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

C-HD-DML

February 12, 1952

Memorandum

To: George E. Selfridge, DMRA

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

Subject: Field Report on loan application DMA 1609 X - Cobalt
K. S. Boynton and K. V. King
P.O. Box 3622
San Francisco 19, California

Property: Sunshine Claims
Blackbird Creek
Lemhi County, Idaho

The Field Team mapped the deposit and systematically sampled the soils for cobalt content. Geochemical determinations of 163 samples are plotted on the map and contoured to show a geochemical anomaly of higher cobalt content.

The Field Team recommends a program of bulldozer trenching in 2 stages, followed by diamond drilling if results warrant it. The total estimated cost of all 3 stages is $12,000. The geochemical work, done as part of a Geological Survey research project, has given encouraging results, and I concur with the recommendation that exploration of the property is warranted.

The Field Team received no response to 3 letters addressed to the applicant, suggesting that the applicant is no longer interested in exploring the property or that ownership has changed. Another attempt should be made to communicate with Boynton and King before taking further action on the application.

D. M. Lemmon

DMLemmon:gt

UNITED STATES
DEPARTMENT OF THE INTERIOR
Geological Survey
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WASHINGTON 25, D. C.

G-MD-DML

February 12, 1952

Memorandum

To: George C. Selfridge, DMEA

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

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D M Lemmon

DMLemmon:gt

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 4, Washington

February 4, 1952

Mr. C. O. Mittendorf
Chairman, Operating Committee
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.

Re: DMA 1609I
Sunshine Mine
Lemhi County, Idaho

Dear Sir:

Enclose are 4 copies of a map inadvertently omitted from a report on the subject property submitted January 31, 1952. The original docket material is also enclosed.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 4, Washington

February 4, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 7 1952

Mr. C. O. Mittendorf
Chairman, Operating Committee
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.

Re: DMA 1609X
Sunshine Mine
Lemhi County, Idaho

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A. E. Weissenborn
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DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 4 1952

No. 157 Howard Street
Spokane 4, Washington

January 31, 1952

Reviewed by
DMEA OPERATING COMMITTEE
2/11/52
(date)

MEMORANDUM

To: C. O. Mittendorf, Chairman, Operating Committee, DMEA

From: Field Team, Region II

Subject: Docket No. DMA 1609x-Cobalt
Sunshine Claims, Blackbird Creek
Lemhi County, Idaho

The docket containing the original application for an exploration contract on the Sunshine claims was received from Washington by this office about June 26, 1951. It was sent immediately to J. S. Vhay of the Geological Survey, who was working in the Blackbird district at that time. At the same time a letter (June 27, 1951, copy enclosed) was sent to K. S. Boynton, one of the applicants, requesting that he contact Mr. Vhay regarding the examination of the property. Neither Mr. Boynton nor his partner, Mr. King, contacted Mr. Vhay while he was in the district, although Mr. Vhay did talk with a man that was doing the assessment work on the property for the owners. However, this man did not seem to know anything about a DMA application. Without awaiting advice from the owners, Mr. Vhay instructed Mr. Wayne Roberts to make the necessary investigation.

A map was made of the property, and the few exposures there were examined. Because of the scarcity of exposures, a grid was laid out and a large number of soil samples were taken for geochemical testing. Some delay in preparing the report has been caused because of the time involved in obtaining the assays for this large number of samples. A first draft of the report by Wayne Roberts was completed by November 21, 1951, but has been held here pending attempts to contact the owners.

This report and attached maps are enclosed with this memorandum. The original docket material is also returned to you.

The applicants' original proposal to sink a shaft was too indefinite, and not enough is known about the deposit to justify approving it. However, the geochemical results are sufficiently encouraging so that the Field Team would support a revised program, as

suggested in the report, consisting of bulldozing and possibly diamond drilling.

Letters sent to the owners on October 17 and November 13, 1951 (copies enclosed), to determine whether this suggested program might be agreeable to them have remained unanswered, so there is considerable doubt that they are interested in any exploration program. The suggestion is made therefore, that you make one more effort to contact them and, if no answer is forthcoming, the application be considered dead.

By DMEA Field Team, Region II

A. E. Weissenborn, Executive Officer
(U. S. Geological Survey)

M. E. Volin, Member
(U. S. Bureau of Mines)

Enclosures
cc: USBM, Spokane
USBM, Albany

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 4 1952

So. 157 Howard Street
Spokane 4, Washington

January 31, 1952

Reviewed by
DMEA OPERATING COMMITTEE
2-11-52
(date) (HB)

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(U. S. Geological Survey)

M. E. Volin, Member
(U. S. Bureau of Mines)

Enclosures
cc: USBM, Spokane
USBM, Albany

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

No. 157 Howard Street
Spokane 4, Washington

December 27, 1951

Memorandum

To: R. K. Weissenborn, Executive Officer, DMA Field Team, Region II

From: Wayne A. Roberts and John S. Whay, Geologists, U.S.G.S.

Subject: Sunshine Mine, Lemhi County, Idaho, DMA Docket No. 1009x

RECOMMENDATIONS

An application for an exploration contract from K. J. Boynton and K. V. King contained a proposal to sink a shaft on the Sunshine property, Blackbird district, Lemhi County, Idaho, at a total cost of $[illegible],000. Almost nothing is known about the shape of any possible ore bodies on this property, therefore, it is recommended that the proposal to sink a shaft be denied. Inasmuch, however, as cobalt does occur on the property, it is recommended that an exploration contract for $12,000 be granted to the owners of the property. The exploration should be done by bulldozing and diamond drilling in stages as outlined below, each succeeding stage being dependent upon the results of the preceding stages.

It should be pointed out here that, although the geochemical and geological data indicate conditions favoring the presence of a cobalt deposit, the location of the property with respect to availability of water and the arrangement and topographic position of the claims will make it difficult to mine cobalt on this property; however, as a possible source of cobalt, it should be explored sufficiently to determine the size and grade of possible ore bodies.

Letters to contact the owners on two occasions (dated October 17, 1951 and November 15, 1951) concerning this program have not been answered, so there is some doubt as to how interested they are in an exploration contract.

The delay in submitting this memorandum has been caused in large part by the time necessary to analyze the large number of geochemical samples it was necessary to take.

OUTLINE OF PROPOSED EXPLORATION

The first stage should be bulldozing of locations of possible high-grade cobalt ore as outlined in figure 1. If this bulldozing discloses ore, but does not delimit the deposit, then the second stage of bulldozing should be done, but if the first stage of bulldozing does delimit the deposit, then Stage II bulldozing may be omitted. Sufficient hand trenching should be done during both bulldozing stages to properly expose bedrock for sampling and geological examination. If the bulldozing discloses mineralized rock containing cobalt of high enough grade to be feasible for mining, then Stage III (diamond drilling) should be done. Diamond drilling of the area should determine the attitude, size, and grade of the ore bodies.

Assuming that the bulldozer cuts are 15 feet wide and average 6 feet deep, slightly over 4,160 cubic yards of mantle must be removed by the Stage I bulldozing and hand trenching to expose the inferred high-grade material. Approximately 2,500 cubic yards of mantle will be removed by Stage II bulldozing and hand trenching. Stage III will consist of approximately 1,200 feet of diamond drilling to explore the deposit at depth.

The costs of this program are estimated as follows:

Bulldozing 4,160 cubic yds.	105 hrs. at $10/hr.	$1,050
Bulldozing 2,500 cubic yds.	55 hrs. at $10/hr.	560
Hand trenching 10[illegible]		800
Diamond drilling 1,200' at $6/ft.		7,200
Sampling and assaying		500
Supervisor, 2 months at $500/month		1,000
Miscellaneous		890
		$12,000

INTRODUCTION

An application made by K. S. Boynton and K. V. King for an exploration loan for cobalt at the Sunshine property, Blackbird mining district, Lemhi County, Idaho, DMA Docket No. 1609x was received June 1, 1951 on Form MF-103. The Sunshine property consists of three unpatented claims, The Sunshine, Sunshine No. 1, and Sunshine No. 2 (see figure 1) situated on the ridge between Blackbird Creek and Big Deer Creek.

LOCATION

The Sunshine property is in the S.E. quarter of sec. 20, T. 21 N., R. 18 E., as delineated by the fifth standard parallel north, in the Blackbird mining district, Lemhi County, Idaho. It is accessible by a fair unimproved dirt road up Meadow Creek about a mile northwest of the Blackbird mine of the Calera Mining Company.

No claim corners of the three claims could be found. The claim lines and corners plotted approximately on figure 1 are based on the claim description plus the known bearing of the Broadgauge patented claim to the south. The claims are poorly laid out and there is considerable overlap between Sunshine No. 1 and Sunshine No. 2. The Sunshine appears to be separated from the two other claims by a fraction which is now owned by Calera Mining Company, and all three Sunshine claims are enclosed by land now held by that company.

