main vein.

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4. There appears to be little or no ore reserves. A few tons may be inferred near the 1.02 per cent WO_3 sample on the first level.

5. The field team recommends that the access road application be denied because of lack of appreciable amounts of tungsten ore.

6. The Commodity Division of the U. S. Geological Survey recommends denial.

G. C. Selfridge

G. C. Selfridge, Chief
Iron and Ferro-Alloy Division

IN REPLY REFER TO:

G-MD-DML

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

March 31, 1952

Memorandum

To: George C. Selfridge, DMEA

From: D. M. Lemmon, U.S.G.S.

Subject: Exploration application $50,000 DMEA 1943 - Tungsten
Gerry W. Eden
401 Bridge St.
Winnemucca, Nevada

Property: Relief Mine
4 miles south of Rochester
Humboldt Range
Pershing County, Nevada

Proposal: In the application, Eden gives no information about what exploration he intends to do. In response to questions from DMA, he replied with similarly vague statements.

Mineralization: The deposit was examined August 25-27, 1951 by F. J. Wiebelt and L. F. Muller of the Bureau of Mines in connection with an application for an access road (AR-74).

The examining engineers determined that the property contains no appreciable amount of tungsten. Eleven samples of old mill tailings from silver operations assayed from 0.01 to 0.14 percent of WO_3. Of four vein samples taken in the best scheelite mineralization exposed in workings, only one contained more than 0.08 percent, and this one, assaying 1.02 percent, represented only a few tons in a lens one foot wide. The accessible workings were examined in ultra-violet light before samples were taken.

The tailings, of which about 300 tons appear to contain 0.10 percent of WO_3, presumably contain most of the scheelite originally present in ore that was milled for silver.

The applicant cited several high-grade assays from veins and tailings, but did not provide certificates. Presumably he was guessing from fluorescence, or his assayer was unreliable.

copy retained in SOU

Recommendation.

The Field Team recommended that the application for an access road be denied because the mine does not contain any appreciable amount of tungsten ore.

The information contained in the field report shows that there is little chance of making a significant discovery of tungsten ore in the mine. Therefore I recommend that the exploration application be denied.

D.M. Lemmon

3/25/52

Write letter when forms

Mr. Selfridge:

Senator's Malone's secretary phoned and asked to talk particularly with you about status of a loan application. I suggested that since you were at staff meeting that if I had the docket number and applicant's name, I could have the file ready for your consultation so that you could in only one phone call give the Senator the desired information.

DMA 1943, Gerry W. Eden is the case. I find in front of docket a red pencil note dated 1/22/52 that a field referral for exam was made, but no transmittal letter. Mr. Gentry wrote in journal: "Jan. 22 & 23-52: Letter and photostat copies of map sent to Field Team, requesting re-examination and sampling."

I question whether the field referral ever went thru. Hazel Berry has no record it ever passed thru Operating Committee. Mr. Adams' office can find no record of such referral. I checked both your reading file and Lura's copies of letters she wrote in January--no evidence of a field referral letter.

Therefore, before you can given Senator Malone current data on the docket, it appears a wire to Region 3 will be necessary.

Call Mrs Ball when we hear from Malone.

L. Scott

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

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

Air Mail

March 26, 1952

Memorandum

To: George C. Selfridge, Chief, Iron and Ferro-Alloys Division, Defense Minerals Exploration Administration, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMA-1943, Eden Mines, Relief Mining District, Pershing County, Nevada (Tungsten)

Reference is made to your telephone call concerning subject docket.

I contacted our Reno mining office immediately after our conversation was over, thinking that the docket might have bypassed us and gone directly to Reno. I was told by phone this morning that no docket No. 1943 reached Reno, but that the subject property was examined on August 25-27, pursuant to an application for an access road.

On October 16, 1951, a report, "Access Road, Eden Mines, Pershing County, Nevada", by Frank J. Wiebelt and L. F. Muller, mining engineers, U. S. Bureau of Mines, dated October 10, 1951, was sent to DMA with a memorandum from me, subject: "Access Road Application, DMA Docket AR-74 - Eden Mines, Tungsten - Nevada".

This perhaps solves the mystery of why DMEA has no report of a field examination made by us of the subject property. The report we made will probably be found in the access road files. Anyway, our Reno office has been instructed to airmail you a copy of the report so you should receive it shortly.

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Copy to E. H. Bailey, USGS

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 28 1952

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
P. O. BOX 1551
RENO, NEVADA

AIR MAIL

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 28 1952

March 26, 1952

Memorandum

To: Mr. George C. Selfridge, Chief, Iron & Ferro-Alloy Div.

From: Chief, Mining Division, Region III

Subject: Docket DMEA-1943, Eden Mines, Relief Mining District, Pershing County, Nevada (Tungsten)

With reference to your telephone conversation of March 25 with Mr. H. C. Miller, Regional Director, Region III, San Francisco, Calif., requesting information on the subject docket:

Attached herewith is a copy of a report by Frank J. Wiebelt and L. F. Muller, dated October 10, 1951 on the Eden Mines, Pershing County, Nev.

An Access Road application was made in July 1951 by Gerry W. Eden and the examination was made to determine if this work was warranted. There is no record in this office of Docket DMEA-1943, Eden Mines, Relief Mining District, Pershing County, Nev., covering an application for an exploration loan.

George H. Walker Jr.
for A. C. Johnson

Encl.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 28 1952

AIR MAIL

March 26, 1952

Memorandum

To: Mr. George C. Salfridge, Chief, Iron & Ferro-Alloy Div.

From: Chief, Mining Division, Region III

Subject: Docket DMEA-1943, Eden Mines, Relief Mining District, Pershing County, Nevada (Tungsten)

With reference to your telephone conversation of March 25 with Mr. H. C. Miller, Regional Director, Region III, San Francisco, Calif., requesting information on the subject docket:

Attached herewith is a copy of a report by Frank J. Wiebelt and L. F. Muller, dated October 10, 1951 on the Eden Mines, Pershing County, Nev.

An Access Road application was made in July 1951 by Gerry W. Eden and the examination was made to determine if this work was warranted. There is no record in this office of Docket DMEA-1943, Eden Mines, Relief Mining District, Pershing County, Nev., covering an application for an exploration loan.

A. C. Johnson

Encl.
cc: H. C. Miller, San Francisco
E. H. Bailey, San Francisco, USGS
Files

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

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 28 1952

ACCESS ROAD

Eden Mines

Pershing County, Nev.

Frank J. Wiebelt, Mining Engineer
U. S. Bureau of Mines

L. F. Muller, Mining Engineer
U. S. Bureau of Mines

October 10, 1951

ACCESS ROAD

UNITED STATES DEPARTMENT OF THE INTERIOR - BUREAU OF MINES

EDEN MINES
Pershing County, Nev.

SUMMARY

Pursuant to an "Application for Access Road", the Eden Mine was examined by two engineers[1] on August 25 to 27, 1951. The application requested the improvement and reconstruction of 14 miles of old wagon road, about 1,500 feet of which was to be a new road.

The mine, in Pershing County, Nev., is near the head of Relief Canyon, south of Buffalo Peak and is accessible from Lovelock, Nev., by 20.2 miles of road and about 2.5 miles of trail.

The property was formerly known as the Relief mine and is now owned by Gerry W. Eden. It has had a noteworthy production of silver ore. No production of scheelite has been recorded. It has been idle for about 45 years. Mr. Eden discovered the presence of scheelite in the mine.

The deposits occur in quartz veins in limestone. The limestone is about 600 feet in thickness and is overlain by andesite and underlain by rhyolite. The principal minerals are silver-bearing minerals and a minor amount of scheelite.

There are no appreciable tungsten ore reserves in the mine and mill tailing ponds and the request for an access road to the mine is unwarranted.

1/ Frank J. Wiebelt and L. F. Muller.

INTRODUCTION

The Eden Mine was examined by two engineers of the Bureau of Mines on Aug. 25 to 27, 1951 inclusive in connection with an application for an access road to this property made by Gerry W. Eden, dated July 23, 1951. The application requests 14 miles of rebuilding and improvement of an old wagon road and the construction of about 1,500 feet of new road.

The Eden mine is better known as the Old Relief mine.

The mine is near the head of Relief Canyon, which heads south of Buffalo Peak and trends southeastward into Black Knob Valley. It is accessible from Lovelock by 20.2 miles of road and 2.5 miles of trail. To get to the mine go 5.8 miles northeasterly on U. S. Highway 40, then turn to the right and follow the Coal Canyon road 10.2 miles, then turn left and go 1.2 miles at which point turn to the right and go 2.1 miles to the Old Relief millsite at the mouth of Relief Canyon. It is possible to drive a car an additional 0.9 mile up Relief Canyon at which point a trail, formerly a wagon road, is followed approximately 2.5 miles up Relief Canyon to the mine.

