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

224 New Customhouse
Denver 2, Colorado

February 25, 1952

Memorandum

To: Chairman, Operating Committee, DMPA, Washington, D. C.

From: Field Team, Region IV

Subject: Final Report, DMA 2069, Eureka Consolidated Mining Co., Loma Prieta and Copper Hill Mines, Copper Basin District, Yavapai County, Arizona

Enclosed are the original and two copies of the final report on the application of the Eureka Consolidated Mining Co.

The above application is for a production loan of $1,131,000, of which $200,000 is to provide for working capital. The applicant proposes to strip the overburden from the Loma Prieta and Copper Hill Mines, develop the mines by the open-pit method, and build a 1,000-ton daily capacity flotation mill for the recovery of copper and molybdenite.

The mines do not have any measured ore. According to a U.S.G.S. report written in 1943, the Loma Prieta mine has 1,750,000 tons of indicated ore with a grade of 0.85-0.90 percent copper and 0.10-0.15 percent MoS_2. Mining this ore by the open-pit method is estimated to cost approximately 38 cents per pound of copper produced. An open-pit at the Loma Prieta mine would by necessity extend into the adjoining Phelps Dodge property and dams to divert present streams would be located on Phelps Dodge ground. It is estimated that the capital requirements to perform the proposed work would approximate $2,200,000 and not $1,131,000, as stated by the applicant.

It is recommended that the Eureka Consolidated Mining Company's application for a production loan be denied. It is recommended that the applicant be requested to submit an application for exploration assistance consisting of drilling six or more churn drill holes in the 200 by 300-foot ore area of the Loma Prieta mine to determine the possibility of blocking out an ore body. The applicant should be requested to show that an agreement can be reached for trespass on Phelps Dodge property if an ore body is found.

J. N. East, Jr.

A. H. Koschmann

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

February 25, 1952

Memorandum

To: Field Team, Region IV

From: Acting Chief, Mining Division, Region IV

Subject: Final Report, DMA 2069, Eureka Consolidated Mining Co., Loma Prieta and Copper Hill Mines, Copper Basin District, Yavapai County, Arizona

Enclosed are the original and seven copies of the final report on the application of the Eureka Consolidated Mining Company, by M. J. Elsing and W. T. Griswold of the Bureau of Mines.

We concur with the findings of the examining engineers and recommend that the above application for a production loan of $1,131,000.00 be denied.

We suggest that the applicant be requested to apply for an exploration loan to block out a possible ore body.

W. H. King

W. H. King

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Arizona-New Mexico Branch
SOUTHWEST EXPERIMENT STATION
Box 4097
UNIVERSITY STATION

MINING DIVISION
REGION IV

Mining Division
Date Rec'd.
FEB 18 1952
BUREAU OF MINES
Denver, Colorado

TUCSON, ARIZONA

February 14, 1952

Memorandum

To : W. H. King, Acting Chief, Mining Div., Region IV

From : Chief, Arizona-New Mexico Br., Mining Div., Region IV

Subject : Final report on DMA Docket 2069, Eureka Consolidated Mining Co's. Loma Prieta and Copper Hill Mines, Copper Basin District, Yavapai County, Ariz.

Enclosed are original and 7 copies of the above report by Morris J. Elsing and William T. Griswold of the Bureau of Mines. Elsing and Griswold consulted with C. A. Anderson of the Geological Survey and Anderson agrees with their conclusions and recommendations. However, as Anderson is a very good friend of the owner of these properties, he does not want his name on the report. Therefore, no separate report will be submitted by the Geological Survey.

This report has my approval.

Brochure is enclosed.

Walter R. Storms

Walter R. Storms

CC W. H. King (7)
C. A. Anderson
DMA-2069
DF

FOR VICTORY
BUY
UNITED STATES SAVINGS BONDS AND STAMPS

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

DEFENSE MINERALS PROCUREMENT AGENCY

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMA-2069, Eureka Consolidated Mining Co's.

Loma Prieta and Copper Hill Mines

Copper Basin District, Yavapai County, Arizona

M. J. Elsing, Consulting Mining Engineer
U. S. Bureau of Mines

W. T. Griswold, Mining Engineer
U. S. Bureau of Mines

February 1952

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

M. J. Elsing[1] and W. T. Griswold[2]

On Jan. 8, 1952 the Operating Committee of the Defense Materials Procurement Agency requested the Field Team, Region IV, to have an examination and report made on the feasibility of the proposal of the Central Eureka Mining Co. to bring into production the Loma Prieta and Copper Hill mines situated in the Copper Basin mining district, Yavapai County, Ariz. Accordingly from Jan. 30 to Feb. 1, 1952, M. J. Elsing and W. T. Griswold visited the property, accompanied by the owner.

The applicant submitted a request for a loan of $1,131,000, of which $200,000 was to provide for working capital. It proposed to build a 1,000-ton flotation mill for the recovery of copper and molybdenite. The applicant also made 3 different proposals for open-pit mining:

(1) Mine from the Loma Prieta, 1,000 tons of ore per day, averaging 0.92 percent copper and 2.6 pounds of MoS_2 per ton;

(2) Mine from the Copper Hill, 1,000 tons of ore per day, averaging 0.475 percent copper and 4.5 pounds MoS_2 per ton; or

(3) Mine 500 tons of ore per day from each of these mines.

1/ M. J. Elsing, Consulting Mining Engineer, U. S. Bureau of Mines, Ariz.- N. Mex. Branch.
2/ W. T. Griswold, Mining Engineer, U. S. Bureau of Mines, Ariz.-N. Mex. Branch.

The application states that if the loan is approved a request will be made for a Certificate of Necessity for tax amortization and the proposed manager of the project states that "above market prices for copper and molybdenum should be requested".

The examiners have made an analysis of the capital requirements and the cost of producing copper in mining 1,000,000 tons of ore from the Loma Prieta mine by open-pit methods.

In the first place, they believe that the applicant has underestimated his capital requirements and that his needs will be approximately $2,200,000 instead of $1,131,000.

In the second place, they believe that mining 1,000,000 tons of ore from the Loma Prieta mine by open-pit methods will result in a cost in the neighborhood of 38 cents per pound of copper produced, after amortization but before depletion and Federal income taxes.

In the third place, before such a large capital investment is made the ore should be more certainly blocked out. The Geological Survey and the Reconstruction Finance Corporation have sampled the 150 and the 400 levels of the Loma Prieta. On the 400, they showed an area 200 by 300 feet with a grade of 0.875 percent copper and 0.125 percent MoS_2. On the 150 level, the area development is only one fourth as large. The Geological Survey classifies this ore (1,750,000 tons above the 400 level) as indicated. It is strongly indicated but it certainly is not measured ore. Before it could be recommended that

$2,000,000 or even a lesser amount be spent, the ore should be more certainly blocked out. The simplest and the least costly way to change 1,750,000 tons of ore from the category of indicated ore to measured ore would be to drill perhaps 6 churn drill holes in the 200- by 300-foot ore area of the Loma Prieta mine. These holes would show the grade of the ore, the thickness of the overburden, and the amount of leached and oxidized ore above the sulphide zone. If a lesser amount of ore were mined from a shallower pit, the waste stripping would be less. However, there is no method of combination of methods by which copper could be produced except at a cost of 10 to 12 cents per pound above the present market price of 24½ cents. Since the applicant's engineer requested an over the market price for both copper and molybdenum he must be of the opinion that costs will be high.

It is recommended that the applicant's request for a production loan be denied for the following reasons:

(1) The ore in the Loma Prieta and Copper Hill mines is indicated ore and not measured ore;

(2) The cost pf producing copper from a pit as suggested by the applicant will be approximately 13 cents per pound over the present market price before depletion and Federal taxes;

(3) The cost of producing copper from a shallower pit or by underground methods will be from 10 to 12 cents above the present market price before depletion and Federal taxes;

(4) An open pit at the Loma Prieta, the more favorable of the two mines, would extend into Phelps Dodge property and some waste-fill dams to divert the present streams would have to be constructed on Phelps Dodge grounds. It is very unlikely that the company would agree to either of these things and the chances are it could and would prevent the operation of this project.