The location of the property on top of a mountain means that water for mining purposes will be difficult to obtain and will probably have to be pumped from the South Fork of Big Deer Creek, a vertical lift of about 2,000 feet. Blackbird Creek and Meadow Creek, although much nearer, are controlled by the Calera Company and used in their mill. Moreover, as the property lies at altitudes between 7,700 and 8,100 feet, a mining operation on this property alone will be a difficult job.

GEOLOGY

The Sunshine property lies for the most part in the garnet-chloritoid-bearing part of the Blackbird structural block as defined by Vhay in "Cobalt-Copper Deposits of the Blackbird district, Lemhi County, Idaho", Strategic Minerals Investigations, Prelim. Report No. 3-219. A small part of Sunshine No. 2 claim lies in the Lookout structural block. The following general statement is quoted from the above-mentioned report:

> "The most important structural features of the Blackbird district are believed to be three main structural blocks. Only the central or Blackbird block appears to have structures that favor the formation of important mineral deposits. The three blocks differ greatly structurally, though there is not much data on the two outside blocks. In the Blackbird structural block, and to a lesser extent the Lookout block, there are numerous tight folds with overturned limbs locally. The central block has many shear zones also, both broad and narrow; in this block and the north part of the Lookout structural block are several low-angle thrust faults. All three blocks are cut by a number of high-angle faults."

Describing the garnet-chloritoid-bearing rocks, Vhay says (p. 3):

> "The metamorphic rocks in the northern part of the Blackbird block are characterized by the presence of garnet or chloritoid. The common

rocks are garnet-quartz-biotite schist or chloritoid-quartz-biotite schist; the garnet and chloritoid may both be present in some places. Much of the biotite has been replaced by chlorite.....Bedding, nearly destroyed in the garnet-chloritoid-biotite schists, is observable only in the more quartzitic layers."

And regarding the rocks of the Lookout block, (p. 6):

"The Lookout structural block consists of both schistose and non-schistose rock types but is mainly well-bedded non-schistose quartzite and quartz-biotite granulite with various proportions of quartz and biotite."

Few exposures of bed rock can be found on the property because the common biotite schist is usually weathered deeply. On the point at the north end of the Sunshine No. 1 claim, there is typical garnet-schist, garnet-chloritoid-quartz schist and some quartzite, mostly frost-heaved rather than actually in place. In the bulldozer pit north of the shaft, garnet schist with thin bands of micaceous quartzite are exposed. On the ridge about 300 feet south of the shaft (in the area of high geochemical assays, fig. 3) some massive rock consisting mostly of garnet with only a small amount of biotite is poorly exposed. Judging by the float most of the rest of the area is underlain by garnet or chloritoid schist containing bands of micaceous quartzite. Near the west side of the Sunshine No. 2, float indicates the presence of a quartz-feldspar porphyry dike, west of which are the rocks of the Lookout block.

Structurally, little could be determined on the property. The fault between the Blackbird and Lookout structural blocks presumably lies along the porphyry dike; the location of the porphyry dike and the fault shown on figure 1 is taken from Plate I, Prelim. Report No. 3-219. Schistosity seen in the few surface exposures of bedrock strikes about N. 20 W., and dips steeply west. No bedding was recognized. In the underground workings a shear cleavage exposed at the face strikes N. 5 W., and dips steeply west. The plunge of lineaments in the schist is between 30° and 45° to the north.

Indications of mineralization are numerous on the property and consist of massive quartz, gossan and some fresh cobaltite. The shaft (fig. 2) exposes part of the west side of an ore body consisting almost solely of cobaltite replacing early quartz and garnet-biotite schist. Fairly large masses of pure cobaltite can be seen there. On the basis of known habits of ore bodies elsewhere in the district it is presumed that this ore body probably is an irregular-shaped lens plunging 35° to 40° N. 10° to 20° W. As only a part of the west side and perhaps the keel of the lens is exposed, it is not known how large this ore body may be.

At the old prospect pit 175' N. 30 W. of the shaft there is leached quartz stained with iron arsenates. Iron arsenates are taken as a sure sign of the former presence of cobaltite; some gossan occurs here also. Considerable gossan and quartz occurs in the bulldozer trench north and east of the shaft, especially in the small pit in the trench. Quartz float is widespread on the property, and at several points further south (see fig. 1), including the discovery pit of Sunshine No. 1, large outcrops of quartz occur; these probably represent lenses of early massive quartz. There is some gossan and quartz on the dumps of most of the caved adits on the slope to the east (see fig. 1).

The gossan mentioned above indicates that iron sulfides, (probably pyrite) must be present at depth, although none was seen in the ore at the shaft. Whether cobalt occurs with the pyrite is not known as no cobalt bloom was seen at any place on the property aside from the shaft dump, but as the geochemical work (see below) shows several areas of high values in cobalt, it is believed probable that cobaltite does accompany the pyrite.

GEOCHEMICAL WORK

Because of the scarcity of both outcrops and artificial exposures, a grid was laid out on the property and geochemical assays made for cobalt in the soil; the numbers on figure 3 indicate the amount of cobalt in parts per million. As values of less than 80 parts per million are considered background in this district, an isogram at 80 ppm and another at 200 ppm have been drawn on the map. The same two lines have been transferred, somewhat generalized, to figure 1, to indicate the areas which should be prospected by bulldozing.

The results of the geochemical assays seem to show a mineralized zone trending about N. 30° W., about 1,000 feet long and over 200 feet wide in which there are two higher grade areas, one around the shaft about 200 feet long and another between 400 and 700 feet N. 30 E. of the shaft. There is also a parallel zone roughly 100 feet east showing high values northeast of the shaft and a few somewhat higher values as far as 300 feet southeast.

ORE RESERVES

There are not sufficient data at present to calculate any ore reserves.

CONCLUSIONS

It is on the basis of the picture given by the geochemical work plus the high-grade ore exposed in the shaft, that this revised contract has been suggested. The geochemical results were also used to lay out the proposed bulldozing program shown on figure 1.

Because of the complicated structure of the possible ore bodies, the exposures made by Stage 1 bulldozing should be carefully examined by a geologist before Stages II and III are approved. Any further exploration beyond Stage III should not be considered until the problems of claim locations, accessibility, location of mine portals, and especially water supply, are solved. The small size and location of the property will probably make it difficult to operate, but the exploration program is expected, however, to indicate some high-grade cobalt ore.

cc: U.S.B.M., Spokane

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

No. 157 Howard Street
Spokane 4, Washington

December 27, 1951

Memorandum

To: A. E. Weissenborn, Executive Officer, DMA Field Team, Region II

From: Wayne A. Roberts and John S. Vhay, Geologists, U.S.G.S.

Subject: Sunshine Mine, Lemhi County, Idaho, DMA Docket No. 1[illegible]x

RECOMMENDATIONS

An application for an exploration contract from K. G. Boynton and K. V. King contained a proposal to sink a shaft on the Sunshine property, Blackbird district, Lemhi County, Idaho, at a total cost of $15,000. Almost nothing is known about the shape of any possible ore bodies on this property; therefore, it is recommended that the proposal to sink a shaft be denied. Inasmuch, however, as cobalt does occur on the property, it is recommended that an exploration contract for $12,000 be granted to the owners of the property. The exploration should be done by bulldozing and diamond drilling in stages as outlined below, each succeeding stage being dependent upon the results of the preceding stages.

It should be pointed out here that, although the geochemical and geological data indicate conditions favoring the presence of a cobalt deposit, the location of the property with respect to availability of water and the arrangement and topographic position of the claims will make it difficult to mine cobalt on this property; however, as a possible source of cobalt, it should be explored sufficiently to determine the size and grade of possible ore bodies.

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Assuming that the bulldozer cuts are 13 feet wide and average 6 feet deep, slightly over 4,160 cubic yards of mantle must be removed by the Stage I bulldozing and hand trenching to expose the inferred high-grade material. Approximately 2,300 cubic yards of mantle will be removed by Stage II bulldozing and hand trenching. Stage III will consist of approximately 1,200 feet of diamond drilling to explore the deposit at depth.

The costs of this program are estimated as follows:

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Bulldozing 2,300 cubic yds.	58 hrs. at $10/hr.	580
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Sampling and assaying		520
Supervisor, 2 months at $500/month		1,000
Miscellaneous		850
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The gossan mentioned above indicates that iron sulfides, (probably pyrite) must be present at depth, although none was seen in the ore at the shaft. Whether cobalt occurs with the pyrite is not known as no cobalt bloom was seen at any place on the property aside from the shaft dump, but as the geochemical work (see below) shows several areas of high values in cobalt, it is believed probable that cobaltite does accompany the pyrite.

GEOCHEMICAL WORK

Because of the scarcity of both outcrops and artificial exposures, a grid was laid out on the property and geochemical assays made for cobalt in the soil; the numbers on figure 3 indicate the amount of cobalt in parts per million. As values of less than 80 parts per million are considered background in this district, an isogram at 80 ppm and another at 200 ppm have been drawn on the map. The same two lines have been transferred, somewhat generalized, to figure 1, to indicate the areas which should be prospected by bulldozing.