The Eden Mines are owned by Gerry W. Eden of 1555 Elmhurst Street, Lovelock, Nev.

Portions of the history, geology, and description of the mine workings were taken from U. S. Geological Survey Bulletin 580-M, The Rochester Mining District, Nevada by Frank C. Schrader.

HISTORY

The Relief District was discovered in 1869 by P. Andrews and A. J. Knapp. The principal early mine was the Batavia & Pacific which shipped high-grade silver ore and operated a 10-stamp mill near the mouth of Relief Canyon. The mill was built by the Rochester Company and was removed in 1874.

From 1898 to 1905 the mine was owned and worked by Mr. Hardesty of Lovelock, Nev. In 1914 it was relocated by the Rochester Treasure Mining Co. of Lovelock. Mr. Gerry W. Eden relocated the property in 1946 and is the present owner. The property consists of 10 claims and a millsite.

Estimates as to production of the Old Relief silver mine range from $200,000 to $2,500,000, according to Schrader.

PHYSICAL FEATURES

The deposits lie at elevations of approximately 7,100 feet. The topography is steep and rugged.

Vegetation consists mostly of sagebrush and scattered juniper trees. The climate is very comfortable in summer; moderate during the day and cool at night, but the winters are severe. Rainfall, at times of cloudburst proportion and high winds are common.

The nearest shipping point, on the Southern Pacific Railroad, is 17 miles distant by road.

There are no plant and buildings at the property.

It is quite possible that a sufficient water supply for mine and camp use could be developed in Relief Canyon. A water supply for mill

use could be developed in the valley west of the Old Relief millsite.

The nearest city for supplies, etc. is Lovelock on the Southern Pacific Railroad, 22.7 miles distant.

A power line passes within half a mile of the Old Relief millsite.

GEOLOGY

The ore deposits at the Relief mine occur in limestone. The limestone, in thin to fairly thick beds, is dark gray to blackish in color and strikes northeast and dips 20° to 30° southwest. It is about 600 feet in thickness and is overlain by a great thickness of dark greenish andesite and underlain by light colored rhyolite. All these rocks belong to the Star Peak formation of Triassic age.

The old gold-silver workings are mainly along an irregular, elongated bull quartz pipe and the soft, limonitic vein matter found in lenses along the footwall. The levels are connected with stopes and raises which are now inaccessible. The quartz vein or pipe has a dip of 75°-80° and a rake slightly greater than the dip of the dark limestone it cuts. Along the massive quartz borders fine quartz stringers cut the limestone, and it is mainly along these that scheelite mineralization occurs as fine seams, and in places as large, widely spaced masses up to 4 inches. Some of these masses are visible in the bull quartz as well as adjacent to it.

MINE WORKINGS

The deposit is opened by tunnels and drifts. The first level is opened up by a 170-foot adit on the vein and connects with the surface by a large open stope. The second level approximately 50 feet below

the first level is opened up by a 180-foot adit on the vein. A winze has been sunk on the ore body from this level. The third level is 76 feet below the second level and consists of approximately 410 feet of drifts and crosscuts. Access to this level is through a 265-foot adit which crosscuts the limestone and at a point 230 feet from the portal reaches the quartz vein. A winze, of unknown depth, has been sunk on the ore body from this level. A fourth level, the portal of which is caved, is about 100 feet lower than the third level and is said to consist of a 375-foot crosscut tunnel and a 30-foot drift on the vein. A sketch of the first three levels of the mine is shown in figure 2.

SAMPLING

Four underground samples and eleven samples from the old mill tailings pond were taken.

The analyses of the mine samples follows:

Sample No.	Location	Ft. Width	% WO_3	Au Oz/T	Ag Oz/T
BM-1	3rd level	4.0	0.08	Trace	0.15
BM-2	2nd level	4.8	*0.01	0.005	0.75
BM-3	1st level	4.0	0.01	0.005	1.75
BM-4	1st level	1.0	1.02	Trace	0.20

* Less than.

The location of the above samples are shown in figure 2.

The analyses of samples taken from the mill tailings follows:

BM-1	Big tailing pond	4.4	0.12	0.005	9.65
BM-2	" " "	4.5	0.14	0.005	11.90
BM-3	" " "	3.0	0.11	0.005	8.85
BM-4	" " "	2.4	0.06	Trace	3.80
BM-5	" " "	0.7	0.01	Trace	0.95
BM-6	" " "	3.1	0.05	Trace	2.70
BM-7	" " "	4.2	0.09	0.005	9.25
BM-8	Composite of upper pond	0.5	*0.01	Trace	0.30

Sample No.	Location	Ft. Width	% WO_3	Au Oz/T	Ag Oz/T
BM-9	Between the 2 ponds	2.3	0.05	Trace	1.00
BM-10	" " " "	1.2	0.02	Trace	2.70
BM-11	Small pond 50 feet south of big pond	0.7	0.01	Trace	0.25

*Less than

11)66
.06%

A sketch of the two largest tailing ponds showing location of the samples is shown in figure 2.

ORE RESERVES

The analyses of the samples taken from the old mill tailing ponds and from the underground mine workings indicate that the property contains no appreciable tungsten ore reserves.

It is estimated that the big or lower mill tailing pond contains 300 tons of material containing approximately 0.10 percent WO_3 and 8.05 ounces of silver per ton. The gold content is less than 0.005 ounces per ton.

One sample taken from the first level of the mine workings carried 1.02 percent WO_3 content. A few feet either side of this sample the walls of the drift contain very little scheelite according to the ultra violet lamp. Therefore, it is assumed that only a few tons of commercial ore are represented by this sample. The underground samples were taken from selected locations after the workings were lamped.

CONCLUSIONS AND RECOMMENDATIONS

The Eden Mine does not contain appreciable ore reserves of commercial tungsten ore. The mine was not sampled to determine its silver ore reserves. The mine formerly operated as a silver mine.

It is recommended that the request for the access road consisting of approximately 1,500 feet of new road and the rebuilding of about 14 miles of old wagon road to the property be refused.

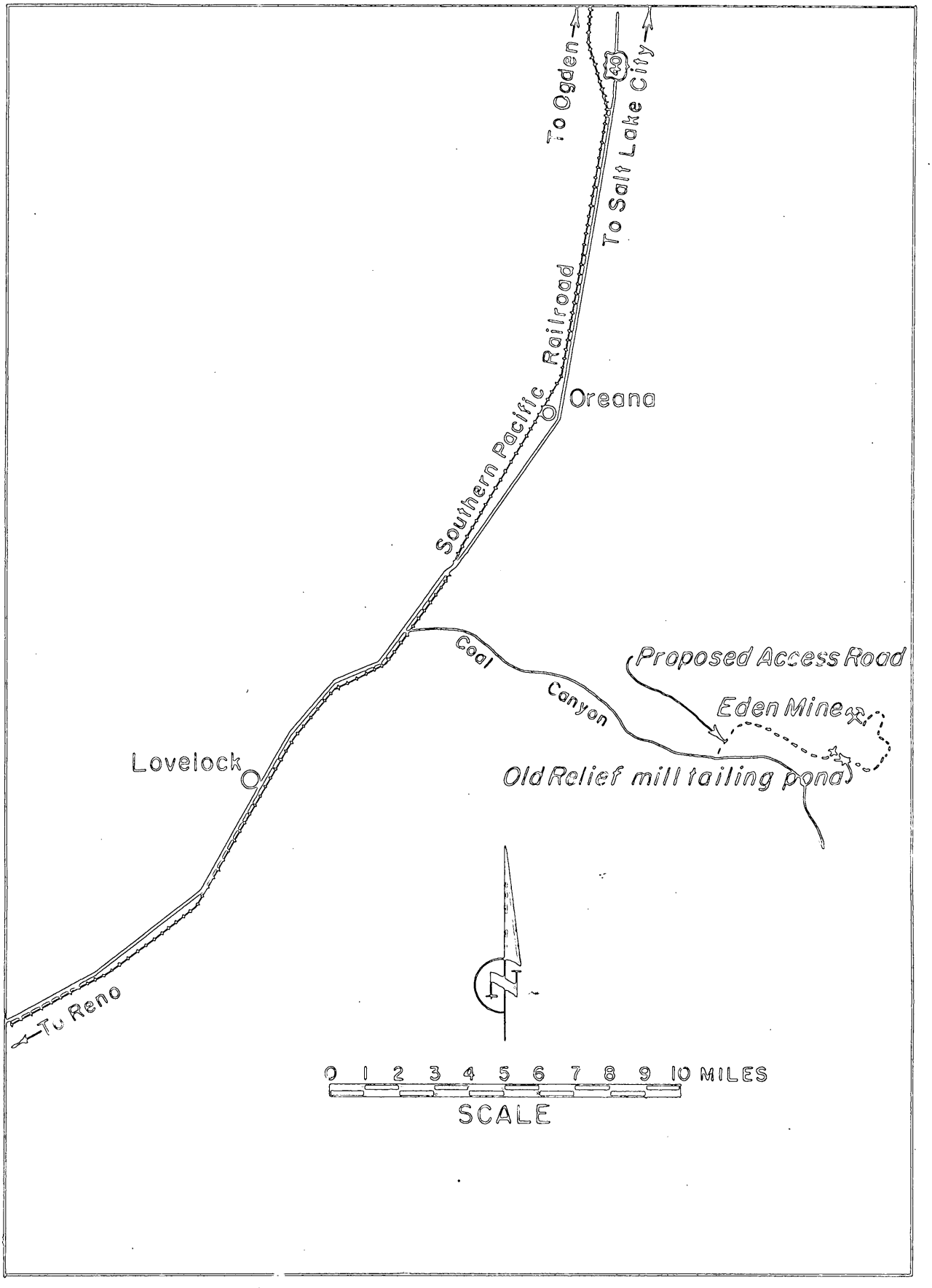

Fig. 1 - Location map, Eden mine, Pershing County, Nevada.

