DEFENSE MATERIALS PROCUREMENT AGENCY
WASHINGTON 25, D. C.

SEP 19 1952

Mr. Harold P. Newman

Ione, Nevada

Re: DMPA-CO4
Commodity-Copper

Dear Mr. Newman:

This is to inform you that the Domestic Expansion Division of this Agency has completed its action on your application for a loan and that it is being referred to the Reconstruction Finance Corporation for further action. Any future correspondence concerning this application should be addressed to that Corporation, Washington 25, D. C. for the attention of Mr. S. A. Bingham.

Very truly yours,

TOM LYON

WB

Tom Lyon, Director
Domestic Expansion Division

RVWaugh:rw
9/16/52

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

Copy to E H Bailey

DEFENSE MATERIALS PROCUREMENT AGENCY
WASHINGTON 25, D. C.

SEP 19 1952

Reconstruction Finance Corporation
811 Vermont Avenue
Washington 25, D. C.

Attention: Mr. E. A. Bingham

Re: DMPA-224
Commodity-copper

Gentlemen:

This correspondence concerns the application of Harold F. Foxman for a production loan in the amount of $20,000 for the Copper King Group, Nye County, Nevada.

Pursuant to the Defense Production Act of 1950, as amended, Executive Order 10161, as amended, and Delegation No. 2 from the Defense Production Administrator to the Defense Materials Procurement Agency Administrator, it is certified that the requested loan is not essential in the interests of national defense.

It is, therefore, recommended that this application be denied.

The loan requested is for equipment to carry out drifting and crosscutting. During the processing of the loan, the applicant submitted an application for exploration assistance to the Defense Minerals Exploration Administration and was granted a contract, No. I DM-2 355, August 12, 1952 in the amount of $3,789 to crosscut and drift. Since under this latter contract the applicant is allowed to charge equipment to the cost of the project there is no justification for the loan at the present time.

Very truly yours,

TOM LYON

WB

Tom Lyon, Director
Domestic Expansion Division

Wheatherly
9/16/52

Copy to: DMPA Official File
DMPA Index File
Credit & Finance (Rm.2107)
Mr. Gowen

Administrator
Deputy Administrator
Mr. Greenburg (Rm.2125)
~~Mr. Eberstadt (Rm.7503)~~
Field Team, Region III
Mr. Levinson - G-127

DEFENSE MATERIALS PROCUREMENT AGENCY
WASHINGTON 25, D. C.

APR 25 1952

Mr. Harold Newman

Re: DMA 204
Commodity-Copper

Ione, Nevada

Dear Mr. Newman:

Since you filed your application for a loan there has been a new program of Government assistance made available to the mining industry in the form of a subsidy program and it is possible that you might qualify for this assistance. The object of the program is to maintain production from marginal mines which were in operation when the program was announced, and which are threatened with closing down because of operating losses due to recent increases in production costs. Outside of this subsidy program no contracts have been entered into involving floor price contracts in excess of 25½ cents per pound of recoverable copper.

Should you wish to take advantage of this program we are enclosing six copies of form MF-106 (Application for a Purchase Contract). Accompanying the application should be the following information:

1. Itemized and detailed costs figured on a per ton or ore basis and a per pound of recoverable metal paid for by the smelter for the years 1950 and 1951, the latter by quarters if possible, and anticipated costs for the balance of the current year figured on the same basis.

2. Financial sheets for the years 1950 and 1951.

3. A written statement outlining the reasons why the subsidy is needed.

4. A written statement outlining the method used in calculating your depletion and depreciation costs.

5. A brief summary of your mining operations.

Because we must justify the base price for any over-the-market negotiations, it is necessary that your cost data, both past and anticipated be completely detailed and itemized including smelter costs as revealed by smelter sheets. It is also important that adequate reasons be given for any upward revision of costs. It is also necessary that you have mineable reserves of copper ore so that you can continue in production.

Very truly yours,

Tom Lyon

Tom Lyon, Director
Domestic Expansion Division

Enclosures

Copy to: DMPA Official File
DMPA INDex File
DMPA Files
Mr. Gowen
Field Team III

RVVaugh:pk
4/22/52

copy to Barber
5/2/52

RECEIVED
REGION III
BUREAU OF MINES
DEPARTMENT OF INTERIOR

DEPARTMENT OF INTERIOR
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REGION III
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1952 MAY 1 PM 1:55

SAN FRANCISCO, CALIFORNIA

310

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

Refer to	Noted	Date
	NEDH	8/13
Answered		

Mr. Harold P. Newman
Nevada Richmond Mines
Ione, Nevada

Re: DMA Docket No. 204

Dear Mr. Newman:

This is to acknowledge your letter of July 31, 1951 submitting information on the leaching of your ore.

We wish to inform you that the material will be incorporated with your application and used in the processing of it.

Very truly yours,

J. B. Gowen

J. B. Gowen, Chief
Copper Branch

Copy to: Administrator's Reading File
Reports and Records Branch
Executive Officer, DMA Field Team III
Copper Branch
Files - DMA Docket

RWWaugh:rw
8-7-51

NEVADA RICHMOND MINES

Ione, Nevada

Harold P. Newman Edward J. Fogarty

July 31, 1951

Defense Minerals Administration
Washington 25, D. C.

Copper Division

Gentlemen:

Referring to future possibilities in the copper production I am seeking the following information.

My copper ore reacts very well to leaching, no lime to speak of therefore my cosumption of sulphuric acid would be small in comparison to the amount of copper I would produce. But I will not build a small plant to handle my ore unless I can be assured of some way to be able to obtain about 100 gallons per month of the required acid. With this amount I can possibly produce 10 tons of copper or better per month. These are only estimates at this time only actual operation can place the figures correctly.

This information should be included in my docket DMA 204 application for a mine loan on my copper property, because since making application for the loan considerable research work has been done on the ore and it has been determined that leaching is the best process to be used on the present ore.

Yours very truly

(sgd)

Harold P. Newman

C O P Y

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

Office of
Executive Officer
DMA Field Team
Region III

1415 Appraisers Bldg.
630 Sansome Street
San Francisco 11, Calif.

June 19, 1951

Memorandum

To: Tom Lyon, Chief, Copper Commodity Committee, Defense Minerals Administration, Washington, D. C.

From: Executive Officer, DMA Field Team, Region III

Subject: Docket DMA-204, Copper King Group, Nye County, Nevada
Harold P. Newman

Reference is made to your letter dated February 26 requesting us to make a field examination of subject property. Attached are four copies of a report entitled "DMA-204, Copper King Group, Nye County, Nevada, by E. J. Matson, Mining Engineer, Bureau of Mines, dated June 7, 1951."

Although the examining engineer concludes that the property does not have sufficient ore reserves to warrant a production loan, and that the property might warrant a small amount of exploration work, I have a note from A. C. Johnson, Chief, Region III, Mining Division, that the applicant does not want matching funds but desires money to hire laborers and make some improvements. He has a concentrating plant of about 15 tons per day capacity and has 2700 tons of 3-7% copper ore with some gold and silver. The ore, according to Mr. Johnson, averages about $20.00.

Subject docket is returned herewith.

