Office of
Executive Officer
DMEA Field Team
Region III

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

May 27, 1952

Mr. W. R. Leedom
New Mammoth Mines
Chinese Camp, Calif.

Re: Docket DMA-1087, New Mammoth
Mines - W. R. Leedom

Dear Mr. Leedom:

In reply to your letter of May 21, it will perhaps not take very long to process an exploration loan application on your property inasmuch as the property has already been examined by geologists of the Geological Survey. We will be requested by Washington, perhaps, only to investigate the soundness of your exploration program.

Sincerely yours,

H. C. MILLER

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

HCMiller:ejs

Files
Chron

Refer to	Noted	Date
Answered	WCH	5/27

Chinese Camp, California
May 21, 1952

U. S. Bureau of Mines
Region 3
1012 Flood Building
San Francisco, California

Re: DMA 1087
New Mammoth Mines
W. R. Leedom

Attn: Mr. H. C. Miller

Gentlemen:

In applying for an Exploration loan on tungsten will it be necessary for the time element to be the same as required on the original processing of my application for a Development Loan, or could you give me approximately the time it would require to get a report.

Very truly yours

NEW MAMMOTH MINES

W R Leedom

W. R. Leedom

WRL/il

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED

1952 MAY 23 AM 8:16

SAN FRANCISCO, CALIFORNIA

DEFENSE MATERIALS PROCUREMENT AGENCY
WASHINGTON 25, D. C.

JAN 17 1952

Mr. H. R. Leadom
Eagle Shawmut Mine
Chinese Camp, California

Re DMA-1057

Dear Mr. Leadom:

Your application for a loan to develop the new Mammoth Mines, Confidence District, Tuolumne County, California, has been reviewed by the Lead-Zinc Branch of Defense Materials Procurement Agency. In the opinion of the Field Team, Region III, who examined the property, there are insufficient ore reserves blocked out to justify such a loan. All representatives of the Lead-Zinc Branch are in complete agreement with this opinion.

I regret therefore, that your application for a loan cannot be approved.

Consideration will be given an application for an exploration loan should you decide to file one.

Very truly yours,

Tom Lyon

Tom Lyon, Director
Program Development Division

Field Team Region III
Field Team Region III

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED

JAN 2[illegible] AM 11 : 0[illegible]

SAN FRANCISCO, CALIFORNIA

WASHINGTON 25, D. C.
DEFENSE MATERIALS PROCUREMENT AGENCY

DEFENSE MATERIALS PROCUREMENT AGENCY
WASHINGTON 25, D. C.

JAN 17 1952

Memorandum

To: Control Center, DMPA

From: G. E. Johnson, Acting Chief, Lead-Zinc Branch

Subject: Denial of Application for a Loan
DMA-1077
New Mammoth Mines
Confidence District
Tuolumne County, California
Direct Loan- $36,365

The property was examined by the field team. They find that no ore has been blocked out on the property to justify such a loan, and their report recommends a denial of a direct loan.

The field team suggested that the applicant apply for an exploration loan of $5,000, but reports that the applicant is not interested.

We recommend, and the United States Geological Survey concurs, that the request for this loan be denied.

APPROVED:

G. E. Johnson, Acting Chief
Lead-Zinc Branch

Sam Lyon, Director
Program Development Division
RSButler:ll January 4/51

CC: DMPA Files
Mr. Young
Mr. Feiss
Mr. Douglas
Mr. Lyon
Mr. Johnson Room 7010
Field Team, Region III

DEFENSE MATERIALS PROCUREMENT AGENCY
WASHINGTON 25, D. C.

JAN 17 1952

Mr. W. R. Leedom
Eagle Shawmut Mine
Chinese Camp, California

Re DMA-1087

Dear Mr. Leedom:

Your application for a loan to develop the new Mammoth Mines, Confidence District, Tuolume County, California, has been reviewed by the Lead-Zinc Branch of Defense Materials Procurement Agency. In the opinion of the Field Team, Region III, who examined the property, there are insufficient ore reserves blocked out to justify such a loan. All representatives of the Lead-Zinc Branch are in complete agreement with this opinion.

I regret therefore, that your application for a loan cannot be approved.

Consideration will be given an application for an exploration loan should you decide to file one.

Very truly yours,

Tom Lyon

Tom Lyon, Director
Program Development Division

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.