The results of the geochemical assays seem to show a mineralized zone trending about N. 20° W., about 1,000 feet long and over 200 feet wide in which there are two higher grade areas, one around the shaft about 200 feet long and another between 400 and 700 feet S. 20 E. of the shaft. There is also a parallel zone roughly 100 feet east showing high values northeast of the shaft and a few somewhat higher values as far as 300 feet southeast.

ORE RESERVES

There are not sufficient data at present to calculate any ore reserves.

CONCLUSIONS

It is on the basis of the picture given by the geochemical work plus the high-grade ore exposed in the shaft, that this revised contract has been suggested. The geochemical results were also used to lay out the proposed bulldozing program shown on figure 1.

Because of the complicated structure of the possible ore bodies, the exposures made by Stage 1 bulldozing should be carefully examined by a geologist before Stages II and III are approved. Any further exploration beyond Stage III should not be considered until the problems of claim locations, accessibility, location of mine portals, and especially water supply, are solved. The small size and location of the property will probably make it difficult to operate, but the exploration program is expected, however, to indicate some high-grade cobalt ore.

cc: U.S.B.M., Spokane

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 4, Washington

November 13, 1951

Mr. K. S. Boynton and
Mr. K. V. King
P. O. Box 3622
San Francisco 19, California

Dear Sirs:

Regarding my letter of October 17, 1951, could you please advise me as soon as possible, if an exploration loan for a program of bulldozing and diamond drilling, total cost $11,115.00 is satisfactory. This information is needed for further processing of your loan.

Sincerely,

Wayne A. Roberts

WAR:lm

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

No. 137 Howard Street
Spokane 4, Washington

October 17, 1951

Mr. K. S. Boynton and Mr. K. V. King
P. O. Box 3622
San Francisco 19, California

Dear Sirs:

The DMA Field Team for Region II has examined your property, the Sunshine claims, in Lemhi County, Idaho, and is in favor of an exploration loan for a program as follows: 1. Bulldozing and hand trenching; 2. Diamond drilling. Geochemical work done on your property indicates a favorable area which should be cleared of overburden, sampled and assayed. The mineralization appears to be localized in pods. Those pods should be diamond drilled to determine the attitude, size, and probable grade. The total cost of this exploration program will be about $10,000 to $12,000.

I do not know whether or not such a loan will be granted. The field men can only recommend. My recommendation is based on geological and geochemical data only. There will be several drawbacks in mining this deposit. Labor will be difficult to obtain. Manpower for mining is, at present, short. There appears to be a fraction between the Sunshine claims on the east and the Sunshine No. 1 and Sunshine No. 2 on the west. I don't know the size of this fraction because I couldn't locate a single claim corner. This fraction, as well as all surrounding ground, is now held by the Calera Mining Company.

I would like to know if a bulldozing and diamond drilling exploration program is suitable to you. If so, please let me know as soon as possible.

Sincerely,

Wayne A. Roberts
Geologist

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 4, Washington

June 27, 1951

Mr. K. S. Boynton
P. O. Box 3622
San Francisco 19, California

Dear Mr. Boynton:

We have recently been advised by the DMA office in Washington, D. C., to conduct a field examination of your cobalt property on Blackbird Creek, Lemhi County, Idaho

The examination will be made by Mr. Jack Vhay, U.S.G.S. representative, who is currently in the Blackbird district. We are forwarding the data concerning your mine to Mr. Vhay, and we request that you contact him immediately and make arrangements either to meet him and examine your property or to supply him with whatever geologic information he might need. Mr. Vhay may be reached in care of the Calera Mining Company, Forney, Idaho.

If further information is required on your part, please advise this office.

Yours very truly,

Thor N. Kiilsgaard
For: A. E. Weissenborn
Executive Officer, DMA
Field Team, Region II

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 4, Washington

June 27, 1951

Mr. K. S. Boynton
P. O. Box 3622
San Francisco 19, California

Dear Mr. Boynton;

We have recently been advised by the DMA office in Washington, D. C., to conduct a field examination of your cobalt property on Blackbird Creek, Lemhi County, Idaho

The examination will be made by Mr. Jack Vhay, U.S.G.S. representative, who is currently in the Blackbird district. We are forwarding the data concerning your mine to Mr. Vhay, and we request that you contact him immediately and make arrangements either to meet him and examine your property or to supply him with whatever geologic information he might need. Mr. Vhay may be reached in care of the Calera Mining Company, Forney, Idaho.

If further information is required on your part, please advise this office.

Yours very truly,

Thor H. Kiilsgaard
For: A. E. Weissenborn
Executive Officer, DMA
Field Team, Region II

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

June 21, 1951

Mr. K. S. Boynton
P. O. Box 3622
San Francisco 19, Calif.

Dear Mr. Boynton:

Your application docketDMA-1609x for exploration project in the amount of $15,000.00 has beenreceived by the Minor and Rare Metals Branch of the Supply Division.

Before a decision can be reached on your request we find it is necessary to obtain additional information on your property. Your application therefore is being referred to the office of the Executive Officer of DMA field team II, Mr. A.E. Weissenborn, South 157 Howard Street, Spokane, Washington, with the request that the needed information be supplied to us.

Yours very truly,

Tom Lyon, Director
Supply Division

WBourret/mh
cc: Adm. Read. File
Strobel
Lyon
Filed Team II
Bourret
Files

Form MF-105
(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-1609X

Date received 6/5/51

Participation

K. S. Boynton Ang
K. V. King
P.O. Box 3622
San Francisco, 19, Calif

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED
JUN 1 1951
SAN FRANCISCO, CALIFORNIA

Name and address of applicant

Date

FILL IN THIS BLOCK

Date of application May 31, 1951

Estimated cost $15,000.00

Mineral or metal Cobalt (cobaltite)

Percentage of Government participation 90.%

Location of mine Blackbird Creek
Lemhi Co - Idaho

Date of filing MF-100

DMA Docket Number, if available

INSTRUCTIONS

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

THE APPLICANT

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

~~*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. above Individuals - 25 years experience in mining and metallurgy with S.O.Co. of Calif - S.F.

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

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.

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) $1500.00 — Sufficient.

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

16—64067-1

attached

THE PROPERTY

10. (a) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.

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

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

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

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

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

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work. none

15. State in detail how the ore could be shipped and how and where milled. By truck - Possibly Calera on Blackbird Creek.

*16. History:

(a) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property with reasons for any past suspensions of operations.

(b) State briefly the known history and production of adjoining and neighboring properties. (See Howe Sound-Calera Lot 4)

(c) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations. See Idaho State and U.S. Bureau of Mines Reports on Sunshine.

~~*17. Production:~~

(a) If mine is in production, furnish the following information:

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

~~*18. Ore or mineral reserves:~~ (If property is or has been operating.)

(a) Describe the ore or mineral deposits briefly.

(b) Submit available maps and assay data.

(c) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions. Cobaltite vein showing richest known in United States - Contains up to 13% cobalt metal by analysis.

THE EXPLORATION

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

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

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

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

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

(a) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.

(b) Supervisors, by numbers and positions, with salaries of each.

(c) Cost of necessary repairs to existing facilities, structures, and buildings.

(d) Cost of necessary installation or construction of additional facilities, structures, and buildings.

(e) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(f) Cost of rental for equipment which the operator proposes to rent.

(g) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(h) Cost of materials and supplies, including items of equipment costing less than $50 each.

(i) Cost of power, water, utilities, and any other items not provided for above.

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

CERTIFICATION

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

(Name of company)

By K. B. Boynton
(Signature of authorized official)

(Date)

President
(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

a)

Paragraph 10 – Lines for Lunsford Claims

These claims on Lunsford Creek, both in Nevada, adjoining claims now held by Howard (Calera Mining Co.) in F-21-N (R-15-E) as delineated by Lunsford Prospect Pit.

Lunsford Claim is situated on the north end of Kennecott Patented Claim #1572 held by Calera

Lunsford #1 Claim situated on south end of Kennecott Claim #1572 held by Calera

Lunsford #3 situated on west side of Lunsford #1, if extended the shaft would about 40 ft. in 75 ft wide vein of Calera co.

Paragraph 12

Claims adjoin Howard (Calera) holdings on Lunsford Creek – Lunsford Claim.

8) — [illegible] relief to claims [illegible] the Blind
creek or up Little Cari Creek. Nearly
tiny of my age in Delaware - County [illegible]
[illegible] — mined and ground in [illegible],
[illegible].

Paragraph 16

The history of the area in which these claims are
located is given in detail in (1) [illegible] Bureau of Mines
Report — [illegible] Feb 1947 by [illegible]
(2) State of Idaho — Division of Mining
Report — Pamphlet 69 — Jan 1943 — [illegible]
[illegible] — by A.L. Anderson

Both reports mention the Sunshine claims
[illegible] which we hold. The [illegible]
[illegible] a detailed summary of the [illegible]
[illegible] which has [illegible] of the [illegible]
[illegible] that date [illegible]
[illegible] of activity.