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

Attachment

Copy to: Ward Smith

HCMiller:ejs

Chrono
Files

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED
JUN 18 1951
SAN FRANCISCO, CALIFORNIA

UNITED STATES
DEPARTMENT OF THE INTERIOR

BUREAU OF MINES

P. O. Box 1551
Reno, Nevada

June 14, 1951

Refer to	Noted	Date
Answered		

Memorandum

To: H. C. Miller, Regional Director, Region III

From: Chief, Mining Division, Region III

Subject: Docket DMA-204, Copper King Group, Nye County, Nev.

Enclosed are 5 copies of the above mentioned report by E. J. Matson.

The examining engineer does not believe that the property has sufficient ore reserves to warrant a production loan. I concur with the examining engineer's conclusions that the property probably does warrant a small amount of exploration work.

The docket and correspondence concerning DMA-204 are returned herewith.

A. C. Johnson

A. C. Johnson

Encls.

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

BUREAU OF MINES ADMINISTRATION

DMA-204, Copper King Group, Nye County, Nev.

E. J. Watson, Mining Engineer
U. S. Bureau of Mines

June 7, 1951

ILLUSTRATIONS

Figure		Following page
1	Location map, Copper King group, Nye County, Nevada	2
2	Looking northeast towards mine adit . .	3
3	Looking towards portal of adit	3
4	Collar of old incline shaft	4
5	Concentrating plant building	4
6	Interior of concentrator plant	4
7	Mill flow sheet	5
8	Assay map	6
9	Sample analyses and proposed development	7
10	Ore indications	8

SECRET RMA-204

UNITED STATES DEPARTMENT OF THE INTERIOR-BUREAU OF MINES

COPPER KING GROUP, NYE COUNTY, NEV.

By E. J. Watson

SUMMARY

The Copper King group comprises two copper lode claims and one millsite located in the Ione Mining District, Nye County, Nev.

Chief structural features are mineralized shear zones with numerous cross fractures. Country rock is a silicified andesite. Copper mineralization within the shear and fracture zones is malachite, azurite, chrysocolla, chalcocite and chalcopyrite.

Development of the property consists of one short adit about 120 feet in length driven on a mineralized shear zone, several small open cuts, and one old abandoned shaft which was sunk in the early days by prospectors in search of gold.

The property is owned by Harold P. Newman, Ione, Nev., who has built a small flotation concentrator capable of treating 16 tons of ore per 24 hours.

Two small shipments of crude ore have been made from the 120-foot adit and one shipment of concentrates from the mill operation, to date.

INTRODUCTION

The property was examined by an engineer[1] of the Bureau of Mines on May 8 and 9, 1951.

This report is in regard to an application loan by Harold P. New-

1/ E. J. Watson

man to develop and equip the Copper King group of mining claims. The loan requested is in the amount of $20,000. The docket number assigned to the application is DPA-204 and the commodity sought is copper. The report supplemented by maps, sketches and views gives the location of the property, describes the deposit and briefly explains the working operations of the venture.

LOCATION

The property is located in the Union Mining District in the unsurveyed portion in the northwestern part of Nye County, Nev. (See fig. 1). The mine is in section 10 and the mill in section 26 of T. 12 N., and R. 39 E.

The property is reached by driving from Fallon, Nev., the chief shopping center, and proceeding east on paved U. S. Highway 50 for a distance of 63 miles to a road fork which is about 3 miles beyond Eastgate; thence traveling southerly 30 miles on a bladed desert road to Ione, Nev. The mine is about 5 miles due south of Ione and the mill is about 5-1/2 miles south of Ione. Total distance from Fallon to Ione is 93 miles.

The owners live at the old abandoned mining camp location of Berlin, which is 4-1/2 miles southwesterly from Ione. From Berlin, the mine is about 3 miles northeasterly by road and the mill is about 1-1/2 miles southeasterly. The distance from mine to mill is about 4-1/2 miles by road.

LIVING CONDITIONS AND ACCOMMODATIONS

The property is in a more or less remote part of the state. No living accommodations are available at the mine or millsite. Limited

