Defense Materials Procurement Agency

Washington 25, D. C.

JAN 8 1952

Mr. Howard F. Keller, President
Claremont Mining Co.
336 West Second Street
Claremont, California

Re: DMA-1102

Dear Mr. Keller:

Your application, Docket DMA-1102, for a Government loan of $90,000 to erect a mill and equip the Sagamore Mine, California, has been reviewed by the Lead-Zinc Branch.

In the opinion of the Field Team, Region III, who made an examination of the property, there are insufficient reserves of measured ore and the assays of samples taken from indicated ore are low in lead and zinc. It is also their opinion that the lead-zinc-copper-tungsten ore association presents metallurgical problems which will require extensive milling tests. 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.

Very truly yours,

Tom Lyon

Tom Lyon, Director
Program Development Division

Copy to Becky Hill

RSButler:ll January 3, 1952

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

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
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'67 JAN 14 PM 1:44

SAN FRANCISCO, CALIFORNIA

MAN 8 1952

Memorandum

To: Control Center, DMPA

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

Subject: Denial of Application for a Direct Loan
DMA-1102
Sagamore Mine
San Bernardino County, California
Direct Loan $80,000

The property has been examined by the field team and their report recommends denial of the loan.

They report that there are no reserves of measured ore and that the assays of samples taken from indicated ore, are low in lead and zinc. They further are of the opinion that the lead-zinc-copper-tungsten ore association presents serious metallurgical problems which will require extensive milling tests.

In view of the field team recommendation, and after reviewing the data, the United States Geological Survey concurs in recommending a denial of the application. The Lead-Zinc Branch is in complete agreement and recommends that the application for a direct loan be denied.

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

Tom Lyon

RSBuller:11 January 3/52

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

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
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JAN 14 PM 1:43

SAN FRANCISCO, CALIFORNIA

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
102 Old Mint Building
San Francisco 3, California

October 31, 1951

Mr. H. C. Miller
U. S. Bureau of Mines
870 Market Street
San Francisco 3, California

Dear Mr. Miller:

Enclosed are five copies of a report "DMA-1102, Claremont Mining Company, Sagamore Mine, San Bernardino County, California" by W. P. Irwin and C. D. Rinehart and subject docket.

The granting of an $80,000 production loan requested by the applicant is not recommended, as there are no measured ore reserves. Further, the ore is complex, and it is probable that milling losses would be high, using the more common milling procedures. Nevertheless, it is likely that a considerable tonnage of ore can be proved by an exploration program. It is also likely that production of an even larger tonnage of complex ore from other nearby deposits will be stimulated in the event a custom mill is erected at the Sagamore mine.

It is suggested that the Committees on lead, zinc, and tungsten consider the feasibility of an exploration program to the extent of $24,250. If the program is warranted, it should be presented to the applicant for his consideration.

It is also recommended that the U. S. Bureau of Mines consider doing research on the complex metallurgical problem presented by the ores of the district.

Sincerely yours,

Edgar H. Bailey

Enclosure

Edgar H. Bailey

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

October 31, 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-1102, Claremont Mining Company, Claremont, California (Copper, Lead, Zinc, Tungsten)
Direct loan - $80,000

Reference is made to your subject letter dated August 23, requesting an examination of subject property for which application for a direct federal loan of $80,000 has been made for the purpose of purchasing and erecting a mill on the property and equipping the Sagamore Mine for production of proven ore.

Attached are four copies of a report entitled, "DMA-1102, Claremont Mining Company, Sagamore Mine, San Bernardino, California", (Lead, Zinc and Tungsten), by William P. Irwin and Charles D. Rinehart, Geologists, U. S. Geological Survey.

The granting of an $80,000 production loan requested by the applicant is not recommended, as there are no measured ore reserves. Further, the ore is complex, and it is probable that milling losses would be high, using the more common milling procedures. Nevertheless, it is likely that a considerable tonnage of ore can be proved by an exploration program. It is also likely that production of an even larger tonnage of complex ore from other nearby deposits will be stimulated in the event a custom mill is erected at the Sagamore mine.

It is suggested that the Committees on lead, zinc, and tungsten consider the feasibility of an exploration program to the extent of $24,250. If the program is warranted, it should be presented to the applicant for his consideration.

The docket is being returned herewith.