Office of
Executive Officer
DMA Field Team
Region III

November 1, 1951

Memorandum

To: Tom Lyon, Chairman, Coordinating Committee, Defense Minerals Administration, Washington, D. C.

From: Executive Officer, DMA Field Team, Region III

Subject: Docket DMA-1087 - New Mammoth Mines, Tuolumne County, California

Reference is made to your subject letter dated August 13, requesting a geologic examination be made of the subject property to determine if there are sufficient ore reserves to amortize a $36,365 loan.

Attached are four copies of a report, "DMA-1087, New Mammoth Mines Property, Confidence District, Tuolumne County, California", by C. Melvin Swinney and Arvid A. Stromquist, geologists, U. S. Geological Survey, dated October 29, 1951.

The examining geologists do not recommend the granting of a production loan because no ore is blocked out. In evaluating the property from the standpoint of an exploration loan, the examining geologists concluded that a $5,000 exploration program might be expected to develop 1,050 tons of ore containing 3% lead and 15 oz. of silver per ton, which could be hand sorted to double the grade. The applicant, however, was little interested in an exploration loan.

The docket is being returned herewith.

H. C. MILLER

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

Attachment

Copy to: E. H. Bailey, USGS

HCMiller:ejs

Files
Chron

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

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMA-1087, New Mammoth Mine Property

Confidence District, Tuolumne County, Calif.

C. Melvin Swinney, Geologist
Arvid A. Stromquist, Geologist
U. S. Geological Survey

October 29, 1951

Summary

A production loan is not recommended because no ore is blocked out on the property.

An exploration program in the order of $5,000 to explore the Mammoth vein for lead should be considered. This program may be expected to develop, 1050 tons of ore containing 3% Pb and 15 oz. Ag per ton, which will have to be concentrated by handsorting should produce about 525 tons of concentrates containing 6% Pb and 30 oz. Ag per ton.

Introduction

On August 31, 1951 Arvid A Stromquist and C. M. Swinney of the Geological Survey, accompanied by Mr. Wilbur Leedom of Chinese Camp, Calif., made a brief geological examination of the New Mammoth Mines property in the Confidence district, Tuolumne County, California. The purpose of the examination was to determine whether the property contains sufficient ore to amortize a development loan of $36,365 requested by Mr. Leedom from the Defense Minerals Administration. If such a loan is not justified it was then to be determined whether additional exploration is desirable, and if so whether Mr. Leedom would be interested in government participation in such exploration.

Location

The New Mammoth Mines property is in Sec. 14, T. 2 N., R. 16 E., MDBM, Confidence District, Tuolumne County, California. The property is accessible by driving 17½ miles east from Sonora along California Highway 108 (see Fig. 1). One half mile east of the village of Confidence turn right on a dirt road and continue ½ mile to a crossroads. Turn to the right and continue approximately 1½ miles to a fork; take the lefthand branch. About one mile of steep, one-way, winding dirt mountain leads from the fork to the mine. The last section of the road is passible only to trucks with low gear transmission and in wet weather it is passible only in four-wheel drive vehicles.

The property of the New Mammoth Mines is in the canyon of the North Fork of the Tuolumne River and extends up the steep canyon slopes a distance of about half a mile on both sides of the river (Fig. 2). The region is well forested with pine, fir and oak, with a moderate growth of underbrush. Bedrock, except for widely scattered outcrops, is covered by a thin soil mantle that probably averages a foot or two in thickness.

Geology

The Confidence District is a portion of the Mother Lode East Belt, a system of discontinuous quartz veins that parallels the

Mother Lode and lies about 12 miles to the east of it. The New Mammoth Mines property is on the northwestern edge of a large irregular body of metamorphic rocks of the Calaveras formation that is nearly surrounded by a westward extending apophysis of the Sierra Nevada batholith (Fig. 1). The accompanying map of the general geology is modified from a map by James Little 1/.

The Calaveras formation consists of fine-grained crystalline marble, quartzite, and quartz-mica schists. Its contact with the granitic rock of the batholith is extremely irregular and embayed. In general, the granitic rocks have a granodiorite composition, but locally small patches of gabbroic types occur. Numerous quartz veins crosscut both the granitic and the metamorphic rocks. Most of the veins strike roughly parallel to the northeast trend of the contact between the granitic and metamorphic rocks. Many of the quartz veins contain galena in addition to pyrite, and three such veins occur within the boundary of the New Mammoth Mines property.