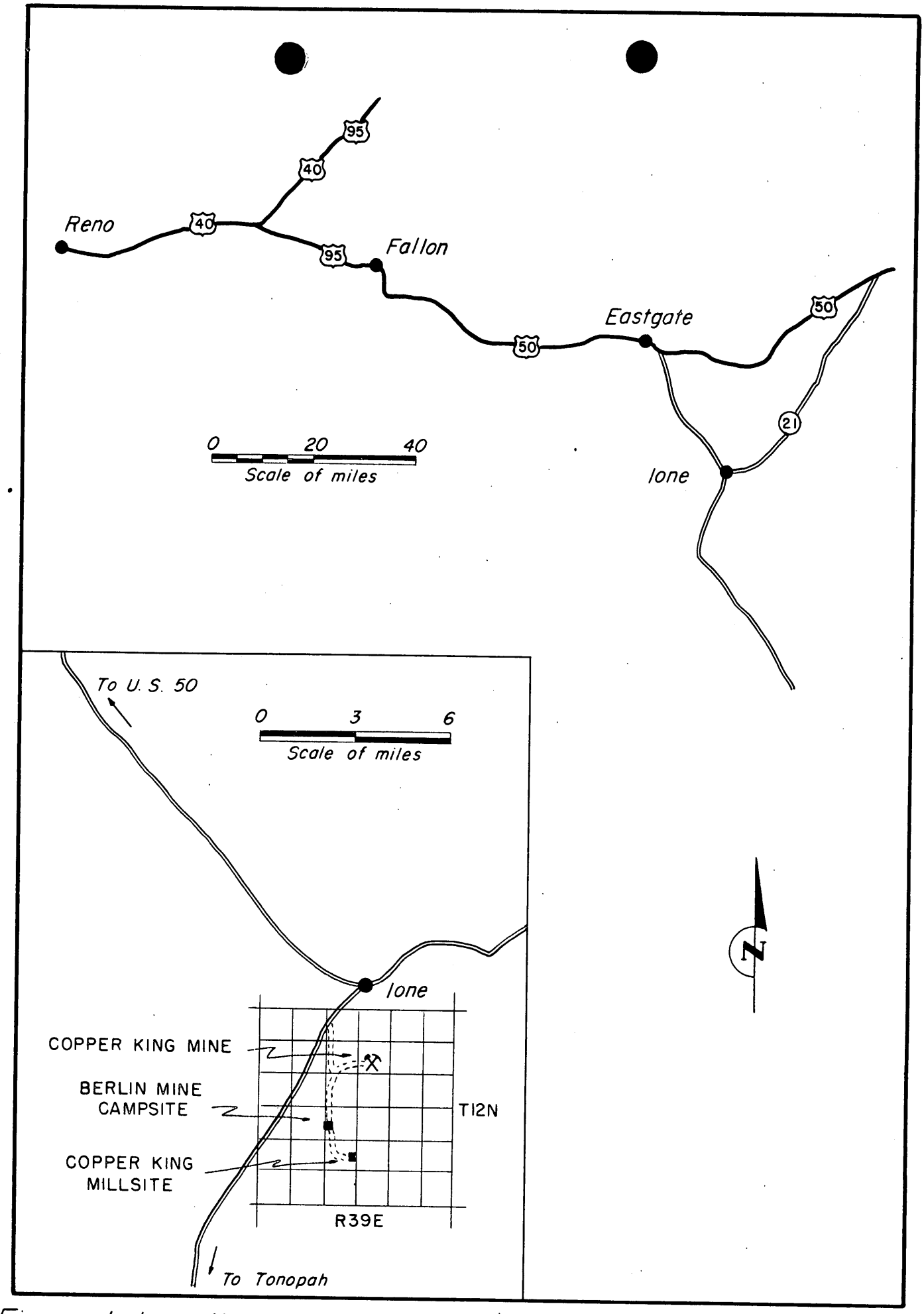

Figure 1-Location map, Copper King group, Nye County, Nevada

living accommodations can be had at the old abandoned mining camp-site of Berlin, which still has a few buildings left. Some groceries and minor supplies can be had at Ione which has one small general grocery store. The chief shopping center, however, is Fallon, Nev., which is about 27-1/2 miles distant from Berlin.

PHYSICAL FEATURES

The property is on the east flank of Ione Valley and the west slope of the Shoshone mountains at a mean elevation of about 7,500 feet. The terrain rises gradually from the valley floor and increases abruptly towards the crest of the range. The highest point in the range in the vicinity is Mt. Berlin which rises to an elevation of 9,081 feet and is about 1-1/2 miles southeast from the mine location. The area is covered with an abundant growth of pinon and juniper trees, and is semi-arid (fig. 2). Precipitation is mainly in the form of snow. Summers are hot and dry with moderate to cold winters.

HISTORY AND OWNERSHIP

The Union Mining District has been an old producer of gold and silver ores. Ore discoveries date back to 1863. Since 1912, however, the district has been on the decline and only intermittent production has been achieved.

The Copper King deposit was located by early prospectors when the district was in its boom days. They sank a short inclined shaft in their quest for gold. It is rumored that the bottom of the shaft encountered copper mineralization and the work was abandoned. They also made a shallow open cut about 130 feet northeast from the shaft on an outcrop, which is now at the portal of the adit of the present workings;

this was also abandoned due to low gold values.

The property was idle until 1939 when the present owner, Harold F. Newman, Reno, Nev., relocated the ground and staked out two claims known as the Copper King and Copper King No. 1. He also located a millsite claim about 3 miles (airline) southerly near a water supply. Since taking over the property, Mr. Newman has driven the adit for a distance of 120 feet and built a small flotation mill.

MINE DEVELOPMENT

The deposit is developed by an adit driven into the hillside (fig. 3), along the strike of a mineralized copper showing for a distance of 120 feet. The old inclined shaft located about 130 feet southwesterly (fig. 4), from the portal of the adit, which was sunk by the early prospectors, is reported by Mr. Newman to be down to a depth of 70 feet. It is however inaccessible at the present time; the shaft timbers have rotted and fallen down to the bottom along with cave material and only about 40 feet of the shaft is now open. Several shallow cuts on surface outcrops supplement the development of the deposit.

About 2-1/2 miles of road was also bulldozed out on the hillside approaching the adit by Mr. Newman.

MILL EQUIPMENT

The concentrating plant is housed in a frame building 20- by 80-feet (figs. 5 and 6), set on a hillside. It is capable of treating 16 ton of crude ore per 24 hours and comprises a straub 6x6 jaw crusher, 20-ton fine ore bin, straub feeder, straub ball mill with and screen discharge at 40 mesh, Denver reagent feeder, one Denver No. 15 flota-

tion cell, one Wagergren flotation cell, settling tank and drier. Flow sheet is shown by figure 7.

The crusher is powered by a 9 horsepower Wisconsin gasoline engine; the flotation cells are operated by a 27 horsepower Kawasaki gasoline engine.

DESCRIPTION OF THE DEPOSIT

The mineralization occurs in a badly fractured shear zone roughly striking N. 60° E., within limits of 80 to 110 feet in width. A granodiorite dike strikes transversally across the shear zone near the portal of the adit.

The zone itself is a highly silicified andesite, badly fractured and sheared. Mineralization occurs in relatively narrow shear zones within the general broad belt, varying from a few inches to several feet in thickness. Two main zones are apparently evident within the belt. One is at the old shaft and the other more or less paralleling the adit, both having the same steep dip to the southwest and a more or less parallel strike. Numerous cross-fractures, as noted in the adit, occur along the shear zone, some of which show movement, off-setting the zone in a somewhat echelon pattern. Some of the cross-fractures also contain some mineralization. The face of the adit is only about 60 feet below the surface and is still in the oxidized section of the zone. However, some sulphide mineralization is noted in some sections in the adit.

The old shaft, about 180 feet southwesterly from the portal of the adit, was inaccessible for observation or sampling. However, the material on the dump consisted of silicified andesite, considerable