HCMiller:ejs

Files - Chron

Attachments

Copy to: E. H. Bailey, USGS

H. C. MILLER

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

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

UNITED STATES GEOLOGICAL SURVEY
REGION III

REPORT OF INVESTIGATION BY FIELD TEAM

DPI-1102, Claremont Mining Company, Sagamore Mine

San Bernardino County, California

(Lead, Zinc and Tungsten)

William F. Irwin, Geologist
Charles L. Rinehart, Geologist
U. S. Geological Survey

October 31, 1951

Summary

The Sagamore Mine opens a persistent quartz vein that contains lead, zinc, copper, tungsten and silver. The deposit is estimated to contain 9807 tons of indicated ore with an average grade of 1.32% Pb, 0.92% Zn, 0.46% Cu, 0.15% WO_3, and 2.02 oz. of Ag. per ton, and several times that amount of inferred ore. No reserves of measured ore are present. Prospects nearby are estimated to contain inferred reserves of more than a million tons of similar ore. The ore is complex and presents serious metallurgical problems.

Because measureable ore reserve are lacking, the granting of an $80,000 production loan does not seem warranted. Nevertheless, the deposit may contain a substantial tonnage of ore that could be mined profitably if the metallurgical problems are solved. Production from this deposit may stimulate a potentially large production from other deposits nearby. Consideration should be given to Government participation in an exploration program that should be carried on coincidentally with milling tests. The exploration program would cost approximately $42,250. It was not discussed with the applicant, and it is not known to what extent he is financially able to participate.

Introduction

The Sagamore Mine is in Keystone Canyon on the southeastern slope of the New York Mountains, Ivanpah quadrangle, San Bernardino County, California. It is at an altitude of 6000 feet in secs. 32 and 33, T. 14 N., R. 16 E., SBBM, about 5 airline miles S 5° E of Ivanpah Station on the Union Pacific Railroad. Four miles of gravel road connect the mine to the Ivanpah-Goffs road at a point of 11 miles south of Ivanpah.

Mining in the area began about 1870. The first work was primarily for silver ores in narrow, high-grade veins near the main workings of the Sagamore Mine. The main workings of the Sagamore Mine were begun in the 1890's and in 1904 the larger part of the present property was patented. Most of the workings were driven by the Tecopa Consolidated Mining Company about 1921, but little production is reported. The California Sulphur Company leased the mine from 1942 to 1945, and is reported to have shipped about 300 tons of concentrates and hand sorted ore. It is believed that an RFC loan of $30,000 was made during that period.

The mine was secured with a purchase contract by the Claremont Mining Company in February 1951. On April 10, 1951, the company requested the Government for a direct loan of $80,000 to put the mine into production.

At the request of the Defense Minerals Administration, W. P. Irwin and C. D. Rinehart of the Geological Survey spent 4 days examining the property during the period September 8 to 11, 1951, in the company of Messers. H. F. Keller and H. Hollingsworth, Directors of

the Claremont Mining Company. The purpose of the examination was to determine whether the ore reserves would justify the requested production loan. The geology of the main underground workings was mapped at a scale of 1 inch equals 25 feet, on a base map supplied by the company. Twenty-five samples were cut, and were assayed by the Hydrometallurgical and Ore-Testing Branch of the Bureau of Mines at Reno, Nevada. In addition, two nights were spent making brief examinations of the Bronze and Hard Cash Mines nearby. These two mines are believed to have important bearing on the loan requested by the Claremont Mining Company.

Workings

The main workings are on the Alpha No. 1 claim, and consist of two westerly heading drifts, two vertical shafts, and several stopes (see Fig. 1, plan of underground workings and longitudinal projection). All of the workings are in approximately the same vertical plane. The upper drift is caved 330 feet from the portal but is reported by Mr. Keller to be 700 feet long. The lower drift, which is only 45 feet below the upper drift, is reported to be 1100 feet long, but only the outer 680 feet is accessible.

The collar of the main shaft is near the portal of the upper level. The shaft is connected to the lower level by a short crosscut. At the time of examination the shaft below the lower level was filled with water. According to Mr. Keller, a short crosscut at the bottom of the shaft cuts the vein 100 feet below the lowerlevel, and the lower 20 feet of the shaft is filled with muck. The collar of the other shaft is 340 feet west of the portal of the upper level. The shaft is inaccessible but is believed to extend to the lower level.

Only the extent of stopes leading upward from the accessible part of the lower level is accurately known, but it is probable that most of the ground above the upper level has been stoped, and that large stopes also extend above the inaccessible part of the lower level. Mr. Keller states that none of the vein below the lower level has been stoped.

Geology

The workings open a nearly vertical quartz vein that is enclosed in fine-grained micaceous schist. The foliation of the schist strikes east and dips gently to the south. Limestone overlies the schist south of a point about 70 feet higher and 150 feet southwest of the collar of the shaft above the upper level. The bedding in the limestone appears to be nearly concordant with the foliation of the schist, but the contact between the limestone and the schist is occupied by a 2½-foot thick section of calcareous rouge-like material that may be fault gouge.

