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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 23 1952

224 New Customhouse
Denver 2, Colorado

December 16, 1952

Mrs. Anna Huffman
1301½ Berkeley Ave.
Pueblo, Colorado

Re: DMEA Docket 2699

Dear Mrs. Huffman:

Reference is made to your application for Government aid in exploration work on your copper claims in Chaffee County.

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

A careful study of your property and data available to this agency reveals that the probability of disclosing mineable reserves of copper by your proposed exploration program is not considered sufficiently promising to justify Government participation. Under these circumstances, we regret to advise you that your application for Government aid is denied.

Very truly yours,

John F. Shaw for
W. H. King
Field Team, Region IV

HMC:oc
cc: Administrator (DMEA)
WMTraver
Subject
Chron.
AHKoschmann (2)

A. H. Koschmann
Field Team, Region IV

Reviewed by
DMEA OPERATING COMMITTEE
12-31-52.
(date)

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

224 New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 23 1952

December 16, 1952

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 2699, (Copper) Anna Huffman Claims, Chaffee County, Colorado

Enclosed are four copies of the final report on the subject docket together with two copies of Form 3b and a copy of the letter of denial to the applicant.

John F. Shaw for
W. H. King

A. H. Koschmann

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DEPARTMENT OF THE INTERIOR
Defense Materials Administration
RECEIVED
DEC 30 1952

Mining Division
Region IV

December 16, 1952

Memorandum

To: Field Team, Region IV

From: Acting Chief, Mining Division, Region IV

Subject: Final Report, DMEA Docket 2699 (Copper) Anna Huffman Claims, Chaffee County, Colorado

Enclosed are eight copies of the final engineering report on the subject docket.

The applicant requested a total of $8,600 but the examining engineer estimates the access road alone would exceed this amount.

The examining engineer concludes that the applicants estimate of cost is far too low and that the true cost would be too large for the property to warrant. He recommends the application be denied.

We concur in this recommendation.

John F. Shaw
John F. Shaw for
W. H. King

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
12-31-52
(date)

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

224 New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
DENVER
DEC 8 3 1952

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WMTraver
Subject
Chron.
A. H. Koschmann (2)

Reviewed by
DMEA OPERATING COMMITTEE
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(date)

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DEPARTMENT OF THE INTERIOR
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Mining Division
Region IV

December 16, 1952

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John F. Shaw for
W. H. King

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
12-31-52
(date)

ANNA HUFFMAN CLAIMS

CHAFFEE COUNTY, COLORADO

DMEA DOCKET 2699

Geologic Report

By E. N. Harshman
U. S. Geological Survey

ANNA HUFFMAN CLAIMS
CHAFFEE COUNTY, COLORADO

INTRODUCTION

Anna Huffman, 1301½ Berkely Avenue, Pueblo, Colorado, has applied for Government assistance, DMEA Docket 2699, to explore for copper on 4 unpatented lode claims in sec. 23, T. 49 N., R. 6 E., Monarch mining district, Chaffee County, Colorado. The applicant proposes to rehabilitate 3 miles of old logging road, construct about 2 miles of new access road, and extend an old adit 75 feet to crosscut a mineralized zone in pre-Cambrian schists. The estimated cost of $8,600 appears low.

The Huffman claims are at an altitude of 11,500 feet and are 2 miles south of U. S. Highway 50. From Maysville, Colorado, on U. S. 50, 13 miles west of Salida, the claims may be reached by 3 miles of trail following Como Creek or 4 miles of trail along Willow Creek.

The property was examined on October 28, 1952, in company with M. R. Brock, U. S. Geological Survey; M. H. Salsbury, U. S. Bureau of Mines; and E. L. Huffman, the applicant's son.

The deposit is low grade, poorly defined, and only accessible with great difficulty; denial of the application is recommended.

GEOLOGY

The claims are underlain by pre-Cambrian hornblende gneiss and schist. The pronounced foliation strikes northwest and dips steeply to the south. The rocks are hard and unweathered but are broken by several sets of joints. Acidic dikes, some pegmatitic, intrude the metamorphic rocks.

Primary copper sulfide minerals occur along fractures in a basic member of the hornblende schist. In and near the mineralized zone, the schist is altered to an epidote-rich rock containing quartz. This zone of altered rock forms a prominent ridge at the head of Como Creek and crops out more or less continuously for about 1500 feet. The eastern 700 feet of the outcrop contain copper sulfide and oxide minerals; the western part appears barren. The zone of sulfide mineralization is 10 to 25 feet or more in width.

The distribution of sulfides is not uniform across or along the ore-bearing zone. The ore which occurs in small lenses, stringers, and irregular masses separated by relatively large masses of epidotized schist, very probably resulted from replacement of the country rock along small rock fractures.

DEVELOPMENT, SAMPLES, AND ORE RESERVES

Although the Huffman deposit has been known for more than 40 years, little development work has been done to ascertain its size and grade. One short adit at the east end of the deposit, now caved, apparently cut low grade ore, judging from the dump rock. A second adit, 125 feet long, was driven in an attempt to crosscut the mineralized zone below the outcrop. It reached to within an estimated 50 feet of the zone. The applicant proposes to extend this adit 75 feet to the south.

