DMA Form 1

DEFENSE MINERALS ADMINISTRATION
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DMEA ~~DMA~~ Docket No. 2451

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EXPLORATION PROJECT

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Routing Slip

Copies to USBM, USGS, Region III.

To:	Code 700, Rm. 4640	Date	3-27-52
To:	Opr. Comm	Date	7/2/52
To:	Mr. Mittendorf	Date	
To:	Mails & Files	Date	
To:	Docket (Ellis)	Date	
To:	Opr. Com.	Date	6-16-52
To:	Mr. Mittendorf	Date	
To:	Mails & Files	Date	
To:	Ellis Rm. 4640	Date	
To:	Op Com	Date	7-30-52
To:		Date	
To:		Date	
To:		Date	
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To:		Date	

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2/13/53 gla

FILE COPY
SURNAME:

200

Adams

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

FEB 12 1953

Mr. H. C. O'Brien
Panamint Antimony & Tungsten
Mining Company
Newport, Washington

N.S. in R.R.

Dear Mr. O'Brien:

This will acknowledge your letter dated February 5, 1953 requesting the return of material submitted by you with your application for exploration assistance, Docket No. DMEA-2451.

There are enclosed all papers submitted by you with the exception of the official application forms which are Government property and, therefore, not returnable to the applicant.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

J.N.
2-12-53

Enclosures

READams/meb
2-10-53
cc to: Adm.Reading File
Mails & Files Br.

HONE 157J HOME PHONE 136

H. C. O'BRIEN
Real Estate

STOCK RANCHES, FARMS, BUSINESS OPPORTUNITIES & RESIDENCES
NEWPORT, WASHINGTON

2-5-53

Mr. C.O. Mitkendorf Adm.
DMEA Minerals Exploration
Washington DC.

Dear Sir:- Will you please return the entire file on DMEA. #2451 (antimony) Nellie Mining claims, Inyo County, Cal.

Yours very truly
H.C. O'Brien
Vice Pres.
Paramitt Antimony & Tungsten Mining Co Inc.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 9 1953

Executive Officer
DMEA Field Team
Region III

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

WASHINGTON 25, D. C.

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

Department of the Interior
Defense Minerals Administration
RECEIVED

November 5, 1952

Richard C. Thamm, President
Panamint Antimony & Tungsten Mining Co., Inc.
Newport, Washington

Re: Docket DMEA-2451 (Antimony)
Nellie Claims
Inyo County, California

Dear Mr. Thamm:

We acknowledge your letter of October 27, 1952, in which you state that neither you nor your office ever received the letter from Mr. C. O. Mittendorf, dated July 31, 1952, to which I referred in my letter to Mr. O'Brien, dated September 25, 1952.

Not having received that letter surely puts you at a loss as to what the findings were. Accordingly, as requested, I am sending herewith a copy of Mr. Mittendorf's letter to you, dated July 31, 1952.

Sincerely yours,

H. C. MILLER

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

Enclosure

Copy to: C. O. Mittendorf, DMEA, Interior Bldg., Washington, D. C.
E. H. Bailey, USGS

Office of
Executive Officer
DMEA Field Team
Region III

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED

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

November 5, 1952

Richard C. Thaum, President
Panamint Antimony & Tungsten Mining Co., Inc.
Newport, Washington

Re: Docket DMEA-2451 (Antimony)
Nellie Claims
Inyo County, California

Dear Mr. Thaum:

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Executive Officer
DMEA Field Team, Region III

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E. H. Bailey, USGS

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

Office of
Executive Officer
DMEA Field Team
Region III

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 29 1952

September 25, 1952

Mr. H. C. O'Brien
Newport, Washington

Re: Docket DMEA-2451 (Antimony)
Nellie Claims
Inyo County, California

Dear Mr. O'Brien:

In reply to your letter of September 21, the results of the geologists' findings on the subject claims are reflected in the letter, dated July 31, 1952, from Mr. C. O. Mittendorf, Acting Administrator, Defense Minerals Exploration Administration, to Mr. Richard C. Thamm, President, Panamint Antimony and Tungsten Mining Co., Inc., Newport, Washington.

I regret that we are not permitted to give out information on which those conclusions are based.

Sincerely yours,

H. C. MILLER

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

Copy to DMEA, Interior Building, Washington 25, D. C.
E. H. Bailey, USGS

Note: The following is body of Mr. O'Brien's letter to me, dated 9 - 21 - 52.

"Dear Mr. Miller: - We would like any information you can give us as to your engineers and geologists findings on our antimony claims in Death Valley, Cal., namely Panamint Antimony & Tungsten Mining Co., Inc. Claims #1 through 16 "Nellie Mining Claims," our DMEA number is 2451. Very truly yours, H. C. O'Brien, Vice Pres."

H.C.M.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 29 1952

Office of
Executive Officer
DMEA Field Team
Region III

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

September 25, 1952

Mr. H. C. O'Brien
Newport, Washington

Re: Docket DMEA-2451 (Antimony)
Nellie Claims
Inyo County, California

Dear Mr. O'Brien:

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H. C. MILLER

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

Copy to DMEA, Interior Building, Washington 25, D. C.
E. H. Bailey, USGS

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H.C.M.

FILE COPY
SURNAME:

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

JUL 31 1952

AIR MAIL

Mr. Richard C. Thamm, President
Panamint Antimony and Tungsten Mining Co., Inc.
Newport, Washington

Re: Docket No. DMEA-2451 (Antimony)
Nellis Claims
Inyo County, California

Dear Mr. Thamm:

This office has carefully studied and evaluated the information you furnished in your application for aid in an exploration project, as well as various reports and additional information available.

We regret to advise you that your application has been denied. It is the opinion of this office that although the area you propose to explore is not lacking in antimony mineralization, the possibility of discovering a significant ore deposit is too limited to justify the expenditure of public funds.

We wish to thank you for your cooperation in bringing this property to the attention of the Government.

Sincerely yours,

C. O. Mittendorf (fw) 7/31/52

Acting Administrator

HFKeller/gla
7-28-52

cc to: Adm. Reading File
Operating Committee
Docket
Mr. Renick, Rm. 3061
Mr. McKnight, Rm. 4204 GSA
Mr. Ellis
Mr. Keller
DMEA Field Team, Region III (2)

7/25/52 gla

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

July 25, 1952

Memorandum

To: Mr. E. W. Ellis

From: Abbott Renick, Base Metals Branch

Subject: Docket No. DMEA-2451 (Antimony), Panamint Antimony & Tungsten Mining Company, Inc., Nellie Mining Claims, Inyo County, California.

The writer concurs with the examining geologists, namely that the deposit does not merit exploration under present economic conditions and that the applicant be denied for this reason.

Abbott Renick

Abbott Renick

JUL 25 1952

7/14/52 glc

IN REPLY REFER TO:

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

July 11, 1952

Memorandum

To: Mr. E. Wm. Ellis

From: E. T. McKnight

Subject: Denial of loan

Re: DMEA-2451
Panamint Antimony and
Tungsten Mining Company
Mine in Inyo County, Calif.
$36,675
Antimony

Field team examination shows several scattered discontinuous quartz veins containing some antimony and occurring along shears and faults in schist. Grade of antimony is low, but there are small pods and lenses of higher grade ore localized irregularly but particularly along certain fault intersections. These pods are so widely scattered and small as to make the occurrence unattractive economically. Applicant's proposal for underground tunnelling is expensive and considering lack of continuity and sporadic occurrence of ore pods, field team concludes that the applicant's proposal holds too little promise of discovery of a significant tonnage of antimony to justify the requested expenditure of Government funds.

Field team makes an alternate proposal to bulldoze a series of 6 trenches, 100 feet apart and each about 200 feet long. These trenches should be across the average trend of the fault zone that carries the mineralization, as shown in Fig. 3 of field team report. This trenching might reveal certain ore pods that extend to the erosion surface, but the antimony occurrence would probably be similar to that already exposed in shallow surface workings and open pits on the property. The best that could be expected would be a number of small surficial pods that would yield a small tonnage, but probably would not lead to any larger bodies in depth.

Considering the number of prospect pits already opened on mineralization along the zone of proposed trenching that have not led to mining (see Fig. 3 of field team report), it seems doubtful that any significant contribution to mineral supply would be made by the suggested trenching. I therefore recommend that this application be denied without qualification.

Edwin T. McKnight

Edwin T. McKnight
Geologist

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

July 11, 1952

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From: E. T. McKnight

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Edwin T. McKnight
Geologist

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

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Bldg.
870 Market St.
San Francisco 2, Calif.

June 13, 1952

Air Mail

Memorandum

To: Frank E. Johnson, Chairman, Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-2451 (Antimony), Panamint Antimony & Tungsten Mng. Co., Nellie Mining Claims, Inyo County, Calif.

Answering your air-mail letter of June 12, we are pleased to inform you that our field report on subject property was mailed to your office on June 12, together with the docket file.

H. C. Miller
an

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

DEPARTMENT OF THE I...
Defense Minerals Administ...
RECEIVED
JUN 16 1952

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

Office of
Executive Officer
DMEA Field Team
Region III

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

June 12, 1952

Memorandum

To: Frank E. Johnson, Defense Minerals Exploration Administration, Interior Building, Washington, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA-2451 (Antimony), Panamint Antimony & Tungsten Mining Company, Inc., Nellie Mining Claims, Inyo County, California

Reference is made to your letter, dated April 3, requesting a field examination of the subject property.

The examination has been made and attached are four copies of their report, entitled - DMEA 2451, Panamint Antimony and Tungsten Mining Company, Inyo County, California by Wayne E. Hall and E. M. MacKevett, Geologists, U. S. Geological Survey, dated June 6, 1952.

The examining geologists do not believe that the deposit merits exploration under present economic conditions, but conclude that a small amount of bulldozing, costing about $500, might be justified if the demand for antimony becomes critical.

The docket is being returned herewith.

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

Attachments

Copy to: E. H. Bailey, USGS

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 16 1952

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY DMEA TEAM
REGION III

DMEA 2451, Panamint Antimony and Tungsten Mining Company

Inyo County, California

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
Received
JUN 16 1952

Wayne E. Hall, Geologist
E. M. MacKevett, Geologist
U. S. Geological Survey

June 6, 1952

Reviewed by
DMEA OPERATING COMMITTEE
6-20-52
(date)

Summary

The Nellie antimony claims being developed by the Panamint Antimony and Tungsten Mining Company, Inc., of Newport, Washington contain antimony ore that occurs in small pods localized in shear zones and at the intersection of faults in chlorite schist and amphibolite. At least seven small pits and adits on four of the claims expose widths of low-grade antimony ore that range from a few inches to 8.5 feet, and small lenses of high-grade ore. Exposures of bedrock are limited mainly to the pits and adits. None of the exposed pods of ore look very extensive, but possibly 150 tons of ore containing 8 percent antimony could be produced. Other pods of ore, however, may be present. The owners of the claims report tungsten-bearing minerals to be present in the ore, but none was seen in any of the workings during the examination.

The writers recommend that the applicants' request for Government aid be denied, as the deposit does not appear to be economic under present prices for antimony. If, however, the demand for antimony becomes more critical, exploration of the deposit may be warranted. In such case the applicants' proposal to limit exploration to the one pod of ore in the adit in the Nellie No. 2 claim should be modified, as that pod is not likely to prove large. The deposit could be explored best by bulldozing six trenches for a total length of 1200 feet at a cost of about $500.

Introduction

The Nellie Mining Claims are owned by the Panamint Antimony and Tungsten Mining Company of Newport, Washington. The property consists of 16 unpatented mining claims on Tuber Ridge on the west slope of the Panamint Range, 1 mile south of the U. S. Park Service FM radio station in Wildrose Canyon. The Nellie claims include the former Mohawk deposit described by Donald E. White in the Wildrose Canyon Area 1/.

The property was examined at the request of DMEA, on April 14 and 15, 1952 by W. B. Hall and R. M. MacKevett of the U. S. Geological Survey. They were accompanied by Mr. Richard C. Thum, president of the Panamint Antimony and Tungsten Mining Company, Inc., Mr. David Adams of Wildrose Station and Mr. Harry Bennett of Aguerreberry Camp, who was examining the property for a road site.

The claims are accessible by hard-surfaced road from Lone Pine or Trona to the U. S. Park Service summer headquarters in Wildrose Canyon and by gravel road from the Park Service headquarters to the FM radio station. A two-mile trail that rises 1200 feet in elevation leads from the radio station south up Antimony Ridge to the Nellie claims on Tuber Ridge (see White, pl. 45, 1940). The nearest railroad station is at Trona, about 45 miles to the southwest.

1/ White, D. E., Antimony deposits of the Wildrose Canyon Area, Inyo County, Calif., U. S. Geol. Surv. Bull., 922K, Pp. 307-325, 1940.

The earliest recorded production from the district is reported by White 2/ to have been by the Western Talc Company in 1951. Tucker and Sampson 3/ report that from 1915 to 1917 this company mined about 400 tons of ore from the Monarch, Combination, Monopoly and Kennedy quartz claims that is reported to have contained 42 percent antimony.

The history and production from the Mohawk prospect is not known. The production, however, could not be more than a few hundred tons, judging from the size of the workings and dumps. This work was probably done during 1915 to 1917, the active period of development of the district. No work appears to have been done on the Mohawk since the Wildrose Area was mapped by White, except for the location work on the Nellie claims done by the Panamint Antimony and Tungsten Mining Company in 1952.