Several small bodies of tactite occur along the contact between the metamorphic and granitic rocks, and two tactite masses on the New Mammoth Mines property contain scheelite.

Quartz veins

Three quartz veins that crop out on the property have been prospected for lead. They are the Miracle vein, the Mammoth vein and the Oro Grande vein. The most promising is the Mammoth vein which crops out where it crosses the Tuolumne River. At this point it is 6 feet wide, and dips about 70° to the northwest. It can be traced discontinuously for about 1000 feet to the east of the river and may extend considerably further. West of the river it is covered or pinches out, but may be continuous with a quartz vein that crops out high on the west side of the river canyon. The vein lies on or very close to the contact between the metamorphic and granitic rocks. At one point, near the river (see Fig. 2) the vein has been explored to a depth of about 12 feet by an open cut. The hanging wall side of the vein is mineralized over a width of about two feet. Pyrite is by far the most abundant metallic mineral, but galena and sphalerite are present in notable amounts. A grab sample from the dump, which represents the rock taken from the entire width (6 feet) of the quartz vein at the open cut, gave the following results: Pb. 1.9%; Zn. 0.5%; and Ag. 15.45 oz. per ton. As most of the values are in the two foot mineralized zone it is believed to contain about 6% Pb. and 1½% Zn.

The Miracle vein, in the corner of the property, is about 3½ to 4 feet thick but of unknown length. It has been explored near the outcrop by a 12-foot adit parallel to the strike of the vein. The

---

1/ Little, James M., Tungsten Deposits of the Confidence Mining District, Tuolumne County, Calif.: Calif. Jour. Mines and Geol. Vol. 38, Nos. 3 and 4, pp. 283-290, July and October, 1942.

vein is entirely in granodiorite and dips steeply northwest. Galena and sphalerite are visible to the eye in a zone about 1 foot thick along the hanging wall side of the vein. Samples taken from the dump, which represents about 3-foot width of rock taken from the vein when driving the adit, assay Pb. 0.4%; Zn. 0.2%; and Ag. 1.20 oz. per ton. By hand sorting, the grade of the ore can be enriched to about 1.2% Pb.

Where observed on the surface at a few places along the strike the ore in both the Mammoth and Miracle veins seems to be of fairly uniform grade. In the Mammoth vein the grade of ore seems to be constant through a vertical distance of about 35 feet, observed where the vein crops out on the east side of river canyon, but the Miracle vein is not exposed enough for one to observe if its grade changes at depth.

The Oro Grande vein which has been explored by one trench for about 100 feet along the southern edge of the property contains pyrite and only a trace of galena.

Scheelite deposits

Two scheelite-bearing tactite bodies have been prospected by Mr. Leedom. One of these is in the northwest corner of the property near the Miracle vein. Only a very shallow pit has been dug, and the extent of the body is not known. Samples of ore from this prospect assay only about 0.04% WO_3.

The other scheelite prospect is in tactite near the river, close to the Mammoth vein. The tactite appears to be enclosed in the granodiorite, but its boundaries are obscured by overburden. It has been prospected at its eastern end by means of a trench 15 feet long and 4 feet wide, dug parallel to the long direction of the pendant. Scheelite is disseminated throughout the tactite and is associated with abundant pyrrhotite. A grab sample from the dump contained 0.27% WO_3. As the tactite is brittle and easily shattered much of the scheelite probably is mixed with fine material, this may account for the assay of the sample being lower than a visual estimate of 1.0% WO_3 made on the material in place in the face of the cut.