DEFENSE MINERALS
ADMINISTRATION
WASHINGTON, D. C.

OCT 18 9 15 AM '51

OCT 18 '51
Rec'd by
Mr. Holderer

401 Bridge St.
Winnemucca, Nevada
October 16, 1951

OFFICIAL FILE COPY

To		Date
3/0	a.s.c.	10-18

Mr. George B. Holderer
Chief, Tungsten Branch
U. S. Department of Interior
Defense Minerals Administration
Washington 25, D. C.

Subject: DMA-1943

Dear Mr. Holderer:

In reply to your letter of September 20, 1951, in which you request additional information for my D.M.A. application, Docket Number DMA 1943, I am submitting the following revised estimated schedule of exploration work for tungsten on my property located in Pershing County, Nevada:

Exploration work by drilling and diamond drilling from the surface and various mine levels, approximately 3700 feet, at an estimated contract drilling price of $37,000. Time schedule approximately 600 feet per month, total 6 months.

Rehabilitation of old mine workings for access in drilling and sampling program, $2,500. Time schedule approximately 2 weeks.

Salary, exploration engineer, $450.00 per month. Time schedule 6 months, total $2700.00.

Road rehabilitation for ingress and egress to property, in order to conduct diamond drilling, sampling, and general exploration work, total estimated cost, $5,500.00 Total estimated time schedule, approximately 2 weeks.

Miscellaneous drill set up roads and trails, $1,500.00

Miscellaneous - power, water, utilities, etc., $800.00

Estimated total cost,$50,000. Estimated total time, 6 months.

In answer to your request for assay maps, I will have to refer you to your San Francisco regional office as they have them. The Bureau of Mines and D.M.A. field engineer recently sampled and maped the property. The engineers borrowed my maps and field notes. Mr. L. F. Muller, of your Reno office, has advised me in a letter dated October 8, 1951, "that the assay data, sketches, and maps of the property and various levels, tracings, and report have been forwarded to San Francisco for processing." I trust that you now have this information.

I propose to drill and sample where the tungsten showings occur on the surface, and in the underground levels, to search for tungsten off the winzes and in the unknown and undeveloped parts of the old mine workings where there is sound geological evidences or reasons for exploration. This work will be conducted in recognized and sound procedures for obtaining the pertinent information as to the source and deposit of tungsten ore.

Trusting that this is the information you need, and hoping for speedy action, I remain,

Very truly yours,

Gerry W. Eden

Gerry W. Eden

gwe:dm

340

FILE COPY
SURNAME:

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

Holderer
Jacoby

SEP 20 1951

G. E. C.

Mr. Gerry W. Eden
401 Bridge Street
Winnemucca, Nevada

In reply please refer to
DMA-1943

Dear Mr. Eden:

In reviewing your application, the Tungsten Branch has found that additional information is required. We would like to point out that an "exploration project" means the search for unknown or undeveloped sources of strategic or critical metals or minerals within a specified area or parcel of ground in the United States, its territories or possessions, whether conducted from the surface or underground, including recognized and sound procedures for obtaining pertinent geological, geophysical, and geochemical information. The work shall not go beyond a reasonable delineation and sampling of the ore, and shall not include work prosecuted primarily for mining or preparation of mining. From this definition, it is evident that some of your proposed work is not exploration. It would not include such items as development work for mining, building of ore bins, or the installation of equipment other than that required for exploration work.

In your report on the property, you give assay figures but no supporting data. An assay map, showing the locations sampled and the assay results, is necessary. A geological map of the area would be of help. It will be necessary for you to submit a diagrammatic sketch of the proposed work. There should be cross sections which clearly show the vein outcrops, old workings and proposed explorations. All available reports showing the possibilities of tungsten are of importance. ← Note

Upon receipt of the requested information, further action will be taken on your application.

Very truly yours,

George B. Holderer
George B. Holderer
Chief, Tungsten Branch

CHJacoby:ll 9/20/51
CC: DMA Docket File
Adm. Reading File
Mr. Holderer

Mr. Gerry W. Eden
401 Bridge Street
Winnemucca, Nevada

In reply please refer to
DMA-1943

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George B. Holderer

George B. Holderer
Chief, Tungsten Branch

CHJacoby:ll 9/20/51
CC: DMA Docket File
Adm. Reading File
Mr. Holderer

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 1943

Date received 8-10-51

Participation

Gerry W. Eden
401 Bridge Street
Winnemucca, Nevada

Name and address of applicant

Date August 7, 1951

FILL IN THIS BLOCK

Date of application August 7, 1951

Estimated cost $50,000.00

Mineral or metal Tungsten

Percentage of Government participation 75%

Location of mine Relief Mining District

Pershing County, Nevada

Date of filing MF-100

DMA Docket Number, if available 1943

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 [illegible] 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.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 10 1951

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? Individual.

*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. See attached sheet.

*5. Are you the owner or the lessee of the property? Owner.

6. If owner, state what claims, liens, or encumbrances, if any, are against the property. None.

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. See Attachment.

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)? Yes, one fourth, equipment and machinery as stated in Question 8.

*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. See attached sheet.

(*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. Eden, formerly Relief Mine.

*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. 20 miles NE Lovelock, Nevada.

*13. State source and quantity of water available for operations and its sufficiency at all seasons. Spring, sufficient. State amount of power to be used, rate per hour or other cost, and source. Sierra Pacific-1½ mi. distant.

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

15. State in detail how the ore could be shipped and how and where milled. Shipped by truck to Toulon Mill, Lovelock, Nevada

*16. History: See attached sheet.

(*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: See attached sheet.

(*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.) Has not operated since 1873.

(*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? WO_3.

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

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. See attached Report.

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: See attached sheet.

(*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. See attached sheet.

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.

Eden Mines
(Name of company)

By Gerry W. Eden
(Signature of authorized official)

August 7, 1951
(Date)

Owner
(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

Gerry W. Eden
401 Bridge Street
Winnemucca, Nevada

4. (a) Gerry W. Eden
(b) Same
A. B. degree in Economics, University of Nevada, 1923; graduate work in Mineralogy, Geology and Mining practice; thirteen years executive experience oil and hard rock mining; ten years administrative and managerial experience in government and Public Service; five years High School teacher and administrator. Born and reared in mining camps of Mother-lode district, California. Went to work in mines at age of sixteen, continued summer vacation mining through High School and College. Have had approximately ten years proactical experience in about every job around Nevada and California mines from mucker to general manager. Partner in Assay Office for one year. Owned, operated and developed and organized several for self. A few of the mining companies I have worked for are: Champion Gold Mines, Nevada City, California; North Star-Empire Mines, Grass Valley, California; 16-1 and Tightner, Allegheney, California; Con. Virginia, Virginia City, Nevada; Gem Mine, Panamints, California; Kearsarge Mine, Independence, California; Newmont Mining Co., New York City. During the last war four years War Manpower Commissioner, Reno, Nevada, in charge of keeping strategic mines of Nevada supplied with men. Prospected Nevada state extensively for gold and strategic metals.

8.

Liabilities	Assets	
None	Relief Mine: approximately one half million dollars developed ore.	
	mining machinery	$3,000.00
	camp outfit	2,000.00
	office building in Lovelock	6,000.00
	office and engineering equipment	1,000.00
	Total equipment and building	$12,000.00

10. (a) Eden Mines; Relief unpatented claim, Relief Mining District, Pershing County, Nevada
(b) Same as above.