The quartz vein opened by the main workings is one of several parallel veins covered by the company's claims. It strikes N. 70 , and is vertical. According to reports, it can be traced for a mile to the east of the portal of the main workings. West of the hoist shaft, it presumably is concealed by the overlying limestone. The vein pinches locally, but in places swells to more than 10 feet in thickness. Lead-, zinc-, silver-, and tungsten-bearing minerals occur in the vein in bands that parallel the vein walls and less commonly as irregular masses intergrown with quartz crystals. Ore minerals that are recognizable in hand specimens include galena, chalcopyrite, bornite, sphalerite, pyrite, huebnerite and scheelite. The sulfide minerals are partly oxidized in the upper level, but in the lower level oxidation has been negligible.

A rhyolite porphyry dike crosscuts the vein near the portal of the lower drift. It strikes east and appears to dip very steeply to the north. The vein is not sufficiently well exposed at the dike to determine whether it has been offset by the dike. However, any offset is probably small, as the vein is well exposed across the canyon to the northeast in approximately the position it would occupy without faulting.

Sampling

Twenty-five chip samples averaging about 10 pounds per sample were cut in the main workings. All of the samples were cut across the vein. An attempt was made to space the samples as uniformly as possible in order to determine the average mineral content of the vein material. At the sample localities, and at more closely-spaced intervals between the samples, the thickness of the vein was measured and plotted on the accompanying map. It was difficult to obtain accurate results where the workings are lagged. In general, the lagged workings are in thicker parts of the vein that were stoped by former operators. Consequently, the average width is probably less than that of much of the ore that formerly was mined.

The assay values of the samples are tabulated below:

Sample No.	% Pb	% Zn	% Cu	% Sb_2O_3	Oz. Ag/T	Width
1	0.2	0.1	0.11	<0.02	0.50	5.0
2	1.4	0.2	0.56	<0.02	2.30	8.0
3	1.8	<0.1	0.28	<0.02	2.92	6.0
4	.6	1.2	0.70	<0.02	1.2	0.7
5	1.3	0.1	0.36	0.02	2.10	1.7
6	2.4	0.5	0.45	<0.02	4.12	4.0
7	<0.1	0.2	0.15	0.04	0.92	2.0
8	2.3	1.3	1.06	0.28	2.42	3.5
9	1.9	1.2	0.46	0.04	1.96	2.0
10	1.6	0.3	0.35	0.02	1.26	0.6
11	0.5	0.3	0.18	0.03	0.58	.5
12	0.9	1.4	0.18	<0.02	1.0	2.7

Sample No.	% Pb	% Zn	% Cu	% WO_3	Oz Ag/T	Width (Ft.)
13	1.4	0.6	0.56	0.03	1.60	2.4
14	0.2	0.2	0.15	0.02	0.58	1.2
15	2.0	1.9	0.80	0.02	2.44	1.8
16	7.5	4.0	1.67	0.11	6.48	2.0
17	4.9	3.2	2.04	2.08	4.96	4.0
18	2.0	0.7	0.58	0.79	2.38	3.0
19	2.4	3.2	0.38	0.03	4.80	3.5
20	0.4	0.4	0.48	0.26	1.56	4.9
21	*0.1	0.3	0.18	0.04	0.10	[illegible].7
22	0.5	0.2	0.34	0.03	3.20	1.2
23	0.2	0.1	0.16	0.12	0.26	2.2
24	0.3	0.6	0.28	0.03	1.10	4.0
25	1.1	0.1	0.21	*0.01	1.60	0.9

* Less Than
Note: All samples contain a trace of gold.

Ore Reserves

Indicated ore in two blocks has been calculated (see fig. 1). The upper limit of both blocks is considered to be the upper level, and the lower limit is arbitrarily placed at 50 feet below the lower level. The lower limit appears conservative considering the continuity of the exposed ore shoots.

Block No. 1 is calculated to contain 5579 tons of indicated ore with a grade of 1.42% Pb, 0.80% Zn, 0.51% Cu, 0.24% WO_3, and 1.18 oz. of Ag per ton. The grade was computed from analyses of the samples taken from the two adit levels. In computing the tonnage, the width of the vein was assumed to be 3.41 feet (the weighted average of all measurements in that block on the adit levels), and the weight of the ore to be 11 cubic feet per ton.