Conclusions

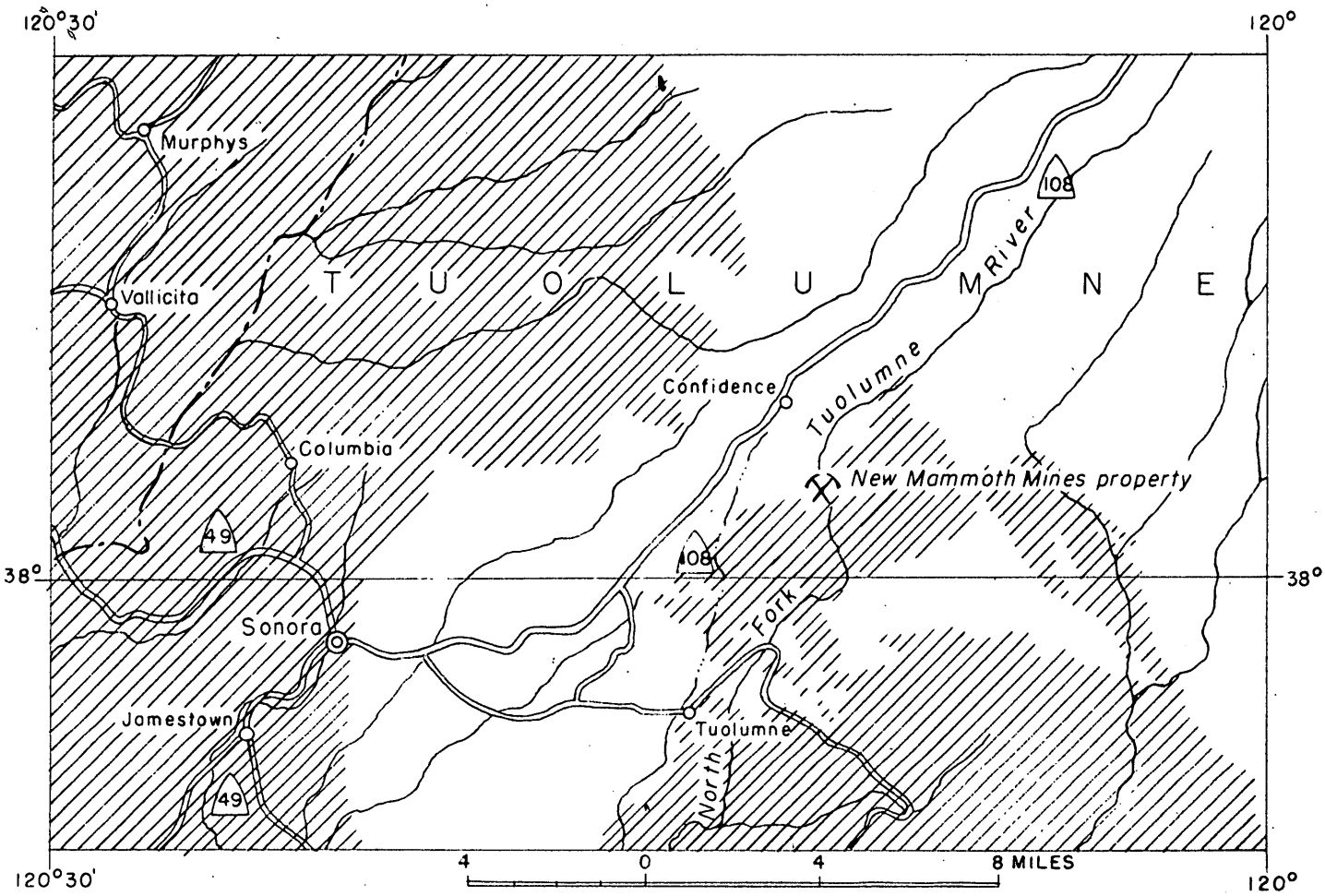
A production loan is not recommended as no measured ore is present on the property because of the limited extent of the workings and other exposures. The low grade of the vein material in the Miracle and Oro Grande veins does not seem to warrant Government participation in the exploration of these veins. The same can be said of the scheelite prospects.

However, if the committee on lead thinks that it would be worthwhile to explore for "ore", that at best must be hand sorted, it seems reasonable to encourage Mr. Leedom to explore the Mammoth vein. An exploration program in the order of $5,000 should be adequate to prove the value of the vein.

Such exploration could be carried out best by driving an adit eastward along the strike of the Mammoth vein, starting at a point just above the highwater level of the river. If it is assumed that a four foot width is to be mined, then the average grade of ore would be about 3% Pb. This figure is based on an assay value of 1.9% Pb over the total six foot width of the vein. If hand sorted the grade of the ore can be increased to at least 6%. Four different samples of hand sorted ore submitted to the American Smelting and Refining Company by Mr. Leedom assayed 6.2%, 2.1%, 6.7%, and 1[illegible].2% Pb. respectively.