From a study of various reports on mines of the Copper Basin district, from an examination of some of the mines in the area and from on-the-spot information obtained, the examiners believe that the Copper Basin district offers great possibilities for the future production of copper and molybdenum.

Ore occurs in breccia pipes. The Loma Prieta and Copper Hill are small pipes on the fringe of an area that contains several large pipes. The Commercial pipe is 1,200 by 1,800 feet, and has produced some 300,000 tons of ore ranging between 2 and 3 percent copper. This ore came from higher grade sections of the main pipe. The average grade and the depth of the ore in the main pipe is unknown. The Smelter Hill pipe is 700 by 700 feet and the Commercial No. 3 pipe is of similar size. The Victory pipe is 900 by 1,800 feet. If these pipes have a depth of 500 feet they represent a possible 175,000,000 tons of ore. These pipes could be mined by open-pit methods with very little stripping of overburden. The grade is unknown but until proven otherwise, the visual evidence indicates the larger pipes might have a grade nearly as high as that at the Loma Prieta and Copper Hill. With greater size and less overburden the larger pipes would be less submarginal by a

considerable amount and therefore, they are a great potential source of copper which might be only slightly submarginal. The Phelps Dodge has made extensive geological surveys of the area and they have done some not too accurate sampling. In view of the fact that they have not done additional exploration it is reasonable to assume that sampling results must have indicated submarginal ore.

It is most likely that the grade of the ore will be approximately 8 to 10 pounds of copper with 1 pound of MoS_2 per ton or perhaps a little higher.

Churn drilling would be the best method of preliminary exploration in order to determine the grade of the ore most accurately.

The mine examiners believe that some day in the not too distant future the Copper Basin district will be an important producer of copper and molybdenite.

Any estimate of the possible copper ore reserves of the United States should include the Copper Basin district with the statement that the tonnage and grade are unknown but that the tonnage might easily be 200,000,000 tons with an average of 0.4 percent copper or better and 1 pound or better of MoS_2 per ton.

DMA-2069, EUREKA CONSOLIDATED MINING CO'S. LOMA PRIETA AND COPPER HILL MINES COPPER BASIN DISTRICT, YAVAPAI COUNTY, ARIZONA

Production

Engineering Report

By M. J. Elsing, Consulting Mining Engineer
U. S. Bureau of Mines

W. T. Griswold, Mining Engineer
U. S. Bureau of Mines

February 1952

BMA-2060, EUREKA CONSOLIDATED MINING CO'S.
LOMA PRIETA AND COPPER HILL MINES
COPPER BASIN DISTRICT, YAVAPAI COUNTY, ARIZONA

Production

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INTRODUCTION

On Jan. 8, 1952, the Operating Committee of the Defense Materials Procurement Agency requested the Field Team, Region IV, to have an examination and report made on the feasibility of the proposal of the Central Eureka Mining Co. to bring into production the Loma Prieta and Copper Hill mines, situated in the Copper Basin mining district, Yavapai County, Ariz.

The applicant submitted a request for a loan of $1,131,000, of which $200,000 was to provide for working capital. It proposed to build a 1,000-ton flotation mill for the recovery of copper and molybdenite. The applicant proposed to mine by open-pit methods (1) 1,000 tons per day from the Loma Prieta mine, or (2) 1,000 tons per day from the Copper Hill mine, or (3) 500 tons per day from each of these mines. The application stated that request would be made for a "Certificate of Necessity for tax amortization as soon as word is received from Defense Minerals Administration with respect to loan application".

The applicant's engineer, who will manage the property if the loan is granted, stated in a report on the properties that "above-market prices for copper and molybdenum should be requested".

The project is known as DMA Docket 2069.

ACKNOWLEDGMENTS

Acknowledgments are due Fred Gibbs, mining engineer and operator in the Prescott district. He is the owner of the Loma Prieta and Copper Hill mines and was present during the sampling and diamond drilling done

by the Reconstruction Finance Corporation and the Geological Survey during World War II. Gibbs spent a day at the property with the examiners and contributed valuable information regarding these mines, as well as other mines in the district.

The report of C. A. Andersen of the Geological Survey on the Loma Prieta mine was of great assistance. The report of D. H. Kupfer of the Geological Survey on the Copper Hill mine also was helpful. The ore reserves reported in these 2 reports were made the basis for all calculations by the examining team as to the possible operation of these properties.

LOCATION, TOPOGRAPHY AND PHYSICAL FEATURES

The Loma Prieta mine is situated in the Copper Basin mining district, Yavapai County, Ariz., in Section 21, T. 13 N., R. 3 W. The town of Skull Valley on the Santa Fe railroad is 7 miles to the west and Prescott is 11 miles to the northeast. The road to Skull Valley is a fair gravel road with down grades, whereas the road to Prescott has some rather steep grades (see figure 1).

The average altitude of the Copper Basin district is slightly above 5,000 feet. Low hills rise above a gentle rolling topography. The country is covered with scrub oak, manzanita and brush. There are a few larger trees of which yellow pine is the most common.

The Copper Hill mine is about a mile to the northwest of the Loma Prieta mine. The Commercial mine of the Phelps Dodge Corp. joins the Loma Prieta to the northwest.