The [illegible] history of the area is [illegible] in
detailed records [illegible] of the [illegible]
[illegible] (Page [illegible]) [illegible]
([illegible]) Ridings [illegible] of the
Dunkin Group. The [illegible] Report of [illegible]
[illegible] details their development work [illegible] of
[illegible] 1901. [illegible] (
[illegible] Page 4) [illegible] report [illegible]

[illegible] the [illegible] [illegible] to their of the Sunshine Group to the other claims of note in the area.

Recent development work in the shaft on Sunshine [illegible] high grade [illegible] [illegible] the goal of [illegible] per ton [illegible] [illegible] [illegible] [illegible] [illegible] 5 feet.

Methods of development of interest which have established are:-

1- a method of recovering [illegible] by [illegible] from [illegible] [illegible] [illegible] [illegible] patented.

2- a electrolytic cyanide method for [illegible] gold that has [illegible] applied on [illegible] concentrates.

3- an electrostatic [illegible] process has developed for the rapid, accurate determination of [illegible] in ore, concentrates, etc.

4- a local demand for [illegible] in the [illegible] per day was established for [illegible] [illegible] production.

Paragraph 21

In Order the required work on the [illegible] in 5 months to establish [illegible] value in the group of claims.

[illegible] work should be concentrated on the present shaft [illegible] depth of [illegible] feet. In the meantime by means of [illegible] the work should follow the [illegible] shaft by [illegible] Gods Grace on this [illegible] project.

Paragraph 2

Our request to the [illegible] Engineer Corps, [illegible] data to the [illegible] of J.P. Hughes, [illegible] Engineering [illegible] Mining Circular - No. [illegible] Institute [illegible] also [illegible] P.L. Hess in Bureau of Mines [illegible] XI 1917 - Pages 399 - 401

Paragraph 3

a. 4 miners or diamond drill operators (Average $15. a day with board and room or cost of more depending, Lockers, mountains, and Gov't to comfort)

b. 1 Superintendent @ $20 day

c. No facilities existing

d. No buildings finished

e. Cost to put [illegible] equipment [illegible] about 10 hp, air compressor and diamond drill.

f. Air rotating pumping equipment can be rented for $300 a month.

E

Paragraph 23 continued

g. [illegible]

h. Construction fuel, power, hand tools etc will cost $300 a month

i. Not necessary.

24. Anticipate to carry one aircraft for 5 months at a total cost of $300 a month.

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-1609X

Date received 6/5/51

Participation

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED
JUN 1 1951
SAN FRANCISCO, CALIFORNIA

Name and address of applicant

K. S. BOYNTON AND
K. V. KING
P. O. BOX 3622
SAN FRANCISCO, 19, CALIF

Date

FILL IN THIS BLOCK

Date of application MAY 31, 1951

Estimated cost $15,000.00

Mineral or metal COBALT (COBALTITE)

Percentage of Government participation 90.0%

Location of mine BLACKBIRD CREEK
LEMHI CO. IDAHO

Date of filing MF-100

DMA Docket Number, if available

INSTRUCTIONS

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

THE APPLICANT

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

~~*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. above Individuals - 25 years experience in mining + metallurgy with S.O.Co. of Calif - S.F.

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

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. no previous operations

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) $1500.00 — Sufficient.

*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

attached 10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.

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

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

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

*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. (See attached)

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

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work. none

15. State in detail how the ore could be shipped and how and where milled. by truck - possibly by Calera on Blackbird Creek.

*16. History:

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.

(*b*) State briefly the known history and production of adjoining and neighboring properties. (See Home Sound Calera State)

(*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations. See Idaho State and U.S. Bureau of Mines Reports on Sunshine.

~~*17. Production.~~

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

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

~~*18. Ore or mineral~~ reserves: (If property is or has been operating.)

(*a*) Describe the ore or mineral deposits briefly.

(*b*) Submit available maps and assay data.

(*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions. Cobaltite film showing richest known in United States - Contains up to 13% Cobalt metal by analysis - Cobaltite.

THE EXPLORATION

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

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

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

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

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.

(*b*) Supervisors, by numbers and positions, with salaries of each.

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(*f*) Cost of rental for equipment which the operator proposes to rent.

(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.

(*i*) Cost of power, water, utilities, and any other items not provided for above.

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

CERTIFICATION

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

(Name of company)

By K. Boynton
(Signature of authorized official)

(Date)

V. King
(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.

Paragraph 10 – Description Sunshine Claims

Three claims on Blackbird Creek Lemhi Co. Idaho adjoining claims now held by Howe Sound (Calera Mining Co) in T-21-N (R-18-E) as delineated by 5th Standard Parallel north.

Sunshine claim is situated on the north end of Reuman Patented Claim #1592 Held By Calera

Sunshine #1 claim situated on north end of Broadgauge Claim #1592 held by Calera

Sunshine #2 situated on west side of Sunshine #1 and attached. Has shaft sunk about 40 ft. on 2 to 5 ft wide vein of Cobaltite ore.

Paragraph 12

Claims adjoin Howe Sound (Calera) holdings on Blackbird Creek – Lemhi Co – Idaho.

6)

usable road to claims up Blackbird creek or up Little Deer Creek. Nearest town of any size is Salmon - County Seat of Lemhi Co. - Nearest rail point is Darby, Montana.

Paragraph 16

The history of the area in which these claims are located is given in detail in (1) U.S. Bureau of Mines Report - RI 4012 - Feb 1947 By Reed and Hedlick. (2) State of Idaho - Bureau of Mines Report - Pamplet 67 - Jan 1943 - Moscow Idaho - By A.L. Anderson.

Both reports mention the Sunshine claims and others which we hold. The Idaho State Pamplet gives a detailed description of the ore body on Sunshine #2 which has been further developed since that date to a high grade 2 to 5 ft wide vein of cobaltite.

The production of this area is tied up in detailed records we have of the old Uncle Sam mine which is now a part of Howe Sound (Calera) holdings which go in and surround the Sunshine group. The RI-4012 Report of U.S. B.of.M. details their development work and diamond drill records of Project #1801. Figure 2 (Map opposite Page 4) in above report shows

c) the approximate location of the Sunshine Group to the other claims of note in the area.

Recent development work in the shaft on Sunshine #2 shows high grade cobaltite at a depth of about 40 feet with vein size increased from 6" at the surface to about 5 feet.

Metallurgical developments of interest which we evaluated are :-

1 - a method of recovering cobaltite by flotation from Lemhi Co. ores. This is now patented.

2 - an electrolytic cobalt metal and cobalt salt pilot plant was set up and operated on Blackbird concentrates.

3 - an electrometric titration procedure was developed for the rapid, accurate determination of cobalt in ores, concentrates etc.

4 - a local demand for cobalt in X's of 400# per day was established for paint drier production.

Paragraph 21

We believe the required work can be accomplished in 5 months to establish cobaltite values in this group of claims.

The work should be concentrated on the present shaft to an added depth of 100 ft. or more, to be supplemented by diamond drilling or further trench work down the hill toward the Tinkers Pride Claim as development warrant.

Paragraph 22

See Reports as referred to above for Geological Data, also more complete data in the report of J.B. Umpleby on the Geology and Ore Deposits of Lemhi Co. Idaho - U.S.G.S. Bulletin #528. See also Report of F.L. Hess in U.S. Mineral Resources Part I 1917 - Pages 899-901

Paragraph 23

a. 4 miners or diamond drill operators (Assume $15. a day until we can develop more definitely, back in mountains, and have to camp out)

b. 1 supervisor @ $20 day

c. No facilities existing

d. No buildings planned

e. Propose to rent gasoline engine hoist about 10 hp, air compressor and diamond drill.

f. Am estimating necessary equipment can be rented for $300 @ month.

Paragraph 23 Continued

g none

h. An estimating fuel, powder, hand tools etc will cost $300 @ month

i Not necessary.