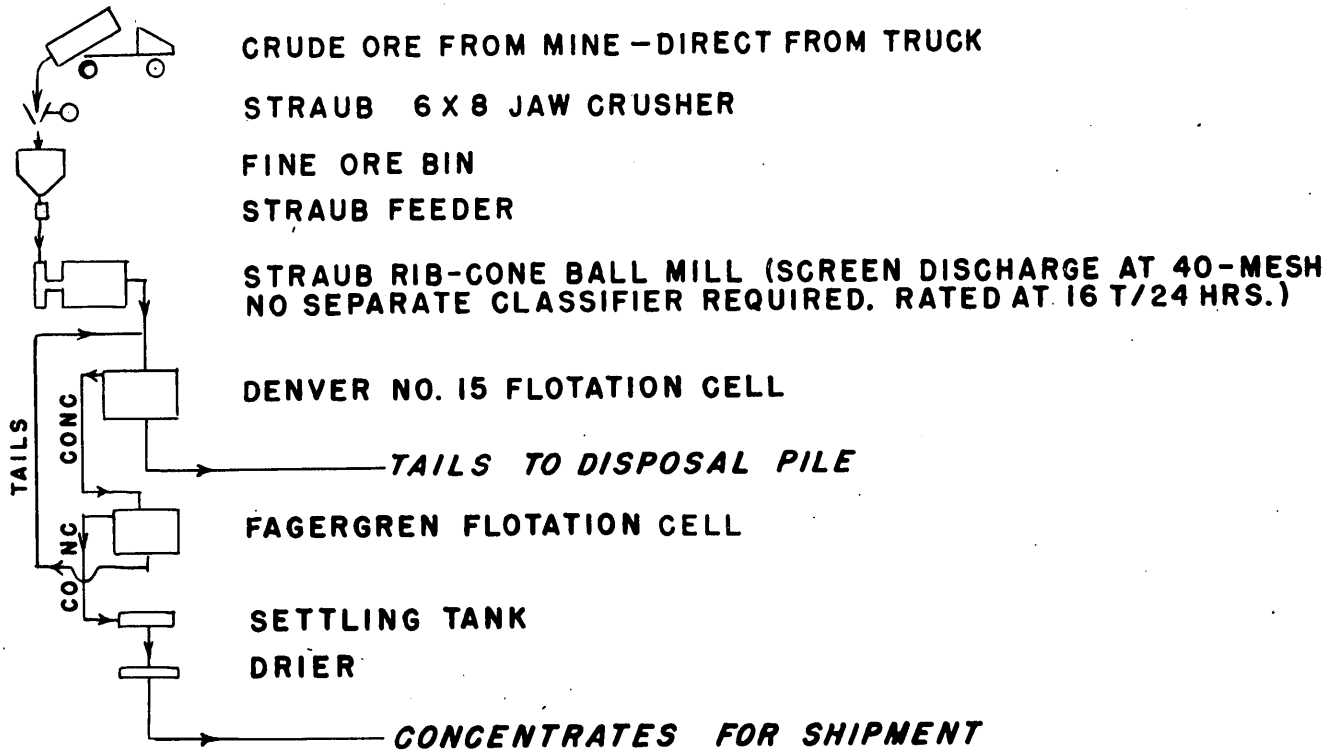

FIG. 7 – MILL FLOW SHEET AT COPPER KING GROUP, NYE COUNTY, NEV.

red limonite formation and a small pile of sorted green oxide and sulphide copper ore. The rocks indicate that the shaft penetrated a mineralized shear or fracture zone. The attitude of the mineralization in the shaft could not be determined.

Some of the small surface open cuts or pits also contain green copper oxide mineralization and small amounts of chalcopyrite along fractured shear zones, but continuity of mineralization does not seem apparent.

Copper mineralization occurs chiefly as malachite with lesser amounts of azurite, chrysocolla, chalcocite and chalcopyrite in succession. Very little pyrite was noted in the deposit.

From the limited amount of development work done, it is not known whether other mineralized fracture-shear zones exist within the general area, however, other zones could normally be expected. The workings are too shallow to show a transition stage from oxide to sulphide in order to predict whether dense sulphide mineralization would be encountered at depth.

The property was examined by the American Smelting and Refining Company in September 1948. A geological and topographic map (Fig. 8) was made by one of their engineers. The map was checked in the field and appears to be adequate. A copy of their report was unobtainable.

SAMPLING

The American Smelting and Refining Company sampled the property thoroughly. Their assays are also shown on figure 9. In comparison with the field examination, the assays are reliable, however, six check samples were taken in the field as shown by figure 9. A weighted

average of 24 samples in the ore zone contains 2.07 percent copper over an average width of 8.0 feet.

THE PROGRAM

No work has been done to block out ore reserves. Only about 88 feet of drifting and 55 feet of open cut at the portal constitute the development of the adit. Figuratively speaking, the adit is 120 feet long, the last 62 feet of which is in a mineralized cross-fractured shear zone. The indicated ore has been estimated by extending the mineralization 60 feet further ahead of the face of the adit and 50 feet downward and upward to within 15 feet of surface; the inferred ore has been extended 60 feet further beyond the indicated ore. A tabulation of the ore reserves are as follows:

	Width	Above adit	Below adit	Total (tons)
Indicated ore	8.0	700	1300	2000
Inferred ore	8.0	500	2800	3300
Totals	8.0	1200	3700	5300

RECENT MINING ACTIVITIES

The owner has been taking down some of the back of the drift in the ore zone and combining it with sorted ore found at the dump from the old shaft, and gathering material from the small shallow surface pits and shipping the ore direct to the smelter of the Bennecott Copper Corporation at McGill, Nev. He also put one batch through the concentrator and shipped the concentrates to the same place for treatment. A tabulation of the shipments are as follows:

Lot No.	Date	Tons	Oz/Ton Au	Oz/Ton Ag	Percent Cu	Percent SiO_2	Percent Fe	Percent CaO	Percent Al_2O_3	Percent S	Percent H_2O	
1	12/11/50	0.261*	0.02	2.69	0.76	67.1	11.5	2.1	3.6	0.1	2.10	Crude ore
2	2/8/51	2.410*	0.10	1.39	7.78	64.3	13.9	0.0	2.8	1.1	1.99	" "
3	3/11/51	1.760	1.00	10.75	7.29	52.9	9.6	0.1	11.7	2.9	5.30	Concentrates

* Sorted ore.

Based on smelter settlement rates as follows: 97% of Gold content at $32.097 per ounce; 92.5% of Silver content at $0.[illegible]; 100% of copper content at $0.269 per pound, less $0.035 per pound and less 10 pounds per ton to cover smelting losses; and smelter charge which is actual smelting costs plus 20%, estimated at $10.430 x 20% or $13.[illegible] per ton.

From a glance at the above rates and tonnage shipments, the total for Lot No. 1 amounts to $66.04 or $10.17 per ton; Lot No. 2 amounts to $75.24 or $21.91 per ton; and Lot No. 3 amounts to $93.[illegible] or $89.[illegible] per ton.

No mining or milling costs have been estimated due to the small scale operations. The haulage from the mine or mill to the Trail smelter, a distance of about 210 miles would probably cost about $0.04 per ton mile. Therefore, after deducting the mining and haulage costs from lots 1 and 2, the net returns would be very little. Lot No. 3 would fare better due to the higher gold and silver content, however, to this the milling costs would have to be added.

FUTURE MINING PLANS

The owner proposes to continue to drive the adit forward and the stope upward; sink a winze from the adit in the ore zone and establish levels for stoping upward between the adit and winze level; and, drive a crosscut towards the old shaft from the adit level to encounter the mineralized zone indicated from the ore on the dump from the old shaft (fig. 9). New mineralized zones may be encountered in the crosscut.