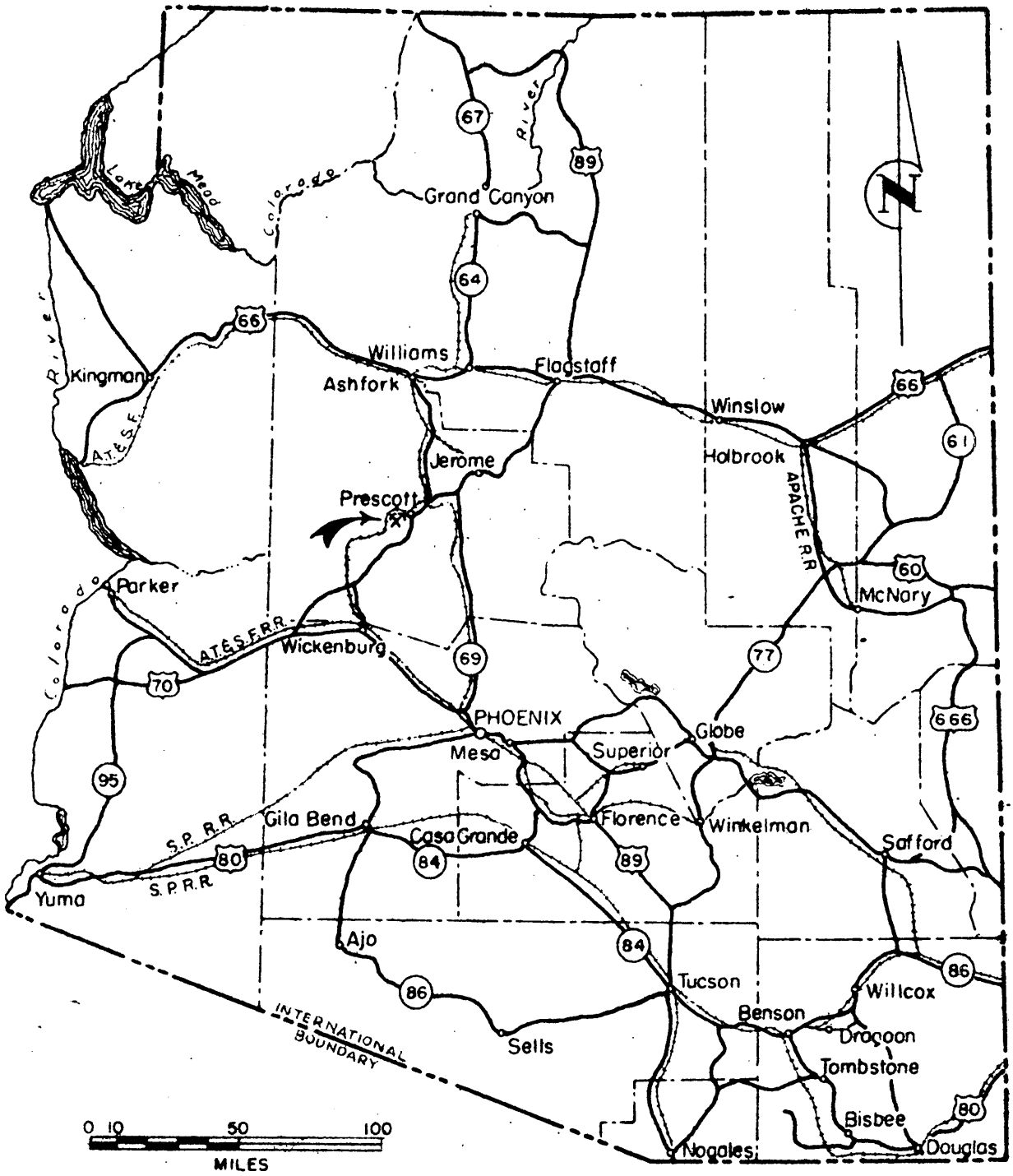


FIG. I LOCATION MAP, LOMA PRIETA AND COPPER HILL MINES, YAVAPAI COUNTY, ARIZONA, DMA 2069

HISTORY AND PRODUCTION

Practically the only production which has been made from the Copper Basin district is that from the Commercial mine of the Phelps Dodge Corp. The history of the Commercial mine, formerly known as the Copper Basin mine, dates back prior to 1900. Phelps Dodge acquired the property shortly after 1900 and did considerable development. Low-grade siliceous mixed oxide-sulphide copper ore was developed, some of which was shipped in the 1920's. During World War II the company gave a lease on the property. During the period of this lease approximately 300,000 tons of siliceous fluxing ore was shipped to the Clarkdale smelter, the grade of which varied from 2 to 3 percent copper.

All of the development at the Loma Prieta mine was done between 1916 and 1918 by the Loma Prieta Mines Co. Some 2 or 3 railroad cars of copper sulphide ore, sorted from the material broken in the various headings, were shipped during this period. The mine was shut down in 1918 and not re-opened until 1943 when a loan was obtained from the Reconstruction Finance Corporation. The mine was unwatered and sampled by engineers of the Reconstruction Finance Corporation, assisted by representatives of the Geological Survey. The ore was found to be sub-marginal and the mine was shut down and allowed to fill with water.

The Copper Hill mine first was located in 1890. Most of the work at the property has been done between that date and 1907, when it was shut down. From 1916 to 1919 the mine was operated under a lease for the production of molybdenum. In 1936 the mine was unwatered and sampled

by the Arizona Molybdenum Corp. Two diamond drill holes were drilled by the Arizona Molybdenum Corp. and in 1937 three holes were drilled by the Ohio Ferro Alloys Corp. Gibbs and Buyn leased the property in 1942 and later obtained a class "C" loan from the Reconstruction Finance Corporation to unwater and sample the 130-foot level. A second loan was obtained for diamond drilling and for unwatering the shaft to the 300-foot level.

There are no records of the small tonnage of copper ore shipped during early day operations. It is reported that in 1916-1918, 1,800 tons of molybdenum ore was mined, 300 tons of which averaged 5 percent MoS_2. It is not known how much of the 1,800 tons produced was actually shipped. It also is not known from what sections of the mine this ore came but presumably a considerable part came from the upper levels where the higher grade ore is known to occur.

The Commercial mine, which is owned by the Phelps Dodge Corp., is located between the Loma Prieta and the Copper Hill mines. Its production is unknown but it is reported by reliable sources to be approximately 300,000 tons with a grade between 2 and 3 percent copper. The mine was operated continuously from 1942 until the United Verde smelter was shut down late in 1950. The ore is highly siliceous and was desirable as a smelter flux. More than half of the total production was made since 1942. A substantial part of the late production was made under the benefit of the Premium Price Plan. The Molybdenum content of this ore is unknown.

OWNERSHIP AND EXTENT

The Loma Prieta mine comprises 6 patented mining claims, Mary Bell, Anna Bell, Albe Marle, Rob Roy, Allegheny, and Copper Glance (see figure 2). The first 5 of these are recorded in the County Records of Yavapai County, in Book of Deeds No. 127, pages 493-503, under the Mineral Survey No. 3425. The Copper Glance is recorded in Book of Deeds No. 102, pages 216-219, under the Mineral Survey No. 2990. These claims are owned by Fred Gibbs and his wife, and Nick Duyn and his wife.

The Copper Hill mine comprises 4 unpatented mining claims, the records of which are shown in the office of the County Recorder of Yavapai County as follows:

Name of Claim	Book of Mines	Page
Red Hill	72	125
Copper Hill	69	594
Copper Hill Ext. No. 1	72	126
Concord	78	415

Gibbs and Duyn have given the Central Eureka Mining Co. of Sutter Creek, Calif. a 10-year lease and option to purchase the claims which comprise the Loma Prieta and Copper Hill mines.

DESCRIPTION OF THE DEPOSITS

The Loma Prieta and the Copper Hill ore deposits are mineralized breccia pipes. The prevailing rock in the pipes is brecciated quartz diorite. The cementing material is quartz with pyrite, chalcopyrite and molybdenite. The ore area in the Loma Prieta is approximately 200 by 300 feet. The ore in the Copper Hill pipe occurs in 2 shoots

separated by a band of waste approximately 70 feet wide. The area of the mineralized section, including the waste, is 240 by 250 feet. The depth from the surface to the top of the ore body at the Loma Prieta is approximately 50 feet. This surface material consists of surface gravels and leached oxidized breccia. The height of the ore column to the 400 level is 350 feet. The depth of the ore below the 400 level is unknown.

The Copper Hill ore body has a covering of some 40 feet, consisting of surface gravels and leached oxidized breccia. The height of the ore column is approximately 200 feet. Ore is estimated to extend 80 feet below the 130 level. Ore of a commercial grade was not found on the 330 level where brecciation is less intense.

MINEABLE ORE RESERVES

In July 1943, Anderson estimated that the indicated ore reserves in the Loma Prieta mine above the 400 level amounted to 1,750,000 tons with a grade of 0.85-0.90 percent copper and 0.10-0.15 percent MoS_2.

The horizontal cross-sectional area of the ore body comprises approximately 60,000 square feet. The shaft shows 50 feet of waste, followed by 350 feet of ore to the 400 level.

On the basis of Anderson's estimate, Loma Prieta ore contains an average of 17.5 pounds of copper and 2.5 pounds of MoS_2 per ton. These values are used in all subsequent calculations.

Anderson advised that the Copper Hill breccia contains 150,000 tons of indicated ore and 350,000 tons of inferred ore with a grade of 0.475 percent copper and 0.225 percent MoS_2.

Kupfer's report shows that this ore occurs in two parallel blocks with a band of waste 50 to 70 feet wide between them. These two blocks, including the waste between them, occur in an area approximately 240 by 250 feet. The waste stripping above the ore is approximately 40 feet thick. The thickness of the block is shown by Kupfer to be 200 feet.

PRESENT STATUS

Exploration and Development

The Loma Prieta mine has been developed by a shaft 414 feet deep, and 1,196 feet of drifts and crosscuts. There is 882 feet of drifting on the 400-foot level, 264 feet on the 150-foot level, 10 feet on the 75-foot level and 40 feet on the 46-foot level.

The mineralized area on the 400 level covers an area approximately 200 by 300 feet, or 60,000 square feet. Workings extend beyond this area, but assay values are less than 0.45 percent copper, which is the cut-off point in calculating ore reserves. The 150 level has developed an area 100 by 160 feet which is entirely within the brecciated ore pipe as indicated by the 400 level. There is every reason to believe the pipe will be of the same size and grade as indicated by the 400 level. There is only 10 feet of work on the 75 level. The 46 level shows "some copper carbonate and oxide as well as sulfide".