Because of the size and character of the deposit, a thorough sampling was not possible at the time of this examination. However, two typical samples were taken, and assays by the U. S. Bureau of Mines are as follows:

Sample No.	Description	% Cu	oz. Ag
S-16	Selected sample of highest grade sulfide ore observed in outcrop	2.12	0.3
S-17	Epidotized schist adjacent to highest grade sulfide ore	0.08	not run

The copper content of sample S-16 checks selected samples of "high grade" ore taken during a prior examination by the U. S. Bureau of Mines; the copper content is lower than the average, 3-4%, estimated by the applicant.

No ore reserves can be estimated.

CONCLUSIONS AND RECOMMENDATIONS

The Anna Huffman deposit cannot be considered as a potential source of copper either at present or in the foreseeable future. The known facts indicate that shipping grade ore of mineable width does not exist in the deposit, and that if considered in its entirety, the deposit is sub-marginal. Spotty distribution, the high altitude and geographical location of the property are unfavorable to low cost operations. Denial of the application, DMEA Docket 2699, is, therefore, recommended.

DMEA 2699

ANNA HUFFMAN COPPER CLAIMS
CHAFFEE COUNTY, COLORADO

Engineering Report

By M. H. Salsbury
Mining Engineer
Bureau of Mines

DMEA 2699

ANNA HUFFMAN COPPER CLAIMS
CHAFFEE COUNTY, COLORADO

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ILLUSTRATIONS

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1. Location map, Anna Huffman copper mine, Monarch Mining District, Chaffee County, Colorado	2

DMEA 2699

ANNA HUFFMAN COPPER CLAIMS
CHAFFEE COUNTY, COLORADO

ENGINEERING REPORT

By

M. H. Salsbury

INTRODUCTION

The Anna Huffman copper claims were examined by M. H. Salsbury, of the Bureau of Mines, and E. N. Harshman and M. R. Brock, of the U. S. Geological Survey, on October 28, 1952, in company with E. L. Huffman, son of the applicant, Anna Huffman.

The applicant proposes to build an access road to the property, construct a service building, install a compressor and other equipment, and continue driving a crosscut tunnel 75 feet to explore the downward continuation of a copper-bearing rock which outcrops on top of the ridge above the tunnel portal. The amount of exploration assistance requested is $8,600.00--Government participation 50 percent, or $4,300.00.

ACKNOWLEDGMENTS

Information on the property was obtained from E. L. Huffman and from reports in the files of the Colorado Branch, Bureau of Mines, Region IV, covering an examination made by one of their engineers in 1948.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The prospect is located in rough terrain on the steep north slope of a ridge extending northwest and southeast overlooking the head of Como Gulch, a tributary of the South Arkansas River. It is about 19 miles northwest of Salida in Monarch Mining District, Chaffee County, Colo. (fig. 1). It can be located approximately on the U. S. Forest Service map of the San Isabel National Forest dated 1947. The locality is also shown on plate II of Bulletin 4, Colorado State Geological Survey. The tunnel on the property is at an estimated elevation of 11,500 feet.

There is no road to the property but it can be reached by two routes. One is by way of U. S. Highway 50 from Salida, 16 miles to the mouth of Como Gulch, thence about 3 miles over a pack trail up Como Gulch to the tunnel and outcrop. The other route, which was followed by the examining team, follows U. S. Highway 50, county roads 2 and 19, and an old timber hauling road 12.4 miles from Salida up Green's and Willow Creek Gulches. The car was left here and a route was followed along a trail on Willow Creek for about a mile, and then across country for a distance of about 4 miles to the tunnel portal. A road following this route would be feasible but it would be difficult to construct and expensive to maintain.

The climate of the elevation of the prospect is severe in winter and surface exploration would be limited to the summer and early fall.