PREVIOUS MILLING OPERATIONS

Only one batch of copper ore was treated at the concentrator to

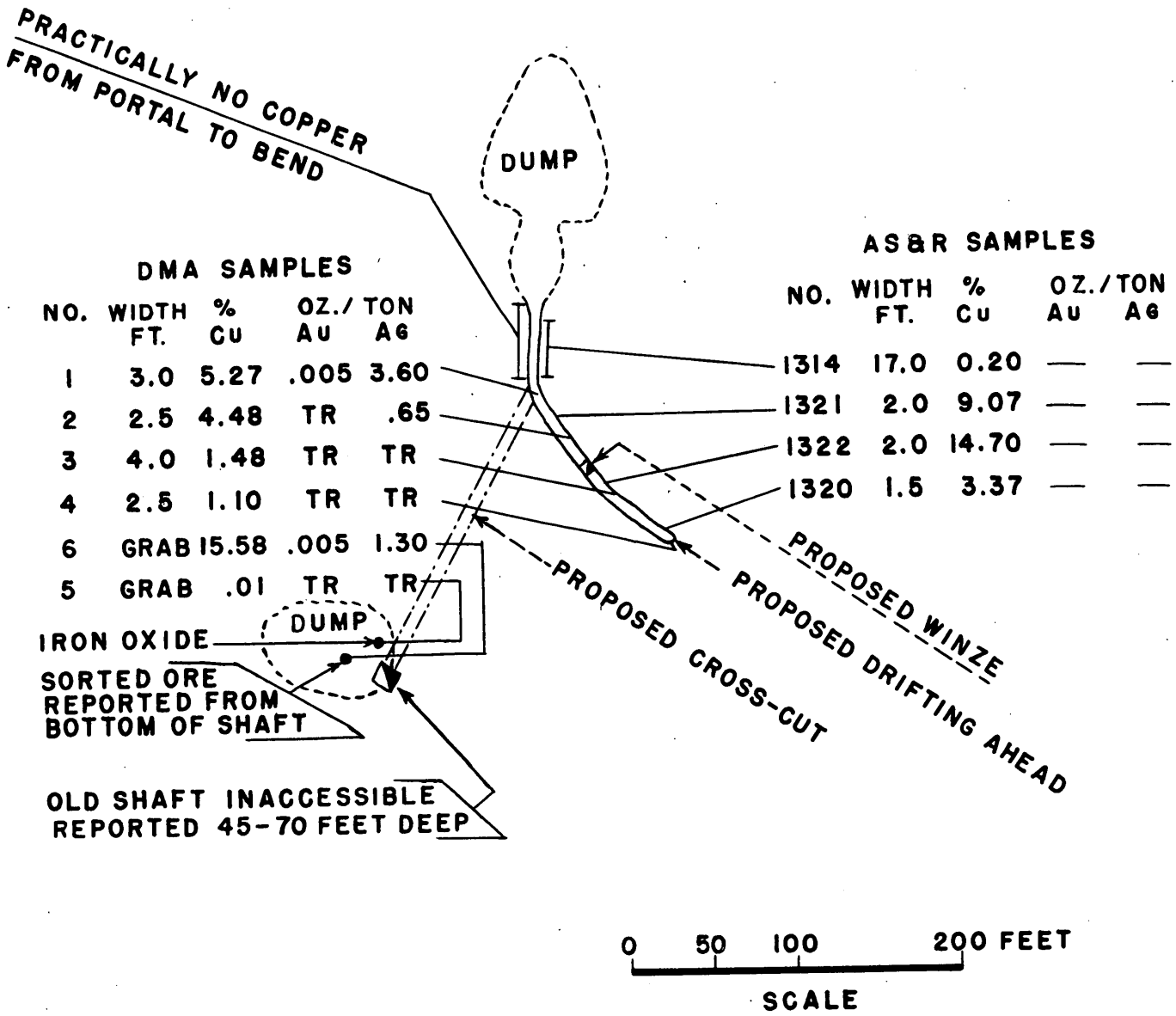

FIG. 9 - SHOWING SAMPLE ANALYSES AND PROPOSED DEVELOPMENT
COPPER KING GROUP, NYE COUNTY, NEV.

date. The flow sheet (fig. 7) shows the present arrangement at the concentrating plant. No accurate account of the amount of ore treated through the mill was made, however, 1.75 tons of concentrate was obtained. The following shows calculated results obtained:

Head (feed) assay	---- none made
Concentrates	7.29% Cu
Tails	2.00% Cu

Assuming 10 tons of feed, the concentrates would be 17.5% of weight.

17.5 x 7.29%	= 1.275	units of copper
82.5 x 2.00%	= 1.650	units of copper
100.0	2.925	units of copper (calculated heads)

The calculated heads check very closely to the weighted assays of the adit which was 2.97% copper.

$$\frac{1.275}{2.925} = 43.6 \text{ percent recovery.}$$

It is believed much of the copper oxides were lost in the tails.

FUTURE MILLING PLANS

The flow sheet as set up now (fig. 7) needs some revision. The owner, if granted a loan, proposes to add two more flotation units, build a crude ore bin at the mill and install a Diesel electric engine for power and lighting at the mill. The capacity of the concentrator at present is about 16 tons of crude ore per 24 hours. The capacity of the concentrator however would not be increased.

CONCLUSIONS

Indicated ore reserves are small and with the small amount of development work accomplished, it is hazardous to estimate any large tonnage of inferred ore. The mine and mill is a small scale operation. The owner has been doing most of the work alone and intends to proceed

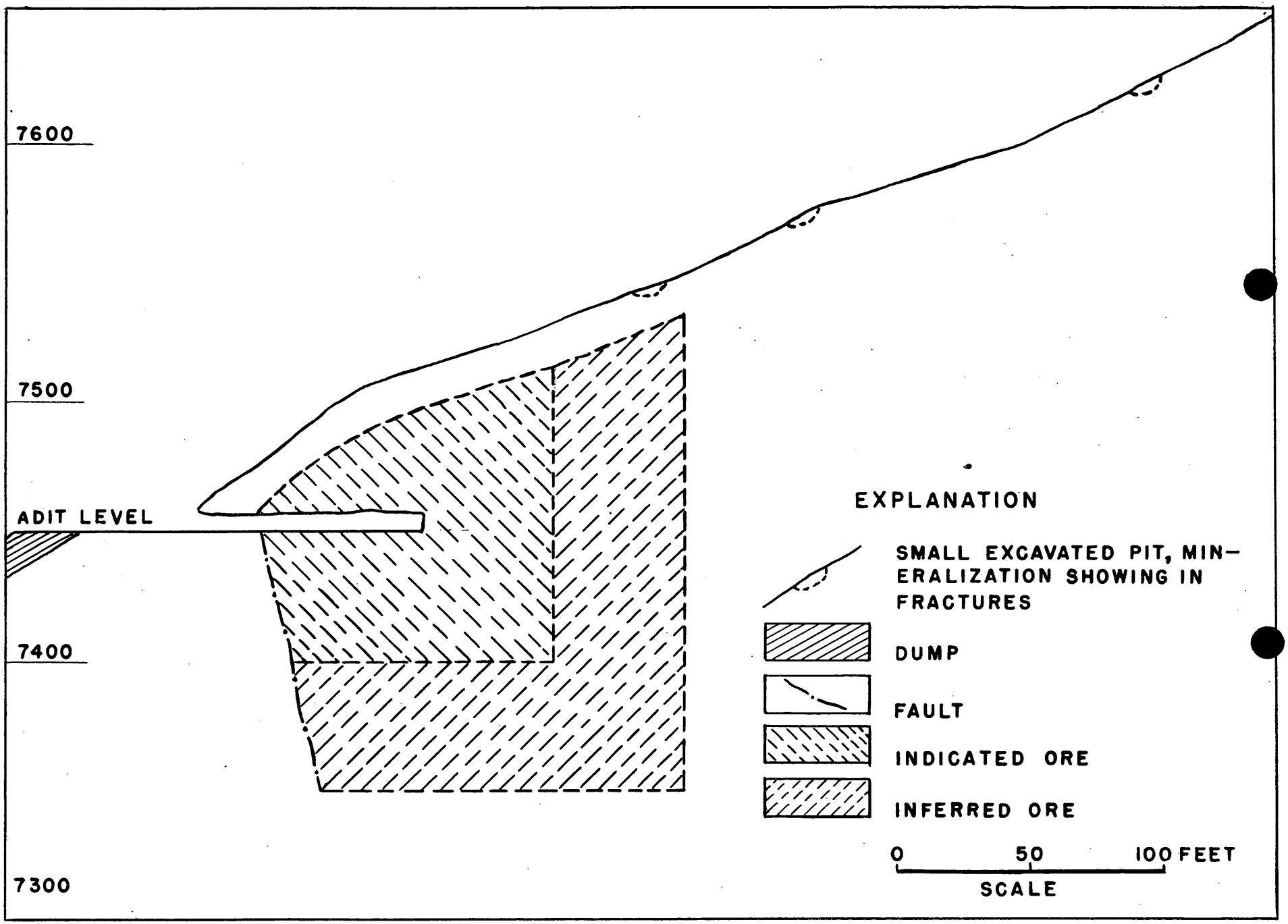

FIG. 10 – ORE INDICATIONS AT COPPER KING GROUP, NYE COUNTY, NEV.

cautiously and make the venture pay its way along with development and improvements. The haulage of low grade ore to the smelter at McGill, Nev., a distance of about 229 miles is not a profitable venture. Due to the nature of the ore minerals which are chiefly oxides, it is doubtful if flotation methods alone will improve mill concentration. The low percent recovery of the mill run indicates that much of the copper oxides were lost in the tails and another flotation unit would not improve conditions much.