The Loma Prieta shaft passed through 25 feet of gravels before entering the breccia pipe. It is reported that the first mineralization in the shaft starts at 64 feet from the collar. This does not check

with results obtained on the 46 level. Anderson gives the height of the ore column as 350 feet.

The Loma Prieta mine is under water and inaccessible, but consideration of the project is made easy because of the splendid records of sampling and assaying done by the engineers of the Reconstruction Finance Corporation and by representatives of the Geological Survey.

There is no mining or milling equipment, or any other facility at the Loma Prieta.

The Copper Hill mine has been developed by a shaft 300 feet deep with levels at 130 feet and at 300 feet. A map dated February 1943 shows that the 130 level comprises 710 feet. The 300 level was shown to be under water. The amount of work is uncertain but the map indicates some 230 feet of work. There is a 26-foot tunnel level which shows 370 feet of work. There is an old shaft 60 feet deep with levels at 44 and 56 feet. The 44 level includes 130 feet of work and the 56 level has approximately 100 feet of work. The total amount of drifting is 1,510 feet. Shafts amount to approximately 356 feet, and winzes and raises comprise some 275 feet of work.

PROJECT PROPOSALS WITH COSTS

The applicant has made 3 proposals for mining by open-pit methods:

(1) Mine 1,000 tons per day from the Loma Prieta mine;

(2) Mine 1,000 tons per day from the Copper Hill mine; or

(3) Mine 500 tons per day from each of these mines.

He proposes to erect a flotation mill of 1,000-ton capacity for the recovery of copper and molybdenite. The capital requirements to permit such an operation he believes to be as follows:

Construction and Development Capital

1	Stripping and grading	$50,000
2	Crushing Plant - 3,000 tons per day	109,000
3	Milling plant - 1,000 tons per day	522,000
4	Electrical distribution system	50,000
5	Water supply line	25,000
6	Water supply pumps	5,000
7	Plant service buildings	10,000
8	Open pit drilling and loading equipment	75,000
9	Contingencies, 10 percent of above	85,000
	Total	$931,000

Working Capital

1	Cash	$50,000
2	Supplies	50,000
3	Metal in transit - 30 days	100,000
	Total	$200,000
	Grant total	$1,131,000

It is believed that several of the items mentioned above are much too low. A revised estimate made by the examiners is given herewith:

1	Stripping and grading, 700,000 tons at 40¢	$280,000
2	Mill, including crushing, 1,000 tons at $1,000	1,000,000
3	Power lines	50,000
4	Water supply, including pumps	50,000
5	Plant service building	25,000
6	Open-pit drilling and loading equipment	325,000
7	Housing facilities (3 key men)	15,000
		$1,745,000
	Contingencies, approximately 15 percent	255,000
		$2,000,000
	Working capital	200,000
	Total capital requirements	$2,200,000

The above estimate is not a carefully calculated cost of a bill of materials required for this project. It is a general estimate based on cost data obtained in a study of three of the smaller open-pit operations in Arizona, Namely, the Lavender Pit at Bisbee, the Silver Bell and the Bagdad pits.

The Loma Prieta operation would be much smaller than any of these operations in point of the tonnage of ore produced. Since the ratio of stripping is 3.6 tons per ton of ore the total material handled is approximately 60 percent of that at Silver Bell.

The applicant has estimated a cost of $75,000 for open pit drilling and loading equipment. This is entirely inadequate to handle a minimum of 5,000 tons of material per day. Equipment more or less as outlined in the table which follows would be required.

Open-Pit Equipment

2	2.5-cubic yard shovels	$85,000
2	1.5-cubic yard shovels	50,000
3	Churn drills	27,500
	Churn drill accessories	5,000
4	Wagon drills	8,000
2	Tractors	16,000
2	30-ton trucks	45,000
4	10-ton trucks	28,000
2	Portable compressors, 315 cfm	18,400
2	Portable compressors, 105 cfm	4,800
6	Machine drills and jackhammers	5,000
	Bit shop and garage, equipped	15,000
	Miscellaneous small equipment	17,300
	Total	$325,000

Another item which the applicant has greatly underestimated is the necessary stripping to be done before mining of ore starts. The ore body is 200 feet wide by 300 feet long. The capping over this ore

is estimated to be 50 feet thick and made up of gravels and leached breccia material. It has been calculated that the minimum amount of stripping that should be done before mining starts is 700,000 tons. At $0.40 per ton the advance stripping will cost approximately $280,000.

Current mill construction costs, including crushing and power for a 1,000-ton mill, have been estimated at $1,000 per ton.

It is believed that to erect a 1,000-ton mill and to equip and prepare the Loma Prieta open pit for a production of 1,000 tons of ore per day will cost not less than $2,000,000. The applicant estimates $200,000 as working capital. It is believed that such an amount is not excessive.

Manpower

The applicant has estimated his manpower requirements as follows:

Mining, loading, and hauling	20 men
Milling	12 "
Shop and office	12 "
Total	44 "

The present estimate of the examining team shows approximately 100 necessary men, of whom 40 would be for mining, 30 in the mill, and 30 miscellaneous.

Power

A 69,000-volt power line passes within 1 mile of the property. Power can be purchased at 1.25 cents per kilowatt hour.

Water

There are two sources of water to supply a mill of 1,000 tons capacity. Gibbs advised that several miles down Copper Basin creek water can be developed in the valley on State and Federal land which is

leased to cattlemen under the Taylor Grazing Act. Gibb's proposal is to pick a favorable area, negotiate with the lessee, and drill. Deep-well pumps would be installed to pump into tanks. From these tanks heavy duty pumps would be installed to pump to a mill storage reservoir. The mill site is from 700 to 1,000 feet above the water supply and the distance is 6 miles.

The second source of supply is at Skull Valley. If water is obtained from this source it will probably be necessary to buy a ranch. The distance from the water supply to the mill is also 6 miles and the pumping head would be perhaps 1,000 feet.

Water is available and can be obtained. The main question is the cost. It is almost certain that it cannot be supplied for $30,000. The examiners have raised this cost to $50,000 and think that this amount may not be sufficient to provide an adequate water supply.

PRODUCTION PLAN

Time Schedule

The applicant believes that production would commence 12 months after start of development and construction.

The bottle neck in bringing this property into production would be the erection of the mill. It would take 2 or 3 months to design a 1,000-ton mill, and it is most likely that it would be 18 to 24 months before it could be put into operation from the time a loan was approved for the project.

Rate of Production

The applicant expects that the grade of his ore will be 0.92 percent copper, that mill recovery will be 75 percent, and that the mill will treat 360,000 tons per year. On this basis, with a smelter recovery of 97.5 percent, the annual production will be 4,350,000 pounds of copper.

The applicant also estimates that the recovery of MoS_2 will be approximately 700,000 pounds per year.

Using Anderson's grade for the Loma Prieta, copper production will be 4,700,000 pounds and molybdenite will be 675,000 pounds per year.

No calculations have been made for mining from the Copper Hill mine because the grade of the ore is so much lower and the amount of indicated ore is too small to warrant consideration for open-pit mining.

Mining Methods and Costs

The largest item in the cost of mining the Loma Prieta ore body by the open-pit method would be the cost of stripping. Anderson has estimated that the pipe contains 5,000 tons per vertical foot. The applicant proposes to mine a total of 1,000,000 tons which is equivalent to mining the upper 200 feet of the ore body. Since the top 50 feet is gravel and leached breccia, the pit is calculated to reach a depth of 250 feet.