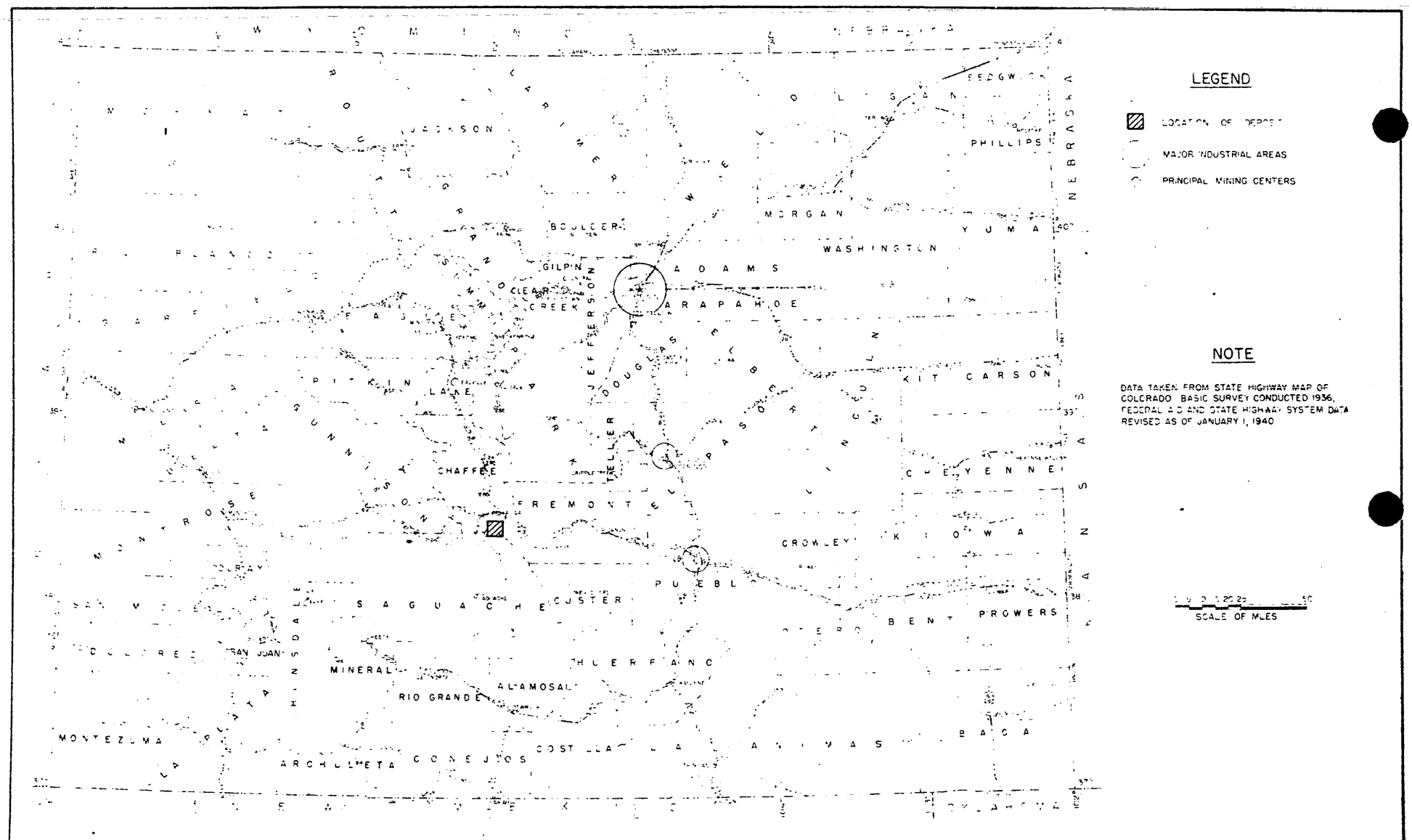

Figure 1 - Location map, Anna Huffman copper mine, Monarch Mining District, Chaffee County, Colorado - DMEA 2699

There is an adequate supply of spring water for preliminary work.

The nearest market for ore would be at Salt Lake City, Utah, over the Denver and Rio Grande Western Railroad from Salida to the nearest railhead.

HISTORY AND PRODUCTION

The claims were located by the applicant's husband, now deceased, who, with the help of his son and others, carried on necessary assessment work consisting, in part, of a crosscut tunnel driven a total of 125 feet towards the possible downward continuation of a copper-bearing outcrop on top of the ridge.

No ore has been produced from the property.

Several parties have made brief examinations, taken a few samples, and expressed interestin the prospect, but have never followed it up.

OWNERSHIP AND EXTENT

The property consists of 4 unpatented standard mining claims owned by Mrs. Anna Huffman, the applicant, located in sec. 13, T. 49 N., R. 6 E. N. N. P. M. . They are recorded in book 236, pages 16,17, and 18, in the Chaffee County courthouse at Salida. The applicant did not furnish a map of the claims but states they cover 1,500 feet of the copper outcrop.

DESCRIPTION OF THE DEPOSITS

The property is not mentioned in the only geological report which covers the location, Bulletin 4, Colorado State Geological Survey. Recent work by the U. S. Geological Survey covering the Garfield Triangle did not include the property.

The ore is a copper sulfide (tetrahedrite?) as a primary constituent of an epidosite outcrop 10 to 20 feet wide, occurring in the surrounding granitic country rock. There is superficial oxidization at the surface. The outcrop forms the backbone of a ridge and strikes about N. 45° W., swinging to N. 55° W. at the north end of the exposure. The dip is not apparent from surface evidence. The outcrop can be traced 1,500 feet and is obscured at each end by surface wash. Copper mineralization is not apparent at the north end.

In the south thousand feet, visible copper minerals show in the outcrop, the mineralization apparently increasing southward.

Samples of the rock sent to the Bureau of Mines Experiment Station at Salt Lake City in 1948 were described as principally quartz and epodite with minor amounts of calcite, chlorite, and hornblende, and were classified as epidosite.

The applicant reports 3.0 to 4.0 percent copper content.

Samples T-75 and T-76, following, were taken by the Bureau of Mines in 1948. Samples S-17 and S-17 were taken by the examining team.

Sample Number	Description	Ounces per Ton Gold	Ounces per Ton Silver	Percent Copper
T-75	Freshly broken better-grade rock	Trace	0.3	1.4
T-76	Representative medium-grade rock	-	-	0.4
S-16	Specimen with most visible copper	0.005	0.3	2.12
S-17	Specimen with no visible copper	-	-	0.08

Examination of the outcrop indicates that the copper minerals are not uniformly distributed.