16. (a) Property discovered about 1853. Worked as gold-silver mine until 1874, when the drop in price of silver closed mine. Mill and buildings removed that year. Mine reported to have produced two and one half million dollars. Over 2,000 feet of developed workings. Mine relocated in 1946 by Gerry W. Eden, of Lovelock, Nevada, who found tungsten in mine and has been prospecting same for past three years. Has developed approximately 3,000 tons of 1½% - 6% ore, but money needed for extensive exploration and blocking. Has possibilities of making a big tungsten producer.
(b) Not known.
(c) Private report by owner attached. Also examinations have been made this year by Royce Hardy, M. E., Superintendent Getchell Mine; assays run by Getchell Mine; Red House, Nevada. Engineering and metallurgical examination this year by William R. Marshall, M. E. (present address: Francis Scott Key Hotel, Washington, D. C.). These reports can be obtained by writing these engineers at above address.

It is recommended that approximately one half mile of road be re-built, about five miles of old wagon road re-conditioned, and mine retimbered, and necessary equipment and machinery installed to develop the discovery of WO_3 on the first level of mine.

17. Mine not in production since 1874.

21. Road building, approximately 10 days; timbering mine, 2 weeks; laying track, installing air compressor and other necessary machinery, 2 weeks; building ore bins and chutes, 2 weeks; approximately 2 months. Engineering, mapping and developing ore, 10 months; total approximately 1 year.

23. To start operation:
    (a) One miner, one mucker, possibly "tributors" (lessors), miner's scale $1.43 per hour, mucker $1.38 per hour. 1½ O. T. (over 40 hours).
    (b) One engineer, $450.00 month; one general manager , $500.00 month; one clerk, $250.00 month; one laborer $300.00 month, to start operation.
    (c) $17,000.00. Will have to build new.
    (d) $10,000.00
    (e) $100,000.00
    (f) $2,000.00
    (g) $3,000.00
    (h) $3,000.00
    (i) $3,000.00

24. Should be mining within 2 months from day operation starts and shipping ore should pay for some or all of operating costs after 2 months, but operation is set up for one year to prospect and develop ore body. Expect to spend approximately $50,000.00.

August 7, 1951
401 Bridge Street
Winnemucca, Nevada

REPORT ON THE Eden (RELIEF) MINE

by

Gerry W. Eden

The Eden, or Old Relief mine, is located in the Relief Mining District, Pershing,County, Nevada; approximately twenty miles northeast of Lovelock, about four miles south of Nenzel Hill, Rochester, in the southern end of the Humboldt Range, and the ore deposits differ from the Rochester District in that they occur in limestone and appear to belong to the general class of deposits that occur in the Star Peak Range.

The deposit was discovered in the early sixties and was worked mainly in the seventies. Estimates of its production are $2,500,000. Much of the ore produced was very rich and contained chiefly silver chloride with some bromide, and considerable native silver, some of which formed fine specimens. It apparently contained argentite also. According to J. T. Reid, a carload of the ore shipped to Swansea, Wales, yielded $22,000.

Afterward the mine was worked by the old Rochester Co., and still later by Bailey, who for a time took out much rich ore with large profits. Part of the ore was treated by pan amalgamation in a 10-stamp mill built by the Rochester Co. near the mouth of Relief Canyon. This mill was removed in 1874 when the mine shut down. It was reopened in 1898 and was worked intermittently by Mr. Hardesty of Lovelock until 1905, with fair results. It is now owned by Gerry W. Eden of Lovelock.

The mine is near the head of Relief Canyon, which heads south of Buffalo Peak and opens southeastward into Black Knob Valley. It lies at an elevation of about 7,000 feet. There was a good wagon road to the mine, but about 1,500 feet has been washed out by recent floods which necessitates walking the last two miles to the mine.

The deposit is a quartz vein or lode, from 15 to 30 feet wide, in limestone. It dips about 55 degrees West, though the limestone dips 40 degrees SW. The limestone is dark gray, in thin to moderately thick beds, partly slaty, and had a thickness of 600 feet or more. It is underlain by light-colored rhyolite, with which it seems to be conformable, and is overlain by a great thickness of dark-greenish, partly schistose andesite, which appears to extend from the vicinity of the mine to the mouth of the canyon, 2 miles distant. The rhyolite is dense and consists chiefly of a microfalsitic to glassy base in which are a few small squeezed phenocrysts of quartz microcline and microperthite.

These rocks all belong to the Star Peak formation. The contact of the limestone with the rhyolite is about 200 feet from the mine on the north, but no rhyolite has been cut in the workings. In the vicinity of the vein the linestone is in part silicified.

The deposit is opened chiefly by tunnels and drifts for a horizontal distance of nearly 1,000 feet and through a vertical range of about 320 feet. Croppings of quartz that has replaced calcite veinlets and limestone occur also 80 feet above the highest workings.

The vein is strong at nearly all places where it has been exposed, but the ore occurs mainly as pockets or disconnected bodies ranging in value from a thousand to several thousand dollars. The rich ore occurs mostly on the hanging-wall side of the vein and that formerly stoped came mainly from the upper and middle levels.

The 200 foot or Blacksmith Shop level is at an elevation of about 7,000 feet and comprises several hundred feet of drifts. Access is gained to it through a 280 foot tunnel, which crosscuts the limestone and at a point 250 feet from the portal reaches the vein. At this place the vein is large, about 50 feet wide, and contains, besides stringers of quartz, considerable calcite and layers of limestone, all dipping 60 degrees NW. The calcite and the limestone seem to be in part replaced by the quartz, which was introduced in solution with the ore minerals. The quartz in general is banded and contains some small vugs lined with druses of crystalline quartz. These vugs do not contain ore. A winze approximatly 300 feet deep was sunk on the ore body at this level.

On a level about 100 feet lower, consisting of a 375 foot crosscut tunnel and a 30 foot drift on the vein, occurs gougelike material some of which will assay from six to fifteen dollars a ton in gold and silver.

The upper or 100 foot level, which is about 150 feet above the second level, is opened mainly by a 200 foot tunnel on the vein. The vein, for some distance from the portal, is 3 feet wide and consists of mottled ore. It carries on its hanging wall 6 inches of what appears to be reddish gouge. Farther in, however, this soft material becomes good ore, 2½ feet in width, and the ore body has here been stoped to a width of at 5½ feet to the surface. Much of the high grade ore extracted in early days came from this level. There are two winzes on this level which connect with the second or lower levels. About 25 feet from the south winze on this level occurs an intrusion which could be a dyke, or perhaps it is a water course. This dyke shows Wo_3 under the tungsten lamp and the tungsten vein here has been opened to about 25 feet and appears to be from 14 inches to 40 inches wide. At 30 inches wide the vein was cut from wall to wall and assayed 1.5% Wo_3 and $6.50 in gold and .50 in silver. A few feet from this point, at a width of 40 inches two large chunks assayed 6% Wo_3 and about the same gold and silver content. We know this dyke goes through to the surface, approximately 100 feet. There has not been any cross drifting on the lower levels to determine if the tungsten goes to any greater depth, although there are indications on the second level. The tungstent discovery was made by the writer; the old timers apparently did not know anything about it. A test of the tailings pond at the Old Relief millsite went 0.3% Wo_3, and $3.00 Au and Ag. There are approximately 1,500 tons of these tailings. The large quartz vein has not been assayed for tungsten, however, the lamp shows traces of it in places. About 60 feet above the first or 100 foot level is a large open or daylight stope (mentioned above), which shows that the main part of the lode consists, for a width of 14 feet, of yellowish-brown crushed quartz, next to which, on the hanging wall side, is 16 feet of rather siliceous mineralized material, including some limestone, all more or less banded and dipping about 50 degrees SSW. The deposit here contains also some crushed material suggestive of altered igneous rock. About 10 feet south of the winze here the tungsten vein in approximately 40 inches wide and assays 8-10% Wo_3.

The three old dumps are really stockpiles of white quartz and can be profitably milled under favorable conditions. It is estimated that they contain approximately 20,000 tons of ore.

This mine was originally a high grade gold and silver property, but with the discovery of tungsten on the 100 foot level, and the nature of the ore and contact, indicate that it is quite possible that this might develop into a very rich tungsten body.

The Sierra Pacific power line runs within a mile and a half of the property; water can be developed nearby; and the old road can be put into condition for trucks at a nominal cost. There are no equipment or buildings at the property, however, the close proximity to Lovelock, and good roads will eliminate the expense of a camp.

August 13, 1951

Mr. Gerry W. Eden
401 Bridge Street
Winnemucca, Nevada

Subject: Exploration Loan
Re: DMA-1943

My dear Mr. Eden:

This will acknowledge receipt of your application dated August 7, 1951 for a loan under the Defense Production Act of 1950.

Your application was assigned Docket Number DMA- 1943 and referred to the Ferro Alloys Branch.