An adit 100 feet long should test the average grade of the ore in the vein and should develop 1050 tons of ore containing 3% Pb per ton, which, after concentration by hand sorting, should result in about 525 tons of concentrates containing 6% Pb per ton. This is calculated by assuming a triangular block of rock (100' x 58' x 4') and a volume figure of 11 cubic feet of rock per ton.

If the values of the concentrates remain at 6% for the entire distance of 100 feet of drifting then the value of the ore mined should exceed the exploration cost. If one assumes that drifting can be done at $30 per foot and that the price of lead is 16 cents per pound then the cost of drifting would be about $3,000 and the value of the lead in 525 tons of concentrates would be about $10,000 and the silver would more than double this value.



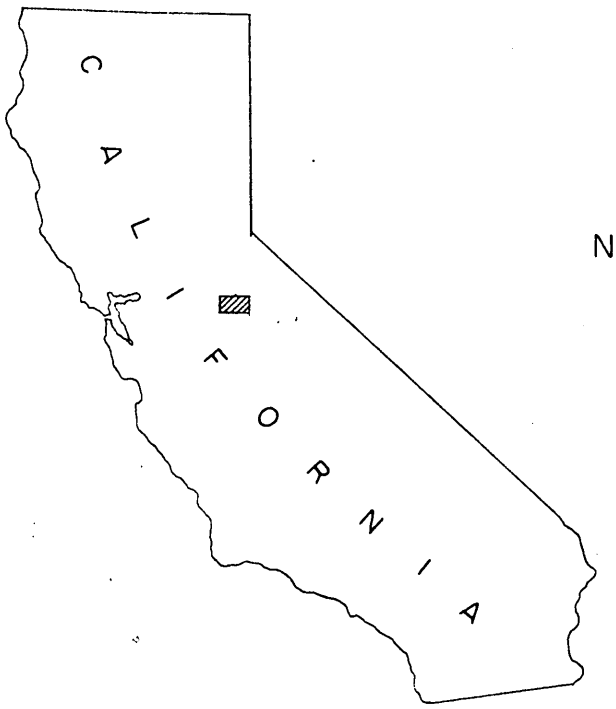


Figure 1.

INDEX MAP

SHOWING LOCATION OF

NEW MAMMOTH MINES PROPERTY

Sedimentary and volcanic rocks

Intrusive rocks

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMA 1087
(LEAD)