Development

The principal workings on the Nellie claims are those of the Mohawk prospect on the Nellie No. 3 claim (fig. 1). The workings consist of an open cut 60 feet long, 20 feet wide, and about 20 feet deep, and three adits 30 to 60 feet long, all of which are open. Other workings on the Nellie No. 3 claim consist of small open cuts.

The principal work of the Panamint Antimony and Tungsten Company has been in the adit on the Nellie No. 2 claim (fig. 2). Other workings on this claim consist of 5 open cuts, the largest of which is about 30 feet long and 20 feet deep. The workings on all the other claims are small open cuts except for those on the north end of the Nellie 15 claim, which apparently overlaps the patented Combination claim.

The claims as shown on Figure 3 were plotted from the descriptions given on location monument on the Nellie 13 claim. When plotted as described, the Nellie 15 claim covers the upper workings of the Combination claim. Therefore, those workings were not examined or considered in this report.

Geology

The geology of the Wildrose Canyon area was mapped by Donald B. White of the U. S. Geological Survey in 1939. The geologic map of the Nellie Mining Claims (fig. 3) and the general geology are taken from his report 4/.

2/ White, D. B., op. cit., p. 306.

3/ Tucker, W. B., and Sampson, R. J. Mineral Resources of Inyo Co., Calif.: Calif. Jour. Mines and Geology, vol. 31, p. 378, 1935.

4/ White, D. B., op. cit., pl. 15

The oldest rocks in the district are dark schists and gneisses of probable pre-Cambrian age. They are overlain by 200 feet of bluish-gray, dolomitic limestone. Unconformably overlying the dolomitic limestones are the younger schists of the Surprise formation.

The Surprise formation contains all the known antimony deposits in the district. It was subdivided by White on differences of metamorphism into chlorite schist, biotite schist, amphibolite, and light-colored mica schist, and it is overlain by dark schistose conglomerate, and buff-colored limestone. Small aplite and pegmatite dikes intrude all of the metamorphic rocks.

The metamorphic rocks are complexly folded and are cut by abundant faults. Most of the antimony deposits are in the area of close folding north of Tuber Ridge. Axes of the folds trend northerly (fig. 3). The folds cannot be traced to the south side of Tuber Ridge, where the rocks strike north to northwest and dip to the northeast. The larger faults are parallel to the strike of bedding, and they dip to the east. Many faults that strike northeast and dip southeast are exposed in the workings.

Ore

The ore occurs as small pods and lenses in shear zones and at the intersection of faults and shear zones in chlorite schist and amphibolite of the Surprise formation. The pods and lenses have been formed by open-space filling and the partial replacement of gouge and shear breccia. Primary minerals are stibnite, quartz, and minor pyrite and fluorite. The stibnite is very fine grained and is intimately associated with quartz. In places the primary minerals have been partly altered to yellowish antimony oxides, limonite, jarosite, and gypsum. These oxide minerals coat fractures in the primary ore and penetrate the wall rock, forming an oxide zone that is somewhat wider than the primary ore zone. Oxide ore appears to be more abundant than primary ore in the ground opened by the workings.

The Mohawk deposit on the Nellie No. 3 claim is the largest ore body exposed on the Nellie claims. The ore body is in a shear zone that strikes northerly and dips from 40 to 60 degrees east. It ranges from 4 to 8.5 feet thick for a length of 70 feet in the open cut. At the north end of the open cut the ore body splits and each split has been followed by a 30-foot adit. The footwall split pinches out at a point about 10 feet from the portal of the adit. The hanging-wall split narrows toward the face of the adit to a thickness of only 6 inches. Exposures are poor on the surface, and the vein can be traced only for a short distance north and south of the open cut. The vein has been followed down dip for a distance of about 70 feet to the 6335 foot adit. No ore is exposed in the lower adit, but ore is present in the raise several feet above the adit level. The Mohawk deposit appears to be a lenticular body. It is only 6 inches thick at the north end of the workings, and it cannot be traced on the surface south of the lower (6335 foot) adit.

Most of the ore in the Mohawk deposit contains less than 10 percent antimony. Two small lenses of high-grade ore are exposed in the face of the open cut at the north end. Assays of samples taken by the writers of ore from the Mohawk open cut show 2.77 percent antimony at the south end over a thickness of 8.25 feet and .65 percent antimony over a thickness of 8.5 feet at the north end. The sample at the north end of the cut was in better than average ore. White 5/ makes the following statement on grade of ore from the Mohawk deposit.

> Several high grade lenses of stibnite-antimony oxide ore are exposed in the vein, but most of the ore is of low grade. The vein has not been sufficiently explored to prove more than a few hundred tons of ore, assaying 10 percent or less in antimony. Inasmuch as the vein can be traced on the surface for only a short distance from the tunnels in each direction, it may be lenticular and short. However, more high-grade ore is exposed in the Mohawk workings than in any other deposit in the area with the exception of the main Kennedy vein.

A small open cut exposes an isolated pod of stibnite and antimony oxides 1 foot thick and 6 feet high in amphibolite at the north end of the Nellie No. 3 claim. A sample of this ore assayed 20.39 percent antimony. The pod is localized at the crest of a sharp roll of the bedding of amphibolite. Further prospecting should be to follow the roll of the bedding rather than down dip as explored. However, this looks like a very small pocket of ore.

Most of the work and interest of the Panamint Antimony and Tungsten Company has been on the east side of the Nellie No. 2 claim and the west side of the Nellie 1 claim. Sample N2-1 (fig. 3) is from the face of a 30-foot adit driven on a minor northeast-trending fault that dips 45° SE. This is the adit from which applicants propose to do their 375 feet of drifting and crosscutting. The shear at the portal of the adit contains 6 inches to 1 foot of ore for a length of 20 feet to a point where it breaks into the hanging-wall. The adit continues under another minor shear that strikes north and dips 21° east, and that contains only minor stibnite ore. At the face of the adit the gently dipping, north-trending fault intercepts a fault that strikes N.15° E. and dips 60° W., and a pocket of ore is localized under the intersection of the faults. The pocket is exposed for a width of 3½ feet and a height of about three feet. The ore does not extend above the intersection of the faults, but ore is exposed in the floor of the drift. The sample of ore from the face of the adit assayed 2.92 percent antimony.

5/White, L. M., op. cit, p. 328

Another pocket of rather high-grade ore is exposed at pits marked samples N3-1 and N3-3 (see fig. 3). Stibnite and antimony oxides are exposed in a shear zone that strikes north and dips 40° east in chlorite schist. The ore is faulted off on the north side of the pit, but the ore is not delimited to the south or in depth. Sample N3-1 across 4.9 feet of ore assayed 9.84 percent antimony. Sample N3-3 was a grab sample of a small dump of a few tons of ore. It assayed 11.76 percent antimony.

Sample N3-2 from the upper pit on the east side of the Nellie 2 claim is a composite of two cuts made 10 feet apart across a 2-foot mineralized zone. The ore is in a persistent shear zone that strikes N.30°W. and dips 40° SE. Several small high-grade lenses of ore are exposed in the shear zone. The shear zone can be traced for at least 200 feet north of the upper pit, but no antimony minerals were observed at the surface.

Little antimony is exposed in the pits on the Nellie Nos. 1, 12 and 13 claims.

Sampling

Eight samples were taken of the largest and most promising exposures of ore. Seven samples were cut by pick across the full width of vein, and one grab sample was taken of a small dump. The location of the samples is shown on figure 3, and the results of the assays made by the Bureau of Mines, Reno Office, are given below.

Sample No.	Width (feet)	Antimony (%)	WO_3 (%)
N2-1	3.5	2.92	*0.01
N3-1	4.9	9.84	-
N3-2	2.0	2.70	-
N3-3	grab	11.76	*0.01
N4-1	8.5	0.93 **	-
N4-2	8.25	2.77	-
N4-3	8.5	9.65	-
N4-4	1.0	20.39	-

* Less than

** Wallrock of Mohawk deposit with minor antimony oxides

In addition to the cut samples, the writers used a Mineralight ultra-violet lamp over the dump and in all the workings of the Mohawk deposit and in the Nellie No. 2 adit. No fluorescent minerals were seen. The applicants reported their tungsten assays from samples from the Nellie 2 adit. A sample taken by the writers from the face of the Nellie 2 adit at the same place that the applicants' sampled assayed less than 0.01 percent WO_3. Therefore, the writers believe that there is little probability that tungsten is present.

Ore Reserves

The writers made no attempt to measure the small amount of ore exposed in the workings in the Mohawk deposit, but it is estimated to be a few hundred tons. It is difficult to estimate the tonnage of inferred ore in the ground covered by the Nellie claims. None of the workings are sufficiently extensive to outline any of the ore bodies, or to show that the ore bodies are more than small pods. It is unlikely that exploration of the exposed pods will prove more than 1500 tons of ore containing 5 to 10 percent antimony.

Exploration

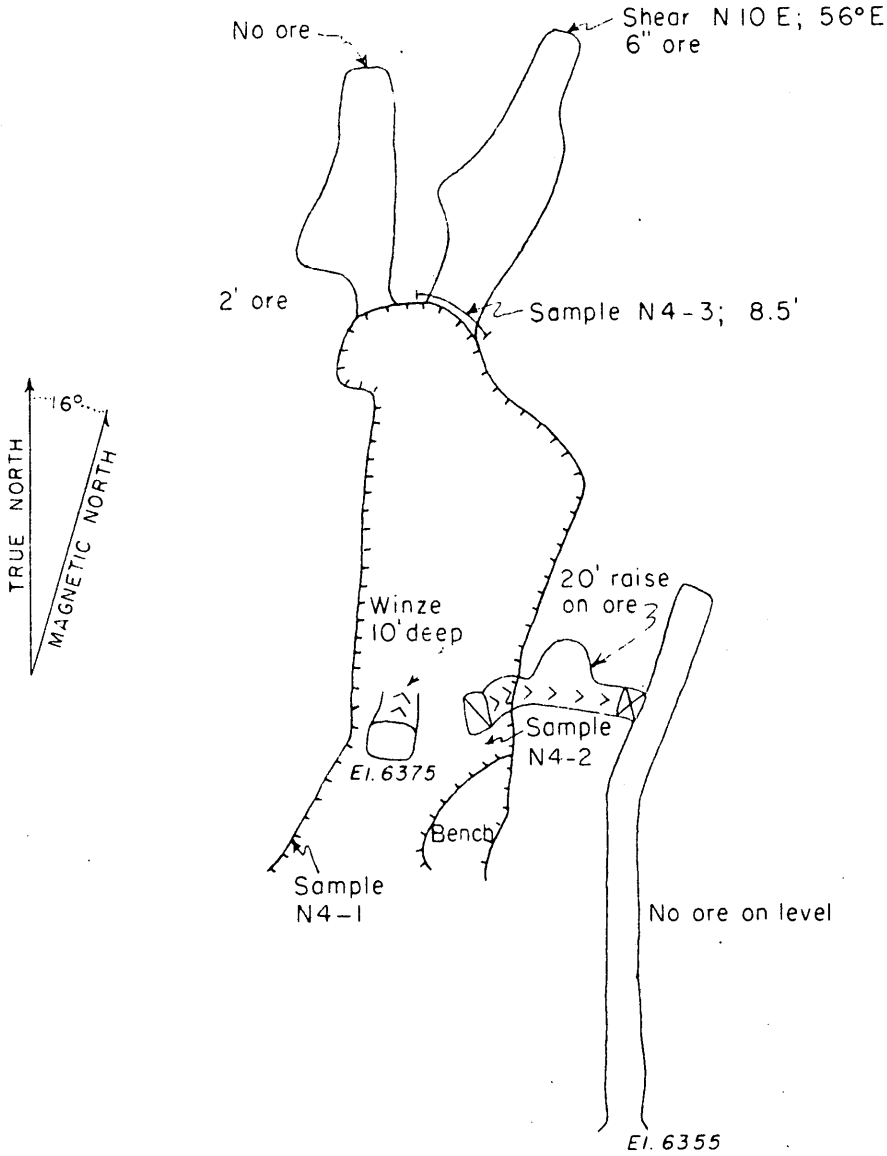
The applicants proposed to drift 150 feet northeasterly on the Nellie No. 2 adit, drift 75 feet both northwest and southeast from the end of the adit, and raise 75 feet.

In the Nellie No. 2 adit, the ore occurs as a pod that lies under the intersection of two faults. The pod of ore appears to be small, and the cost of driving the proposed exploratory workings is not commensurable with the quantity of ore that might be reasonably be expected to be found. Raising as suggested by the applicant does not seem feasible as the exposed ore does not extend above the intersecting faults.

The writers believe that the best exploration method is to bulldoze a series of six east-trending trenches each about 200 feet long and 100 feet apart in a northerly direction from the Nellie No. 2 adit to the top of Tuber Ridge (see fig. 3). These trenches would prospect the most favorable ground covered by the Nellie claims. The total cost of the bulldozing would be about $500, figuring about 5 days, including access, at $100 for daily rental of equipment.