Kindly refer to DMA-1943 in any future correspondence relating to your application.

Sincerely yours,

Robert E. Adams

Robert E. Adams, Chief
Reports and Records Unit

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 1943

Date received 8-10-51

Participation

Gerry W. Eden
401 Bridge Street
Winnemucca, Nevada

Name and address of applicant

Date August 7, 1951

FILL IN THIS BLOCK

Date of application August 7, 1951

Estimated cost $50,000.00

Mineral or metal Tungsten

Percentage of Government participation 75%

Location of mine Relief Mining District
Pershing County, Nevada

Date of filing MF-100

DMA Docket Number, if available 1943

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.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 10 1951

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? Individual.
*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. See attached sheet.
*5. Are you the owner or the lessee of the property? Owner.
6. If owner, state what claims, liens, or encumbrances, if any, are against the property. None.
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. See Attachment.
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)? Yes, one fourth, equipment and machinery as stated in Question 8.

*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. See attached sheet.

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

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*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. 20 miles NE Lovelock, Nevada.

*13. State source and quantity of water available for operations and its sufficiency at all seasons. Spring, sufficient.
State amount of power to be used, rate per hour or other cost, and source. Sierra Pacific-1½ mi. distant.

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

15. State in detail how the ore could be shipped and how and where milled. Shipped by truck to Toulon Mill, Lovelock, Nevada

*16. History: See attached sheet.

(*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.

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(*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.) Has not operated since 1873.

(*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? WO_3.

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

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

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THE REQUIREMENTS AND COSTS

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(*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. See attached sheet.

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.

Eden Mines
(Name of company)

By Gerry W. Eden
(Signature of authorized official)

August 7, 1951
(Date)

Owner
(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

Gerry W. Eden
401 Bridge Street
Winnemucca, Nevada

4. (a) Gerry W. Eden
(b) Same
A. B. degree in Economics, University of Nevada, 1923; graduate work in Mineralogy, Geology and Mining practice; thirteen years executive experience oil and hard rock mining; ten years administrative and managerial experience in government and Public Service; five years High School teacher and administrator. Born and reared in mining camps of Mother-lode district, California. Went to work in mines at age of sixteen, continued summer vacation mining through High School and College. Have had approximately ten years proactical experience in about every job around Nevada and California mines from mucker to general manager. Partner in Assay Office for one year. Owned, operated and developed and organized several for self. A few of the mining companies I have worked for are: Champion Gold Mines, Nevada City, California; North Star-Empire Mines, Grass Valley, California; 16-1 and Tightner, Alleghaney, California; Con. Virginia, Virginia City, Nevada; Gem Mine, Panamints, California; Kearsarge Mine, Independence, California; Newmont Mining Co., New York City. During the last war four years War Manpower Commissioner, Reno, Nevada, in charge of helping strategic mines of Nevada supplied with men. Prospected Nevada state extensively for gold and strategic metals.

8. Liabilities
None

Assets	
Relief Mine: approximately one half million dollars developed ore.	
mining machinery	$3,000.00
camp outfit	2,000.00
office building in Lovelock	6,000.00
office and engineering equipment	1,000.00
Total equipment and building	$12,000.00

10. (a) Eden Mines; Relief unpatented claim, Relief Mining District, Pershing County, Nevada
(b) Same as above.

16. (a) Property discovered about 1853. Worked as gold-silver mine until 1874, when the drop in price of silver closed mine. Mill and buildings removed that year. Mine reported to have produced two and one half million dollars. Over 2,000 feet of developed workings. Mine relocated in 1946 by Gerry W. Eden, of Lovelock, Nevada, who found tungsten in mine and has been prospecting same for past three years. Has developed approximately 3,000 tons of 1½% - 6% ore, but money needed for extensive exploration and blocking. Has possibilities of making a big tungsten producer.
(b) Not known.
(c) Private report by owner attached. Also examinations have been made this year by Royce Hardy, M. E., Superintendent Getchell Mine; assays run by Getchell Mine; Red House, Nevada. Engineering and metallurgical examination this year by William R. Marshall, M. E. (present address: Francis Scott Key Hotel, Washington, D. C.). These reports can be obtained by writing these engineers at above address.

It is recommended that approximately one half mile of road be re-built, about five miles of old wagon road re-conditioned, and mine retimbered, and necessary equipment and machinery installed to develop the discovery of WO_3 on the first level of mine.

17. Mine not in production since 1874.

21. Road building, approximately 10 days; timbering mine, 2 weeks; laying track, installing air compressor and other necessary machinery, 2 weeks; building ore bins and chutes, 2 weeks; approximately 2 months. Engineering, mapping and developing ore, 10 months; total approximately 1 year.

23. To start operation:
    (a) One miner, one mucker, possible "tributors" (lessors), miner's scale $1.43 per hour, mucker $1.38 per hour. 1½ O. T. (over 40 hours).
    (b) One engineer, $450.00 month; one general manager , $500.00 month; one clerk, $250.00 month; one laborer $300.00 month, to start operation.
    (c) $17,000.00. Will have to build new.
    (d) $10,000.00
    (e) $10,000.00
    (f) $2,000.00
    (g) $3,000.00
    (h) $3,000.00
    (i) $3,000.00

24. Should be mining within 2 months from day operation starts and shipping ore should pay for some or all of operating costs after 2 months, but operation is set up for one year to prospect and develop ore body. Expect to spend approximately $50,000.00.

August 7, 1951
401 Bridge Street
Winnemucca, Nevada

REPORT ON THE RELIEF MINE

by

Gerry W. Eden

The Eden, or Old Relief mine, is located in the Relief Mining District, Pershing,County, Nevada; approximately twenty miles northeast of Lovelock, about four miles south of Nenzel Hill, Rochester, in the southern end of the Humboldt Range, and the ore deposits differ from the Rochester District in that they occur in limestone and appear to belong to the general class of deposits that occur in the Star Peak Range.

The deposit was discovered in the early sixties and was worked mainly in the seventies. Estimates of its production are $2,500,000. Much of the ore produced was very rich and contained chiefly silver chloride with some bromide, and considerable native silver, some of which formed fine specimens. It apparently contained argentite also. According to J. T. Reid, a carload of the ore shipped to Swansea, Wales, yielded $22,000.

Afterward the mine was worked by the old Rochester Co., and still later by Bailey, who for a time took out much rich ore with large profits. Part of the ore was treated by pan amalgamation in a 10-stamp mill built by the Rochester Co. near the mouth of Relief Canyon. This mill was removed in 1874 when the mine shut down. It was reopened in 1898 and was worked intermittently by Mr. Hardesty of Lovelock until 1905, with fair results. It is now owned by Gerry W. Eden of Lovelock.

The mine is near the head of Relief Canyon, which heads south of Buffalo Peak and opens southeastward into Black Knob Valley. It lies at an elevation of about 7,000 feet. There was a good wagon road to the mine, but about 1,500 feet has been washed out by recent floods which necessitates walking the last two miles to the mine.

The deposit is a quartz vein or lode, from 15 to 30 feet wide, in limestone. It dips about 55 degrees West, though the limestone dips 40 degrees SW. The limestone is dark gray, in thin to moderately thick beds, partly slaty, and had a thickness of 600 feet or more. It is underlain by light-colored rhyolite, with which it seems to be conformable, and is overlain by a great thickness of dark-greenish, partly schistose andesite, which appears to extend from the vicinity of the mine to the mouth of the canyon, 2 miles distant. The rhyolite is dense and consists chiefly of a microfalsitic to glassy base in which are a few small squeezed phenocrysts of quartz microcline and microperthite.

These rocks all belong to the Star Peak formation. The contact of the limestone with the rhyolite is about 200 feet from the mine on the north, but no rhyolite has been cut in the workings. In the vicinity of the vein the linestone is in part silicified.

The deposit is opened chiefly by tunnels and drifts for a horizontal distance of nearly 1,000 feet and through a vertical range of about 320 feet. Croppings of quartz that has replaced calcite veinlets and limestone occur also 80 feet above the highest workings.

The vein is strong at nearly all places where it has been exposed, but the ore occurs mainly as pockets or disconnected bodies ranging in value from a thousand to several thousand dollars. The rich ore occurs mostly on the hanging-wall side of the vein and that formerly stoped came mainly from the upper and middle levels.

The 200 foot or Blacksmith Shop level is at an elevation of about 7,000 feet and comprises several hundred feet of drifts. Access is gained to it through a 280 foot tunnel, which crosscuts the limestone and at a point 250 feet from the portal reaches the vein. At this place the vein is large, about 50 feet wide, and contains, besides stringers of quartz, considerable calcite and layers of limestone, all dipping 60 degrees NW. The calcite and the limestone seem to be in part replaced by the quartz, which was introduced in solution with the ore minerals. The quartz in general is banded and contains some small vugs lined with druses of crystalline quartz. These vugs do not contain ore. A winze approximatly 300 feet deep was sunk on the ore body at this level.