An exploration loan would be more feasible in order to find more ore reserves, and especially to get into the sulphide zone. If the ore continues chiefly in the oxide stage, a more elaborate concentrator would have to be built using flotation and leaching methods. Not enough ore has been blocked out to warrant installing such a plant.

The owner, however, is adverse to receiving an exploration loan on a matching fund basis, that is, with him contributing 50 percent and the Government contributing the other 50 percent. He is in the same predicament as most small prospectors, they do not have the money to match funds with the Government.

A visit to the property was made on May 28, 1951, accompanied by Mr. A. L. Engel, metallurgist, Region III, in order to study the milling problem and obtain a large sample for experimental metallurgical tests at the Reno laboratory. Mr. Engel's observations will be submitted later as a supplemental report to this investigation.

SUPPLEMENTAL MILLING REPORT

DRA-204, Copper King Group
Nye County, Nev.

A. E. Engel, Metallurgist
U. S. Bureau of Mines

June 7, 1951

(Copy)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Metallurgical Div. Rare and Precious Metals Experiment Station Reno, Nevada
Hydrometallurgical and Ore-dressing Branch
Box D, University Station

Region III

June 7, 1951

Re-O-2.60 Oxidized Copper Ore from Copper King Mine
Ione, Nevada

D.M.A. Project 204

This sample was taken from the mine, and represented ore that was intended to concentrate in the pla nt at present available, or after certain additional equipment was installed.

The ore is a highly altered silicious rock, containing iron oxides, copper carbonates, a small amount of copper sulfide, barite, and earthy material. No copper silicate mineral was noted, but stains in the earthy portion of the ore indicated its presence. Analyses showed:

Copper	7.44	percent	Gold	0.006	ounce per ton
Sulfide sulfur . . .	0.34	percent	Silver	0.60	ounce per ton

The practice at the mill included grinding the ore to minus 40-mesh followed by one-step flotation. This resulted in recovery of most of the sulfide minerals in the ore, but none of the copper carbonate minerals were recovered by the reagents in use at the mill. Apparently, the grade of this concentrate could be controlled by the operation of the single flotation cell and the amounts of reagents used, so that the use of the second flotation cell as a cleaner would not be necessary, unless the ore changed and carried a much higher amount of sulfides.

A preliminary flotation test was made on ore crushed to minus 8-mesh and then carefully stage-ground to minus 40-mesh. The reagents used were, in pounds per ton of ore:

Sodium carbonate	1.0	(to adjust pH to 8.2)
A.C. 301	0.025)	
A.C. 208	0.025)	added together
Aerofloat 15	0.05	
Z-6	0.05	
Cresylic Acid	0.05	

These reagents were in use at the mill.

Concentrates were produced, carrying 16.9 percent copper and 6.4 ounces silver per ton, representing 11.7 percent recovery of copper, 54.1 percent recovery of silver, in 5 percent of the original weight of ore. The tailings were full of copper carbonate grains, and carried 6.6 percent copper, and 0.65 ounce silver per ton.

Since only a small part of the copper was present as sulfide mineral, subsequent tests were made with reagents selected to recover the copper carbonates.

It was found that reagent A.C. 425, either alone or with sodium sulfide, did not recover any amount of copper carbonates. Oleic acid was also unsatisfactory, inasmuch as little selection for the copper minerals was achieved.

The most satisfactory results were achieved with the following procedure, while still maintaining the minus 40-mesh grind:

Conditioning with 1.0 pound sodium carbonate and 0.25 pound sodium silicate per ton of ore, to adjust pH to 8.2 and disperse colloids. (These reagents could be added to the ball mill.)

Flotation of sulfides with 0.05 pound Z-6 and 0.05 pound cresylic acid.

Flotation of carbonates with 10.0 pounds sodium sulfide, and 0.25 pound Aerofloat 25, added in increments of 1.0 pound sodium sulfide and 0.05 pound Aerofloat 25.

This procedure was very slow, requiring 30 minutes, but resulted in floating copper carbonates in a fairly high-grade concentrate without cleaning.

In other tests, it was shown that addition of either larger or smaller increments of sodium sulfide was ineffective.

The concentrates carried 23.3 percent copper and 3.5 ounces silver per ton, representing recovery of 64.3 percent of the copper and 70 percent of the silver in the ore in 20.7 percent of the original weight. No copper minerals were noted in the tailings. However, the recovery of copper was still low and a similar test was made on ore ground to minus 100-mesh using the same reagents and procedure.

Considerable improvement in results was achieved. The recovery of copper was increased to 73.4 percent, but silver recovery remained 71 percent. The concentrates contained 24.9 percent copper and 3.0 ounces silver per ton, with 22.1 percent of the original ore weight. Apparently, the copper remaining in the tailings was in extremely fine grained or earthy carbonate or silicate minerals, either unliberated by grinding, or unresponsive to flotation.

Conclusions:

The sample of ore studied required lengthy treatment to recover even 64 percent of the copper, which in turn would require the use of several more flotation cells than contemplated in the proposed alteration of the mill. The successful operation of this treatment entails a critical balanced use of the reagents and hence requires very close attention. Frequent variations in the nature and grade of ore which are usually prevalent in a small mill, would cause uneven operating conditions and poor results.

Grinding the ore to minus 100-mesh instead of minus 40-mesh resulted in about 10 percent increase in recovery of copper, but alteration of the ball mill screen to 100-mesh might result in a considerable decrease in grinding capacity.

The present equipment and flotation reagents are only adequate for recovery of copper sulfide minerals.

The proposed addition of one more large flotation cell even with installation of a better power plant, would not be suitable for treatment of ore of the type tested.

REGIONAL DIRECTOR

UNITED STATES
DEPARTMENT OF THE INTERIOR

BUREAU OF MINES
1415 U. S. APPRAISERS BLDG.,
630 SANSOME STREET,
SAN FRANCISCO 11, CALIF.

May 3, 1951

Memorandum

To: A. C. Johnson - Reno, Nevada

From: Regional Director, Region III

Subject: DMA-204, Copper King Group, Nye County, Nevada

Subject docket is attached. You will note from Tom Lyon's memorandum to me, dated February 26 (last paragraph) that he thinks the subject property possibly merits an exploration loan instead of a development loan and suggests that our field men discuss this with Mr. Newman.