Conclusions

It is recommended that the applicants' request for Government aid to explore the deposits be denied, as the deposits are of doubtful economic grade, and it seems unlikely that a significant tonnage of ore could be proved. Possibly a total of 1500 tons of handsorted ore containing 5 to 10 percent antimony could be proved in the several small, widely-separated pods that are exposed. Other similar pods may be found by further prospecting but nothing was seen during the examination to indicate the presence of a large body of ore.

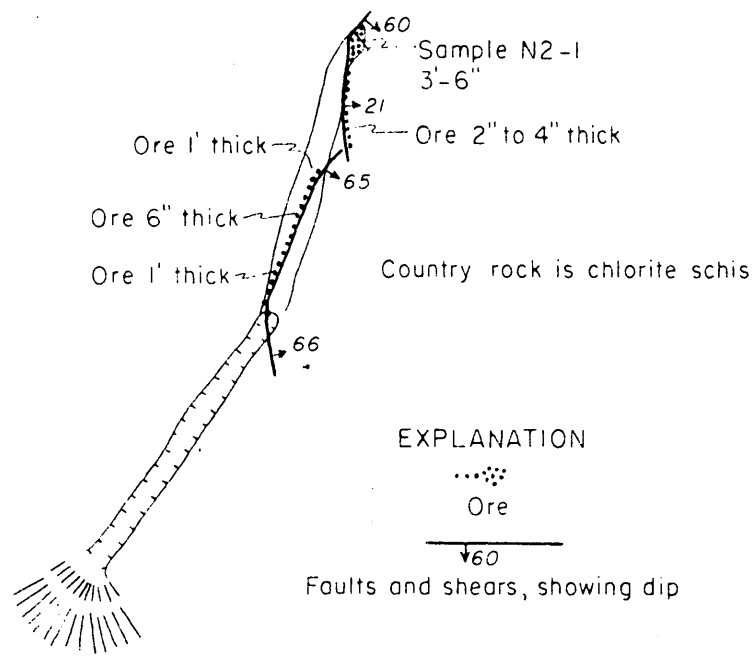


Mapped by W. E. Hall and E. M. MacKevett, April 1952

0 20 40 FEET

FIGURE 1.

PLAN OF MINE WORKINGS OF MOHAWK DEPOSIT
NELLIE NO. 3 CLAIM, INYO COUNTY, CALIFORNIA



Mapped by W. E Hall and E. M MacKevett, April 1952

0 20 40 FEET

FIGURE 2. NELLIE 2 ADIT AND OPEN CUT

Geology by D. E. White, 1940 (USGS Bull. 922K)

FIGURE 3. GEOLOGIC MAP OF THE NELLIE MINING CLAIMS, INYO COUNTY, CALIFORNIA

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA 2451, Panamint Antimony and Tungsten Mining Company

Inyo County, California

Wayne E. Hall, Geologist
E. M. MacKevett, Geologist
U. S. Geological Survey

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
JUN 16 1952

June 6, 1952

Summary

The Nellie antimony claims being developed by the Panamint Antimony and Tungsten Mining Company, Inc., of Newport, Washington contain antimony ore that occurs in small pods localized in shear zones and at the intersection of faults in chlorite schist and amphibolite. At least seven small pits and adits on four of the claims expose widths of low-grade antimony ore that range from a few inches to 8.5 feet, and small lenses of high-grade ore. Exposures of bedrock are limited mainly to the pits and adits. None of the exposed pods of ore look very extensive, but possibly 1500 tons of ore containing 8 percent antimony could be produced. Other pods of ore, however, may be present. The owners of the claims report tungsten-bearing minerals to be present in the ore, but none was seen in any of the workings during the examination.

The writers recommend that the applicants' request for Government aid be denied, as the deposit does not appear to be economic under present prices for antimony. If, however, the demand for antimony becomes more critical, exploration of the deposit may be warranted. In such case the applicants' proposal to limit exploration to the one pod of ore in the adit in the Nellie No. 2 claim should be modified, as that pod is not likely to prove large. The deposit could be explored best by bulldozing six trenches for a total length of 1200 feet at a cost of about $500.

Introduction

The Nellie Mining Claims are owned by the Panamint Antimony and Tungsten Mining Company of Newport, Washington. The property consists of 16 unpatented mining claims on Tuber Ridge on the west slope of the Panamint Range, 1 mile south of the U. S. Park Service FM radio station in Wildrose Canyon. The Nellie claims include the former Mohawk deposit described by Donald E. White in the Wildrose Canyon Area 1/.

The property was examined at the request of DMEA, on April 14 and 15, 1952 by W. E. Hall and E. M. MacKevett of the U. S. Geological Survey. They were accompanied by Mr. Richard C. Tham, president of the Panamint Antimony and Tungsten Mining Company, Inc., Mr. David Adams of Wildrose Station and Mr. Harry Bennett of Aguerreberry Camp, who was examining the property for a road site.

The claims are accessible by hard-surfaced road from Lone Pine or Trona to the U. S. Park Service summer headquarters in Wildrose Canyon and by gravel road from the Park Service headquarters to the FM radio station. A two-mile trail that rises 1200 feet in elevation leads from the radio station south up Antimony Ridge to the Nellie claims on Tuber Ridge (see White, pl. 45, 1940). The nearest railroad station is at Trona, about 45 miles to the southwest.

1/ White, D. E., Antimony deposits of the Wildrose Canyon Area, Inyo County, Calif., U. S. Geol. Surv. Bull., 922K, Pp. 307-325, 1940.

The earliest recorded production from the district is reported by White 2/ to have been by the Western Metals Company in 1951. Tucker and Sampson 3/ report that from 1915 to 1917 this company mined about 4000 tons of ore from the Monarch, Combination, Monopoly and Kennedy Quartz claims that is reported to have contained 42 percent antimony.

The history and production from the Mohawk prospect is not known. The production, however, could not be more than a few hundred tons, judging from the size of the workings and dumps. This work was probably done during 1915 to 1917, the active period of development of the district. No work appears to have been done on the Mohawk since the Wildrose Area was mapped by White, except for the location work on the Nellie claims done by the Panamint Antimony and Tungsten Mining Company in 1952.

Development

The principal workings on the Nellie claims are those of the Mohawk prospect on the Nellie No. 3 claim (fig. 1). The workings consist of an open cut 60 feet long, 20 feet wide, and about 20 feet deep, and three adits 30 to 60 feet long, all of which are open. Other workings on the Nellie No. 3 claim consist of small open cuts.

The principal work of the Panamint Antimony and Tungsten Company has been in the adit on the Nellie No. 2 claim (fig. 2). Other workings on this claim consist of 5 open cuts, the largest of which is about 30 feet long and 20 feet deep. The workings on all the other claims are small open cuts except for those on the north end of the Nellie 15 claim, which apparently overlaps the patented Combination claim.

The claims as shown on Figure 3 were plotted from the descriptions given on location monument on the Nellie 13 claim. When plotted as described, the Nellie 15 claim covers the upper workings of the Combination claim. Therefore, these workings were not examined or considered in this report.

Geology

The geology of the Wildrose Canyon area was mapped by Donald E. White of the U. S. Geological Survey in 1939. The geologic map of the Nellie Mining Claims (fig. 3) and the general geology are taken from his report 4/.

2/ White, D. E., op. cit., p. 308.

3/ Tucker, W. B., and Sampson, R. J. Mineral Resources of Inyo Co., Calif.: Calif. Jour. Mines and Geology, vol. 34, p. 378, 1938.

4/ White, D. E., op. cit., pl. 45

The oldest rocks in the district are dark schists and gneisses of probable pre-Cambrian age. They are overlain by 200 feet of bluish-gray, dolomitic limestone. Unconformably overlying the dolomitic limestones are the younger schists of the Surprise formation.

The Surprise formation contains all the known antimony deposits in the district. It was subdivided by White on differences of metamorphism into chlorite schist, biotite schist, amphibolite, and light-colored mica schist, and it is overlain by dark schistose conglomerate, and buff-colored limestone. Small aplite and pegmatite dikes intrude all of the metamorphic rocks.

The metamorphic rocks are complexly folded and are cut by abundant faults. Most of the antimony deposits are in the area of close folding north of Tuber Ridge. Axes of the folds trend northerly (fig. 3). The folds cannot be traced to the south side of Tuber Ridge, where the rocks strike north to northwest and dip to the northeast. The larger faults are parallel to the strike of bedding, and they dip to the east. Many faults that strike northeast and dip southeast are exposed in the workings.

Ore

The ore occurs as small pods and lenses in shear zones and at the intersection of faults and shear zones in chlorite schist and amphibolite of the Surprise formation. The pods and lenses have been formed by open-space filling and the partial replacement of gouge and shear breccia. Primary minerals are stibnite, quartz, and minor pyrite and fluorite. The stibnite is very fine grained and is intimately associated with quartz. In places the primary minerals have been partly altered to yellowish antimony oxides, limonite, jarosite, and gypsum. These oxide minerals coat fractures in the primary ore and penetrate the wall rock, forming an oxide zone that is somewhat wider than the primary ore zone. Oxide ore appears to be more abundant than primary ore in the ground opened by the workings.

The Mohawk deposit on the Nellie No. 3 claim is the largest ore body exposed on the Nellie claims. The ore body is in a shear zone that strikes northerly and dips from 40 to 60 degrees east. It ranges from 4 to 8.5 feet thick for a length of 60 feet in the open cut. At the north end of the open cut the ore body splits and each split has been followed by a 30-foot adit. The footwall split pinches out at a point about 10 feet from the portal of the adit. The hanging-wall split narrows toward the face of the adit to a thickness of only 6 inches. Exposures are poor on the surface, and the vein can be traced only for a short distance north and south of the open cut. The vein has been followed down dip for a distance of about 20 feet to the 6335 foot adit. No ore is exposed in the lower adit, but ore is present in the raise several feet above the adit level. The Mohawk deposit appears to be a lenticular body. It is only 6 inches thick at the north end of the workings, and it cannot be traced on the surface south of the lower (6335 foot) adit.

Most of the ore in the Mohawk deposit contains less than 10 percent antimony. Two small lenses of high-grade ore are exposed in the face of the open cut at the north end. Assays of samples taken by the writers of ore from the Mohawk open cut show 2.77 percent antimony at the south end over a thickness of 8.25 feet and 9.65 percent antimony over a thickness of 8.5 feet at the north end. The sample at the north end of the cut was in better than average ore. White 5/ makes the following statement on grade of ore from the Mohawk deposit.

> Several high grade lenses of stibnite-antimony oxide ore are exposed in the vein, but most of the ore is of low grade. The vein has not been sufficiently explored to prove more than a few hundred tons of ore, assaying 10 percent or less in antimony. Inasmuch as the vein can be traced on the surface for only a short distance from the tunnels in each direction, it may be lenticular and short. However, more high-grade ore is exposed in the Mohawk workings than in any other deposit in the area with the exception of the main Kennedy vein.

A small open cut exposes an isolated pod of stibnite and antimony oxides 1 foot thick and 6 feet high in amphibolite at the north end of the Nellie No. 3 claim. A sample of this ore assayed 20.39 percent antimony. The pod is localized at the crest of a sharp roll of the bedding of amphibolite. Further prospecting should be to follow the roll of the bedding rather than down dip as explored. However, this looks like a very small pocket of ore.

Most of the work and interest of the Panamint Antimony and Tungsten Company has been on the east side of the Nellie No. 2 claim and the west side of the Nellie 1 claim. Sample N2-1 (fig. 3) is from the face of a 30-foot adit driven on a minor northeast-trending fault that dips 65° SE. This is the adit from which applicants propose to do their 375 feet of drifting and crosscutting. The shear at the portal of the adit contains 6 inches to 1 foot of ore for a length of 20 feet to a point where it breaks into the hanging-wall. The adit continues under another minor shear that strikes north and dips 21° east, and that contains only minor stibnite ore. At the face of the adit the gently dipping, north-trending fault intercepts a fault that strikes N.45° E and dips 60° SE, and a pocket of ore is localized under the intersection of the faults. The pocket is exposed for a width of 3½ feet and a height of about three feet. The ore does not extend above the intersection of the faults, but ore is exposed in the floor of the drift. The sample of ore from the face of the drift assayed 2.92 percent antimony.

5/White, D. E., op. cit, p. 323

Another pocket of rather high-grade ore is exposed at pits marked samples N3-1 and N3-3 (see fig. 3). Stibnite and antimony oxides are exposed in a shear zone that strikes north and dips 45° east in chlorite schist. The ore is faulted off on the north side of the pit, but the ore is not delimited to thesouth or in depth. Sample N3-1 across 4.9 feet of ore assayed 9.84 percent antimony. Sample N3-3 was a grab sample of a small dump of a few tons of ore. It assayed 11.76 percent antimony.

Sample N3-2 from the upper pit on the east side of the Nellie 2 claim is a composite of two cuts made 10 feet apart across a 2-foot mineralized zone. The ore is in a persistent shear zone that strikes N.30°E. and dips 40° SE. Several small high-grade lenses of ore are exposed in the shear zone. The shear zone can be traced for at least 200 feet north of the upper pit, but no antimony minerals were observed at the surface.

Little antimony is exposed in the pits on the Nellie Nos. 1, 12 and 13 claims.

Sampling

Eight samples were taken of the largest and most promising exposures of ore. Seven samples were cut by pick across the full width of vein, and one grab sample was taken of a small dump. The location of the samples is shown on figure 3, and the results of the assays made by the Bureau of Mines, Reno Office, are given below.