On a level about 100 feet lower, consisting of a 375 foot crosscut tunnel and a 30 foot drift on the vein, occurs gougelike material some of which will assay from six to fifteen dollars a ton in gold and silver.

The upper or 100 foot level, which is about 150 feet above the second level, is opened mainly by a 200 foot tunnel on the vein. The vein, for some distance from the portal, is 3 feet wide and consists of mottled ore. It carries on its hanging wall 6 inches of what appears to be reddish gouge. Farther in, however, this soft material becomes good ore, 2½ feet in width, and the ore body has here been stoped to a width of at 5½ feet to the surface. Much of the high grade ore extracted in early days came from this level. There are two winzes on this level which connect with the second or lower levels. About 25 feet from the south winze on this level occurs an intrusion which could be a dyke, or perhaps it is a water course. This dyke shows Wo_3 under the tungsten lamp and the tungsten vein here has been opened to about 25 feet and appears to be from 14 inches to 40 inches wide. At 30 inches wide the vein was cut from wall to wall and assayed 1.5% Wo_3 and $6.50 in gold and .50 in silver. A few feet from this point, at a width of 40 inches two large chunks assayed 6% Wo_3 and about the same gold and silver content. We know this dyke goes through to the surface, approximately 100 feet. There has not been any cross drifting on the lower levels to determine if the tungsten goes to any greater depth, although there are indications on the second level. The tungsten discovery was made by the writer; the old timers apparently did not know anything about it. A test of the tailings pond at the Old Relief millsite went 0.3% Wo_3, and $3.00 Au and Ag. There are approximately 1,500 tons of these tailings. The large quartz vein has not been assayed for tungsten, however, the lamp shows traces of it in places. About 60 feet above the first or 100 foot level is a large open or daylight stope (mentioned above), which shows that the main part of the lode consists, for a width of 14 feet, of yellowish-brown crushed quartz, next to which, on the hanging wall side, is 16 feet of rather siliceous mineralized material, including some limestone, all more or less banded and dipping about 50 degrees SSW. The deposit here contains also some crushed material suggestive of altered igneous rock. About 10 feet south of the winze here the tungsten vein in approximately 40 inches wide and assays 8-10% Wo_3.

The three old dumps are really stockpiles of white quartz and can be profitably mill under favorable conditions. It is estimated that they contain approximately 20,000 tons of ore.

This mine was originally a high grade gold and silver property, but with the discovery of tungsten on the 100 foot level, and the nature of the ore and contact, indicate that it is quite possible that this might develop into a very rich tungsten body.

The Sierra Pacific power line runs within a mile and a half of the property; water can be developed nearby; and the old road can be put into condition for trucks at a nominal cost. There are no equipment or buildings at the property, however, the close proximity to Lovelock, and good roads will eliminate the expense of a camp.

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 1943

Date received 8-10-51

Participation

Gerry W. Eden
401 Bridge Street
Winnemucca, Nevada

Name and address of applicant

Date August 7, 1951

FILL IN THIS BLOCK

Date of application August 7, 1951

Estimated cost $50,000.00

Mineral or metal Tungsten

Percentage of Government participation 75%

Location of mine Relief Mining District
Pershing County, Nevada

Date of filing MF-100

DMA Docket Number, if available 1943

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.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 10 1951

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? Individual.

*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. See attached sheet.

*5. Are you the owner or the lessee of the property? Owner.

6. If owner, state what claims, liens, or encumbrances, if any, are against the property. None.

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. See Attachment.

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)? Yes, one fourth, equipment and machinery as stated in Question 8.

*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. See attached sheet.

(*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. Eden, formerly Relief Mine.

*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. 20 miles NE Lovelock, Nevada.

*13. State source and quantity of water available for operations and its sufficiency at all seasons. Spring, sufficient.
State amount of power to be used, rate per hour or other cost, and source Sierra Pacific-1½ mi. distant.

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

15. State in detail how the ore could be shipped and how and where milled. Shipped by truck to Toulon Mill, Lovelock, Nevada

*16. History: See attached sheet.

(*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: See attached sheet.

(*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.) Has not operated since 1873.

(*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? Wo3.

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

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. See attached Report.

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: See attached sheet.

(*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. See attached sheet.

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.

Eden Mines
(Name of company)

By Gerry W. Eden
(Signature of authorized official)

August 7, 1951
(Date)

Owner
(Title)

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August 7, 1951
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Winnemucca, Nevada

REPORT ON THE RELIEF MINE

by

Gerry W. Eden

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The deposit is a quartz vein or lode, from 15 to 30 feet wide, in limestone. It dips about 55 degrees West, though the limestone dips 40 degrees SW. The limestone is dark gray, in thin to moderately thick beds, partly slaty, and had a thickness of 600 feet or more. It is underlain by light-colored rhyolite, with which it seems to be conformable, and is overlain by a great thickness of dark-greenish, partly schistose andesite, which appears to extend from the vicinity of the mine to the mouth of the canyon, 2 miles distant. The rhyolite is dense and consists chiefly of a microfalsitic to glassy base in which are a few small squeezed phenocrysts of quartz microcline and microperthite.

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On a level about 100 feet lower, consisting of a 375 foot crosscut tunnel and a 30 foot drift on the vein, occurs gougelike material some of which will assay from six to fifteen dollars a ton in gold and silver.

The upper or 100 foot level, which is about 150 feet above the second level, is opened mainly by a 200 foot tunnel on the vein. The vein, for some distance from the portal, is 3 feet wide and consists of mottled ore. It carries on its hanging wall 6 inches of what appears to be reddish gouge. Farther in, however, this soft material becomes good ore, 2½ feet in width, and the ore body has here been stoped to a width of at 5½ feet to the surface. Much of the high grade ore extracted in early days came from this level. There are two winzes on this level which connect with the second or lower levels. About 25 feet from the south winze on this level occurs an intrusion which could be a dyke, or perhaps it is a water course. This dyke shows Wo_3 under the tungsten lamp and the tungsten vein here has been opened to about 25 feet and appears to be from 14 inches to 40 inches wide. At 30 inches wide the vein was cut from wall to wall and assayed 1.5% Wo_3 and $6.50 in gold and .50 in silver. A few feet from this point, at a width of 40 inches two large chunks assayed 6% Wo_3 and about the same gold and silver content. We know this dyke goes through to the surface, approximately 100 feet. There has not been any cross drifting on the lower levels to determine if the tungsten goes to any greater depth, although there are indications on the second level. The tungsten discovery was made by the writer; the old timers apparently did not know anything about it. A test of the tailings pond at the Old Relief millsite went 0.3% Wo_3, and $3.00 Au and Ag. There are approximately 1,500 tons of these tailings. The large quartz vein has not been assayed for tungsten, however, the lamp shows traces of it in places. About 60 feet above the first or 100 foot level is a large open or daylight stope (mentioned above), which shows that the main part of the lode consists, for a width of 14 feet, of yellowish-brown crushed quartz, next to which, on the hanging wall side, is 16 feet of rather siliceous mineralized material, including some limestone, all more or less banded and dipping about 50 degrees SSW. The deposit here contains also some crushed material suggestive of altered igneous rock. About 10 feet south of the winze here the tungsten vein in approximately 60 inches wide and assays 8-10% Wo_3.

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The Sierra Pacific power line runs within a mile and a half of the property; water can be developed nearby; and the old road can be put into condition for trucks at a nominal cost. There are no equipment or buildings at the property, however, the close proximity to Lovelock, and good roads will eliminate the expense of a camp.

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 1943

Date received 8-10-51

Participation

Gerry W. Eden
401 Bridge Street
Winnemucca, Nevada

Name and address of applicant

Date August 7, 1951

FILL IN THIS BLOCK

Date of application August 7, 1951

Estimated cost $50,000.00

Mineral or metal Tungsten

Percentage of Government participation 75%

Location of mine Relief Mining District
Pershing County, Nevada

Date of filing MF-100

DMA Docket Number, if available 1943

INSTRUCTIONS

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DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 10 1951

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? Individual.
*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. See attached sheet.
*5. Are you the owner or the lessee of the property? Owner.
6. If owner, state what claims, liens, or encumbrances, if any, are against the property. None.
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. See Attachment.
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)? Yes, one fourth, equipment and machinery as stated in Question 8.

*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. See attached sheet.
    (*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. Eden, formerly Relief Mine.

*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. 20 miles NE Lovelock, Nevada.

*13. State source and quantity of water available for operations and its sufficiency at all seasons. Spring, sufficient.
State amount of power to be used, rate per hour or other cost, and source Sierra Pacific-1½ mi. distant.