Block No. 2 is calculated to contain 4226 tons of indicated ore with a grade of 1.18% Pb, 1.07% Zn, 0.39% Cu, 0.02% WO_3, and 1.82 oz. of Ag. per ton. The grade was computed from analyses of samples taken on the lower level. In computing the tonnage, the vein was assumed to be 4.27 feet thick (the weighted average of all measurements in that block on the lower adit level, taking into consideration an 11 foot thickness midway between sample nos. 12 and 13), and the weight of the ore to be 11 cubic feet per ton.

The total of the two blocks of indicated ore is 9807 tons with a weighted average grade of 1.32% Pb, 0.92% Zn, 0.46% Cu, 0.15% WO_3 and 1.02 oz. of Ag. per ton.

Because the vein is remarkably persistent both along the strike and in depth, several times the amount of indicated ore probably can be inferred. The main shaft below the lower level is reported by Mr. Keller to be mostly in ore that contains an average of

12.0% Pb, 1.0% Cu and 19 oz. of Ag per ton over a width of 3.5 feet at the bottom. The 420 feet of drift beyond the caved point in the lower level is also reported by former miners to have been in ore for the greater part. If these reports are correct a considerable tonnage of ore may be inferred to lie beneath the lower level, extending downward at least to the elevation of the bottom of the main shaft.

The applicant submitted an estimate of 23,600 tons of ore with a grade of 6.20% Pb, 2.90 Zn, 2.06% Cu, 0.465 WO3 and 7.40 oz. of Ag. per ton. Neither his tonnage nor his grade figures agree well with our estimates. The discrepancy in estimated tonnage can be accounted for partly by the discovery subsequent to the submission of Mr. Keller's loan application that all of the ore above the upper level has been stoped by former operators. The discrepancy in estimated tonnage is further reduced if Mr. Keller's blocks nos. 3 and 4 on the Alpha No. 2 claim, which are of too low grade to be included as reserves, are deleted. Mr. Keller acknowledges that these blocks are too low grade to be mined.

The reason for the wide difference in grade of ore is not so easily explained. It may be that the earlier sampling was not across the entire width of the vein, or that the samples were taken only from richer sections of the vein. The validity of our sampling seems to be substantiated by the assays of former shipments of concentrates or handsorted ore (see page 2 of the applicant's report). The shipments total 345.4 tons with an average weighted grade of 12.09% Pb, 7.01% Zn, 3.21% Cu, and 10.9 oz. of Ag. per ton.

Judging from the appearance of the ore and records of shipments the grade can be increased several times by hand sorting. In many places the ore occurs in bands separated by a foot or two of barren milky quartz that can be readily distinguished and discarded. Records show that shipments of sorted ore have been made, containing as much as 20 percent lead. It is probable, however, that a grade between 5 and 10 percent lead, with a proportional concentration of the other metals is a more reasonable average to expect by sorting.

The ore contains about $42 in total metal per ton, of which tungsten constitutes about $9.75. Because the ore is complex, and making a clean separation between the tungsten minerals and base metals sulfides may present serious difficulties, it is doubtful that a large proportion of the tungsten values could be recovered, and without good tungsten recovery the ore is not commercial.

The same vein and other veins on the property have been explored in other places by an aggregate of approximately 2000 feet of workings. Not all of these workings were examined, but they doubtless open deposits similar to that on the Alpha No. 1 claim. These deposits were not considered in calculating the ore reserves, but nevertheless may constitute a potential source of ore if a mill is erected.

Several other properties within a few miles of the Sagamore were reported by Mr. Keller to be potential contributors of ore to a custom mill to be erected on his property with funds included in the requested loan. The two most important of these properties that were examined briefly were the Bronze mine and Hard Cash mines.

The Bronze mine, operated by the Paramount Mining Co., and the Hard Cash mine, operated by the Giant Ledge-Copper Mining Co., applied for Government loans. The docket on the Bronze mine is MA 1339x, but that of the Hard Cash Mine is not known. Both applications are believed to have been rejected owing to the complex nature of the ore.

The ore is similar in both deposits but is different from that of the Sagamore Mine. It consists mainly of fluorite, pyrite, chalcopyrite, sphalerite, scheelite, and hubnerite. The grade of the ore is not known, but at least a million tons of ore of unknown grade are inferred.

Conclusions

The $[illegible],000 production loan requested by the applicant is not warranted, because the deposit contains no reserves of measured ore, and because the expectable profits from the inferred ore appear insufficient to repay the loan. On the other hand, the deposit may have sufficient merit to warrant an exploration loan. Exploration should consist of rehabilitating the main shaft, sinking an additional 125 feet, and drifting westward along the vein on a level 200 feet below the present lower level. The bottom 25 feet of the shaft would serve as a sump. If the proposed drift were driven 950 feet, the face would be almost directly beneath the reported face of the present lower tunnel.