Sample No.	Width (feet)	Antimony (%)	WO_3 (%)
N2-1	3.5	2.92	*0.01
N3-1	4.9	9.84	-
N3-2	2.0	2.70	-
N3-3	grab	11.76	*0.01
N4-1	6.5	0.93 **	-
N4-2	8.25	2.77	-
N4-3	8.5	9.65	-
N4-4	1.0	20.39	-

* Less than
** Wallrock of Mohawk deposit with minor antimony oxides

In addition to the cut samples, the writers used a Mineralight ultra-violet lamp over the dump and in all the workings of the Mohawk deposit and in the Nellie No. 2 adit. No fluorescent minerals were seen. The applicants reported their tungsten assays from samples from the Nellie 2 adit. A sample taken by the writers from the face of the Nellie 2 adit at the same place that the applicants' sampled assayed less than 0.01 percent WO_3. Therefore, the writers believe that there is little probability that tungsten is present.

Ore Reserves

The writers made no attempt to measure the small amount of ore exposed in the workings in the Mohawk deposit, but it is estimated to be a few hundred tons. It is difficult to estimate the tonnage of inferred ore in the ground covered by the Nellie claims. None of the workings are sufficiently extensive to outline any of the ore bodies, or to show that the ore bodies are more than small pods. It is unlikely that exploration of the exposed pods will prove more than 1500 tons of ore containing 5 to 10 percent antimony.

Exploration

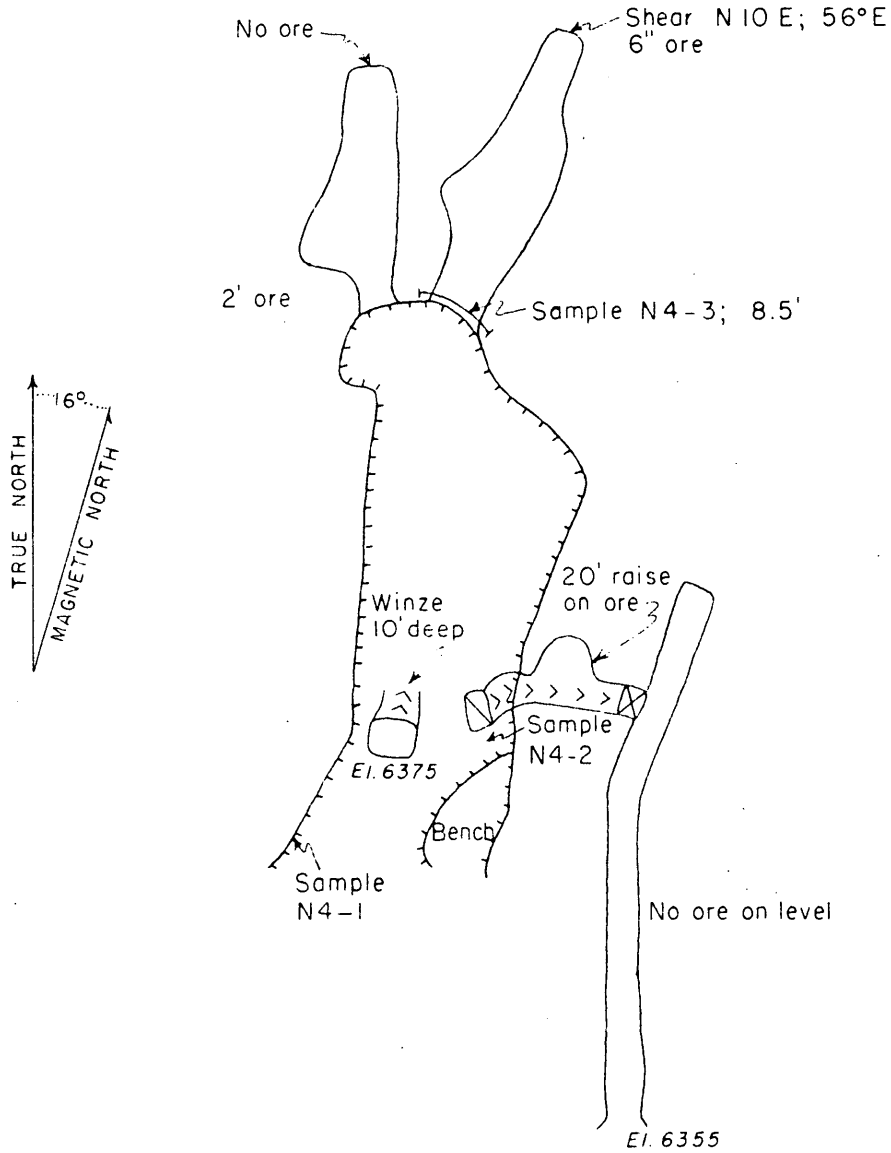
The applicants proposed to drift 150 feet northeasterly on the Nellie No. 2 adit, drift 75 feet both northwest and southeast from the end of the adit, and raise 75 feet.

In the Nellie No. 2 adit, the ore occurs as a pod that lies under the intersection of two faults. The pod of ore appears to be small, and the cost of driving the proposed exploratory workings is not commensurable with the quantity of ore that might be reasonably be expected to be found. Raising as suggested by the applicant does not seem feasible as the exposed ore does not extend above the intersecting faults.

The writers believe that the best exploration method is to bulldoze a series of six east-trending trenches each about 200 feet long and 100 feet apart in a northerly direction from the Nellie No. 2 adit to the top of Tubar Ridge (see fig. 3). These trenches would prospect the most favorable ground covered by the Nellie claims. The total cost of the bulldozing would be about $500, figuring about 5 days, including access, at $100 for daily rental of equipment.

Conclusions

It is recommended that the applicants' request for Government aid to explore the deposits be denied, as the deposits are of doubtful economic grade, and it seems unlikely that a significant tonnage of ore could be proved. Possibly a total of 1500 tons of handsorted ore containing 5 to 10 percent antimony could be proved in the several small, widely-separated pods that are exposed. Other similar pods may be found by further prospecting but nothing was seen during the examination to indicate the presence of a large body of ore.

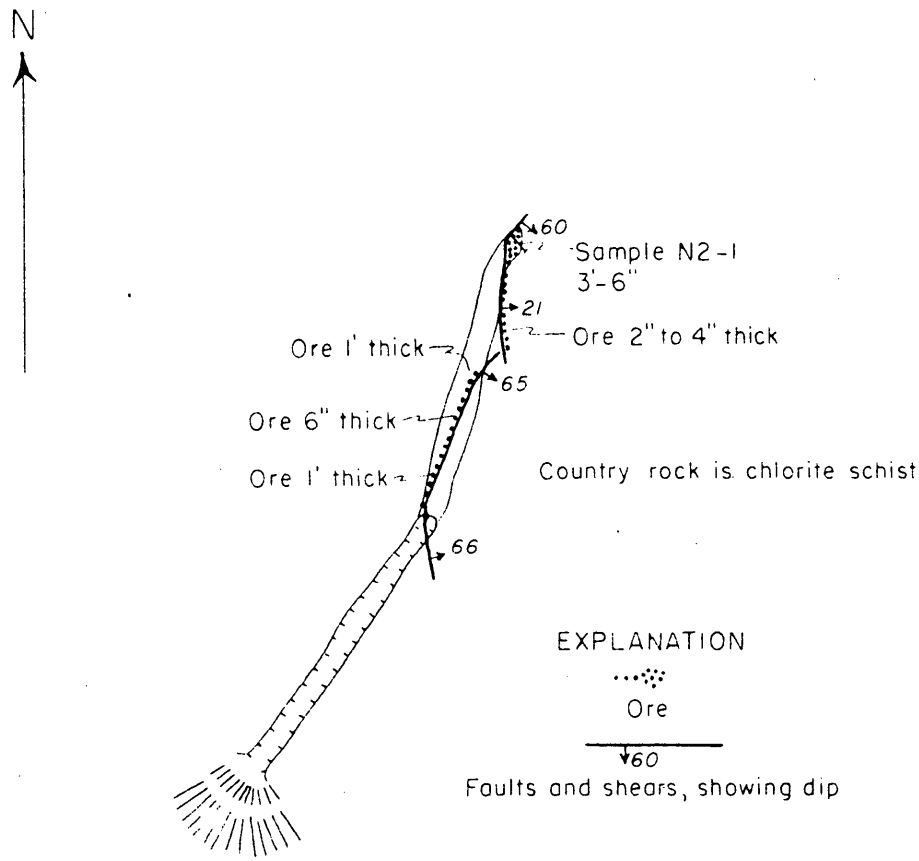


Mapped by W. E. Hall and E. M. MacKevett, April 1952

0 20 40 FEET

FIGURE 1.

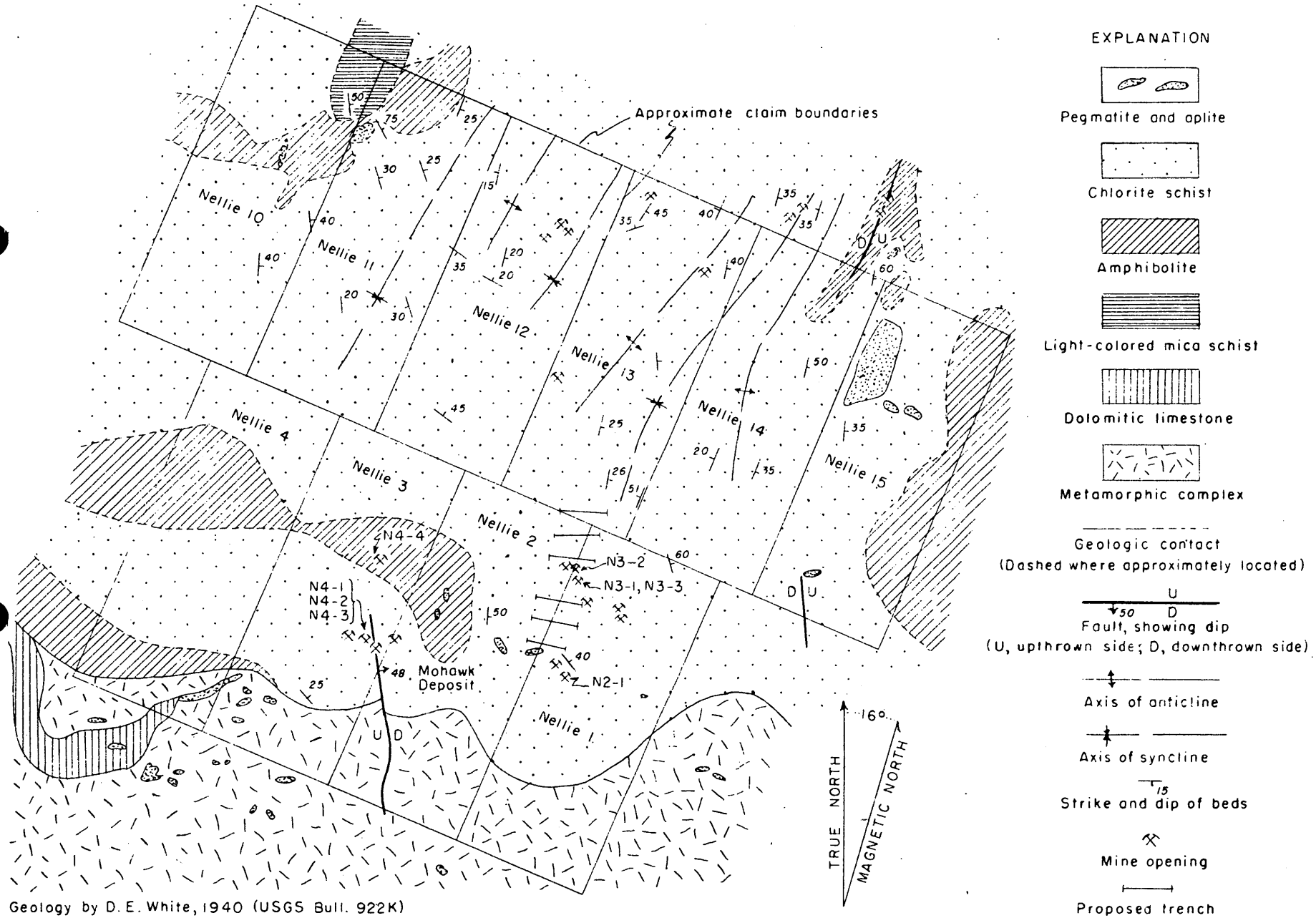
PLAN OF MINE WORKINGS OF MOHAWK DEPOSIT
NELLIE NO. 3 CLAIM, INYO COUNTY, CALIFORNIA



Mapped by W. E. Hall and E. M. MacKevett, April 1952

0 20 40 FEET

FIGURE 2. NELLIE 2 ADIT AND OPEN CUT



Geology by D. E. White, 1940 (USGS Bull. 922K)

FIGURE 3. GEOLOGIC MAP OF THE NELLIE MINING CLAIMS, INYO COUNTY, CALIFORNIA

700 FILE COPY
SURNAME:

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

AIR MAIL

JUN 12 1952

Mr. H. C. Miller
Executive Officer
DMEA Field Team, Region III
1012 Flood Building
870 Market Street
San Francisco 2, California

Re: Docket No. DMEA-2451 (Antimony)
Panamint Antimony & Tungsten
Mining Company
Nellie Mining Claims
Inyo County, California

Dear Mr. Miller:

We understand that in accordance with the request in our letter of April 1, 1952, a field examination was made of the subject Applicant's properties.