24. Anticipate to carry on work for 5 months at a total cost of $3000 @ month.

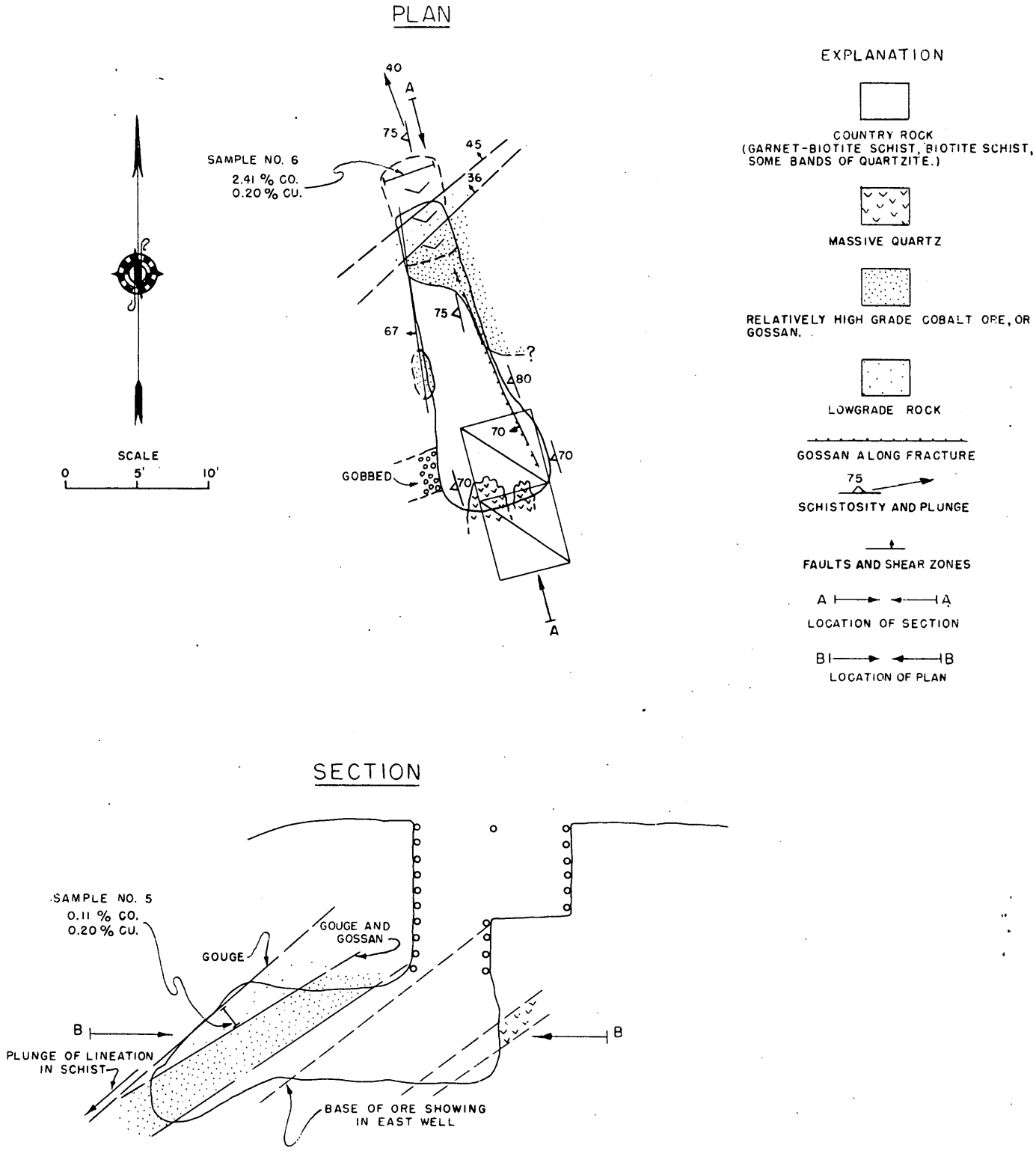


FIG. 2

PLAN AND SECTION OF SHAFT ON SUNSHINE PROPERTY

ROBERTS & VHAY

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

EXPLANATION

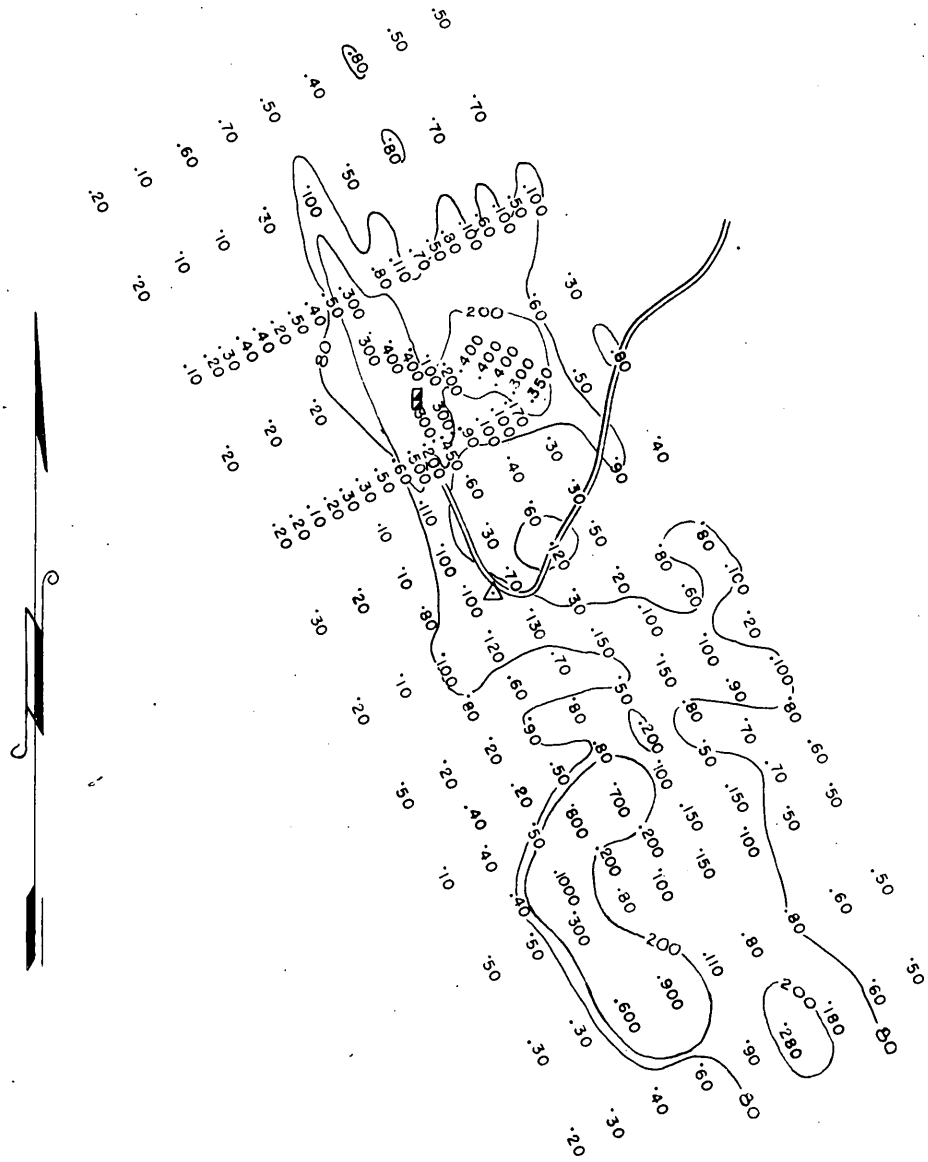
·350
Location of soil sample with value of cobalt in parts per million.

200
80
Isograms. Lines connecting equal values of cobalt contained in the soil.

Road

Shaft

BM 8105



ROBERTS & HAWKES

FIGURE 3

GEOCHEMICAL DATA ON SUNSHINE PROPERTY, LEMHI COUNTY, IDAHO

VALUES IN PPM

200 100 0 200 400

EXPLANATION

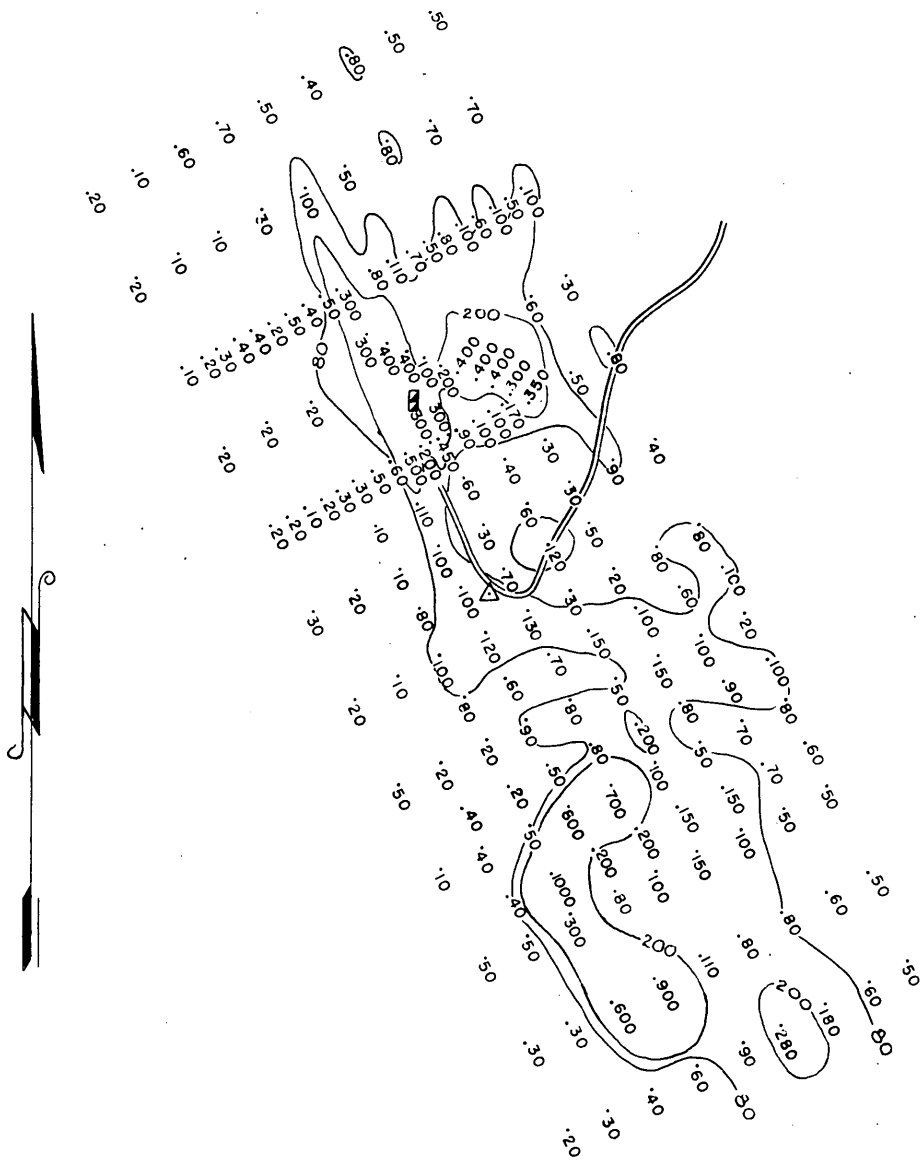
·350
Location of soil sample with value of cobalt in parts per million.