Although I wrote Mr. Newman on March 26 that your discussion with him would be deferred until exploration requirements and application forms were received, I now find that Mr. Newman will not have to make another application but should merely indicate by letter to me that he would consider an exploration loan on a 50-50 matching basis.

As you have copies of the press releases dated February 20 and April 11 in your office, you should have no trouble in telling Mr. Newman details about exploration loans. Kindly take care of this matter as soon as you can and return the docket to me when it has served its purpose.

H. C. Miller
Regional Director, Region III

Attachment (Docket file)

Copy to: Ward C. Smith, Geological Survey

Mr. Lyon was going off. Have in file & feed back.

Does not want matching funds

Has 2700 — 3-7% Cu. plus little gold & silver

15 tons of ore 24 hrs.

Need Mill & Probable of concentrating?

Wants money to hire labor & some improvements.

Good enough to justify work. asked for.

Ore average $20

March 26, 1951

Subject: IMA-204
Copper King Group
Nye County, Nevada

Mr. Harold P. Newman
Ione
Nevada

Dear Mr. Newman:

Reference is to your letter dated March 22, concerning an investigation of your property by our engineers.

Mr. Lyon advised us that there is some question if your property warrants a production loan but possibly merits an exploration loan. As we were instructed to have our field men discuss this with you, we have deferred our field investigation until we receive our supply of regulations and application forms pertaining to exploration loans, which would permit our field engineers to have something tangible about which to talk to you.

The forms are expected within a week or ten days. When they arrive, steps will be taken to have an engineer from Reno contact you and arrange a convenient time for the field examination.

Sincerely yours,

H. C. MILLER

H. C. Miller
Regional Director, Region III

HCMiller:am

Files
Chrono

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED
MAR 23 1951
SAN FRANCISCO, CALIFORNIA

Ione Nevada
March 22,1950

Mr. Harold C. Miller
Regional Director
Bureau of Mines
1415 U. S. Appraisers Bldg.
San Francisco, California

Refer to	Noted	Date
Answered		

Re: Docket No. DMA 204

Dear Mr. Miller:

I have a letter dated March $7th, from Mr. Tom Lyon, Acting Director Supply Division Washington D. C. stating an engineer would be out shortly to go over my property in regards to my request for a loan.

To date I have had no word in regards to the engineers visit and I find it necessary for me to make a trip to the smelter with some concentrates. I have put this off expecting to hear something at any time, as I want to be there when the engineer arrives, so if you will kindly advise as to when I can expect the engineer I will make my plans accordingly.

Very truly yours
Harold P. Newman
Harold P. Newman

DEPARTMENT OF INTE
BUREAU OF MINES
REGION III
RECEIVED
MAR 22 1951
SAN FRANCISCO, CALIFORNIA

102 Old Mint Building
San Francisco, California

Refer to	Noted	Date
Answered		

March 21, 1951

Mr. Ralph J. Roberts
U1 S. Geological Survey
Room 307, 320 South Main
Salt Lake City 1, Utah

Subject: DMA-204, Copper King Group, Nye Co., Nevada.

Dear Ralph:

The docket came into San Francisco, with a letter of transmittal indicating that neither the reserves nor the owner's engineering figures were likely to stand the test of critical examination. Mr. Miller and I agreed that the docket should go to Mr. Johnson at Reno. I anticipate an unfavorable report from the examining engineer. If it turns out that his opinion is favorable, however, we will send a geologist from here to check the extent of the reserves unless you have a man in the neighborhood. Action on the geologic examination, if any, would be after May 28.

Sincerely,

W. S

Ward Smith

DMA-204, Copper King Group
Reading
cc to H. C. Miller
A. C. Johnson

WCS: smd

Exec. Off. F. T, Reg. III

Refer to	Noted	Date
	Well	4/2
Answered		

DEPARTMENT OF INT
BUREAU OF MINES
REGION III
RECEIVED
APR 2 1951
SAN FRANCISCO, CALIFORNIA

Mr. Lyon
Ione Nev.
March 17, 1951

Defense Minerals Administration
Washington 25, D.C.

Re Docket No. DMA-204

Dear Mr. Lyon:-

Thank you for your letter of March 7, stating an engineer would be sent out to look at my copper property.

I appreciate your kind consideration in this matter.

Yours very truly,

/s/ Harold P. Newman

Copy

COPY

copy

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

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED
MAR 12 1951
SAN FRANCISCO, CALIFORNIA

February 26, 1951

Air Mail

Memorandum

To: Executive Officer, DMA Field Team, Region III,
1415 U. S. Appraisers Building,
San Francisco 11, California

Refer to	Noted	Date
Answered		

From: Copper Commodity Committee

Through: Operating Committee

Subject: Field Examination, Loan Application
Harold P. Newman, Copper King Group, Nye County,
Nevada, DMA-204

It is requested that you arrange to have made a field examination and report on the technical and economic feasibility of the subject proposal. Copies of the application (NSRB-146 Form) and related correspondence are transmitted herewith. You will note that applicant has been informed of the requested field study.

We call your attention to the small tonnage of "ore in sight," and the indefinite reserve of probable or indicated ore, on which the proposal hinges as a production project. The applicant appears greatly to overestimate net returns, even if his estimates of mining cost, milling cost, and grade of ore and concentrate be accepted, which is also dubious. We should have been inclined to deny the application except for lack of Bureau or Survey reports on the property, and if it were not evident that applicant is going ahead and making a small production.

Possibly, the property merits exploration, if not a production loan. If so, your field men should discuss this with Mr. Newman. We assume that by the time they call on him they will be informed of the details of the Defense Minerals Administration exploration program.

Hold for [illegible]

Tom Lyon

Tom Lyon, Chief
Copper commodity Committee

Enclosures

(See next page)

Approved:

C O Mittendorf
Acting Chairman, Operating Committee

Samuel B. Moon
Member, Bureau of Mines

T. P. Thayer for O N Rove
Member, Geological Survey

Copy to: Executive Secretary
Copper Commodity Committee
File

February 26, 1951

Re: Docket No. DMA-204

Mr. Harold P. Newman
Ione, Nevada

Dear Mr. Newman:

Thank you for your letter of February 7, 1951, giving us your estimates of ore reserves, costs and returns, in connection with your application for a loan of $20,000 to equip and operate the Copper King group near Ione.

After a careful study of the information submitted we have decided to request a field examination to determine the feasibility of your proposal. You should hear shortly from Mr. H. C. Miller, U. S. Bureau of Mines, San Francisco, who is Executive Officer of the Defense Mineral Administration Field Team in Region III, or from one of his staff, with reference thereto.