ORE RESERVES

There are no ore reserves developed.

PRESENT STATUS

Development consists of a tunnel 125 feet long driven southwest into the hill about 75 feet vertically below the outcrop, some 200 feet from the south end. This tunnel is in hard, gneissic rock and is accessible to the face, which is possibly 50 feet short of cutting the copper-bearing dike. Another tunnel in the outcrop at the south end is caved. The only surface improvements are a shed at the tunnel portal and a cabin nearby which would require extensive repairs.

PROJECT PROPOSALS

The applicant proposes to construct a rough access road to the tunnel portal from the Willow Creek approach, build a tool and equipment shed, and drive the tunnel 75 feet further which would probably reach and cut through or into the epidosite. All equipment would be furnished by the applicant who gives a cost estimate as follows:

Labor	$7,000.00
Small tools	1,000.00
Buildings	600.00
Total	$8,600.00

The estimated time required is 18 months. Upon completion of the road, the applicant proposes to mine and sort a shipping grade of ore from the outcrop, driving the tunnel at the same time.

PROPOSED FINANCING

The applicant proposes to furnish her share in cash, labor, and equipment.

CONCLUSIONS

There is an extensive exposure of copper-bearing material in the outcrop. If it should persist in depth there is a possibility of developing a large tonnage of low-grade copper ore. Exploration to date, however, is not enough to indicate the average grade of the deposit nor its persistence in depth. On surface the copper mineralization is not uniform and extensive sampling by trenching and/or diamond drilling would be necessary to estimate the average grade.

While the Bureau of Mines assays of samples taken do not rule out the possibility of 3.0 to 4.0 percent copper ore claimed by the applicant, they indicate that this figure is probably high. In picking the sample which assayed 2.12 percent copper the examining team made an effort to obtain, by visual inspection, the richest material (sample S-17).

The applicant's cost figures would not cover the work proposed and certainly would not cover the sampling necessary to evaluate the deposit and bring exploration to a stage where further development might be justified.

No detailed survey of a possible access road was made, but in the opinion of the examining engineer the cost of the road suitable for exploration work alone would be more than the $8,600.00 requested.

Unless the work could be done without building a road, it would cost at least $15,000.00 to sample the outcrop and diamond drill the

dike to determine if the ore is persistent in depth. This would be only a start towards production of copper. The ore is not likely to be of shipping grade and a much larger expenditure would be required to develop the mine and build a mill.

Thus, while the property has interest as a future source of extremely low-grade copper ore, it could hardly contribute to the copper stockpile within a reasonable time and is not a suitable project for the expenditure of Defense Minerals Exploration Administration funds.

RECOMMENDATIONS

Denial of the loan application is recommended.

cb

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.
200 New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 23 1952

December 12, 1952

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 2699, Anna Huffman Claims, Chaffee County, Colorado.

Enclosed are 8 copies of the geological report by E. N. Harshman covering DMEA Docket 2699, Anna Huffman claims, Chaffee County, Colorado.

The applicant proposes to improve 3 miles of an old logging road, construct about 2 miles of new access road, and extend an old adit 75 feet to crosscut a mineralized zone in pre-Cambrian rocks.

Primary copper sulfides occur along fractures in a basic layer of hornblende schist. The distribution of sulfides is not uniform across nor along the ore-bearing zone. It occurs in small lenses, stringers, and irregular masses separated by relatively large masses of epidotized schist.

Although this deposit has been known for more than 40 years, present development work on the property consists of only two short adits. Because of the spotty ore distribution, the low grade of the deposit, the high altitude and unfavorable location of the property, Harshman recommends that an exploration loan be denied.

I concur in this recommendation.

A. H. Koschmann
A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (8)

UNITED STATES
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DEFENSE MINERALS ADMINISTRATION
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Enclosures (8)

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA 2699

Anna Huffman Copper Claims

Chaffee County, Colorado

Copper

E. N. Harshman, Geologist
U. S. Geological Survey

M. H. Salsbury, Mining Engineer
Bureau of Mines

December 8, 1952

DMEA 2699

ANNA HUFFMAN COPPER CLAIMS
CHAFFEE COUNTY, COLORADO

Summary, Conclusions, and Recommendations

By E. N. Harshman
Geologist
U. S. Geological Survey

M. H. Salsbury
Mining Engineer
Bureau of Mines

DMEA 2699

ANNA HUFFMAN COPPER CLAIMS
CHAFFEE COUNTY, COLORADO

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

By E. N. Harshman and M. H. Salsbury

The Anna Huffman copper claims, located in the Monarch Mining District, Chaffee County, were examined by a Defense Minerals Exploration Administration examining team on October 28, 1952, to check the information submitted with an application for exploration assistance in the amount of $8,600.00—Government participation 50 percent, or $4,300.00—DMEA 2699. The applicant proposes an access road, buildings, and continuation of a crosscut tunnel on the property to reach the possible downward continuation of a copper-bearing outcrop exposed on the hill above.