200
80
Isograms. Lines connecting equal values of cobalt contained in the soil.

Road

Shaft

BM 8105



ROBERTS & HAWKES

FIGURE 3

GEOCHEMICAL DATA ON SUNSHINE PROPERTY, LEMHI COUNTY, IDAHO

VALUES IN PPM

200 100 0 200 400

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-1609X

Date received 6/5/51

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED
JUN 1 1951
SAN FRANCISCO, CALIFORNIA

Name and address of applicant

K.S. Boynton And
K.V. King
P.O. Box 3822
San Francisco, 19, Calif

Date

FILL IN THIS BLOCK

Date of application May 31, 1951

Estimated cost $15,000.00

Mineral or metal Cobalt (cobaltite)

Percentage of Government participation 90.%

Location of mine Blackbird Creek
Lemhi Co — Idaho

Date of filing MF-100

DMA Docket Number, if available

INSTRUCTIONS

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

THE APPLICANT

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

~~*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. above Individuals — 25 years experience in mining & metallurgy with So. Co. of Calif. S.F.

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

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. no previous operations

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) $1500.00 — Sufficient.

*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

attached

10. (a) Give a description of the property that will be in any way involved in the exploration project, including any existing mine or operating property.

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

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

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

*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. (See attached)

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

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work. none

15. State in detail how the ore could be shipped and how and where milled. By truck - possibly by Cableway on Blackbird Creek

16. History:

(a) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.

(b) State briefly the known history and production of adjoining and neighboring properties. See (Stone Sound - Cobalt Creek)

(c) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations. See Idaho State and U.S. Bureau of Mines Reports on Sunshine

~~*17. Production:~~

(a) If mine is in production, furnish the following information:

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

~~*18. Ore or mineral reserves:~~ (If property is or has been operating.)

(a) Describe the ore or mineral deposits briefly.

(b) Submit available maps and assay data.

(c) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions. Cobaltite Vein showing richest known in United States - Contains up to 13.0% metal by analysis - Cobaltite.

THE EXPLORATION

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

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

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

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

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

(a) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.

(b) Supervisors, by numbers and positions, with salaries of each.

(c) Cost of necessary repairs to existing facilities, structures, and buildings.

(d) Cost of necessary installation or construction of additional facilities, structures, and buildings.

(e) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(f) Cost of rental for equipment which the operator proposes to rent.

(g) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(h) Cost of materials and supplies, including items of equipment costing less than $50 each.

(i) Cost of power, water, utilities, and any other items not provided for above.

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

CERTIFICATION

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

(Name of company)

By K. Boynton
(Signature of authorized official)

(Date)

G. T. King
(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.

a)

Paragraph 10 – Description Sunshine Claims

Three claims on Blackbird Creek Lemhi Co. Idaho adjoining claims now held by Howe Sound (Calera Mining Co) in T-21-N (R-18-E) as delineated by 5th Standard Parallel North.

Sunshine claim is situated on the north end of Newman Patented Claim # 1592 held by Calera

Sunshine #1 claim situated on north end of Broadgauge Claim #1592 held by Calera

Sunshine #2 situated on west side of Sunshine #1 and attached. Has shaft sunk about 40 ft. on 2 to 5 ft wide vein of Cobaltite ore.

Paragraph 12

Claims adjoin Howe Sound (Calera) holdings on Blackbird Creek – Lemhi Co – Idaho.

8) - usable road to claims up Blackbird creek or up Little Deer Creek. Nearest town of any size is Salmon - County Seat of Lemhi Co. Nearest rail point is Darby, Montana.

Paragraph 16

The history of the area in which these claims are located is given in detail in (1) U.S. Bureau of Mines Report - RI 4012 - Feb 1947 by Reed F. Hulliah (2) State of Idaho - Bureau of Mines Report - Pamphlet 69 - Jan 1943 - Resources of Idaho - by A.L. Anderson.

Both reports mention the Sunshine claims and others which we hold. The Idaho State Pamphlet gives a detailed description of the ore body on Sunshine #2 which has been further developed since that date to a high grade 3 to 5 ft wide vein of cobaltite.

The production of this area is tied up in detailed records we have of the old Nucleus Mine which is now a part of Home Stake (Calera) holdings which go in and surround the Sunshine group. The RI-4012 Report of U.S. B.M. details their development work and includes detail records of Project #1801. Figure 2 (Map opposite Page 4) in above report shows

c) the approximate location of the Sunshine Group to the other claims of note in the area.

Recent development work in the shaft on Sunshine #2 shows high grade cobaltite at a depth of about 40 feet with vein size increased from 6" at the surface to about 5 feet.

Metallurgical developments of interest which we evaluated are :-

1 - a method of recovering cobaltite by flotation from tenth Co ores. This is now patented.

2 - an electrolytic cobalt metal and cobalt salt pilot plant was set up operated on Blackbird concentrates.

3 - an electrometric titration procedure was developed for the rapid, accurate determination of cobalt in ores, concentrates, etc.

4 - a local demand for cobalt in X's of 400# per day was established for first direct production.

Paragraph 21

We believe the required work can be accomplished in 5 months to establish cobaltite values in this group of claims.

d).

The work should be concentrated on the present shaft to an added depth of 100 ft. or more. To be supplemented by diamond drilling or further trench work down the hill toward the Tinkers Pride Claim as development warrant.

Paragraph 22

See Reports referred to above for Geological data. Also more complete data in the report of J. B. Umpleby on the Geology of Ore Deposits of Lemhi Co. Idaho - U.S. G.S. Bulletin #528. See also Report of F. L. Hess in U.S. Mineral Resources Part I 1917 - Pages 899-901.

Paragraph 23

a. 4 miners or diamond drill operators (Assume $15. a day until we can develop more definitely, back in mountains, and have to camp out)

b. 1 Supervisor @ $20 day

c. No facilities existing

d. No buildings planned

e. Propose to rent gasoline engine about 10 hp, air compressor and diamond drill.

f. Any estimating necessary equipment can be rented for $300 @ month.

E)

Paragraph 23 Continued

g none

h. An estimating fuel, powder, hand tools etc will cost $300 @ month

i Not necessary.

24. Anticipate to carry on work for 5 months at a total cost of $3000 @ month.

FEB 19 1952

Messrs. T. S. Royston and T. V. King
Post Office Box 3652
San Francisco 19, California

Re: Docket No. DMA 16093 - Cobalt
Sunshine Mine
Lemhi County, Idaho

Dear Sirs:

Review of our files reveals that letters dated October 17 and November 13, 1951, to you from Wayne A. Roberts of Defense Minerals Exploration Administration, Region II, Spokane, Washington, remain unanswered. Will you please advise us whether or not you are interested in the modified exploration program as outlined by Mr. Roberts and wish to proceed with your application.

If you are not, please so inform us so that we can remove your application from our active files and consider the matter closed.

May we hear from you at your earliest convenience?

Sincerely yours,

O. C. Selfridge, Acting Chief
Iron and Ferro-Alloy Division

OCSelfridge:la
2/15/52

cc: Admin. Read. File
Docket
Field Team, Reg. II
H. W. Davis, USBM
T. P. Thayer, USGS
O. C. Selfridge

147A.

G-MD-DML

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

February 12, 1952

Memorandum

To: George C. Selfridge, DMEA

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

Subject: Field Report on loan application DMA 1609 X - Cobalt
K. S. Boynton and K. V. King
P.O. Box 3622
San Francisco 19, California

Property: Sunshine Claims
Blackbird Creek
Lemhi County, Idaho

The Field Team mapped the deposit and systematically sampled the soils for cobalt content. Geochemical determinations of 163 samples are plotted on the map and contoured to show a geochemical anomaly of higher cobalt content.