Some 3,600,000 tons of stripping would have to be removed in order to mine 1,000,000 tons of ore. This is based on a slope of 1 to 1. On the basis of 50-foot benches, the amount of waste and ore recovered is as follows:

Loma Prieta Open Pit

Benches 50 feet high

Bench No.	Waste, Tons	Ore, Tons
1	1,750,000	--------
2	1,000,000	250,000
3	580,000	250,000
4	250,000	250,000
5	--------	250,000
Total	3,580,00	1,000,000

Based on stripping costs at Bagdad, the estimated costs for the Lavender pit and the Silver Bell pit, it is estimated that the direct cost of stripping, before depreciation, will be $0.40 per ton of material stripped. On the basis of 3.6 tons of stripping per ton of ore, the stripping cost will be $1.44 per ton of ore.

It is to be expected that the applicant would like to mine this ore on a steeper slope than 1 to 1 but to do so could result in the most serious consequences. It is believed that a slope of 1 to 1 is the steepest allowable slope.

The Loma Prieta pipe is located on the Mary Bell claim. This claim has parallel side lines, but its end line is at 60 degrees to the side lines (see figure 2). The pipe occurs in the sharp angular corner of the claim. The Phelps Dodge Corp. owns the land on both sides of this angular section. One edge of the pipe is approximately 25 feet from the company's Copper Bell side line while the westerly side of the pipe is only 60 feet from the Phelps Dodge Valley Forge claim.

The Loma Prieta pit would extend into the Copper Bell claim by as much as 250 feet, and into the Valley Forge by as much as 200 feet. The only other method of mining applicable would be undercut caving but this method also would eventually cave ground well across the property line. It is conceivable that under certain conditions Phelps Dodge might be justified in not granting permission for the Loma Prieta pit to be carried into its property. Other conditions might warrant it in permitting waste excavations on its property. The point to be made is that Phelps Dodge could block the mining of the Loma Prieta by open pit methods or even by block caving. The question is raised in order to draw attention to the necessity of arriving at some kind of an understanding with Phelps Dodge before a mining method is decided upon for mining the Loma Prieta ore body.

The approximate outlines of the proposed pit were considered with respect to the topography of the area. There are two or three dry washes which would drain into the pit. The amount of water that these washes might carry in a rainy season would probably not be great as the drainage area is not particularly large. However, it is certain that the flow from these streams would have to be diverted. The problem is not particularly serious as waste from stripping could be placed across these streams and a small channel could be cut to completely divert the flow of these streams away from the pit. The total cost would probably not exceed $10,000. Some of these waste dams would have to be placed on Phelps Dodge ground and the main difficulty might be to get its permission. It might have very good reasons for refusing.

Milling Methods and Costs

The applicant proposes to treat the ore produced in a flotation mill. Concentrates containing the copper and molybdenum will be retreated and a copper concentrate and a molybdenite concentrate will be obtained. From the test work done, the applicant estimates that the recovery of copper and molybdenite each will be 75 percent of the content of the ore.

The applicant has given an estimated total cost of $3.25 per ton of ore without a breakdown for mining, milling and smelting. A milling cost of $1.50 per ton has been used by the examining team, based on operations of similar sized mills. It is assumed that the copper concentrates will average 30 percent copper, and molybdenite concentrates will average 90 percent MoS_2. On the basis of the above, the ratio of concentration for copper is 45.7 to 1, and for molybdenite it is 960 to 1, based on Anderson's average grade of the ore from the Loma Prieta.

Smelting Methods and Costs

Copper concentrates will be trucked from the mill to Skull Valley, from which point they will go to the El Paso smelter by rail. It is believed that the molybdenite concentrates can be sold on the same basis as at Bagdad, where the price paid is 56 cents per pound of MoS_2 in a 90 percent concentrate at the mill. Hillside and Skull Valley, the shipping points for Bagdad and Loma Prieta, are both on the Santa Fe Railroad only a few miles apart. The freight rate on the copper concentrates to Skull Valley is estimated at $0.95 per dry ton. Freight to El Paso is $9.22 per dry ton and smelting is estimated at $10.16 per dry ton.

Royalty

The owner has devised a unique method of calculating royalty on production from the Loma Prieta and Copper Hill mines. The royalty is calculated on mill capacity rather than on net smelter returns. The contract of sale is actually drawn on the basis of a fixed payment per month. The purpose of this is to reduce income taxes. The Treasury Department has ruled that 100 percent of royalty is taxable. In the case of a sale of the property on the basis of the method set up by the owner, it is believed that he can show the sale of a capital asset held for more than 6 months. The profit involved is, therefore, a long term gain of which only 50 percent is subject to tax.

Amortization of Capital

The applicant proposes to mine 1,000,000 tons of ore from the Loma Prieta by open-pit methods. He estimates that the necessary capital expenses will be $1,131,000. The examiners believe that this amount is much too low and they have calculated that the necessary expenditures to bring the property into production will be approximately $2,000,000.

The indicated and inferred ore reserves of the Loma Prieta and the Copper Hill amount to 2,350,000 tons. The applicant's program provides for mining 1,600,000 tons of this ore by open-pit methods. It is true that there still will be a large tonnage of ore which can be mined by underground methods. The mill will have been amortized by the open pit ore, but a considerable amount of capital will be required for a new

shaft and for preparing the remaining ore for mining. It is believed that the $2,000,000 capital should be amortized over 1,600,000 tons, which amounts to $1.25 per ton.

SUMMARY: COST OF PROJECT

Capital Requirements

The capital requirements as estimated by the applicant amount to $1,131,000, including $200,000 working capital. The examiners believe that this figure is much too low and should be raised to $2,200,000, of which $200,000 is allowed as working capital.

Operating Costs

Operating costs are figured on mining 1,000,000 tons of ore from the Loma Prieta mine as proposed by the operator. The grade of this ore is 0.875 percent copper and 2.5 pounds MoS_2 per ton. Mill recovery is estimated at 75 percent of the copper and MoS_2 content. The net recovery after deducting the smelter losses will be 13.0 pounds. No allowance has been made for dilution of the ore in mining. Dilution in open-pit mining would be less than in block caving. The applicant has used a 75 percent copper recovery in the mill. This is probably low and will make up for dilution. The cost of milling has been discussed with the Metallurgical Division of the Bureau of Mines. Other costs are based on similar costs. The total amount of $2,000,000 has been amortized over 1,600,000 tons of ore in both properties. Technically,

an allowance should be made for a credit for advance stripping which is covered by amortization and by the direct cost of removing 3.6 tons of waste for each ton of ore. The reason this was not done is due to the fact that after having mined 1,000,000 tons from the Loma Prieta, a considerable capital expenditure will need be made to prepare the Copper Hill for production and it is believed that the amount of these expenditures will approximately offset the stripping credit. No cost for depreciation has been shown because amortization includes depreciation in this case. The above explanations cover the points raised by the Operating Committee of the Defense Materials Procurement Agency, except the matter of bank loans, back taxes and interest. The Central Eureka Mining Co. is a going concern and the items above mentioned are for the account of that company and not the Copper Basin Project. The parent company has sufficient assets over liabilities so bank loans, back taxes and interest will be taken care of independently of operations at the Loma Prieta and Copper Hill.

Estimated costs at the Loma Prieta are shown as follows:

Lena Prieta Mine

Estimated Operating Costs before Depletion and Federal Income Taxes.

	Per ton	Per lb. copper
Stripping 3.6 tons at $0.40	$1.44	11.08¢
Mining, with delivery to mill	.45	3.46
Mining and stripping	$1.89	14.54¢
Milling	1.50	11.54
Trucking concentrates to Skull Valley	.02	.15
Freight to El Paso Smelter	.21	1.61
Smelting	.23	1.77
Freight, refining, marketing, and delivery	.39	3.00
General expense at property	.35	2.69
Overhead expense	.10	.77
Royalty	.10	.77
Total direct costs	$4.79	36.84¢
Credits		
Molybdenite (1.88 pounds at 56 cents)	1.05	8.08
Total before depletion, depreciation, and amortization	$3.74	28.76¢
Amortization, $2,000,000 on 1,600,000 tons	1.25	9.61
Total before depletion and income taxes	$4,99	38.37¢

PROPOSED FINANCING

The applicant anticipates that he will require 25 percent of the requested loan upon signing of the application, an additional 50 percent in 4 months, and the balance in 6 months.