The proposed exploration would necessitate the installation of a headframe and hoist at a cost (estimated by the applicant) of about $10,000. Rehabilitation of the shaft from the collar to the present lower level would cost about $1,000. The timbering in the waterfall lost part of the shaft below the lower level is reported to be in good condition. Assuming a cost of $60 per foot for sinking 125 feet, and $25 per foot for drifting 950 feet, the total cost of the proposed exploration would be approximately $22,250.

Summary of cost of the proposed exploration

Erection of headframe	$10,000
Rehabilitation of shaft	1,000
Sinking shaft 125 feet	7,500
Drifting 950 ft.	23,750
	$ 42,250

The proposed program was not discussed with the applicant, as such a discussion at the time of examination seemed premature. The amount of drifting would depend in part on the amount the applicant is financially able to spend on a dollar-matching basis. It would

be advisable to drift a considerable distance, preferably the suggested 950 feet, to keep down the cost of exploration per ton of ore developed. About 50,000 tons of indicated ore will be developed if the persistence of the ore shoots on the present lower level is proved at depth by drifting 950 feet, at a cost of $0.80 per ton.

Metallurgical work should be carried on simultaneously with any exploration program to insure a profitable operation. The ore is complex, and possibly cannot be worked profitably under present conditions and milling procedures. Even if ore of high enough grade to be worked profitably were found, it is likely that a considerable part of the metal content of the ore would be lost. In view of the large inferred tonnage of complex base metal and tungsten ore in the New York area, exhaustive mill tests seem warranted, and it is recommended that such tests be carried on by the Bureau of Mines.

The feasibility of the exploration program outlined by the writers should be weighed by the Committee on lead, zinc and tungsten from both a short and long range view.

C O P Y

102 Old Mint Building
San Francisco 3, California

Septemner 14, 1951

Mr. J. B. Zadra
Hydro-metallurgical and Ore Testing Branch
U. S. Bureau of Mines
Box D. University Station
Reno, Nevada

Dear Mr. Zadra:

Under separate cover I am sending ore samples from the following mines: Queen of Sheba (DMA 1728X), Inyo County, California; Evelyn's Delight (DMA 1749X), Inyo County, California; and the Sagamore Mine (DMA 1102), San Bernardino County, California.

Samples S X1 - S #25, and D #1 - D #3 are from the Sagamore mine and should be assayed for Pb, Ag, Cu, Zn, Au, and WO_3. Samples M #1, M #2A, M #2B, and M #3 are from the Evelyn's Delight prospect and should be assayed for Mn. Sample Q #1 is from the Queen of Sheba Mine and should be assayed for Pb, Ag, Cu, Zn, and Au.

Thank you for your assistance.

Sincerely yours,

C. D. Rinehart

Miller
Rinehart
Package

Reading
CDR/hvs

DMA-1728, 1749, 1102

Refer to	Notice	Date
	WWW	9/5
Answered		

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

102 Old Mint Building
San Francisco 3, California

DEPARTMENT OF INTER
BUREAU OF MINES
REGION III
RECEIVED
SEP - 5 1951
SAN FRANCISCO, CALIFORNIA

September 4, 1951

Registered

Subject: DMA 1102, Claremont Mining Company, Claremont, California

Mr. William P. Irwin
U. S. Geological Survey
c/o General Delivery
Goodsprings, Nevada

Dear Porter:

As indicated by my phone call of September 4, I am sending to you the docket for DMA-1102 to be used in making the necessary examination.

Please note that the request is for a $80,000 direct loan to purchase and erect a mill at the Sagamore mine, 14 miles southwest of Ivanpah, California. The applicant also proposes to treat custom ore, so it will be necessary to obtain information on the other mines of the district. Because of Foster Hewett's long time familiarity with the area he should be consulted on this, rather than attempt the appraisal yourself. Unless you see reasons for doing otherwise I suggest you take care of that by mail or phone on your return to the office.

Your chief job appears from a review of the docket to be checking on the reserves. The cross sections show large blocks of ore extending below the lowest adit levels, and I do not believe these qualify as known reserves when one is calculating whether or not the ore reserves justify the loan. In the case of a very persistent ore body or vein a strong case could be made for their inclusion, but if the mineralization is erratic the ore in the blocks would be too uncertain. This all adds up to cautioning you to carefully observe the persistence of the ore and cut an adequate number of samples. If the job requires extensive sampling, I suggest you call on the Bureau of Mines to take over this part of the examination.