The Field Team recommends a program of bulldozer trenching in 2 stages, followed by diamond drilling if results warrant it. The total estimated cost of all 3 stages is $12,000. The geochemical work, done as part of a Geological Survey research project, has given encouraging results, and I concur with the recommendation that exploration of the property is warranted.

The Field Team received no response to 3 letters addressed to the applicant, suggesting that the applicant is no longer interested in exploring the property or that ownership has changed. Another attempt should be made to communicate with Boynton and King before taking further action on the application.

Don Lemmon

DMLemmon:gt

March 13, 1952

Memorandum

To: Mr. Robert E. Adams - Code 200
Attention: Docket Control Section

From: Iron and Ferro-Alloy Division, DMEA

Subject: Removal of application from active files of Iron and Ferro-Alloy Division:
Docket No. DMA 1609X - Cobalt
K. S. Boynton and K. V. King
Sunshine Mine
Lemhi County, Idaho

Several attempts have been made through correspondence to contact the applicants of the subject docket without success. We, therefore, are removing the docket from our active files and thereby will consider the matter closed.

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

Attachment

GCSelfridge:ls 3/12/52

cc: Admn. Reading File
Docket
G. C. Selfridge
Field Team, Region 2
H. W. Davis, USBM
T. P. Thayer, USGS

JAN 25 1952

Mr. A. M. Weisenburn
Mapping Officer, Region II
Suite 157 Mount Street
Spokane 8, Washington

Re: Docket No. MMA 1692X - Opal
Double Claim, Elizabeth Creek
Lemhi County, Idaho

Dear Mr. Weisenburn:

A field appraisal of the above noted property was requested of your office by letter dated June 21, 1951.

Please advise us as to the progress of your investigation at this time.

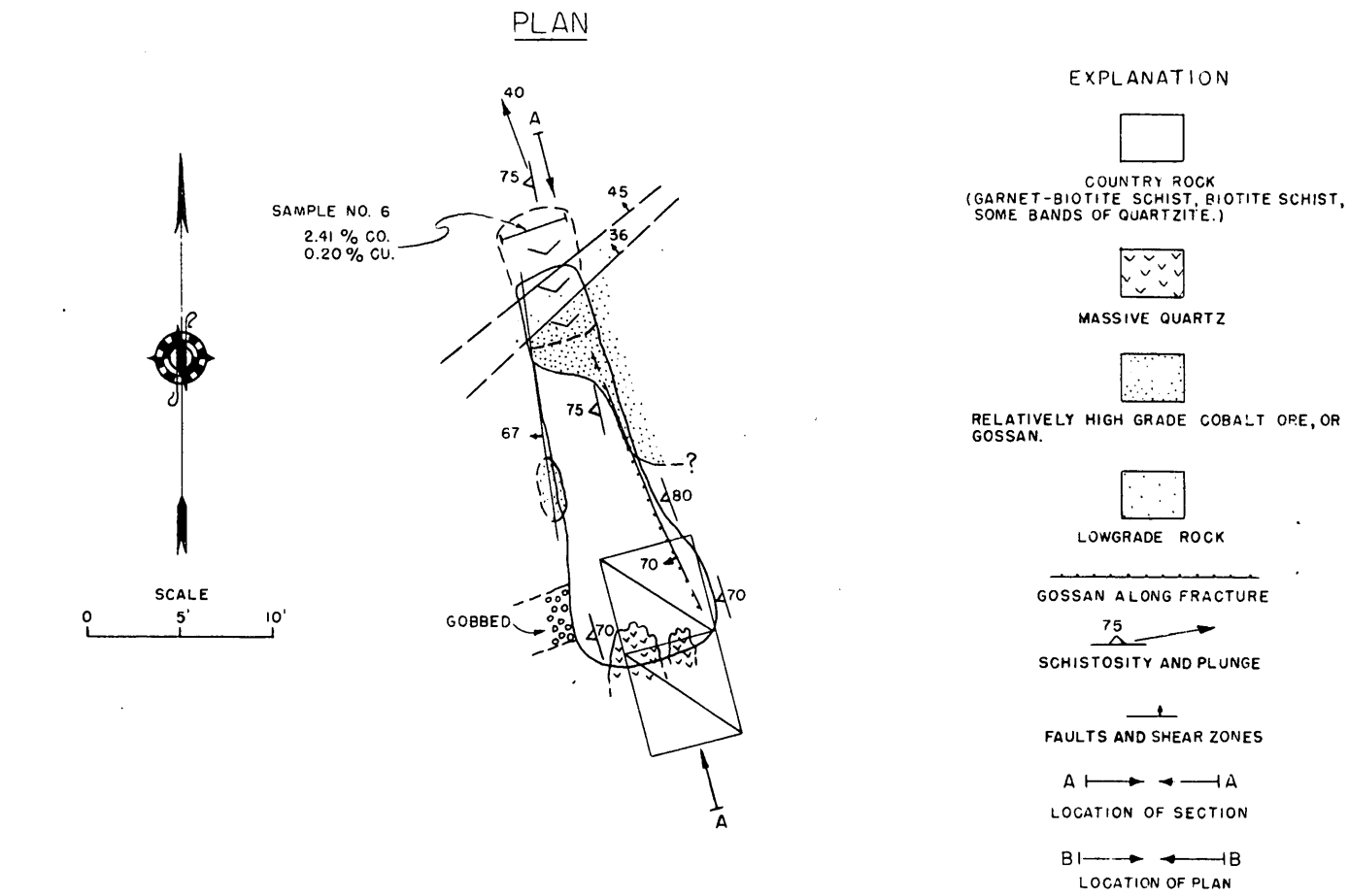
Sincerely yours,

C. O. Mittendorf

Acting Administrator
Defense Minerals Exploration
Administration

McCentry'lm
1/24/52

cc: Adm. Reading File
Docket
R. W. Davis, USBM
E. P. Thayer, USGS
Field Team Reg. II
✓ G. G. Selfridge
G. E. Gentry



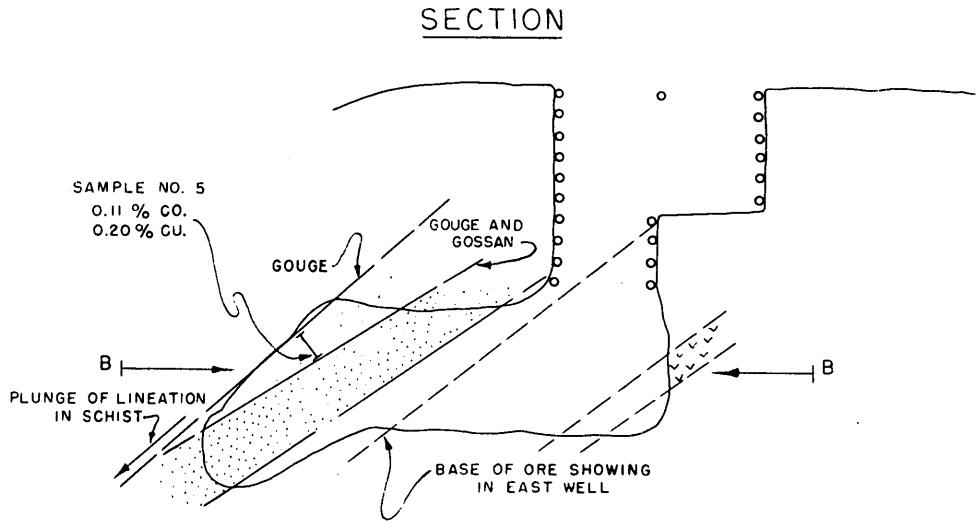
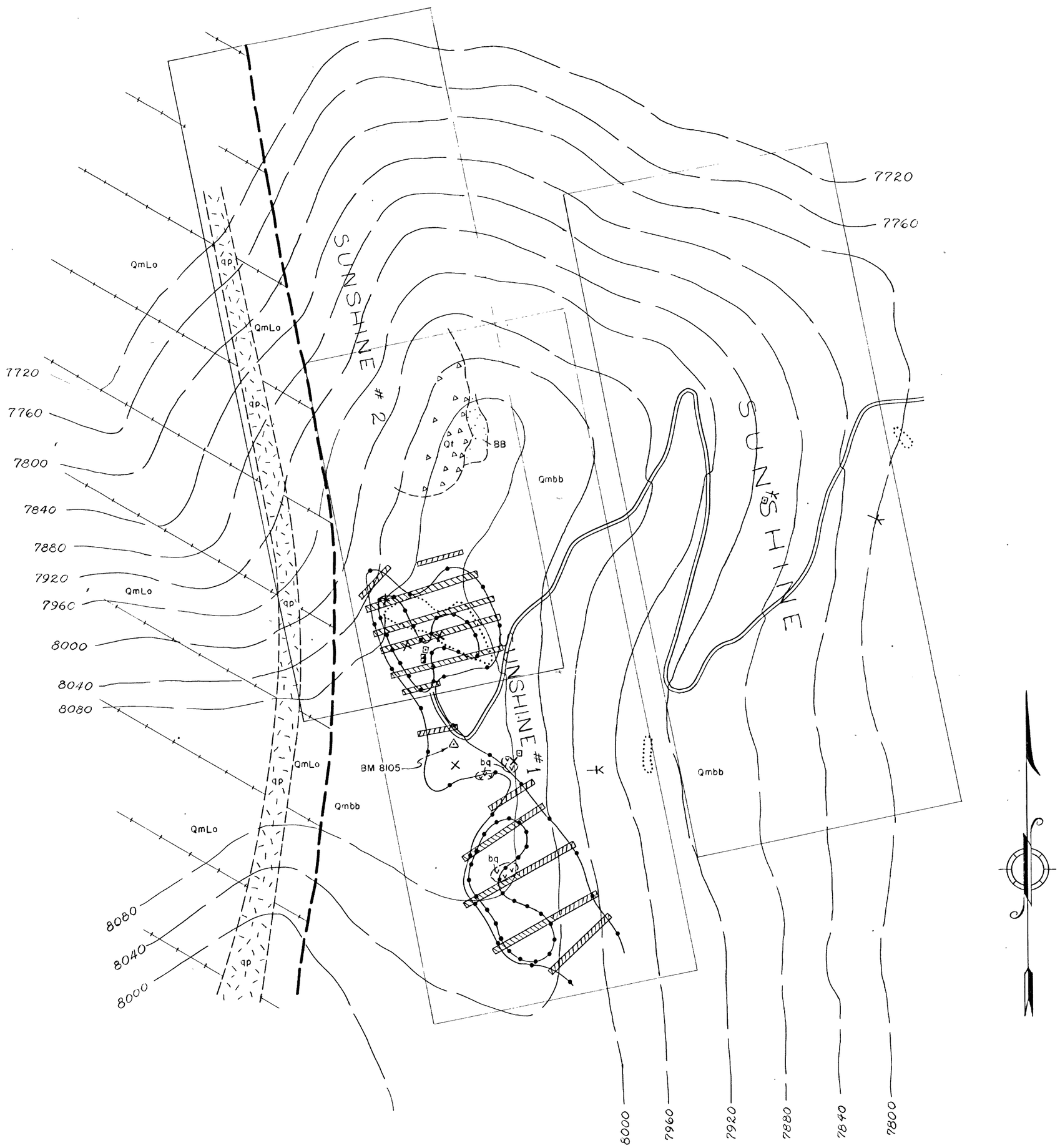