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

15. State in detail how the ore could be shipped and how and where milled. Shipped by truck to Toulon Mill, Lovelock, Nevada

*16. History: See attached sheet.
    (*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: See attached sheet.
    (*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.) Has not operated since 1873.
    (*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? Wo3.

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

    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. See attached Report.

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: See attached sheet.
    (*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. See attached sheet.

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.

Eden Mines
(Name of company)

By Gerry W. Eden
(Signature of authorized official)

August 7, 1951
(Date)

Owner
(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

Gerry W. Eden
401 Bridge Street
Winnemucca, Nevada

4. (a) Gerry W. Eden
   (b) Same
   A. B. degree in Economics, University of Nevada, 1923; graduate work in Mineralogy, Geology and Mining practice; thirteen years executive experience oil and hard rock mining; ten years administrative and managerial experience in government and Public Service; five years High School teacher and administrator. Born and reared in mining camps of Mother-lode district, California. Went to work in mines at age of sixteen, continued summer vacation mining through High School and College. Have had approximately ten years proactical experience in about every job around Nevada and California mines from mucker to general manager. Partner in Assay Office for one year. Owned, operated and developed and organized several for self. A few of the mining companies I have worked for are: Champion Gold Mines, Nevada City, California; North Star-Empire Mines, Grass Valley, California; 16-1 and Tightner, Allegheney, California; Con. Virginia, Virginia City, Nevada; Gem Mine, Panamints, California; Kearsarge Mine, Independence, California; Newmont Mining Co., New York City. During the last war four years War Manpower Commissioner, Reno, Nevada, in charge of helping strategic mines of Nevada supplied with men. Prospected Nevada state extensively for gold and strategic metals.

8. Liabilities
   None

Assets	
Relief Mine: approximately one half million dollars developed ore.	
mining machinery	$3,000.00
camp outfit	2,000.00
office building in Lovelock	6,000.00
office and engineering equipment	1,000.00
Total equipment and building	$12,000.00

10. (a) Eden Mines; Relief unpatented claim, Relief Mining District, Pershing County, Nevada
    (b) Same as above.

16. (a) Property discovered about 1853. Worked as gold-silver mine until 1874, when the drop in price of silver closed mine. Mill and buildings removed that year. Mine reported to have produced two and one half million dollars. Over 2,000 feet of developed workings. Mine relocated in 1946 by Gerry W. Eden, of Lovelock, Nevada, who found tungsten in mine and has been prospecting same for past three years. Has developed approximately 3,000 tons of 1½% - 6% ore, but money needed for extensive exploration and blocking. Has possibilities of making a big tungsten producer.
    (b) Not known.
    (c) Private report by owner attached. Also examinations have been made this year by Royce Hardy, M. E., Superintendent Getchell Mine; assays run by Getchell Mine; Red House, Nevada. Engineering and metallurgical examination this year by William R. Marshall, M. E. (present address: Francis Scott Key Hotel, Washington, D. C.). These reports can be obtained by writing these engineers at above address.

    It is recommended that approximately one half mile of road be re-built, about five miles of old wagon road re-conditioned, and mine retimbered, and necessary equipment and machinery installed to develop the discovery of WO_3 on the first level of mine.

17. Mine not in production since 1874.

21. Road building, approximately 10 days; timbering mine, 2 weeks; laying track, installing air compressor and other necessary machinery, 2 weeks; building ore bins and chutes, 2 weeks; approximately 2 months. Engineering, mapping and developing ore, 10 months; total approximately 1 year.

23. To start operation:
    (a) One miner, one mucker, possible "tributors" (lessors), miner's scale $1.43 per hour, mucker $1.38 per hour. 1½ O. T. (over 40 hours).
    (b) One engineer, $450.00 month; one general manager , $500.00 month; one clerk, $250.00 month; one laborer $300.00 month, to start operation.
    (c) $17,000.00. Will have to build new.
    (d) $10,000.00
    (e) $10,000.00
    (f) $2,000.00
    (g) $3,000.00
    (h) $3,000.00
    (i) $3,000.00

24. Should be mining within 2 months from day operation starts and shipping ore should pay for some or all of operating costs after 2 months, but operation is set up for one year to prospect and develop ore body. Expect to spend approximately $50,000.00.

August 7, 1951
401 Bridge Street
Winnemucca, Nevada

REPORT ON THE RELIEF MINE

by

Gerry W. Eden

The Eden, or Old Relief mine, is located in the Relief Mining District, Pershing,County, Nevada; approximately twenty miles northeast of Lovelock, about four miles south of Nenzel Hill, Rochester, in the southern end of the Humboldt Range, and the ore deposits differ from the Rochester District in that they occur in limestone and appear to belong to the general class of deposits that occur in the Star Peak Range.

The deposit was discovered in the early sixties and was worked mainly in the seventies. Estimates of its production are $2,500,000. Much of the ore produced was very rich and contained chiefly silver chloride with some bromide, and considerable native silver, some of which formed fine specimens. It apparently contained argentite also. According to J. T. Reid, a carload of the ore shipped to Swansea, Wales, yielded $22,000.

Afterward the mine was worked by the old Rochester Co., and still later by Bailey, who for a time took out much rich ore with large profits. Part of the ore was treated by pan amalgamation in a 10-stamp mill built by the Rochester Co. near the mouth of Relief Canyon. This mill was removed in 1874 when the mine shut down. It was reopened in 1898 and was worked intermittently by Mr. Hardesty of Lovelock until 1905, with fair results. It is now owned by Gerry W. Eden of Lovelock.

The mine is near the head of Relief Canyon, which heads south of Buffalo Peak and opens southeastward into Black Knob Valley. It lies at an elevation of about 7,000 feet. There was a good wagon road to the mine, but about 1,500 feet has been washed out by recent floods which necessitates walking the last two miles to the mine.

The deposit is a quartz vein or lode, from 15 to 30 feet wide, in limestone. It dips about 55 degrees West, though the limestone dips 40 degrees SW. The limestone is dark gray, in thin to moderately thick beds, partly slaty, and had a thickness of 600 feet or more. It is underlain by light-colored rhyolite, with which it seems to be conformable, and is overlain by a great thickness of dark-greenish, partly schistose andesite, which appears to extend from the vicinity of the mine to the mouth of the canyon, 2 miles distant. The rhyolite is dense and consists chiefly of a microfelsitic to glassy base in which are a few small squeezed phenocrysts of quartz microcline and microperthite.

These rocks all belong to the Star Peak formation. The contact of the limestone with the rhyolite is about 200 feet from the mine on the north, but no rhyolite has been cut in the workings. In the vicinity of the vein the linestone is in part silicified.

The deposit is opened chiefly by tunnels and drifts for a horizontal distance of nearly 1,000 feet and through a vertical range of about 320 feet. Croppings of quartz that has replaced calcite veinlets and limestone occur also 80 feet above the highest workings.

The vein is strong at nearly all places where it has been exposed, but the ore occurs mainly as pockets or disconnected bodies ranging in value from a thousand to several thousand dollars. The rich ore occurs mostly on the hanging-wall side of the vein and that formerly stoped came mainly from the upper and middle levels.

The 200 foot or Blacksmith Shop level is at an elevation of about 7,000 feet and comprises several hundred feet of drifts. Access is gained to it through a 280 foot tunnel, which crosscuts the limestone and at a point 250 feet from the portal reaches the vein. At this place the vein is large, about 50 feet wide, and contains, besides stringers of quartz, considerable calcite and layers of limestone, all dipping 60 degrees NW. The calcite and the limestone seem to be in part replaced by the quartz, which was introduced in solution with the ore minerals. The quartz in general is banded and contains some small vugs lined with druses of crystalline quartz. These vugs do not contain ore. A winze approximately 300 feet deep was sunk on the ore body at this level.

On a level about 100 feet lower, consisting of a 375 foot crosscut tunnel and a 30 foot drift on the vein, occurs gougelike material some of which will assay from six to fifteen dollars a ton in gold and silver.