The Applicant in a communication with the Hon. Walt Horan, informed him that the examination was made about six weeks ago. That being the case, we would appreciate it if you would forward your report on the examination as soon as possible so that if the exploration project is approved the Applicant can take advantage of the favorable operating weather.

Sincerely yours,

(signed) FRANK E. JOHNSON

Chairman, Operating Committee

APPROVED:

J. H. Hedges

For Bureau of Mines

D. M. Lemmon

For Geological Survey

HFKeller/gla 6-9-52
cc to: Adm. Reading File
Operating Committee
Docket
Messrs. A. Renick, Rm. 3061
E. T. McKnight, Rm. 4204 GSA
Ellis
Keller
Hon. Walt Horan, Rm. 1329 New HOB

FILE COPY
SURNAME:

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

APR 3 1952

Mr. Richard C. Thamm, President
Panamint Antimony & Tungsten Mining
Co., Inc.
Newport, Washington

Re: Docket No. DMA-2451 (Antimony)
Nellie Mining Claims
Inyo County, California

Dear Mr. Thamm:

Your application for assistance in exploring your property in Inyo County, California, under the above captioned docket number, has been reviewed by the Rare and Miscellaneous Metals Divisions of the Defense Minerals Exploration Administration and has been referred to Mr. H. C. Miller, Executive Officer, Region III, DMEA Field Team, 1012 Flood Building, 870 Market Street, San Francisco 2, California, for a field examination.

The Regional office will contact you at the earliest opportunity in regard to your project.

Sincerely yours,
C. O. Mittendorf (for) P.N. 4.3.52

Acting Administrator
Defense Minerals Exploration
Administration

HFKeller/jem
4/1/52
cc to; Adm. Reading File
Docket
Messrs. A. Renick, Rm. 3061
E.T.McKnight, Rm. 4204 GS
Ellis
Keller
~~Opr~~ Field Team, Region III (2)

700 FILE COPY
SURNAME:

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

APR 3 1952

AIR MAIL

Mr. H. C. Miller
Executive Officer, Region III
DMA Field Team
1012 Flood Building
870 Market Street
San Francisco 2, California

Re: Docket No. DMA-2451 (Antimony)
Panamint Antimony & Tungsten Mining
Company, Inc.
Nellie Mining Claims
Inyo County, California

Dear Mr. Miller:

This is your authority to make a field examination of the captioned applicant's property in the Panamint Mining District Inyo County, California.

While the proposed exploration project does not seem to be too well planned and the information furnished by the applicant is rather limited, it is the consensus of opinion that a field team examination is warranted.

If in the opinion of the field team the geological conditions are such as to justify an exploration project, we would suggest that the engineers aid the applicant in formulating the proposed exploration program. At the same time the estimated costs should be revised and reduced. Such items as two supervisors and two dump trucks are out of line with a project of this size, as are several of the other costs for the rental or purchase of equipment.

The applicant has submitted the leases covering mining claims Nellie No. 1 and Nellie No. 2 with corresponding subordination agreements.

If you wish to telephone Mr. Richard C. Chase to arrange for a visit of the field team his telephone number is 157J, Newport, Washington. The engineers will have to walk about four miles from the point at which they leave their car, to arrive at the claims of the applicant.

Sincerely yours,

(signed) FRANK E. JOHNSON

Chairman, Operating Committee
Defense Minerals Exploration
Administration

APPROVED: J. H. Hedges
Member, Bureau of Mines

T. P. Thayer
Member, Geological Survey

HKeller/jem 4/1/52
cc to: Adm. Reading File
Docket
Messrs. A. Renick, Rm. 3061
L.T. McKnight Rm. 4204 GS
Ellis
Keller
Opr. Comm. Field Team, Reg. III

S.N. 4-3-52

IN REPLY REFER TO:

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

March 31, 1952

Re: DMEA-2451
Panamint Antimony and
Tungsten Mining Company
Mine in Inyo County, Calif.
Exploration, $37,675
Antimony

Memorandum

To: Mr. E. Wm. Ellis

From: Edwin T. McKnight

Subject: Geologic appraisal

Although no clear description of the property or of its location is given, in the application material forwarded to me, it appears to be in Tuber Canyon, just south of Wildrose Canyon, on the west slope of the Panamint Range. During World War I, antimony ore was shipped from Wildrose Canyon averaging 35% antimony metal. Ore described orally by applicant appears promising and this, with known production from the general area, warrants a field referral, even though geologic and other types of information given in the application is far from adequate.

Edwin T. McKnight

Edwin T. McKnight
Geologist

Abbot Renick, concurs in Opinion
W R Keller

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

March 31, 1952

Re: DMRA-2451
Panamint Antimony and
Tungsten Mining Company
Mine in Inyo County, Calif.
Exploration, $37,675
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Edwin T. McKnight

Edwin T. McKnight
Geologist

EXPLORATION

Subject: DMEA-2451
Re: Exploration Loan
Nellie Claims, 1 to 16 inclusive
March 27, 1952

Mr. Richard C. Thamm, President
Panamint Antimony & Tungsten Mining
Co., Inc.
Newport, Washington

My dear Mr. Thamm:

This will acknowledge receipt of your application dated March 17, 1952 for a loan under the Defense Production Act of 1950.

Your application was assigned Docket Number DMEA-2451 and referred to the Rare and Miscellaneous Metals Division.

Kindly refer to DMEA-2451 in any future correspondence relating to your application.

Sincerely yours,

ROBERT E. ADAMS

Robert E. Adams
Acting Administrative Officer

Telephone 157 J or W.
Newport, Wash.

7862

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

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

Not To Be Filled in by Applicant

Docket No. DMEA-2461
Metal or Mineral Antimony
Date Received 3-27-52
Amount $ #37,676
Participation (Government %)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 27 1952

PANAMINT ANTIMONY & TUNGSTEN MINING CO., INC.
Newport, Washington

Name and address of applicant

Date March 17, 1952

If you have already filed MF-100, give date filed Enclosed, type of assistance requested ,

DMA Docket Number (if available) None

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four copies each, of the signed application form, General Technical Data Form MF-100, and answers to questions as specified, to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive office thereof, with your name and address on each sheet of the application and all accompanying papers. If you have previously filed MF-100, it is not necessary to file it again. However, you should indicate in space provided above the type of assistance previously applied for (loans, procurement contracts, etc.) and DMA Docket Number, if available. *When a question is inapplicable it should be so stated in the form.* Additional sheets should be attached in answering any questions or in supplying additional information. IF YOU CANNOT ANSWER A QUESTION, SO STATE.

1. (*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*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application.

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

   NOTE: (1) 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 (*c*) 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.

   (2) If applicant is not the owner of the property or if there are any liens or encumbrances against the property, copy of agreements of claimants, lienors, encumbrances, and lessors subordinating their interests in the property to the interest of the Government under the Exploration Project Contract will be required for attachment to the Contract.

2. (*a*) What metals or minerals do you expect to find?

   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.

The information requested in questions 3, 4, 5, 6, 7, 8, and 9 below should be answered specifically and in detail, as this information will be attached to and incorporated as part of the Exploration Project Contract, if such contract is entered into with you by the Government.

ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project.

   (*b*) State the time required to start the project and to complete it.

4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc.

5. Furnish an itemized list of existing facilities, buildings, installations, and fixtures with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition.

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item.

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each.

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above.

10. (*a*) How much are you prepared to invest in the proposed project?

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO–5)?

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

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.

PANAMINT ANTIMONY & TUNGSTEN MINING CO., INC.
(Name of company)

By R. C. Stanner
(Signature of authorized official)

March 17, 1952
(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.

U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

DATA PERTAINING TO FORM MF-103

1. (a) The property consists of 16 claims all adjoining, namely Nellie 1 to Nellie 16 inclusive. Nellie 3 to Nellie 16 are deeded in our name and are properly located and staked, assessment work has been started.

(b) Nellie 1 and 2 are leased claims, copy of lease and purchase option with authorization of lessor for exploration on Form MF-202 attached hereto.

(c) The legal description of the property is as follows:

DATA PERTAINING TO FORM MF-103

2. (a) The property appears to be very rich in antimony and antimony sulfides, various small excavations have been made with extremely good showings. Small stringers all widening towards the center of the dome. It is the general belief of geologists and engineers who have inspected the property that a solid stibnite deposit will be found within 100 feet of the exploration site by drift and cross-cut. Several assays have been made from ordinary grab samples and direct cuts across exposed veins running from 5 to 50 pounds in weight and the assay reports are attached hereto.

(b) See attachments to section 2 (a).

DATA PERTAINING TO FORM MF-103

3. (a) The proposed work is as follows:

(1) To build three miles of road from existing road to exploration site.

(2) To drift in and down for approximately 150 feet and cross cut 75 feet each way; to construct a rise of approximately 75 feet.

(3) The total cost of the project not to exceed $37,275.00.

DATA PERTAINING TO FORM MF-103

4. Map attached.

5. There are no existing facilities, buildings, installations, or fixtures on site.

6. The only installations outside of actual work itself is the establishment of a camp site. The following items are needed for that purpose:

Tents or trailer rental	$350.00
Cooking equipment & general utilities	500.00
Cots, sleeping equipment and miscellaneous items	350.00
Tool shed and storage	300.00
Total	$1500.00

DATA PERTAINING TO FORM MF-103

7. (a) Operating equipment to be rented:

Compressor	750.00
Light Plant	300.00
Tank Trailer	150.00
Dozer with operator	3300.00
2 Dump Trucks	4000.00
1 Four Wheel Drive Jeep	600.00
Total	$9100.00

(b) Items to be purchased:

2 Drills	2000.00
1 Ore Car	200.00
900' Rail	300.00
Spikes & Splice Bars	55.00
Ties	105.00
Drill Steel	450.00
Drill Bits	450.00
Timbering	375.00
100 Boxes Dynamite	2200.00
Caps	600.00
18,000 ' Fusing	250.00
400' 2" Pipe	160.00
400' 1" Pipe	80.00
Pipe Fittings	75.00
Air Hoses (2)	160.00
Water Pump	265.00
Total	$7725.00

(c) Have no equipment of our own.

DATA PERTAINING TO FORM MF-103

8. Labor Costs:

2 Miners @ $16.00 per day for 100 days	3200.00
2 Muckers @ $14.00 per day for 100 days	2800.00
2 Supervisors @ $20.00 per day for 100 days	4000.00
1 Cat Operator @ $16.00 per day for 100 days	1600.00
2 Truck Drivers @ $14.00 per day for 100 days	2800.00
Industrial Insurance & Social Security	1000.00
Total	15400.00

DATA PERTAINING TO FORM MF-103

9. Materials, see 7 (a) and (b)

Supplies, see 7 (a) and (b)

Engineering (including final reports)	$850.00
Assaying	500.00
Accounting	600.00
Power & Fuel	2000.00

10. $10000.00

11. None

Form MF-100
(May 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA FOR USE UNDER THE DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. DMEA-2451

Date received 3-27-52

PANAMINT ANTIMONY & TUNGSTEN MINING
CO., INC.
Newport, Washington

Name and address of applicant

Date March 17, 1952

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (5) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☒ Owner.
   - ☐ Lessee.
   - ☐ Contractor.
5. Number of years in production _____

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation: Common (e)	Number of Shares Held in Applicant Corporation: Preferred (f)	Life Insurance Carried for Benefit of Applicant: Amount (g)	Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h)
Richard C. Thamm Colville, Washington	D President	None	30,000.	1,000	None	None	None
H. C. O'Brien Newport, Washington	D Vice-President	None	30,000.	1,000	None	None	None
J. L. Gallagher Newport, Washington	D Sec-Treasurer	None	35,000.	1,000	None	None	None
Gillard E. Stevens Priest River, Idaho		None	60,000.	1,000	None	None	None
Lloyd A. Myrich Newport, Washington		None	5,000.	1,000	None	None	None
	Total	None	x x x x x	5,000	None	x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$50,000.00	$ 1250.00	$ .25	5,000	None
Preferred stock	$ None	$ None	$ None	None	None

*Indicate period covered.

10. Production:

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)	Antimony	—	New, not applicable		—
2. Quantity of product processed (specify unit of measure and type of process)	—	—	New, not applicable		—
3. Quantity and grade of product sold or shipped (specify units of measure)	—	—	New, not applicable		—

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(*a*) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves.