The applicant also proposes drilling a well. If you cannot appraise the chances of his getting water we can call on a geologist with Ground Water for an opinion.

If after a brief inspection you feel the job is too big to clear up in a few days, I suggest you phone me and we will discuss it further.

Sincerely yours,

Enclosure

Edgar H. Bailey

OFFICE OF THE ADMINISTRATOR

350

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

AUG 23 1951

Re: DMA-1102
Claremont Mining Company
Claremont, California
Copper, Lead, Zinc, Tungsten
Direct loan - $80,000

Mr. Harold C. Miller
Executive Officer, Region III
1012 Flood Building
870 Market Street
San Francisco, California

Dear Mr. Miller:

An application (DMA-1102) has been received from the Claremont Mining Company, Claremont, California, requesting a direct Federal loan of $80,000 for the purpose of purchasing and erecting a mill on the property and equipping the Sagamore mine for production of proven ore.

Although the company holds eight patented claims and five unpatented claims, only two, the Alpha No. 1 and Alpha No. 2, are considered in the data submitted on proven reserves. In the mine workings on these two claims the applicant claims to have 23,600 tons of ore averaging 7.4 ounces of silver per ton, 2.06% copper, 6.20% lead, 2.90% zinc and 0.46% tungstic oxide. No qualification as to measured, indicated or inferred was given to this ore. As a result of hand sorting operations in the past, there is a stock pile of 15,000 tons of milling ore on the dump averaging 2.40 ounces of silver per ton, 1.00% copper, 2.80% lead, 1.30% zinc, with no assays on tungsten. In addition to these reserves it appears that there are other known ore shoots of milling grade ore on the property.

The applicant feels that the erection of a mill at or near the mine site is necessary for economic mining because of the long haulage involved in shipping to the nearest custom mill. It is also the intention of the applicant to do custom milling for several other mines in the area that have had difficulties in handling milling grade ore.

The Lead-Zinc Branch recommends that an examination of the property be made, to check the technical feasibility of the several proposals set forth in the application, to ascertain whether or not a custom mill in this district would be beneficial, and to determine whether or not the ore reserves justify consideration of the applicant's request for a direct loan. It is recommended that the Field Team's report, if favorable, be based upon the "Outline for Report and Recommendation of Commodity Committee on Application for Government Assistance."

The geological report on this area by D. F. Hewett, is at present in the hands of the author for consideration of certain points before final publication.

Very truly yours,

Tom Lyon

Tom Lyon, Chairman
Coordinating Committee

Copy to Buckley 8/29

APPROVED:

For Bureau of Mines

T. P. Thayer

For Geological Survey

Refer to	Noted	Date
	[illegible]	8/28
Answered		

350

DEPARTMENT OF INTR.
BUREAU OF MINES
REGION IV
RECEIVED
AUG 27 1951
SAN FRANCISCO, CALIFORNIA

AUG 23 1951

Re: DMA-1102

Mr. Howard F. Keller, President
Claremont Mining Company
336 West Second Street
Claremont, California

Dear Mr. Keller:

Your application (DMA-1102) for a loan to erect a mill and equip the Sagamore mine near Ivanpah, California, has been referred to Mr. H. C. Miller, Executive Officer of the Field Term, Region III, 1012 Flood Building, 870 Market Street, San Francisco, California, for further information and advice.