He does not specify how the loan is to be repaid except that returns will come from the net smelter returns from copper and molybdenite concentrates. One reason for the fact that the application has not been more specific regarding the repayment of the loan is that the applicant anticipates an over-the-market price for both copper and molybdenum. However, he has not definitely shown how much it should be nor has he requested it, except by inference.

CONCLUSIONS

The conclusions drawn, relating to this project, are that the ore in the Loma Prieta and the Copper Hill mines is submarginal. In order to make possible the operation of these mines a premium price of 10 to 12 cents per pound of copper will be required.

Should the need for copper become so great that such a premium price were granted, it would cost some $2,000,000 to adequately equip the Loma Prieta mine for a production of 1,000,000 tons of ore from an open pit at the rate of 1,000 tons per day.

The Loma Prieta mine is reported by the Geological Survey to have indicated ore reserves to the 400 level amounting to 1,750,000 tons with a grade of 0.875 percent copper and 2.5 pounds of MoS_2 per ton. Before an expenditure of $2,000,000 could be recommended for placing this mine in production at least 4, and preferably 6 churn drill holes should be sunk at 100-foot intervals in the 200 by 300-foot ore body. Should these holes have a grade as good or better than the present calculated average, the ore could be considered as measured ore. It is essential that the ore be positively blocked out before a loan of such size be recommended.

There is one unknown factor which has an important bearing on the problem. An open pit operation at the Loma Prieta will require that substantial amounts of waste will have to be removed from the adjoining Phelps Dodge ground to permit the opening of a pit 250 feet deep with

a 1 to 1 slope. The undercut caving method of mining also would eventually cause caving on Phelps Dodge ground. In an open-pit operation if the supposedly waste benches on Phelps Dodge ground proved to be ore, the ore could be stockpiled or treated for the account of that company. If Loma Prieta would adopt an underground caving method of mining and such a method resulted in caving ore on Phelps Dodge ground the situation would be much more difficult of solution.

If and when the Loma Prieta mine is to be worked the first step should be to arrive at some kind of an agreement with Phelps Dodge. It is not believed that Phelps Dodge would be unreasonable but it certainly should take every means to protect its own interests. Actually so many unforeseeable complications could arise that the company most likely would resist any encroachment on its property and the chances are that it could and would justifiably block anyone from using either of the two mining methods, open pit or block caving, which would be feasible at the Loma Prieta.

RECOMMENDATIONS

It is recommended that the Eureka Consolidated Mining Co's. application for a production loan be denied for the following reasons:

(1) Ore in the Loma Prieta and Copper Hill mines is indicated ore and not measured ore;

(2) The cost of producing copper from an open pit, as suggested by the applicant, will be approximately 13 cents per pound over the present market price of 24½ cents, before depletion and Federal taxes;

(3) The cost of producing copper from a shallower pit or by underground methods will be from 10 to 12 cents above the present market price before depletion and Federal taxes;

(4) An open pit at the Loma Prieta would extend into Phelps Dodge property and some waste-fill dams to divert the present streams would have to be constructed on Phelps Dodge ground. It is very unlikely that the company would agree to either of these things and the chances are it could and would prevent the operation of this project.

APPENDIX

Some general conclusions have been drawn as to the ultimate possibilities of the Copper Basin district. Some of these conclusions are based on information from the Geological Survey's reports and from Fred Gibbs, who has studied the district for many years.

There are numerous breccia pipes in the district, both large and small. Exploration has shown that several of them contain low-grade ore. The Loma Prieta and the Copper Hill pipes are typical of the small pipes, and the Commercial pipe is representative of the larger ones. There are other large and small pipes with less exploration. All of the ore, except that from the Commercial pipe, has been found to be low-grade and submarginal at present prices. The horizontal dimensions of some of these pipes is unknown. In all cases the vertical extent of the submarginal ore is unknown. A list of these pipes is herewith shown with their approximate size and possible tonnage if mineralization extends to a depth of 500 feet.

Copper Basin District
Indicated and Inferred Ore
(Probably of submarginal grade)
(Sizes by Fred Gibbs)

Pipe	Approx. size, ft.	Possible tonnage	Remarks
Commercial	1,200 x 1,500	72,000,000	
Smelter Hill	700 x 700	19,600,000	
Commercial No. 3	700 x 700	19,600,000	
Victory	900 x 1,800	64,800,000	Low grade
Loma Prieta	200 x 300	1,750,000	0.88% Cu 0.13% MoS_2
Copper Hill	250 x 300	600,000	0.48% Cu, 0.23% MoS_2
Red Hill	?		
Others	?		
Total		178,350,000	

Most of the above ore can be mined by open-pit methods. The grade of the ore is unknown but it is most likely that the average content is presently submarginal at the prevailing prices of copper and molybdenum.

The examiners believe that the Copper Basin district may have a potential production of more than 200,000,000 tons of ore, containing possibly as much as 7 to 10 pounds of copper and from 1 to 2 pounds of MoS_2 per ton. Most of this ore has a shallow capping, and, therefore, waste stripping costs will be low. Operating conditions will be mostly favorable.

The mine examiners did not see the outcrops of all of these pipes nor were they able to inspect all of the workings at the Commercial. The Reconstruction Finance Corporation and the Geological Survey during World War II unwatered and sampled the Loma Prieta and Copper Hill pipes, and showed that at least two of the Copper Basin pipes contained

substantial amounts of marginal ore. One tunnel in the Commercial pipe has been crudely sampled and it is reported to average 1.0 percent copper. The Phelps Dodge Corp. has made extended geological surveys of the district. Apparently it is of the opinion that the Copper Basin ore is submarginal. No churn drilling or diamond drilling is known to have been done in any of the pipes other than the Copper Hill, where some diamond drilling was done. Drilling is the cheapest method of exploration and since the main concern is obtaining the most accurate sample, churn drilling is thought to be the best method.

The examiners believe that an extensive campaign of churn drilling is warranted, provided it has the cooperation of Phelps Dodge. They believe that this drilling will develop a very substantial tonnage of copper ore containing molybdenite. Perhaps some day in the not too distant future the Copper Basin district will be an important producer of these metals.

DMA

DEFENSE MATERIALS PROCUREMENT AGENCY
WASHINGTON 25, D. C.

MAR 3 1 1952

Reconstruction Finance Corporation

Washington 25, D. C.

Attention: Mr. S. A. Bingham

Re: DMPA 2069
Commodity-Copper

Gentlemen:

Enclosed herewith please find an application for a production loan from the Central Eureka Mining Company. It is recommended that this application be denied for the following reasons:

1. The applicant has underestimated his capital requirement; capital requirements will be approximately $2,200,000 instead of $1,131,000

2. The ore in the Loma Prieta and Copper Hill Mines is indicated ore and not measured ore.

3. The cost of producing copper from a pit as suggested by the applicant will be approximately 13 cents per pound over the present market price before depletion and Federal taxes.

4. An open pit at the Loma Prieta, the more favorable of the mines, would extend into Phelps Dodge property and some waste-fill dams to divert the present streams would have to be constructed on Phelps Dodge ground. It is very unlikely that the Company would agree to either of these things. It is more probable that it could and would prevent the operation of this project.

5. The mine was unwatered and sampled by engineers of the RFC, assisted by representatives of the Geological Survey and the ore found to be submarginal. The mine was shut down and allowed to fill with water.