The upper or 100 foot level, which is about 150 feet above the second level, is opened mainly by a 200 foot tunnel on the vein. The vein, for some distance from the portal, is 3 feet wide and consists of mottled ore. It carries on its hanging wall 6 inches of what appears to be reddish gouge. Farther in, however, this soft material becomes good ore, 2½ feet in width, and the ore body has here been stoped to a width of at 5½ feet to the surface. Much of the high grade ore extracted in early days came from this level. There are two winzes on this level which connect with the second or lower levels. About 25 feet from the south winze on this level occurs an intrusion which could be a dyke, or perhaps it is a water course. This dyke shows Wo_3 under the tungsten lamp and the tungsten vein here has been opened to about 25 feet and appears to be from 14 inches to 40 inches wide. At 30 inches wide the vein was cut from wall to wall and assayed 1.5% Wo_3 and $6.50 in gold and .50 in silver. A few feet from this point, at a width of 40 inches two large chunks assayed 6% Wo_3 and about the same gold and silver content. We know this dyke goes through to the surface, approximately 100 feet. There has not been any cross drifting on the lower levels to determine if the tungsten goes to any greater depth, although there are indications on the second level. The tungsten discovery was made by the writer; the old timers apparently did not know anything about it. A test of the tailings pond at the Old Relief millsite went 0.3% Wo_3, and $3.00 Au and Ag. There are approximately 1,500 tons of these tailings. The large quartz vein has not been assayed for tungsten, however, the lamp shows traces of it in places. About 60 feet above the first or 100 foot level is a large open or daylight stope (mentioned above), which shows that the main part of the lode consists, for a width of 14 feet, of yellowish-brown crushed quartz, next to which, on the hanging wall side, is 16 feet of rather siliceous mineralized material, including some limestone, all more or less banded and dipping about 50 degrees SSW. The deposit here contains also some crushed material suggestive of altered igneous rock. About 10 feet south of the winze here the tungsten vein is approximately 40 inches wide and assays 8-10% Wo_3.

The three old dumps are really stockpiles of white quartz and can be profitably mill under favorable conditions. It is estimated that they contain approximately 20,000 tons of ore.

This mine was originally a high grade gold and silver property, but with the discovery of tungsten on the 100 foot level, and the nature of the ore and contact, indicate that it is quite possible that this might develop into a very rich tungsten body.

The Sierra Pacific power line runs within a mile and a half of the property; water can be developed nearby; and the old road can be put into condition for trucks at a nominal cost. There are no equipment or buildings at the property, however, the close proximity to Lovelock, and good roads will eliminate the expense of a camp.

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opportunity
lost forever
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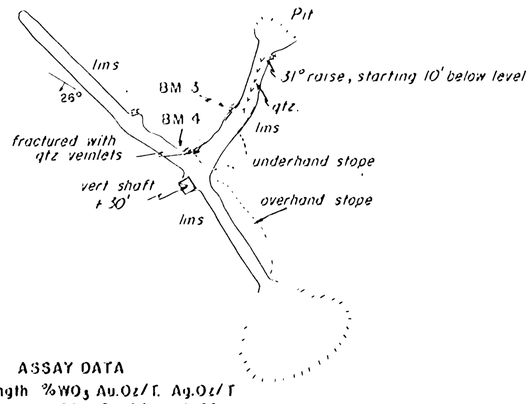


ASSAY DATA

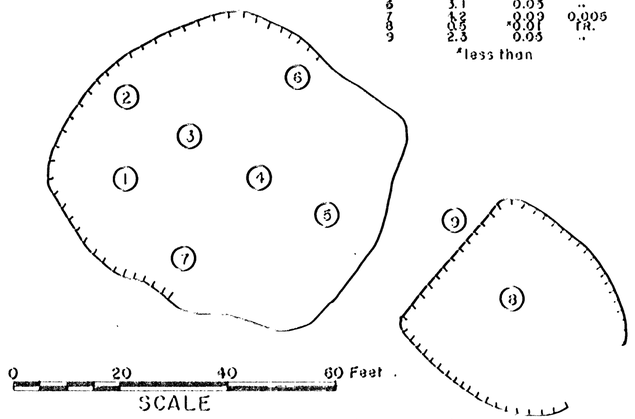
Sample No.	Length	%WO_3	Au.Oz/T.	Ag.Oz/T
BM 3	4.0 Ft.	0.01	0.005	1.75
BM 4	1.0	1.02	Tr.	0.20

No. 1 level (upper)

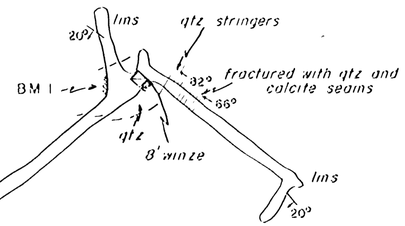
ASSAY DATA

Sample No.	Length	%WO_3	Au.Oz/T.	Ag.Oz/T.
1	3.4 FT.	0.12	0.003	9.65
2	4.5	0.14	0.005	11.50
3	3.0	0.11	0.005	8.85
4	2.4	0.05	TR.	3.80
5	0.7	0.01	"	0.35
6	3.1	0.05	"	2.70
7	4.2	0.09	0.005	3.25
8	0.5	*0.01	TR.	0.30
9	2.3	0.05	"	1.00

*less than



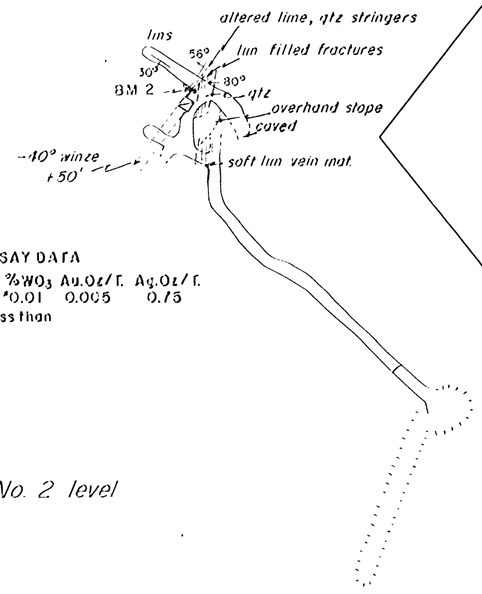
Plan of mill tailing ponds



ASSAY DATA

Sample No.	Length	%WO_3	Au.Oz/T.	Ag.Oz/T.
BM 1	4.0 Ft.	0.08	Tr.	0.15

No. 3 level (lower)

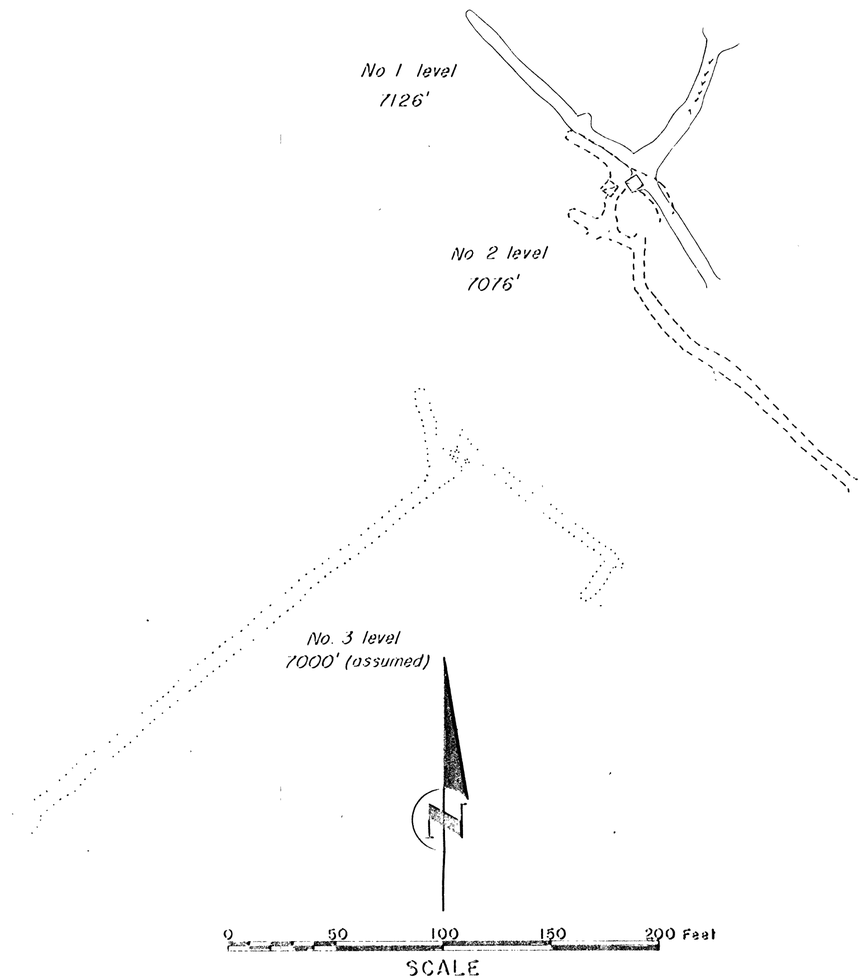


ASSAY DATA

Sample No.	Length	%WO_3	Au.Oz/T.	Ag.Oz/T.
BM 2	4.8 Ft.	*0.01	0.005	0.75

*less than

No. 2 level



Composite of workings

Figure 2 - Plan of upper three levels of Eden mine and old mill tailing ponds.