The outcrop, identified as epidosite, can be traced for some 1,500 feet; the mineralized zone is presumably persistent in depth. The rock contains copper sulfide mineralization in small amounts which is apparently primary but not distributed uniformly throughout the mass.

The property has never produced copper and there are no ore reserves.

The applicant's estimate for the work proposed is not detailed and the amount of assistance requested is insufficient to cover the cost.

The proposal to mine and sort a shipping grade of ore upon completion of a road is hardly feasible on the basis of the copper content indicated by preliminary sampling.

Sampling and diamond drilling not included in the applicant's proposal, at a minimum cost estimated roughly at $15,000.00, would be necessary to evaluate the deposit. A large additional expenditure and considerable time would be required to place the property in operation and no copper production within a reasonable time could be expected.

Denial of the loan is recommended.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DEPARTMENT OF THE INTERIOR
Bureau of Mines Administration
RECEIVED
DEC 8 1952

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
December 8, 1952

Memorandum

To: Executive Officer, Field Team, Region IV

From: Chief, Colorado Branch, Mining Division, Region IV

Subject: DMEA 2699 (Copper), Anna Huffman copper claims, Chaffee County, Colorado

Please find enclosed the original and eight copies of the "Summary, Conclusions, and Recommendations", by E. N. Harshman and N. H. Salsbury, and of Salsbury's engineering report on the above docket.

Salsbury concludes the applicant's estimate for the proposed exploration, which is not detailed, is too low, that the cost of sampling by diamond drilling or other method would be prohibitive, and, should a low-grade copper deposit be delineated, a large additional expenditure would be required to assure operation. Production could not result within a reasonable time. He estimates the cost of an access road to the deposit at more than the loan request, and recommends denial.

I concur with his conclusions and recommendation.

The brochure furnished with the Region IV Field Team's memorandum is also enclosed.

W. M. Traver, Jr.

W. M. Traver, Jr.

enclosures

WMT/eb

cc 8
DMEA 2699
Chron

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA 2699

Anna Huffman Copper Claims

Chaffee County, Colorado

Copper

E. N. Harshman, Geologist
U. S. Geological Survey

M. H. Salsbury, Mining Engineer
Bureau of Mines

December 8, 1952

DMEA 2699

ANNA HUFFMAN COPPER CLAIMS
CHAFFEE COUNTY, COLORADO

Summary, Conclusions, and Recommendations

By E. N. Harshman
Geologist
U. S. Geological Survey

M. H. Salsbury
Mining Engineer
Bureau of Mines

DMEA 2699

ANNA HUFFMAN COPPER CLAIMS
CHAFFEE COUNTY, COLORADO

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

By E. N. Harshman and M. H. Salsbury

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The property has never produced copper and there are no ore reserves.

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Sampling and diamond drilling not included in the applicant's proposal, at a minimum cost estimated roughly at $15,000.00, would be necessary to evaluate the deposit. A large additional expenditure and considerable time would be required to place the property in operation and no copper production within a reasonable time could be expected.

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ANNA HUFFMAN CLAIMS

CHAFFEE COUNTY, COLORADO

DMEA DOCKET 2699

Geologic Report

By E. N. Harshman
U. S. Geological Survey

ANNA HUFFMAN CLAIMS
CHAFFEE COUNTY, COLORADO

INTRODUCTION

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The deposit is low grade, poorly defined, and only accessible with great difficulty; denial of the application is recommended.

GEOLOGY

The claims are underlain by pre-Cambrian hornblende gneiss and schist. The pronounced foliation strikes northwest and dips steeply to the south. The rocks are hard and unweathered but are broken by several sets of joints. Acidic dikes, some pegmatitic, intrude the metamorphic rocks.

Primary copper sulfide minerals occur along fractures in a basic member of the hornblende schist. In and near the mineralized zone, the schist is altered to an epidote-rich rock containing quartz. This zone of altered rock forms a prominent ridge at the head of Como Creek and crops out more or less continuously for about 1500 feet. The eastern 700 feet of the outcrop contain copper sulfide and oxide minerals; the western part appears barren. The zone of sulfide mineralization is 10 to 25 feet or more in width.

The distribution of sulfides is not uniform across or along the ore-bearing zone. The ore which occurs in small lenses, stringers, and irregular masses separated by relatively large masses of epidotized schist, very probably resulted from replacement of the country rock along small rock fractures.

DEVELOPMENT, SAMPLES, AND ORE RESERVES

Although the Huffman deposit has been known for more than 40 years, little development work has been done to ascertain its size and grade. One short adit at the east end of the deposit, now caved, apparently cut low grade ore, judging from the dump rock. A second adit, 125 feet long, was driven in an attempt to crosscut the mineralized zone below the outcrop. It reached to within an estimated 50 feet of the zone. The applicant proposes to extend this adit 75 feet to the south.

Because of the size and character of the deposit, a thorough sampling was not possible at the time of this examination. However, two typical samples were taken, and assays by the U. S. Bureau of Mines are as follows:

Sample No.	Description	% Cu	oz. Ag
S-16	Selected sample of highest grade sulfide ore observed in outcrop	2.12	0.3
S-17	Epidotized schist adjacent to highest grade sulfide ore	0.08	not run

The copper content of sample S-16 checks selected samples of "high grade" ore taken during a prior examination by the U. S. Bureau of Mines; the copper content is lower than the average, 3-4%, estimated by the applicant.