Enclosed herewith for your disposal is the complete file consisting of the following:

4 MF-100 with answer sheet
4 MF-101 with answer sheet
1 Report on the Loma Prieta Mine (4)
1 Flow sheet (4)
1 Engineers Report (4)
1 Option (8)
1 Report on the Operations of the Central Eureka Mining Company, May 20, 1951
1 Map Mining Claims in Copper Basin (4)
1 Map Assay Plan of Diamond Drill Holes (8)
1 Assay Map Loma Prieta Mine (4)
1 Plan of Copper Hill Mine (4)
1 Plat (4)
1 Location Map

MTE

1 Claim Map Copper Basin Group
1 Group of notes on the Eureka Mining Company
2 Letters of A. Taylor to J. B. Gowen
Dec. 13, 1951
Dec. 14, 1951
3 Letters from Central Eureka Mining Company to:
DMA, Sept. 5, 1951
R. E. Adams, Sept. 13, 1951
Pittman & Roberts, Dec. 7, 1951
2 Letters from T. Lyon to:
Central Eureka Mining Company, Dec. 26, 1951
Chairman, Operating Committee, Dec. 29, 1951
1 Letter from C. O. Mittendorf to East, Jan. 8, 1952
1 Letter of Adams to Smith
1 Form letter to Loma Prieta-Copper Hill Mine, Oct. 5, 1951
1 DMA Status Change notice.

Very truly yours,

Tom Lyon

Tom Lyon, Director
Domestic Expansion Division

RVWaugh:pk
3/18/52

Copy to: Mr. Gowen
Field Team IV
DMPA Files

DMPA Official File Copy
DMPA Index File Copy

DMA

DEFENSE MATERIALS PROCUREMENT AGENCY
WASHINGTON 25, D. C.

MAR 3 1 1952

Mr. A. M. Taylor, Jr.
715 Bowen Building
Washington 5, D. C.

Re: DMA 8049
Commodity-Copper

Dear Mr. Taylor:

This is to inform you that the Domestic Expansion Division of this Agency has completed their action on your application for a production loan. The entire file is being referred to the Reconstruction Finance Corporation for final action. Any further correspondence should be referred to that Corporation for the attention of Mr. S. A. Bingham.

Very truly yours,

Tom Lyon

Tom Lyon, Director
Domestic Expansion Division

RVWaugh:rw
3/28/52

Copy to: DMPA Official File Copy
DMPA Index File Copy
DMPA Files
Mr. Gowen
Field Team, Region IV

ATC

Mining Division
Region IV

February 25, 1952

Memorandum

To: Field Team, Region IV

From: Acting Chief, Mining Division, Region IV

Subject: Final Report, DMA 2869, Eureka Consolidated Mining Co., Lead Pelots and Copper Hill Mines, Copper Basin District, Yavapai County, Arizona

Enclosed are the original and seven copies of the final report on the application of the Eureka Consolidated Mining Company, by H. J. Kisling and W. F. Spicuzzi of the Bureau of Mines.

We concur with the findings of the examining engineers and recommend that the above application for a production loan of $2,131,000.00 be denied.

We suggest that the applicant be requested to apply for an exploration loan to block out a possible ore body.

W. H. King

JFS:ec

cc: DMEA Subject, Chron.
Koschmann (2)

[illegible] New Customhouse
Denver 2, Colorado

February 25, 1952

Memorandum

To: Chairman, Operating Committee, DMA, Washington, D. C.

From: Field Team, Region IV

Subject: Final Report, DMA 2069, Eureka Consolidated Mining Co., Loma Prieta and Copper Hill Mines, Copper Basin District, Yavapai County, Arizona

Enclosed are the original and two copies of the final report on the application of the Eureka Consolidated Mining Co.

The above application is for a production loan of $1,131,000, of which $200,000 is to provide for working capital. The applicant proposes to strip the overburden from the Loma Prieta and Copper Hill Mines, develop the mines by the open-pit method, and build a 1,000-ton daily capacity flotation mill for the recovery of copper and molybdenite.

The mines do not have any measured ore. According to a U.S.B.M. report written in 1943, the Loma Prieta mine has 1,750,000 tons of indicated ore with a grade of 0.65-0.90 percent copper and 0.10-0.15 percent MoS_2. Mining this ore by the open-pit method is estimated to cost approximately 36 cents per pound of copper produced. An open-pit at the Loma Prieta mine would by necessity extend into the adjoining Phelps Dodge property and dams to divert present streams would be located on Phelps Dodge ground. It is estimated that the capital requirements to perform the proposed work would approximate $2,200,000 and not $1,131,000, as stated by the applicant.

It is recommended that the Eureka Consolidated Mining Company's application for a production loan be denied. It is recommended that the applicant be requested to submit an application for exploration assistance consisting of drilling six or more churn drill holes in the 200 by 300-foot sub area of the Loma Prieta mine to determine the possibility of blocking out an ore body. The applicant should be requested to show that an agreement can be reached for trespass on Phelps Dodge property if an ore body is found.

cc: Storms w/copy of final report
Anderson " " " "
Koschmann " " " "
Mining Div. " " " 2
DMA Final Report

J. F. East, Jr.

A. R. Koschmann

Enclosures

JFS:oc

cc: DMA Subject, Chron., Koschmann (2)

A.H.C.

DMPA report on Central Europe was sent to Washington Feb. 25, 1952

W.H.K.

GHB

King are we working on DMA-NBG? Also what is the status

GHB

Feb 25

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY
WASHINGTON 25, D. C.

REGIONAL DIRECTOR'S
OFFICE
REGION IV
FEB 12 1952
BUREAU OF MINES
DENVER, COLORADO
FEB 8 1952

Through: Mr. J. J. Forbes
Director, Bureau of Mines

Dear Jack:

Attached is a copy of my reply to Mr. Ralph E. Pittman who is a member of a Washington law firm representing Central Eureka Mining Company of California (DMA-2069).

Tom Lyon has indicated to my office that you are proceeding along entirely appropriate lines. Any deviation from the procedure you have been following would have to come from DMPA so far as any one of their applications is concerned.

Sincerely yours,

Assistant Secretary of the Interior.

Mr. J. H. East, Jr.,
Regional Director,
Bureau of Mines,
Denver, Colorado.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY
WASHINGTON 25, D. C.

REGIONAL DIRECTOR'S OFFICE
REGION IV
FEB 12 1952
BUREAU OF MINES
DENVER, COLORADO

FEB 8 1952

Through: Mr. J. J. Forbes
Director, Bureau of Mines

Dear Jack:

Attached is a copy of my reply to Mr. Ralph E. Pittman who is a member of a Washington law firm representing Central Eureka Mining Company of California (IMA-2069).

Tom Lyon has indicated to my office that you are proceeding along entirely appropriate lines. Any deviation from the procedure you have been following would have to come from IMPA so far as any one of their applications is concerned.

Sincerely yours,

(sgd) Robert R. Rose, Jr.

Assistant Secretary of the Interior

Mr. J. H. East, Jr.,
Regional Director,
Bureau of Mines,
Denver, Colorado.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY
WASHINGTON 25, D. C.

REGIONAL DIRECTOR'S OFFICE REGION IV
FEB 18 1952
BUREAU OF MINES
DENVER, COLORADO
FEB 1952

Dear Mr. Pittman:

The Secretary has referred your letter of January 17, 1952 to me for reply. While this application of the Central Eureka Mining Company of California is outside the Interior Department's area of jurisdiction, I did ask that the matter be checked informally with the Defense Materials Procurement Agency, where application was filed.

Under a cooperative arrangement between the DMPA and this Department, Bureau of Mines and Geological Survey Field Teams, as requested by DMPA, conduct field examinations of proposed projects. I have been advised that the DMPA expects independent evaluations whenever an application is referred to the Field. Under this circumstance it would appear that Mr. East's position, as stated to you, is entirely consistent with DMPA policy.

At the same time I am certain that Mr. East would welcome any assistance in bringing together pertinent information on any proposed project as long as such would in no way interfere with policy or instructions received from DMPA. I am forwarding a copy of this reply to Mr. East for his information.

Sincerely yours,

(sgd) Robert R. Rose, Jr.

Assistant Secretary of the Interior

Mr. Ralph D. Pittman
Attorney-at-Law
Bowen Building
Washington 5, D. C.