TECHNICAL DATA PERTAINING TO FORM MF-100

1. Materials produced:

   (a) Antimony and antimony oxide
   (b) Sulphur, arsenic

2. (a)
   (b)
   (c) NOT APPLICABLE
   (d)

3. (a) 40 miles to Trona, California
   (b) Wildrose Mining District
   (c)
   (d) Inyo County, California

4. (a) This property is new and not in operation at the present time
   (b) 14 claims owned by applicant, 2 claims under lease awaiting signature on Form MF-202

5. New, not applicable

6. (a) The applicant is a corporation, Namely, Paramint Antimony and Tungsten Mining Company, Inc.
   (b) All exploration work will be under the management of a competent and qualified mining engineer

7. (a) New property, not applicable
   (b) Not applicable, but very rich tungsten property has been found and is under development in the vicinity

   (c) No written reports have been obtained but several mining engineers have inspected the property and believe it to terminate in a solid dome of antimony within 100 feet of present site for exploration

8. See Form MF-100

9. See Form MF-100

10. See Form MF-100

11. Not applicable

12. (a) Rich stringers have been located on five of the existing claims on the surface or ledges, or widening towards the center. It is the general belief that all these stringers will terminate in a solid dome of antimony. Several grab samples as well as picks across the entire exposed veins have been taken varying from 5 to 50 pounds each and assay reports have been ver gratifying ranging in percentages from 16 to 53 percent. These official reports are attached to Form MF-103.
    (b) Engineers have estimated the deposit to be at a minimum of 250,000 tons (2000 lbs. per ton)
    (c) Not applicable

13. New hard topped road in excellent condition existing from 6 miles from location to Trona, California, the nearest shipping point. 3 Miles of good gravel road to camp site. 3 miles of road to be built from camp site to location site, see Form MF-103.

14. Sufficient water is available six miles from location site and water rights have been granted for both camp site and drilling purposes.

15. No power available

16. New property, not applicable

17. None, not applicable

18. None, not applicable

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.

PANAMINT ANTIMONY & TUNGSTEN MINING CO., INC.

Name of Company

By _____
Signature of authorized official

March , 1952
Date

President
Title

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing [illegible] and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable)					

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

CERTIFICATION

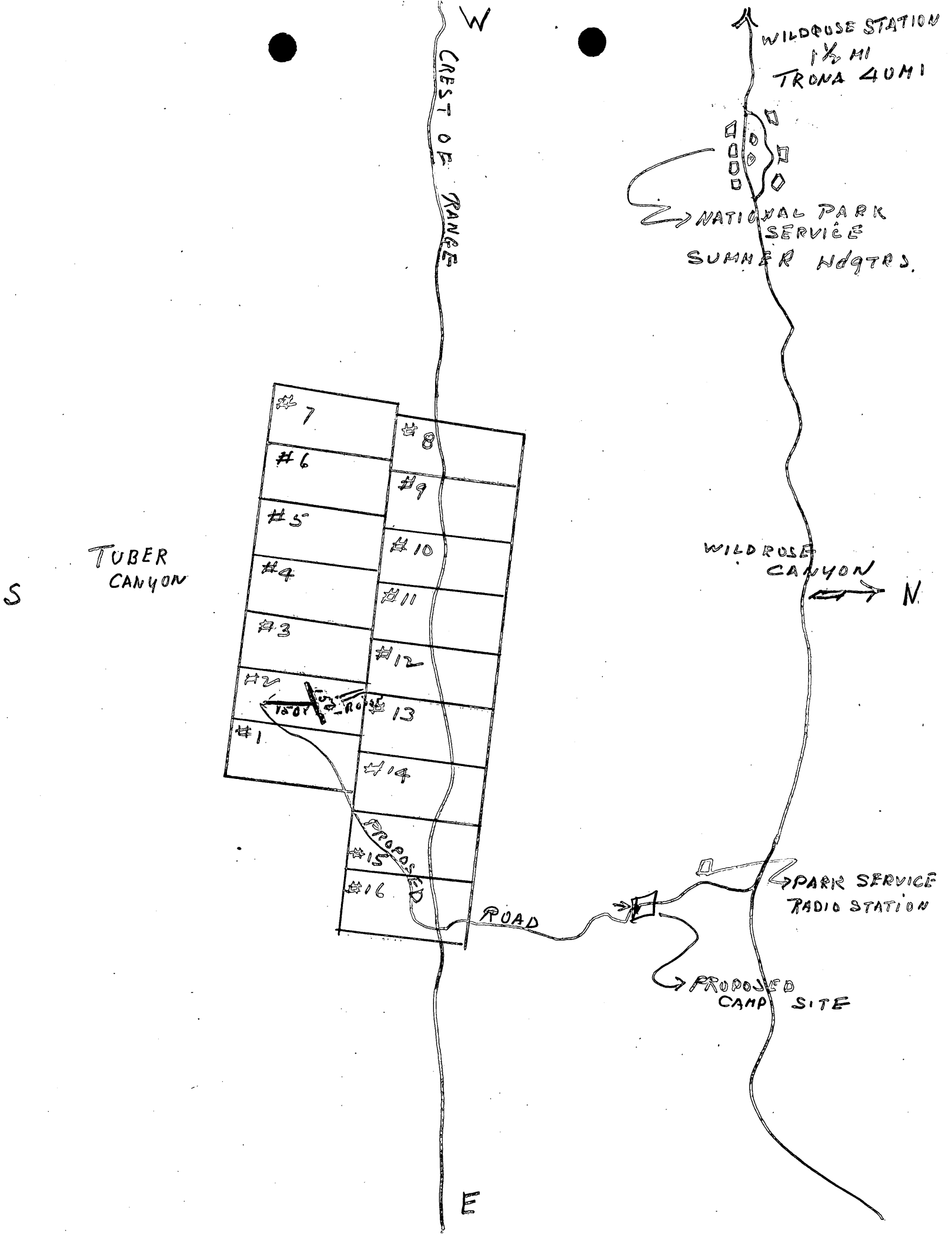
The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

PANAMINT ANTIMONY & TUNGSTEN MINING CO., INC. By [signature]
(Name of company) (Signature of authorized official)

March 27, 1952 President
(Date) (Title)

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

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1


W
CREST OF RANGE
WILDROSE STATION
1½ MI
TRONA 40 MI
NATIONAL PARK SERVICE SUMMER HdQTRS.
#7
#6
#5
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#2
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#8
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#10
#11
#12
#13
#14
#15
#16
TUBER CANYON
S
WILDROSE CANYON
N
PROPOSED ROAD
PARK SERVICE RADIO STATION
PROPOSED CAMP SITE
E

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

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

Not To Be Filled in by Applicant

Docket No. DMEA-2451
Metal or Mineral Antimony
Date Received 3-27-52
Amount $ 87,675
Participation (Government %)

Defense [illegible]
MAR 2 6 1952

PANAMINT ANTIMONY & TUNGSTEN MINING CO., INC.
Newport, Washington

Name and address of applicant

Date March 17, 1952

If you have already filed MF-100, give date filed Enclosed, type of assistance requested ,

DMA Docket Number (if available) None

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four copies each, of the signed application form, General Technical Data Form MF-100, and answers to questions as specified, to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive office thereof, with your name and address on each sheet of the application and all accompanying papers. If you have previously filed MF-100, it is not necessary to file it again. However, you should indicate in space provided above the type of assistance previously applied for (loans, procurement contracts, etc.) and DMA Docket Number, if available. *When a question is inapplicable it should be so stated in the form.* Additional sheets should be attached in answering any questions or in supplying additional information. IF YOU CANNOT ANSWER A QUESTION, SO STATE.

1. (*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*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application.

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

   NOTE: (1) 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 (*c*) 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.

   (2) If applicant is not the owner of the property or if there are any liens or encumbrances against the property, copy of agreements of claimants, lienors, encumbrances, and lessors subordinating their interests in the property to the interest of the Government under the Exploration Project Contract will be required for attachment to the Contract.

2. (*a*) What metals or minerals do you expect to find?

   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.

The information requested in questions 3, 4, 5, 6, 7, 8, and 9 below should be answered specifically and in detail, as this information will be attached to and incorporated as part of the Exploration Project Contract, if such contract is entered into with you by the Government.

ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project.

   (*b*) State the time required to start the project and to complete it.

4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc.

5. Furnish an itemized list of existing facilities, buildings, installations, and fixtures with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition.

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item.

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each.

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above.

10. (*a*) How much are you prepared to invest in the proposed project?

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO–5)?

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

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.

POWELL MINING & TUNGSTEN MINING CO., INC. (Name of company)

By R L Lemm (Signature of authorized official)

March 27, 1952 (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.

U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

DATA PERTAINING TO FORM MF-103

1. (a) The property consists of 16 claims all adjoining, namely Nellie 1 to Nellie 16 inclusive. Nellie 3 to Nellie 16 are deeded in our name and are properly located and staked, assessment work has been started.

(b) Nellie 1 and 2 are leased claims, copy of lease and purchase option with authorization of lessor for exploration on Form MF-202 attached hereto.

(c) The legal description of the property is as follows:

DATA PERTAINING TO FORM MF-103

2. (a) The property appears to be very rich in antimony and antimony sulfides, various small excavations have been made with extremely good showings. Small stringers all widening towards the center of the dome. It is the general belief of geologists and engineers who have inspected the property that a solid stibnite deposit will be found within 100 feet of the exploration site by drift and cross-cut. Several assays have been made from ordinary grab samples and direct cuts across exposed veins running from 5 to 50 pounds in weight and the assay reports are attached hereto.

(b) See attachments to section 2 (a).

DATA PERTAINING TO FORM MF-103

3. (a) The proposed work is as follows:

(1) To build three miles of road from existing road to exploration site.

(2) To drift in and down for approximately 150 feet and cross cut 75 feet each way; to construct a rise of approximately 75 feet.

(3) The total cost of the project not to exceed $37,275.00.

DATA PERTAINING TO FORM MF-103

4. Map attached.

DATA PERTAINING TO FORM MF-103

5. There are no existing facilities, buildings, installations, or fixtures on site.

DATA PERTAINING TO FORM MF-103

6. The only installations outside of actual work itself is the establishment of a camp site. The following items are needed for that purpose:

Tents or trailer rental	$350.00
Cooking equipment & general utilities	500.00
Cots, sleeping equipment and miscellaneous items	350.00
Tool shed and storage	300.00
Total	$1500.00

DATA PERTAINING TO FORM MF-103

7. (a) Operating equipment to be rented:

Compressor	750.00
Light Plant	300.00
Tank Trailer	150.00
Dozer with operator	3300.00
2 Dump Trucks	4000.00
1 Four Wheel Drive Jeep	600.00
Total	$9100.00

(b) Items to be purchased:

2 Drills	2000.00
1 Ore Car	200.00
900' Rail	300.00
Spikes & Splice Bars	55.00
Ties	105.00
Drill Steel	450.00
Drill Bits	450.00
Timbering	375.00
100 Boxes Dynamite	2200.00
Caps	600.00
18,000 ' Fusing	250.00
400' 2" Pipe	160.00
400' 1" Pipe	80.00
Pipe Fittings	75.00
Air Hoses (2)	160.00
Water Pump	265.00
Total	$7725.00

(c) Have no equipment of our own.

DATA PERTAINING TO FORM MF-103

8. Labor Costs:

2 Miners @ $16.00 per day for 100 days	3200.00
2 Muckers @ $14.00 per day for 100 days	2800.00
2 Supervisors @ $20.00 per day for 100 days	4000.00
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2 Truck Drivers @ $14.00 per day for 100 days	2800.00
Industrial Insurance & Social Security	1000.00
Total	15400.00

DATA PERTAINING TO FORM MF-103

9. Materials, see 7 (a) and (b)

Supplies, see 7 (a) and (b)

Engineering (including final reports)	$850.00
Assaying	500.00
Accounting	600.00
Power & Fuel	2000.00

10. $10000.00

11. None

Form MF-100
(May 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA
FOR USE UNDER THE
DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. DMEA-2451

Date received 3-27-52

PANAMINT ANTIMONY & TUNGSTEN MINING
CO., INC.
Newport, Washington

Name and address of applicant

Date March 17, 1952

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (5) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

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1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☒ Owner.
   - ☐ Lessee.
   - ☐ Contractor.
5. Number of years in production _____

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:

   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation: Common (e)	Number of Shares Held in Applicant Corporation: Preferred (f)	Life Insurance Carried for Benefit of Applicant: Amount (g)	Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h)
Richard C. Thamm Colville, Washington	D President	None	30,000.	1,000	None	None	None
H. C. O'Brien Newport, Washington	D Vice-President	None	30,000.	1,000	None	None	None
J. L. Gallagher Newport, Washington	D Sec-Treasurer	None	35,000.	1,000	None	None	None
Willard E. Stevens Priest River, Idaho		None	60,000.	1,000	None	None	None
Lloyd A. Myrich Newport, Washington		None	5,000.	1,000	None	None	None
	Total	None	x x x x x	5,000	None	x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$50,000.00	$1250.00	$.25	5,000	None
Preferred stock	$ None	$ None	$ None	None	None

*Indicate period covered.

10. Production:

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)	Antimony	New, not applicable			
2. Quantity of product processed (specify unit of measure and type of process)		New, not applicable			
3. Quantity and grade of product sold or shipped (specify units of measure)		New, not applicable			

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves.