No ore reserves can be estimated.

CONCLUSIONS AND RECOMMENDATIONS

The Anna Huffman deposit cannot be considered as a potential source of copper either at present or in the foreseeable future. The known facts indicate that shipping grade ore of mineable width does not exist in the deposit, and that if considered in its entirety, the deposit is sub-marginal. Spotty distribution, the high altitude and geographical location of the property are unfavorable to low cost operations. Denial of the application, DMEA Docket 2699, is, therefore, recommended.

DMEA 2699

ANNA HUFFMAN COPPER CLAIMS
CHAFFEE COUNTY, COLORADO

Engineering Report

By M. H. Salsbury
Mining Engineer
Bureau of Mines

DMEA 2699

ANNA HUFFMAN COPPER CLAIMS
CHAFFEE COUNTY, COLORADO

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DMEA 2699

ANNA HUFFMAN COPPER CLAIMS
CHAFFEE COUNTY, COLORADO

ENGINEERING REPORT

By

M. H. Salsbury

INTRODUCTION

The Anna Huffman copper claims were examined by M. H. Salsbury, of the Bureau of Mines, and E. N. Harshman and M. R. Brock, of the U. S. Geological Survey, on October 28, 1952, in company with E. L. Huffman, son of the applicant, Anna Huffman.

The applicant proposes to build an access road to the property, construct a service building, install a compressor and other equipment, and continue driving a crosscut tunnel 75 feet to explore the downward continuation of a copper-bearing rock which outcrops on top of the ridge above the tunnel portal. The amount of exploration assistance requested is $8,600.00—Government participation 50 percent, or $4,300.00.

ACKNOWLEDGMENTS

Information on the property was obtained from E. L. Huffman and from reports in the files of the Colorado Branch, Bureau of Mines, Region IV, covering an examination made by one of their engineers in 1948.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The prospect is located in rough terrain on the steep north slope of a ridge extending northwest and southeast overlooking the head of Como Gulch, a tributary of the South Arkansas River. It is about 19 miles northwest of Salida in Monarch Mining District, Chaffee County, Colo. (fig. 1). It can be located approximately on the U. S. Forest Service map of the San Isabel National Forest dated 1947. The locality is also shown on plate II of Bulletin 4, Colorado State Geological Survey. The tunnel on the property is at an estimated elevation of 11,500 feet.

There is no road to the property but it can be reached by two routes. One is by way of U. S. Highway 50 from Salida, 16 miles to the mouth of Como Gulch, thence about 3 miles over a pack trail up Como Gulch to the tunnel and outcrop. The other route, which was followed by the examining team, follows U. S. Highway 50, county roads 2 and 19, and an old timber hauling road 12.4 miles from Salida up Green's and Willow Creek Gulches. The car was left here and a route was followed along a trail on Willow Creek for about a mile, and then across country for a distance of about 4 miles to the tunnel portal. A road following this route would be feasible but it would be difficult to construct and expensive to maintain.

The climate of the elevation of the prospect is severe in winter and surface exploration would be limited to the summer and early fall.