FIG. 2

PLAN AND SECTION OF SHAFT ON SUNSHINE PROPERTY

ROBERTS & VHAY

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



EXPLANATION

TALUS

MANTLE OVERLYING BLACKBIRD SCHIST

MANTLE OVERLYING LOOKOUT QUARTZITE

QUARTZ PORPHYRY

BULL QUARTZ

BLACKBIRD SCHIST

CONTACT APPROXIMATELY LOCATED

APPROXIMATE LOCATION OF FAULT

SHAFT

CAVED ADIT

BULLDOZER CUT

PROSPECT PIT

DISCOVERY POST

ROAD

LINE ENCLOSING AREA OF HIGH GRADE GEOCHEMICAL VALUES IN COBALT

LINE ENCLOSING AREA IN ABOVE-BACKGROUND GEOCHEMICAL VALUES IN COBALT

BULLDOZER TRENCH TO BE CUT IN STAGE II

BULLDOZER TRENCH TO BE CUT IN STAGE I

NOTE.

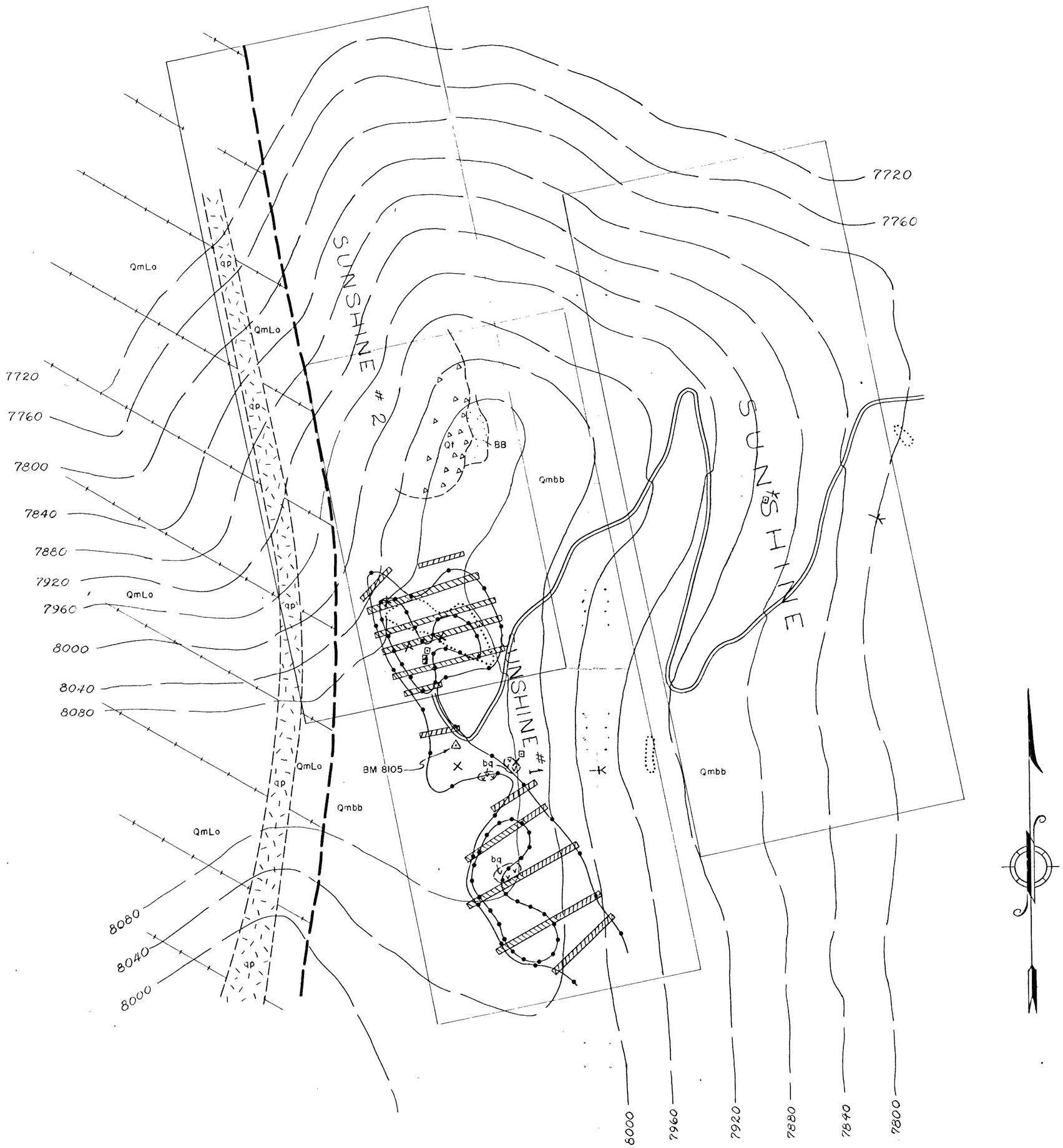
1. DASHED CONTOUR LINES TAKEN FROM U.S. GEOLOGICAL SURVEY TOPOGRAPHIC MAP OF THE BLACKBIRD MOUNTAIN QUADRANGLE.
2. NO CLAIM CORNER POSTS WERE LOCATED. CLAIM LINES AND CORNERS ARE PLOTTED FROM CLAIM DISCRIPTION, AND THE BEARING OF THE PATENTED BROAD-GAUGE CLAIM TO WHICH THE SUNSHINE NO. 1 WAS TIED.

FIGURE 1

SUNSHINE PROPERTY, BLACKBIRD MINING DISTRICT, LEMHI COUNTY, IDAHO

200' 150' 100' 50' 0 200' 400'

ROBERTS & VHAY



EXPLANATION

TALUS

MANTLE OVERLYING BLACKBIRD SCHIST

MANTLE OVERLYING LOOKOUT QUARTZITE

QUARTZ PORPHYRY

BULL QUARTZ

BLACKBIRD SCHIST

CONTACT APPROXIMATELY LOCATED

APPROXIMATE LOCATION OF FAULT

SHAFT

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BULLDOZER CUT

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2. NO CLAIM CORNER POSTS WERE LOCATED. CLAIM LINES AND CORNERS ARE PLOTTED FROM CLAIM DISCRIPTION, AND THE BEARING OF THE PATENTED BROAD-GAUGE CLAIM TO WHICH THE SUNSHINE NO. I WAS TIED.

FIGURE I

SUNSHINE PROPERTY, BLACKBIRD MINING DISTRICT, LEMHI COUNTY, IDAHO

200' 150' 100' 50' 0 200' 400'

ROBERTS & VHAY