TECHNICAL DATA PERTAINING TO FORM MF-100

1. Materials produced:

   (a) Antimony and antimony oxide
   (b) Sulphur, arsenic

2. (a)
   (b)
   (c) NOT APPLICABLE
   (d)

3. (a) 40 miles to Trona, California
   (b) Wildrose Mining District
   (c)
   (d) Inyo County, California

4. (a) This property is new and not in operation at the present time
   (b) 14 claims owned by applicant, 2 claims under lease awaiting signature on Form MF-202

5. New, not applicable

6. (a) The applicant is a corporation, Namely, Panamint Antimony and Tungsten Mining Company, Inc.
   (b) All exploration work will be under the management of a competent and qualified mining engineer

7. (a) New property, not applicable
   (b) Not applicable, but very rich tungsten property has been found and is under development in the vicinity

   (c) No written reports have been obtained but several mining engineers have inspected the property and believe it to terminate in a solid dome of antimony within 100 feet of present site for exploration

8. See Form MF-100

9. See Form Mf-100

10. See Form MF-100

11. Not applicable

12. (a) Rich stringers have been located on five of the existing claims on the surface or ledges, widening towards the center. It is the general belief that all these stringers will terminate in a solid dome of antimony. Several grab samples as well as picks across the entire exposed veins have been taken varying from 5 to 50 pounds each and assay reports have been ver gratifying ranging in percentages from 16 to 53 percent. These official reports are attached to Form Mf-103.
    (b) Engineers have estimated the deposit to be at a minimum of 250,000 tons (2000 lbs. per ton)
    (c) Not applicable

13. New hard topped road in excellent condition existing from 6 miles from location to Trona, California, the nearest shipping point. 3 Miles of good gravel road to camp site. 3 miles of road to be built from camp site to location site, see Form MF-103.

14. Sufficient water is available six miles from location site and water rights have been granted for both camp site and drilling purposes.

15. No power available

16. New property, not applicable

17. None, not applicable

18. None, not applicable

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.

PANAMINT ANTIMONY & TUNGSTEN MINING CO., INC.

Name of Company

By _____
Signature of authorized official

March , 1952
Date

President
Title

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable)					

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

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.

PANAMINT ANTIMONY & TUNGSTEN MINING CO., INC. By R C Hamon
(Name of company) (Signature of authorized official)

March 27, 1952 President
(Date) (Title)

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

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-

MF-103 Should Be Filed With General Technical Data Form MF-100

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

Not To Be Filled in by Applicant

Docket No. DMEA-2451
Metal or Mineral Antimony
Date Received 3-27-52
Amount $ 37,675
Participation (Government %)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 2 1952

Name and address of applicant

PANAMINT ANTIMONY & TUNGSTEN MINING CO., INC.
Newport, Washington

Date March 17, 1952

If you have already filed MF-100, give date filed Enclosed, type of assistance requested ,

DMA Docket Number (if available) None

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four copies each, of the signed application form, General Technical Data Form MF-100, and answers to questions as specified, to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive office thereof, with your name and address on each sheet of the application and all accompanying papers. If you have previously filed MF-100, it is not necessary to file it again. However, you should indicate in space provided above the type of assistance previously applied for (loans, procurement contracts, etc.) and DMA Docket Number, if available. *When a question is inapplicable it should be so stated in the form.* Additional sheets should be attached in answering any questions or in supplying additional information. IF YOU CANNOT ANSWER A QUESTION, SO STATE.

1. (*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*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application.

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

   NOTE: (1) 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 (*c*) 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.

   (2) If applicant is not the owner of the property or if there are any liens or encumbrances against the property, copy of agreements of claimants, lienors, encumbrances, and lessors subordinating their interests in the property to the interest of the Government under the Exploration Project Contract will be required for attachment to the Contract.

2. (*a*) What metals or minerals do you expect to find?

   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.

The information requested in questions 3, 4, 5, 6, 7, 8, and 9 below should be answered specifically and in detail, as this information will be attached to and incorporated as part of the Exploration Project Contract, if such contract is entered into with you by the Government.

ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project.

   (*b*) State the time required to start the project and to complete it.

4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc.

5. Furnish an itemized list of existing facilities, buildings, installations, and fixtures with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition.

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item.

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each.

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above.

10. (*a*) How much are you prepared to invest in the proposed project?

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO–5)?

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

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.

[illegible] Co., Inc. (Name of company)

By [illegible] (Signature of authorized official)

March 27, 1952 (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.

U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

DATA PERTAINING TO FORM MF-103

1. (a) The property consists of 16 claims all adjoining, namely Nellie 1 to Nellie 16 inclusive. Nellie 3 to Nellie 16 are deeded in our name and are properly located and staked, assessment work has been started.

(b) Nellie 1 and 2 are leased claims, copy of lease and purchase option with authorization of lessor for exploration on Form MF-202 attached hereto.

(c) The legal description of the property is as follows:

DATA PERTAINING TO FORM MF-103

2. (a) The property appears to be very rich in antimony and antimony sulfides, various small excavations have been made with extremely good showings. Small stringers all widening towards the center of the dome. It is the general belief of geologists and engineers who have inspected the property that a solid stibnite deposit will be found within 100 feet of the exploration site by drift and cross-cut. Several assays have been made from ordinary grab samples and direct cuts across exposed veins running from 5 to 50 pounds in weight and the assay reports are attached hereto.

(b) See attachments to section 2 (a).

DATA PERTAINING TO FORM MF-103

3. (a) The proposed work is as follows:

(1) To build three miles of road from existing road to exploration site.

(2) To drift in and down for approximately 150 feet and cross cut 75 feet each way; to construct a raise of approximately 75 feet.

(3) The total cost of the project not to exceed $37,~~2~~675.00.

150
75
75
150
150
5
1875
1375

DATA PERTAINING TO FORM MF-103

4. Map attached.

DATA PERTAINING TO FORM MF-103

5. There are no existing facilities, buildings, installations, or fixtures on site.

DATA PERTAINING TO FORM MF-103

6. The only installations outside of actual work itself is the establishment of a camp site. The following items are needed for that purpose:

Tents or trailer rental	$350.00
Cooking equipment & general utilities	500.00
Cots, sleeping equipment and miscellaneous items	350.00
Tool shed and storage	300.00
Total	$1500.00

DATA PERTAINING TO FORM MF-103

7. (a) Operating equipment to be rented:

Compressor	750.00	
Light Plant	300.00	
Tank Trailer	150.00	
Dozer with operator to build road	3300.00	Reduce to 1700
~~2 Dump Trucks~~	~~4000.00~~	cut
1 Four Wheel Drive Jeep	600.00	
Total	$9100.00	

(b) Items to be purchased:

2 Drills	2000.00	
1 Ore Car	200.00	
900' Rail	300.00	150' to dump.
Spikes & Splice Bars	55.00	
Ties	105.00	
Drill Steel	450.00	
Drill Bits	450.00	
Timbering	375.00	
100 Boxes Dynamite	2200.00	
Caps	600.00	
18,000 ' Fusing	250.00	
400' 2" Pipe	160.00	
400' 1" Pipe	80.00	
Pipe Fittings	75.00	
Air Hoses (2)	160.00	
Water Pump	265.00	
Total	$7725.00	

(c) Have no equipment of our own.

DATA PERTAINING TO FORM MF-103

8. Labor Costs:

2 Miners @ $16.00 per day for 100 days	3200.00
2 Muckers @ $14.00 per day for 100 days	2800.00
2 Supervisors @ $20.00 per day for 100 days	~~4000.00~~ 2000
1 Cat Operator @ $16.00 per day for 100 days	1600.00
~~2 Truck Drivers @ $14.00 per day for 100 days~~	~~2800.00~~
Industrial Insurance & Social Security	1000.00
Total	~~15400.00~~

DATA PERTAINING TO FORM MF-103

9. Materials, see 7 (a) and (b)

Supplies, see 7 (a) and (b)

Engineering (including final reports)	$850.00	
Assaying	500.00	
Accounting	600.00	@ 100/mo.
Power & Fuel	2000.00	

10. $10000.00

11. None

Form MF-100
(May 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA
FOR USE UNDER THE
DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. DMEA-2451

Date received 3-27-52

PARKLINT ANTIMONY & TUNGSTEN MINING
CO., INC.
Newport, Washington

Name and address of applicant

Date March 17, 1952

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (5) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☒ Owner.
   - ☒ Lessee.
   - ☐ Contractor.
5. Number of years in production _____

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation: Common (e)	Number of Shares Held in Applicant Corporation: Preferred (f)	Life Insurance Carried for Benefit of Applicant: Amount (g)	Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h)
Richard C. Thamm Colville, Washington	D President	None	30,000.	1,000	None	None	None
H. C. O'Brien Newport, Washington	D Vice-President	None	30,000.	1,000	None	None	None
J. L. Gallagher Newport, Washington	D Sec-Treasurer	None	35,000.	1,000	None	None	None
Willard E. Stevens Priest River, Idaho		None	60,000.	1,000	None	None	None
Lloyd A. Eyrich Newport, Washington		None	5,000.	1,000	None	None	None
	Total	None	x x x x x	5,000	None	x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$250,000.00	$ 1250.00	$ .25	5,000	None
Preferred stock	$ None	$ None	$ None	None	None

*Indicate period covered.

10. Production:

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)	Antimony	———	New, not applicable	———	———
2. Quantity of product processed (specify unit of measure and type of process)	———	———	New, not applicable	———	———
3. Quantity and grade of product sold or shipped (specify units of measure)	———	———	New, not applicable	———	———

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves.

TECHNICAL DATA PERTAINING TO FORM MF-100

1. Materials produced:

   (a) Antimony and antimony oxide
   (b) Sulphur, arsenic

2. (a)
   (b)
   (c) NOT APPLICABLE
   (d)

3. (a) 40 miles to Trona, California
   (b) Wildrose Mining District
   (c)
   (d) Inyo County, California

4. (a) This property is new and not in operation at the present time
   (b) 14 claims owned by applicant, 2 claims under lease awaiting signature on Form MF-202

5. New, not applicable

6. (a) The applicant is a corporation, Namely, Panamint Antimony and Tungsten Mining Company, Inc.
   (b) All exploration work will be under the management of a competent and qualified mining engineer

7. (a) New property, not applicable
   (b) Not applicable, but very rich tungsten property has been found and is under development in the vicinity

   (c) No written reports have been obtained but several mining engineers have inspected the property and believe it to terminate in a solid dome of antimony within 100 feet of present site for exploration

8. See Form MF-100

9. See Form Mf-100

10. See Form MF-100

11. Not applicable

12. (a) Rich stringers have been located on five of the existing claims on the surface or ledges, widening towards the center. It is the general belief that all these stringers will terminate in a solid dome of antimony. Several grab samples as well as picks across the entire exposed veins have been taken varying from 5 to 50 pounds each and assay reports have been ver gratifying ranging in percentages from 16 to 53 percent. These official reports are attached to Form Mf-103.
    (b) Engineers have estimated the deposit to be at a minimum of 250,000 tons (2000 lbs. per ton)
    (c) Not applicable

13. New hard topped road in excellent condition existing from 6 miles from location to Trona, California, the nearest shipping point. 3 Miles of good gravel road to camp site. 3 miles of road to be built from camp site to location site, see Form MF-103.

14. Sufficient water is available six miles from location site and water rights have been granted for both camp site and drilling purposes.

15. No power available

16. New property, not applicable

17. None, not applicable

18. None, not applicable

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.

PANAMINT ANTIMONY & TUNGSTEN MINING CO., INC.

Name of Company

By _____
Signature of authorized official

March , 1952
Date

President
Title

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable)					

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

CERTIFICATION

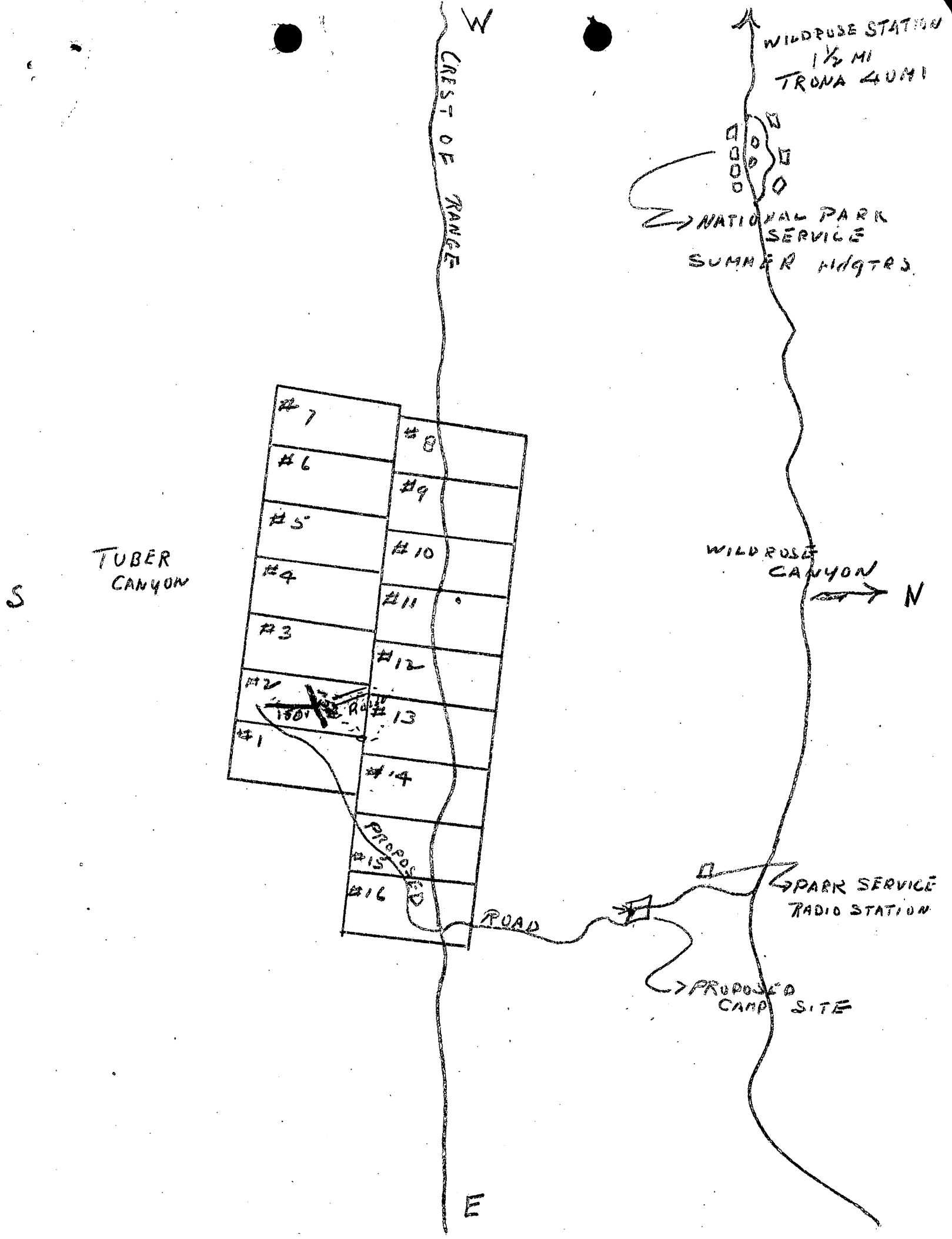
The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