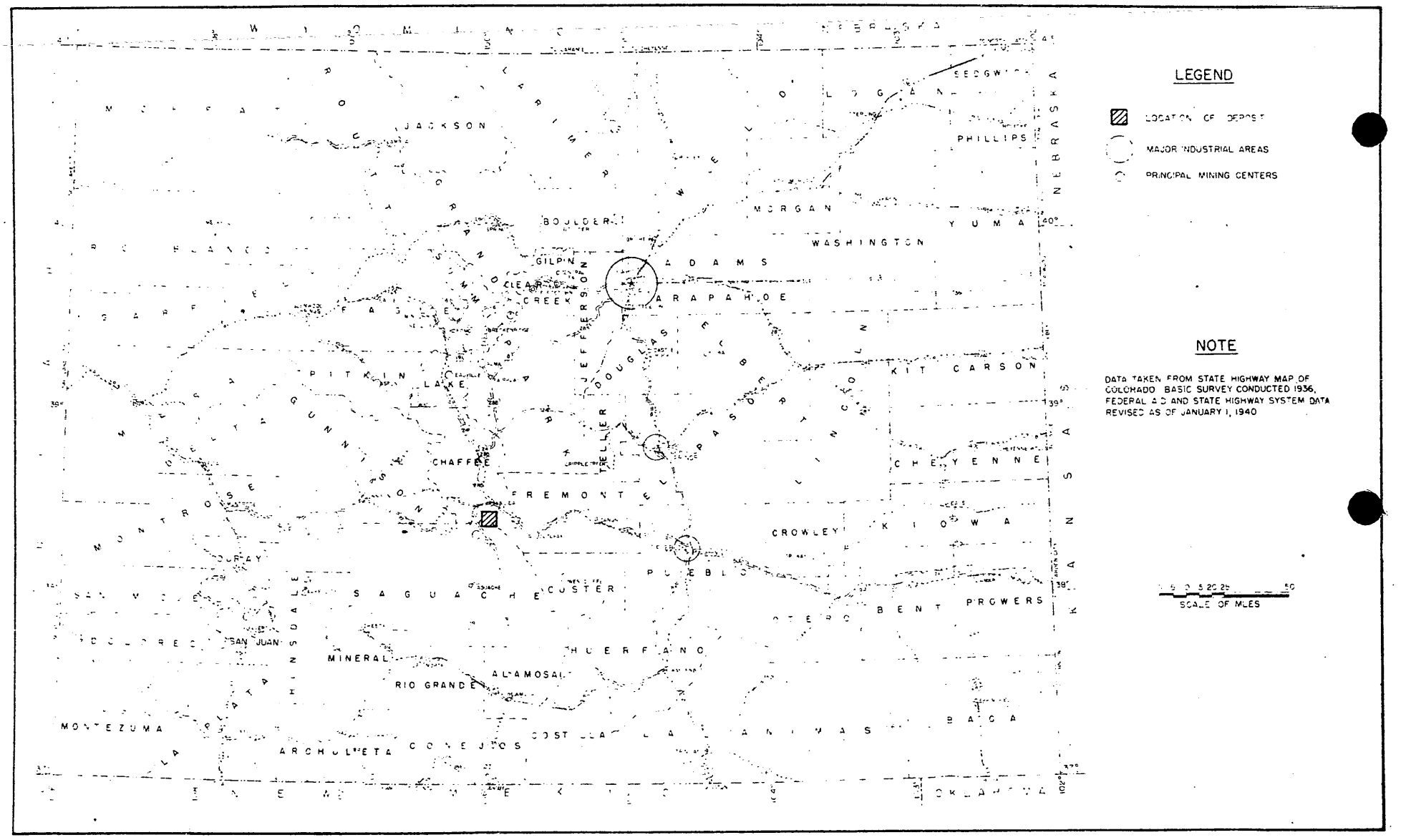

Figure 1 - Location map, Anna Huffman copper mine, Monarch Mining District, Chaffee County, Colorado - DMEA 2699

There is an adequate supply of spring water for preliminary work.

The nearest market for ore would be at Salt Lake City, Utah, over the Denver and Rio Grande Western Railroad from Salida to the nearest railhead.

HISTORY AND PRODUCTION

The claims were located by the applicant's husband, now deceased, who, with the help of his son and others, carried on necessary assessment work consisting, in part, of a crosscut tunnel driven a total of 125 feet towards the possible downward continuation of a copper-bearing outcrop on top of the ridge.

No ore has been produced from the property.

Several parties have made brief examinations, taken a few samples, and expressed interestin theprospect, but have never followed it up.

OWNERSHIP AND EXTENT

The property consists of 4 unpatented standard mining claims owned by Mrs. Anna Huffman, the applicant, located in sec. 13, T. 49 N., R. 6 E. N. N. P. M. . They are recorded in book 236, pages 16, 17, and 18, in the Chaffee County courthouse at Salida. The applicant did not furnish a map of the claims but states they cover 1,500 feet of the copper outcrop.

DESCRIPTION OF THE DEPOSITS

The property is not mentioned in the only geological report which covers the location, Bulletin 4, Colorado State Geological Survey. Recent work by the U. S. Geological Survey covering the Garfield Triangle did not include the property.

The ore is a copper sulfide (tetrahedrite?) as a primary constituent of an epidosite outcrop 10 to 20 feet wide, occurring in the surrounding granitic country rock. There is superficial oxidization at the surface. The outcrop forms the backbone of a ridge and strikes about N. 45° W., swinging to N. 55° W. at the north end of the exposure. The dip is not apparent from surface evidence. The outcrop can be traced 1,500 feet and is obscured at each end by surface wash. Copper mineralization is not apparent at the north end.

In the south thousand feet, visible copper minerals show in the outcrop, the mineralization apparently increasing southward.

Samples of the rock sent to the Bureau of Mines Experiment Station at Salt Lake City in 1948 were described as principally quartz and epodite with minor amounts of calcite, chlorite, and hornblende, and were classified as epidosite.

The applicant reports 3.0 to 4.0 percent copper content.

Samples T-75 and T-76, following, were taken by the Bureau of Mines in 1948. Samples S-17 and S-17 were taken by the examining team.

Sample Number	Description	Ounces per Ton Gold	Ounces per Ton Silver	Percent Copper
T-75	Freshly broken better-grade rock	Trace	0.3	1.4
T-76	Representative medium-grade rock	-	-	0.4
S-16	Specimen with most visible copper	0.005	0.3	2.12
S-17	Specimen with no visible copper	-	-	0.08

Examination of the outcrop indicates that the copper minerals are not uniformly distributed.

ORE RESERVES

There are no ore reserves developed.

PRESENT STATUS

Development consists of a tunnel 125 feet long driven southwest into the hill about 75 feet vertically below the outcrop, some 200 feet from the south end. This tunnel is in hard, gneissic rock and is accessible to the face, which is possibly 50 feet short of cutting the copper-bearing dike. Another tunnel in the outcrop at the south end is caved. The only surface improvements are a shed at the tunnel portal and a cabin nearby which would require extensive repairs.