Mr Jack East

224 New Customhouse
Denver 2, Colorado

January 16, 1952

Memorandum

To: W. R. Storms (with brochure)

C. A. Anderson

(Through Acting Chief, Mining Division, Region IV)

From: Field Team, DMEA, Region IV

Subject: DMA Docket 2069, Central Eureka Mining Company

Enclosed is the brochure on the subject direct loan application and a copy of Mittenderf's letter of transmittal.

Apparently, the investigation will require considerable detail work and it is possible that you may wish to have Mining undertake the job. This possibility has been discussed with Regional Director East, and he approves of such an arrangement in case you consider it advisable.

W. H. King
W. H. King for
J. R. East, Jr.

A. H. Koschmann
A. H. Koschmann

WHK:oc
cc: DMA Subject, Chron.
AHKoschmann

DMA files

DEFENSE MATERIALS PROCUREMENT AGENCY
WASHINGTON 25, D. C.

JAN 8 1952

DIRECTOR'S OFFICE REGION IV JAN 10 1952

Mr. J. H. East, Jr.
Executive Officer
DMEA Field Team, Region IV
Bureau of Mines
224 New Customhouse Building
Denver 2, Colorado

Re: DMA-2069

Dear Mr. East:

Enclosed herewith please find one copy of an application for a Government loan submitted by the Central Eureka Mining Company, DMA-2069. It is requested that a report be made to include any available information or data that will help in processing and evaluating this application.

In view of the marginal character of these mines, expected costs should be thoroughly analyzed to make certain that allowances have been made for all contingencies. Such items as a) stripping of the brecciated granodiorite and terrace gravels from over the ore body, b) amortization of the loan asked for from the Government and c) bank loans, back taxes and interest should be checked to see if they are included in the cost per ton figure. Also it would be well to check the site, cost and flow sheet of the mill and the water supply.

Very truly yours,

C. Mittendorf

Chairman,
~~Coordinating~~ Operating Committee

In duplicate

T. P. Thayer
For Geological Survey

J. V. Hedges
For Bureau of Mines

Copy of this letter to Stone with brochure 1-16-52 O.C.

DEFENSE MATERIALS PROCUREMENT AGENCY
WASHINGTON 25, D. C.

DEC 26 1951

Central Eureka Mining Company
c/o Pullman and Roberts
715 Bowen Building
Washington 5, D. C.

Re: DMA-2069

Gentlemen:

This is to inform you that the production loan application of Central Eureka Mining Company has been referred to the field team for investigation. The company will hear from Mr. J. H. Raab, Jr., Executive Officer, DMPA Field Team, Region IV, Bureau of Mines, 206 New Customhouse Building, Denver 2, Colorado, or one of his staff when they are ready to visit the property.

Very truly yours,

(sgd)

Tom Lyon, Director
Program Development Division

RVWaugh:rw
12/21/51

Copy to: Mr. Young
Mr. Feiss
Mr. Douglas
Field Team, Region IV
Mr. Lyon
Mr. Gowen
DMPA Files

CENTRAL EXPLORATION
OFFICE
REGION IV
DEC 26 1951
BUREAU OF MINES
DENVER, COLO.

co. H.K.
Show JH
Jacobsen

MINING DIVISION
REGION IV

January 24, 1952

Re: DMA Docket 2069,
Central Eureka Mining
Co., Yavapai Co., Ariz.

Mr. Charles A. Anderson
District Supervisor
U. S. Bureau of Mines
Box 633
Prescott, Ariz.

Dear Andy:

We received the above mentioned docket Monday. Mr. East as Executive Officer of the Field Team, Region IV, has asked that Morris J. Elsing handle the engineering phases of this work so I now am having Morris review the docket.

I believe you want to do the geological report so I have asked Morris to get in touch with you as soon as possible. Morris has only a short time to go before he has used his allowable 180 days for this year, so he will have to start his end of the report next week, if possible.

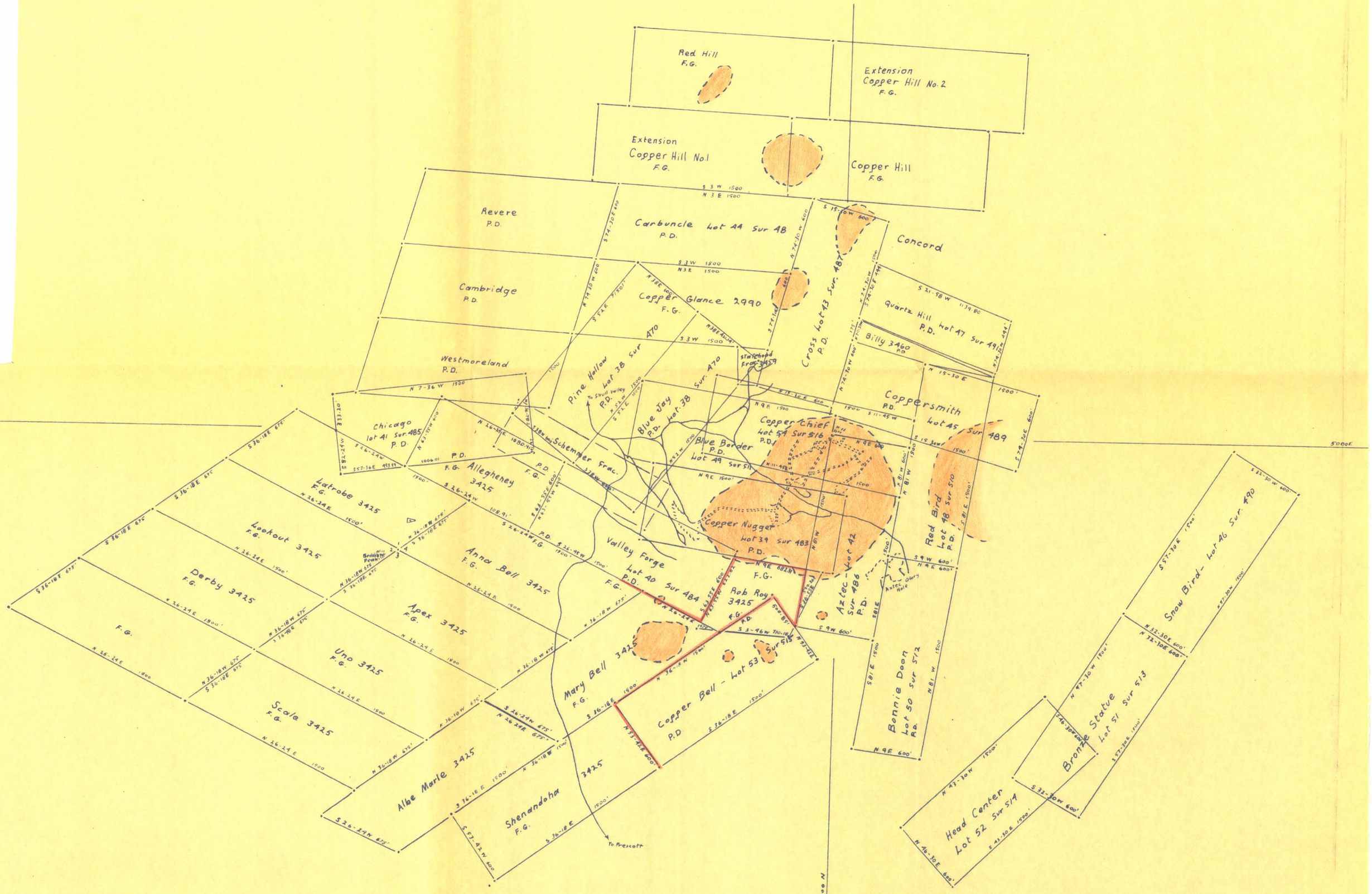
Please phone me when you return to Prescott as I understand from Martin Momslo that illness in your family called you to the coast.

Sincerely yours,

Walter R. Storms, Chief
Arizona-New Mexico Branch

CC W. H. King
A. Shride
DMA-2069
DF

WRStorms:frj



BRECCIA PIPE

SCALE 1" = 500

FIG. 2
CLAIM MAP
COPPER BASIN GROUP
DMA 2069