Very truly yours,

SIGNED

Tom Lyon, Director
Supply Division

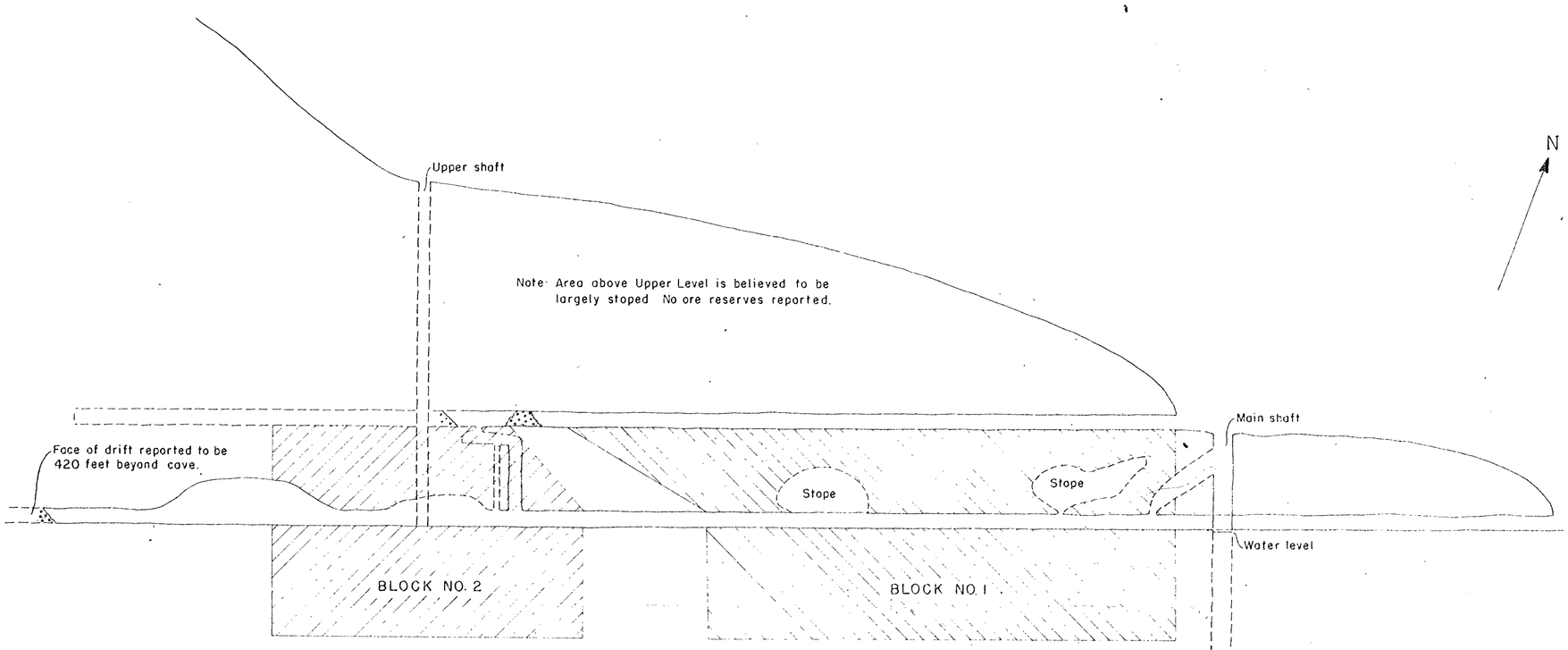
cc: Files
H. C. Miller (2)
Chief, Lead Zinc Br.
E. T. McKnight
R. H. Mote
Reports and Records
Dir. Reading, Rm. 4212 GSA
Br. Reading, Rm. 4212 GSA

Copy to Bailey 8/28

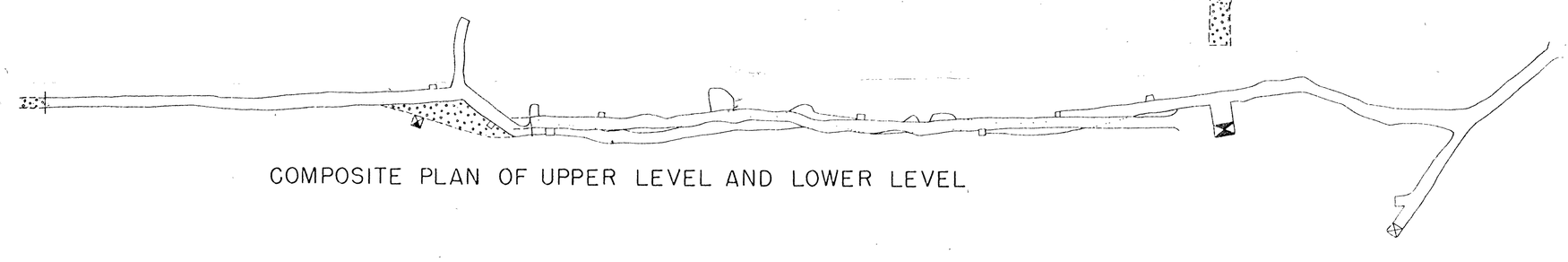
ABCampbell:jr
G: 8/16/51

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

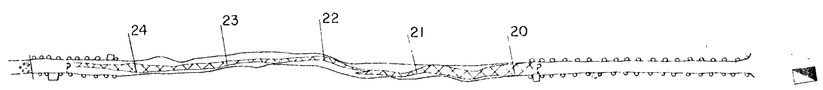
FIGURE I
DMA-1102
(LEAD, ZINC, TUNGSTEN)