PROJECT PROPOSALS

The applicant proposes to construct a rough access road to the tunnel portal from the Willow Creek approach, build a tool and equipment shed, and drive the tunnel 75 feet further which would probably reach and cut through or into the epidosite. All equipment would be furnished by the applicant who gives a cost estimate as follows:

Labor	$7,000.00
Small tools	1,000.00
Buildings	600.00
Total	$8,600.00

The estimated time required is 18 months. Upon completion of the road, the applicant proposes to mine and sort a shipping grade of ore from the outcrop, driving the tunnel at the same time.

PROPOSED FINANCING

The applicant proposes to furnish her share in cash, labor, and equipment.

CONCLUSIONS

There is an extensive exposure of copper-bearing material in the outcrop. If it should persist in depth there is a possibility of developing a large tonnage of low-grade copper ore. Exploration to date, however, is not enough to indicate the average grade of the deposit nor its persistence in depth. On surface the copper mineralization is not uniform and extensive sampling by trenching and/or diamond drilling would be necessary to estimate the average grade.

While the Bureau of Mines assays of samples taken do not rule out the possibility of 3.0 to 4.0 percent copper ore claimed by the applicant, they indicate that this figure is probably high. In picking the sample which assayed 2.12 percent copper the examining team made an effort to obtain, by visual inspection, the richest material (sample S-17).

The applicant's cost figures would not cover the work proposed and certainly would not cover the sampling necessary to evaluate the deposit and bring exploration to a stage where further development might be justified.

No detailed survey of a possible access road was made, but in the opinion of the examining engineer the cost of the road suitable for exploration work alone would be more than the $8,600.00 requested.

Unless the work could be done without building a road, it would cost at least $15,000.00 to sample the outcrop and diamond drill the

dike to determine if the ore is persistent in depth. This would be only a start towards production of copper. The ore is not likely to be of shipping grade and a much larger expenditure would be required to develop the mine and build a mill.

Thus, while the property has interest as a future source of extremely low-grade copper ore, it could hardly contribute to the copper stockpile within a reasonable time and is not a suitable project for the expenditure of Defense Minerals Exploration Administration funds.

RECOMMENDATIONS

Denial of the loan application is recommended.

ob

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
SEP 17 1952

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

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

Not to be filled in by applicant

Docket No. Dmea-2699
Metal or Mineral
Date Received 9-17-52
Estimated Cost
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Anna Huffman
1301½ Berkely Ave.
Pueblo, Colo.

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

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

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

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

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

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

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

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

(*e*) If you own the land, describe any liens or encumbrances on it None

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

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

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

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

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

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

5. *The exploration project.*—(*a*) [redacted]te the mineral or minerals for which you wi[redacted]o explore Copper, Silver + gold.

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

(*c*) The work will start within 30 days and be completed within 18 months from the date of an exploration project contract.

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

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

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

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

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

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

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

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

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

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

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

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

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

[x] Money [x] Use of equipment owned by you [x] Other

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated Aug. 17, 1952

Anna Huffman
(Applicant)

By Lyma Huffman
Son + agent

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

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

I (a) Anna Huffman
1301½ Berkely Ave.
Pueblo, Colo.

(b) –

(c) –

(d) –

II

III (a) the property consists of 4 claims (unpatented) situated in township 49N, Range 6E, Monarch Mining District, Chaffee County, Colorado.

(b) –

(c) owner

(d) –

(e) None

(f) Book 236 page 16
" 236 " 17
" 236 " 18
" 236 " 18

IV (a) property undeveloped except for a short cross-cut started years ago. the tunnel is in hard rock and in good shape.

(b) None, undeveloped.

(c) the deposit is a gneiss dike, thirty to forty ft. wide, and at least fifteen hundred ft. long. It has granite on both sides and shows above the surface in five large outcroppings. the whole dike is mineralized and will average three or four percent copper. one of the outcrops runs considerably richer and shipping ore could be

(over)

sorted profitably, however, if we had a mill on the property, we could work the whole dike.

(d) the property is approximately fourteen miles west of the city of Salida, and about six miles from highway U.S. 50. It is about three and one half or four miles from the nearest county road. the building of a road to the property is the main reason for our application for a loan.

(E) Manpower, supplies, and equipment are available in Salida. there is water on the property, but the nearest power line is three miles away.

V (a) copper, silver + gold.

(b) First of all, we desire to build a road to the Property. As soon as the road was finished, we could start shipping by doing a little sorting, and at the same time, we would finish driving a cross cut through the dike. We have approximately seventy five ft. to drive.

(c) 30 days +
18 Months

(d) I have had ten years mining experience.

VI (a) None

(b) two laborers at $1.50 per hr. Estimated total $ 7,000.00.

(c) all small tools and fuel furnished by ourselves. Estimated cost $ 1,000.00.

Cont. on sheet No. 2

VI (d) compressor and machines will be furnished by us.

(E) None

(f) compressor house, tool house and workshop combined, Estimated Cost. $600.00

VII (a) YES

(b) the county commissioners of Chaffee County will help build the road. We will furnish the compressor & all small tools, and we are also prepared to raise any necessary cash.