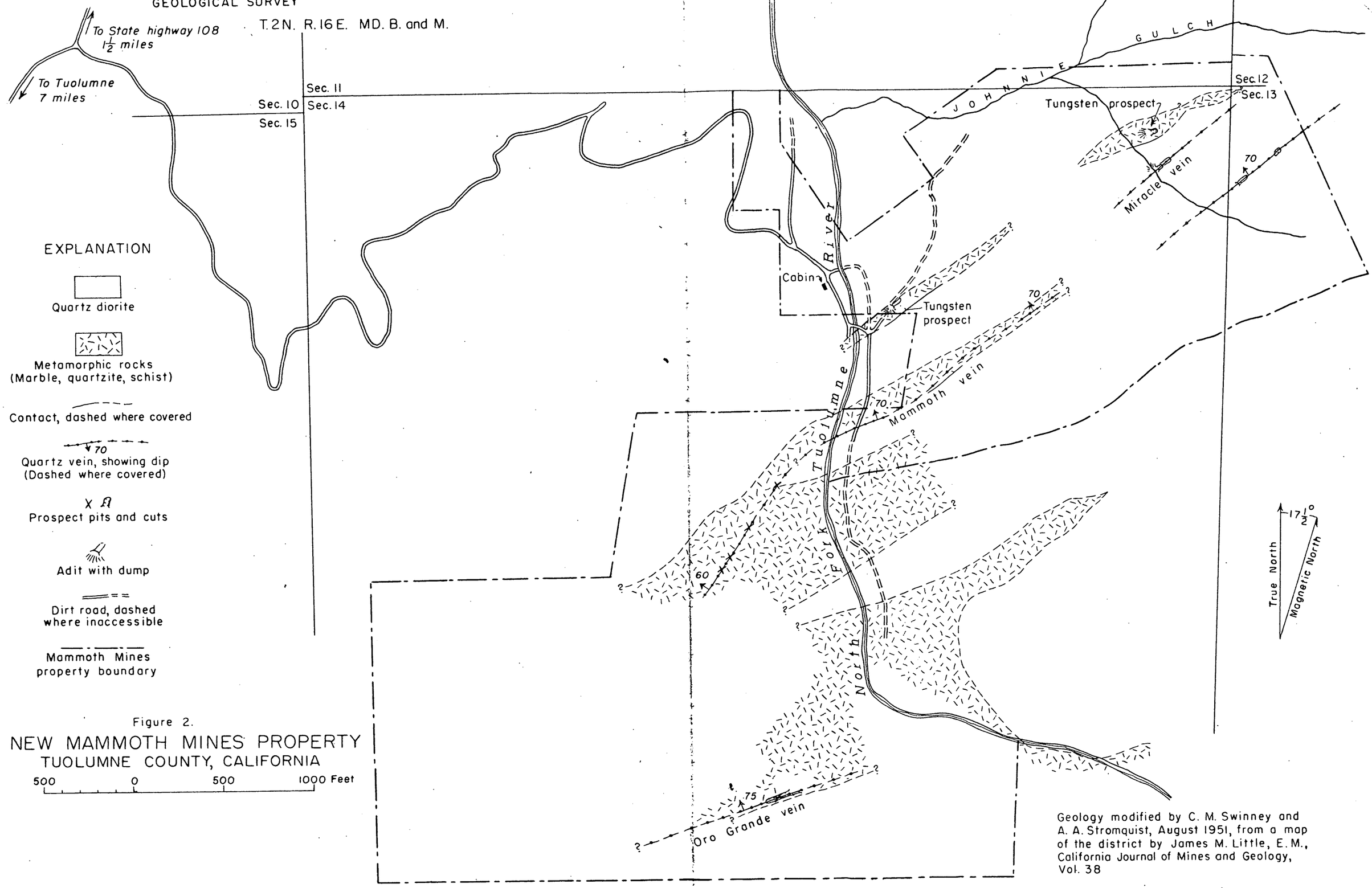


Figure 2.
NEW MAMMOTH MINES PROPERTY
TUOLUMNE COUNTY, CALIFORNIA

Geology modified by C. M. Swinney and A. A. Stromquist, August 1951, from a map of the district by James M. Little, E.M., California Journal of Mines and Geology, Vol. 38

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

102 Old Mint Building
San Francisco 3, California

October 30, 1951

Subject: DMA-1087, New Mammoth Mines,
Tuolumne County, California

Mr. H. C. Miller
U. S. Bureau of Mines
1012 Flood Building
870 Market Street
San Francisco 2, California

Dear Mr. Miller:

Enclosed are five copies of a report on the "New Mammoth mine property, Confidence district, Tuolumne County, Califonria (DMA-1087)" by C. M. Swinney and A. A. Stromquist of the Geological Survey and subject docket.

The applicants requested a production loan, which the examining geologists do not recommend because no ore is blocked out. The geologists were also requested to evaluate the property to ascertain if it would qualify for an exploration loan, and, if so, to consult with the applicant to learn if he wished to apply for this type of loan. The examining geologists conclude that a $5,000 exploration program might be expected to develop 1050 tons of ore containing 3% lead and 15 oz. of silver per ton, and this could be hand sorted to double the grade. The applicant was little interested in applying for such an exploration loan.

Sincerely yours,

Edgar

Edgar H. Bailey

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION II
RECEIVED
AUG 23 1951
SAN FRANCISCO, CALIFORNIA

Hell 8/23

102 Old Mint Building
San Francisco 3, California

August 22, 1951

Registered

Subject: DMA-1087, New Mammoth Mines,
Tuolumne County, California

Mr. Arvid A. Stromquist
P. O. Box 122
Altaville, California

Dear Arvid:

Much as I hate to interrupt your foothills work it seems best to refer to you, and Swinney if still there when this arrives, the enclosed docket, DMA-1087, dealing with the New Mammoth mine, Tuolumne County, California.

You will note from the accompanying letter of August 13 from Lyon to Miller that in addition to a routine geologic examination to ascertain the reserves several other points should be explored. The request is for a development loan, not an exploration loan, and to qualify the applicant must have ore in sight in sufficient quantity to assure repayment of the loan.