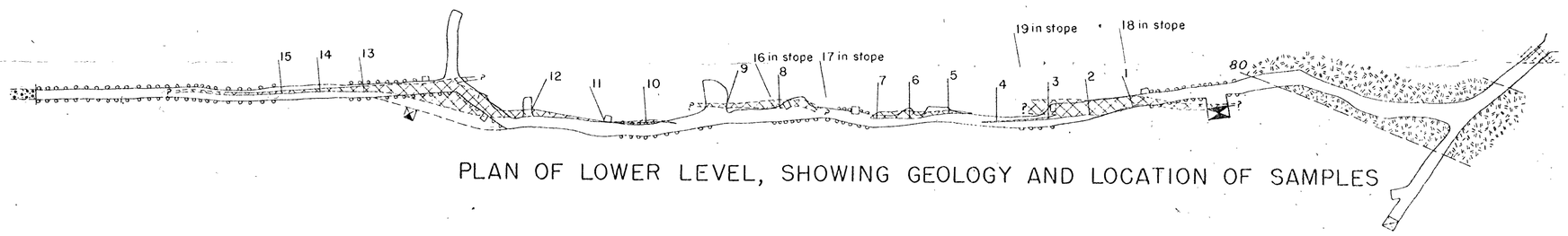
LONGITUDINAL PROJECTION OF UNDERGROUND WORKINGS, SHOWING BLOCKS OF ORE RESERVE



COMPOSITE PLAN OF UPPER LEVEL AND LOWER LEVEL



PLAN OF UPPER LEVEL, SHOWING GEOLOGY AND LOCATION OF SAMPLES



PLAN OF LOWER LEVEL, SHOWING GEOLOGY AND LOCATION OF SAMPLES

EXPLANATION

Schist

Rhyolite porphyry

Ore-bearing quartz vein

80
Contact, showing dip
(Dashed where approximately located)

Shaft at surface

Shaft going above and below levels

Bottom of shaft

Foote of raise or winze

Outline of underground workings
(Dashed where approximately located)

Ore chute

Lagging or cribbing along drift

Filled workings

ASSAYS

Sample No.	Width (Ft)	%Pb	%Cu	%Zn	%WO_3	Oz Ag/T
1	5.0	0.2	0.11	0.1	*0.02	0.50
2	8.0	1.4	0.56	0.2	*0.02	2.38
3	6.0	1.8	0.28	*0.1	*0.02	2.92
4	0.7	2.6	0.70	1.2	*0.02	1.22
5	1.7	1.3	0.36	0.1	*0.02	2.48
6	4.0	2.4	0.45	0.5	*0.02	4.12
7	2.0	*0.1	0.15	0.2	0.04	0.92
8	3.5	2.3	1.06	1.3	0.18	2.42
9	2.0	1.9	0.46	1.2	0.04	1.96
10	0.6	1.6	0.35	0.3	0.03	1.26
11	2.5	0.2	0.18	0.3	0.03	0.58
12	2.7	0.9	0.18	1.4	*0.02	1.98
13	2.4	1.4	0.56	0.6	0.03	1.60
14	1.2	0.2	0.15	0.2	0.02	0.58
15	1.8	2.0	0.80	1.9	0.02	2.44
16	2.0	7.5	1.67	4.0	0.11	6.48
17	4.0	4.9	2.04	3.2	2.08	4.96
18	3.0	2.0	0.58	0.7	0.79	2.38
19	3.5	2.4	0.38	3.2	0.03	4.80
20	4.9	0.4	0.48	0.4	0.26	1.56
21	2.7	*0.1	0.18	0.3	0.04	0.10
22	1.2	0.5	0.34	0.2	0.03	3.20
23	2.2	0.2	0.16	0.1	0.12	0.26
24	4.0	0.3	0.28	0.6	0.03	1.10
25	0.9	1.1	0.21	0.1	*0.01	1.60

* Less than
Note All samples contain trace of gold

ORE RESERVES

Block No 1, 5579 tons of indicated ore with grade of:

1.42% Pb
0.30% Zn
0.51% Cu
0.24% WO_3
2.18 oz. of Ag/ton

Block No. 2, 4228 tons of indicated ore with grade of:

1.18% Pb
1.07% Zn
0.39% Cu
0.2% WO_3
1.81% oz. of Ag/ton

MAP OF SAGAMORE MINE, ALPHA NO. 1 CLAIM

NEW YORK MOUNTAINS, SAN BERNARDINO COUNTY, CALIFORNIA

0 40 80 120 Feet

Geology by W.P. Irwin and C.D. Rinehart.
Base map modified after H. F. Keller.
September 1951