PANAMINT ANTIMONY & TUNGSTEN MINING CO., INC. By J. C. Thamm
(Name of company) (Signature of authorized official)
Thamm

March 27, 1952 President
(Date) (Title)

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

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1


W
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ROAD
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CANYON
N
PARK SERVICE
RADIO STATION
PROPOSED
CAMP SITE
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Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

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

Not To Be Filled in by Applicant

Docket No. DMEA-245
Metal or Mineral Antimony
Date Received 3-27-52
Amount $ 37,675
Participation (Government %)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 27 1952

Name and address of applicant

PANAMINT ANTIMONY & TUNGSTEN MINING CO., INC.
Newport, Washington

Date March 17, 1952

If you have already filed MF-100, give date filed Enclosed, type of assistance requested ,

DMA Docket Number (if available) None

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four copies each, of the signed application form, General Technical Data Form MF-100, and answers to questions as specified, to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive office thereof, with your name and address on each sheet of the application and all accompanying papers. If you have previously filed MF-100, it is not necessary to file it again. However, you should indicate in space provided above the type of assistance previously applied for (loans, procurement contracts, etc.) and DMA Docket Number, if available. *When a question is inapplicable it should be so stated in the form.* Additional sheets should be attached in answering any questions or in supplying additional information. IF YOU CANNOT ANSWER A QUESTION, SO STATE.

1. (*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*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application.

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

   NOTE: (1) 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 (*c*) 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.

   (2) If applicant is not the owner of the property or if there are any liens or encumbrances against the property, copy of agreements of claimants, lienors, encumbrances, and lessors subordinating their interests in the property to the interest of the Government under the Exploration Project Contract will be required for attachment to the Contract.

2. (*a*) What metals or minerals do you expect to find?

   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.

The information requested in questions 3, 4, 5, 6, 7, 8, and 9 below should be answered specifically and in detail, as this information will be attached to and incorporated as part of the Exploration Project Contract, if such contract is entered into with you by the Government.

ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project.

   (*b*) State the time required to start the project and to complete it.

4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc.

5. Furnish an itemized list of existing facilities, buildings, installations, and fixtures with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition.

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item.

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each.

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above.

10. (*a*) How much are you prepared to invest in the proposed project?

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO–5)?

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

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.

PANAMINT ANTIMONY & TUNGSTEN MINING CO., INC.
(Name of company)

By R. L. Shamm
(Signature of authorized official)

March 27, 1952
(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.

U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

DATA PERTAINING TO FORM [illegible]-103

1. (a) The property consists of 16 claims all adjoining, namely Nellie 1 to Nellie 16 inclusive. Nellie 3 to Nellie 16 are deeded in our name and are properly located and staked, assessment work has been started.

(b) Nellie 1 and 2 are leased claims, copy of lease and purchase option with authorization of lessor for exploration on Form MF-202 attached hereto.

(c) The legal description of the property is as follows:

DATA PERTAINING TO FORM MF-103

2. (a) The property appears to be very rich in antimony and antimony sulfides, various small excavations have been made with extremely good showings. Small stringers all widening towards the center of the dome. It is the general belief of geologists and engineers who have inspected the property that a solid stibnite deposit will be found within 100 feet of the exploration site by drift and cross-cut. Several assays have been made from ordinary grab samples and direct cuts across exposed veins running from 5 to 50 pounds in weight and the assay reports are attached hereto.

(b) See attachments to section 2 (a).

DATA PERTAINING TO FORM MF-103

3. (a) The proposed work is as follows:

(1) To build three miles of road from existing road to exploration site.

(2) To drift in and down for approximately 150 feet and cross cut 75 feet each way; to construct a rise of approximately 75 feet.

(3) The total cost of the project not to exceed $37,275.00.

DATA PERTAINING TO FORM MF-103

4. Map attached.

DATA PERTAINING TO FORM MF-103

5. There are no existing facilities, buildings, installations, or fixtures on site.

DATA PERTAINING TO FORM MF-103

6. The only installations outside of actual work itself is the establishment of a camp site. The following items are needed for that purpose:

Tents or trailer rental	$350.00
Cooking equipment & general utilities	500.00
Cots, sleeping equipment and miscellaneous items	350.00
Tool shed and storage	300.00
Total	$1500.00

DATA PERTAINING TO FORM MF-103

7. (a) Operating equipment to be rented:

Compressor	750.00
Light Plant	300.00
Tank Trailer	150.00
Dozer with operator	3300.00
2 Dump Trucks	4000.00
1 Four Wheel Drive Jeep	600.00
Total	$9100.00

(b) Items to be purchased:

2 Drills	2000.00
1 Ore Car	200.00
900' Rail	300.00
Spikes & Splice Bars	55.00
Ties	105.00
Drill Steel	450.00
Drill Bits	450.00
Timbering	375.00
100 Boxes Dynamite	2200.00
Caps	600.00
18,000 ' Fusing	250.00
400' 2" Pipe	160.00
400' 1" Pipe	80.00
Pipe Fittings	75.00
Air Hoses (2)	160.00
Water Pump	265.00
Total	$7725.00

(c) Have no equipment of our own.

DATA PERTAINING TO FORM MF-103

8. Labor Costs:

2 Miners @ $16.00 per day for 100 days	3200.00
2 Muckers @ $14.00 per day for 100 days	2800.00
2 Supervisors @ $20.00 per day for 100 days	4000.00
1 Cat Operator @ $16.00 per day for 100 days	1600.00
2 Truck Drivers @ $14.00 per day for 100 days	2800.00
Industrial Insurance & Social Security	1000.00
Total	15400.00

DATA PERTAINING TO FORM MF-103

9. Materials, see 7 (a) and (b)

Supplies, see 7 (a) and (b)

Engineering (including final reports)	$850.00
Assaying	500.00
Accounting	600.00
Power & Fuel	2000.00

10. $10000.00

11. None

Form MF-100
(May 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA FOR USE UNDER THE DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. DMEA-2451

Date received 3-27-52

PANAMINT ANTIMONY & TUNGSTEN MINING
CO., INC.
Newport, Washington

Name and address of applicant

Date March 17, 1952

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (5) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☒ Owner.
   - ☐ Lessee.
   - ☐ Contractor.
5. Number of years in production _____

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation: Common (e)	Number of Shares Held in Applicant Corporation: Preferred (f)	Life Insurance Carried for Benefit of Applicant: Amount (g)	Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h)
Richard C. Thamm Colville, Washington	D President	None	30,000.	1,000	None	None	None
H. C. O'Brien Newport, Washington	D Vice-President	None	30,000.	1,000	None	None	None
J. L. Gallagher Newport, Washington	D Sec-Treasurer	None	35,000.	1,000	None	None	None
Willard E. Stevens Priest River, Idaho		None	60,000.	1,000	None	None	None
Lloyd A. Eyrich Newport, Washington		None	5,000.	1,000	None	None	None
	Total	None	x x x x x	5,000	None	x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$250,000.00	$ 1250.00	$ .25	5,000	None
Preferred stock	$ None	$ None	$ None	None	None

*Indicate period covered.

10. Production:

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)	Antimony	--------	New, not applicable		--------
2. Quantity of product processed (specify unit of measure and type of process)	--------	--------	New, not applicable		--------
3. Quantity and grade of product sold or shipped (specify units of measure)	--------	--------	New, not applicable		--------

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves.

TECHNICAL DATA PERTAINING TO FORM MF-100

1. Materials produced:

   (a) Antimony and antimony oxide
   (b) Sulphur, arsenic

2. (a)
   (b)
   (c) NOT APPLICABLE
   (d)

3. (a) 40 miles to Trona, California
   (b) Wildrose Mining District
   (c)
   (d) Inyo County, California

4. (a) This property is new and not in operation at the present time
   (b) 14 claims owned by applicant, 2 claims under lease awaiting signature on Form MF-202

5. New, not applicable

6. (a) The applicant is a corporation, Namely, Panamint Antimony and Tungsten Mining Company, Inc.
   (b) All exploration work will be under the management of a competent and qualified mining engineer

7. (a) New property, not applicable
   (b) Not applicable, but very rich tungsten property has been found and is under development in the vicinity

   (c) No written reports have been obtained but several mining engineers have inspected the property and believe it to terminate in a solid dome of antimony within 100 feet of present site for exploration

8. See Form MF-100

9. See Form Mf-100

10. See Form MF-100

11. Not applicable

12. (a) Rich stringers have been located on five of the existing claims on the surface or ledges, or widening towards the center. It is the general belief that all these stringers will terminate in a solid dome of antimony. Several grab samples as well as picks across the entire exposed veins have been taken varying from 5 to 50 pounds each and assay reports have been ver gratifying ranging in percentages from 16 to 53 percent. These official reports are attached to Form Mf-103.
    (b) Engineers have estimated the deposit to be at a minimum of 250,000 tons (2000 lbs. per ton)
    (c) Not applicable

13. New hard topped road in excellent condition existing from 6 miles from location to Trona, California, the nearest shipping point. 3 Miles of good gravel road to camp site. 3 miles of road to be built from camp site to location site, see Form MF-103.

14. Sufficient water is available six miles from location site and water rights have been granted for both camp site and drilling purposes.

15. No power available

16. New property, not applicable

17. None, not applicable

18. None, not applicable

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.

PANAMINT ANTIMONY & TUNGSTEN MINING CO., INC.
Name of Company

By _____
Signature of authorized official

March , 1952
Date

President
Title

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable)					

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

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.

PANAMINT ANTIMONY & TUNGSTEN MINING CO., INC. By R. C. Hamm
(Name of company) (Signature of authorized official)

March 27, 1952 President
(Date) (Title)

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

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

MF-202

6 copies to photocopy

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of Inyo, State of California, described in a certain Exploration Project Contract dated _____, 195__, between Panamint Antimony & Tungsten Mining Co., Inc., the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated January 25, 1952, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

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

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

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

Dated this 20th day of March, 195.2.

David G. Adams

J. W. Johnston

(By Dye by power of attorney)

U. S. GOVERNMENT PRINTING OFFICE 16—64338

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of Inyo, State of California, described in a certain Exploration Project Contract dated _____, 195__, between Panamint Antimony & Tungsten Mining Co., Inc., the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated January 25, 1952, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

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

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

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

Dated this 20th day of March, 1952.

David G. Cadams

J. W. Johnston
(Clay Dye by power of attorney)

U. S. GOVERNMENT PRINTING OFFICE 16—[illegible]

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of Inyo, State of California, described in a certain Exploration Project Contract dated _____, 195__, between Panamint Antimony & Tungsten Mining Co., Inc., the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated January 25, 1952, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

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

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

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

Dated this 20th day of March, 1952.

David L. Adams

J. W. Johnston

(Roy D. Ja by power of attorney)

U. S. GOVERNMENT PRINTING OFFICE 16—[illegible]-1

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of Inyo, State of California, described in a certain Exploration Project Contract dated _____, 195__, between Permanent Antimony & Tungsten Mining Co., Inc., the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated January 25, 1952, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

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

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

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

Dated this 20th day of March, 1952.

David L. Cedoms

J. W. Johnston

(By Dorothy Power of attorney)

U. S. GOVERNMENT PRINTING OFFICE 16—64187

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of Inyo, State of California, described in a certain Exploration Project Contract dated _____, 195__, between Pacific Antimony & Tungsten Mines Co., Inc., the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated January 25, 1952, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

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

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

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

Dated this 20th day of March, 1952.

J. W. Johnston
(By Deal by Power of attorney)
David L. Cadoms

U. S. GOVERNMENT PRINTING OFFICE 16—64582-1

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of Inyo, State of California, described in a certain Exploration Project Contract dated _____, 195__, between Pacific Gulf Oil & Gas Co., Inc.,

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

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated January 25, 1952, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

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

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

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

Dated this 20th day of March, 195[illegible]

David L. Cadoux

J. W. Johnston

(Hey Doga by power of attorney)

U. S. GOVERNMENT PRINTING OFFICE: 16-[illegible]-1

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