If he has sufficient ore in sight to amortize the loan then mining methods and costs should be discussed and itemized statements of proposed expenditures listed. The general rule on this is that every item of over $50 must be listed. If you feel the need of an engineer from the Bureau feel free to contact Mr. Miller, or Mr. Johnson, or myself.

If the applicant does not have sufficient reserves, and if you feel exploration of the property might be justified, then see if the applicant is interested in an exploration loan. If so, assist him insofar as possible to fill out a copy of the enclosed MF-103 form. We will take care of making the additional copies required.

Although the values seem to be chiefly lead and minor zinc, the application mentions tungsten also. Considering the need for tungsten, I suggest you make a point of checking on this, even if in another part of the claims. If you draw up an exploration proposal, be careful that it is clear on whether lead-zinc or tungsten ores are being sought, as the extent to which the Government participates is 50% for

the former, but 75% for the latter.

All best regards, and don't hesitate to call on me for further clarification if it is needed.

Sincerely yours,

Edgar H. Bailey

Enclosure

CC: H. C. Miller

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

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION IV
RECEIVED
AUG 17 1951
SAN FRANCISCO, CALIFORNIA

AUG 13 1951

Re: DMA-1087

Mr. Harold C. Miller
~~Bureau of Mines~~
1012 Flood Building
870 Market Street
San Francisco, California

Dear Mr. Miller:

Attached is the application submitted by W. R. Leedom of Chinese Camp, California for a loan of $36,365 to develop the New Mammoth mines in Tuolumne County, California.

The property, which has not been operated for 37 years, is practically undeveloped and will require road construction, power installation, and construction of a mill besides erection of head-frames and sinking of two shafts and driving two drifts. Some equipment will have to be purchased or rented, but most of the necessary equipment is owned by the applicant and will be moved in.

The applicant proposes to develop three veins--the Mammoth, the Oro Grande, and the Miracle. Estimated reserves in these three veins according to the applicant are:

Mammoth vein - 4,532 tons proven ore and 6,666 tons indicated ore averaging 4.5% Pb and 25 oz. Ag.
Oro Grande vein - 3,554 tons indicated ore averaging 4.5% Pb and 25 oz. Ag.
Miracle vein - 8,888 tons inferred ore averaging 3.5% Pb and 16.11 oz. Ag.

There also are minor gold, copper, and zinc values.

The applicant gives no basis for the above estimates. Assay sheets submitted do not indicate type nor location of samples nor are the sample locations shown on the map.

It is recommended that a geologic examination be made of the property to determine if there are sufficient ore reserves to amortize the loan. If there are, methods and costs should be examined and these submitted in greater detail than presented by the applicant.

If it is thought that further exploration is required and warranted, and provided that the applicant is willing to participate under the terms of the exploration program, all the necessary exhibits required for an exploration contract should be completed. The applicant also should be requested to submit four copies of Form MF-103, "Application for Aid for an Exploration Project."

Very truly yours,

Tom Lyon

Tom Lyon, Chairman
Coordinating Committee

APPROVED:

For Bureau of Mines

T. P. Thayer

For Geological Survey

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED
AUG 16 1951
SAN FRANCISCO, CALIFORNIA

350

AUG 13 1951

Refer to	Name	Date
	Hill	8/16
Answered		

Mr. W. K. Leedom
% Eagle Shaumut Mine
P. O. Box 1
Chinese Camp, California

Re: Docket BMA-1037

Dear Mr. Leedom:

Your application for a loan to develop the New Mammoth mines in Tuolumne County, California has been reviewed by the Lead-Zinc Branch of the Defense Minerals Administration.

Because more data will be required before further action can be taken, your application has been referred to Mr. H. C. Miller, Executive Officer of the Field Team, Bureau of Mines, 1012 Flood Building, 870 Market Street, San Francisco, California for further information and advice.

Very truly yours,

Copy to Bailey 8/16

Tom Lyon, Director
Supply Division

EJLyons:bo
G 8-8-51

Copies to: Harold C. Miller Region III (2)
Chief, Lead-Zinc Br.
E. T. McKnight
R. H. Mote
Reports and Records Unit
Director's r. file 4214 GSA
Br. r. file 4214 GSA
Files