Very truly yours,

Tom Lyon, ~~Chief~~ Acting Director
Supply Division

CHJohnson:pf

Copy to: Executive Officer, DMA Field Team, Region III,
1415 U. S. Appraisers Building, San Francisco 11, Cal.
Executive Secretary
Copper Commodity Committee
Files

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

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED
MAR 12 1951
SAN FRANCISCO, CALIFORNIA

February 26, 1951

Memorandum

To: Executive Officer, DMA Field Team, Region III,
1415 U. S. Appraisers Building,
San Francisco 11, California

From: Copper Commodity Committee

Through: Operating Committee

Subject: Field Examination, Loan Application
Harold P. Newman, Copper King Group, Nye County,
Nevada, DMA-204

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We call your attention to the small tonnage of "ore in sight," and the indefinite reserve of probable or indicated ore, on which the proposal hinges as a production project. The applicant appears greatly to overestimate net returns, even if his estimates of mining cost, milling cost, and grade of ore and concentrate be accepted, which is also dubious. We should have been inclined to deny the application except for lack of Bureau or Survey reports on the property, and if it were not evident that applicant is going ahead and making a small production.

Possibly, the property merits exploration, if not a production loan. If so, your field men should discuss this with Mr. Newman. We assume that by the time they call on him they will be informed of the details of the Defense Minerals Administration exploration program.

/s/
Tom Lyon, Chief
Copper commodity Committee

Enclosures

Approved:

T. O. MITTENDORF

Chairman, Operating Committee

LOWELL B. MOON,

Member, Bureau of Mines

/s Clay N. Rowe

Member, Geological Survey

Copy to: Executive Secretary
Copper Commodity Committee
Files

Harold P. Newman
Ione, Nevada.

Additional Information.

1. My "Copper King" group of claims is situated 3 miles south of Ione, Nevada.

   I own those claims and have had possession of them since 1939.

2. The mineral I am developing is copper ore. My showings are extensive. See map. Sampling on map not complete because all obvious ore not shown on map.

3. The dimensions of ore deposits not known, but I have two definite enriched zones, showing widths from 3 feet to 17 feet and length over 500 feet.

4. 5. History of this deposits goes back about 70 years. The origional prospectors were looking for gold and sank the shaft about 70 feet, hitting a deposits of copper near the bottom. They abandanded their efforts and the property lay idle until I took it over in '39. I drove the X cut into the first enriched zone and then drifted on the higher grade deposits as shown on the map.

6. I have just completed a road to the property and have one shipment of ore at the smelter at this time. I hope to have another one out by the end of this month (Dec.) however its slow business doing it by hand.

7. The U.S. Geologists have been working in this area for several years under Dr. Muller. They have looked over this copper deposits and all gave favorable reports. At the present I am waiting for a reply from Stanford University where Dr. Muller teaches, on various rock classifications.

8. My property requires a complete set of mining equipment so that I can drive 120 feet of X cut over to the bottom of the shaft. In so doing, I expect to encounter another enriched zone about half way to the shaft. I plan to extend the present drift on ore another 2 or 3 hundred feet. I can produce copper right from the start, which should help to carry the payroll and at the same time do the required X cutting.

Harold P. Newman
Ione, Nevada.

Additional Information.

9. My plan at present is to ship all 10% copper ore direct and the ore below 10% will go to my mill providing I can obtain some assistance here also. I have a complete flotation mill of 15 ton capacity in operation, but more cell capacity and better power would be a big improvement, to take care of this copper ore. This way I will be able to produce a fair amount of copper at a minimum of expence.

10. This type of project would require complete mining equipment, which I have located and could get at a reasonable figure providing I could act within a reasonable length of time. Transportation in the form of one pickup truck Ford F 2 and a Ford F6 Dump Truck, eight ton capacity, would be required. This mining equipment and enough funds to carry on until returns come in would be a probable $10,000.

The mill would require a diesel electric plant plus motors and 2 more Denver 15 flotation cells. The cost of this equipment would be around $10,000 dollars or less.

Taking the situation all in all, 80% of the expenditure would be in equipment which would have a definite resale value. Labor and dead work could be taken care of out of earnings from production.

Man power would be essentially 3 miners and one mill man to start with. As development progressed probably 2 more miners and 2 mill men would be the extent of the operation.

COPY

Ione, Nevada,
February 7th. 1951

Bureau of Mines
Washington 25, D. C.
Attn: Mr. J. K. Richardson
Chief Copper Branch

Re: Docket No. DMA-204

Dear Mr. Richardson:

I hope the enclosed information will help answer your letter of January 29th.

Everyone has had some complaint about the 12 page forms for mining loans and I spent two days in Reno, going from Bureau to Bureau trying to complete said forms.

I am in hopes that an engineer can make an inspection of my mine and Mill. I am of the opinion that with further development work the property can be made into a large lower grade property, Just how large only further development work will tell. An engineer seeing the property will have a much better conception than all the letters I can write.

I hope the added information will be of help and if there is more information required please advise.

Very truly yours,

/s/ Harold P. Newman
Harold P. Newman

COPY

DM-204

Mr. Harold P. Newman
Ione, Nevada.

Ownership.

I alone own the mine and Mill.

Operating Costs.

I figure it will cost $12 per foot for development work. Drifting on ore and extracting and sorting ore will cost about $3 per ton. Milling at present time costs $5 per ton but with Diesel Electric plant installed the cost could be cut and extraction raised so that the costs will drop to $3.50 to $4.00 per ton.

Figuring costs on 10 tons per day.

Returns.

2 tons sorted ore at $63.60	$127.20
8 tons to mill—(1 ton Concentrates)	169.60
Total	$296.80

Costs

Development Work	$70.00
Mining $3.00 per ton	30.00
Milling 8 tons at $5.00	40.00
Total	$140.00
Returns	$156.80

These costs are based on present day prices and proper equipment and as development work encounters better ore at bottom of shaft, tonnage will be substantially increased, with a tendence to lower costs. Price of Cu. figured at smelter return of 21.2 cents per pound.

Loan Repay.

At these figures of production the loan would be repayable in two years time.

Loss estimates - I can not estimate loss because I have outlined the program so that I shall make ore pay for development work and expect not to have any deficiencies. I do not believe there is any reason to have a loss with the ore body I am developing.

Capitol Costs.

I am asking for $20,000 to put this property into production and out of this amount $15,000 will be put into Capitol equipment with a definite resale value. If I can get action soon enough I can lower this figure as there will be some good used equipment available at present at lower cost than estimated.

Mr. Harold P. Newman
Ione, Nevada

Re: Docket No. DMA-204

Ore in Sight.

On enriched zone "A" there are 1000 plus tons of ore blocked out with assay values from 6 to 20% CU.

Have returns from Lot "I" which was mine run, assay 6.74% Cu.

Lot 2 at the smelter at present. This lot I sorted and shipped a higher grade product. Expect assay to go about 15% Cu.

Rejects from sorting I am now preparing to run through mill. Mill feed averages 5.2% Cu. Concentrates I expect to bring up to 35 to 40% Cu.

Probable ore.

Tonnage on probable ore is difficult to say until further development work is done.

Cuts "C" and "D" are down through the oxide zone and bottoms in sulphide. Assay values in the sulphides run pretty close to 15%. Not sufficient work done to actually show widths in either cut. I want to drift from "A" on ore up to "C" and "D".

Shaft B encountered sulphide ore below the 50 foot mark and widened out to 17 feet in width with assay values from 10 to 22% Cu.

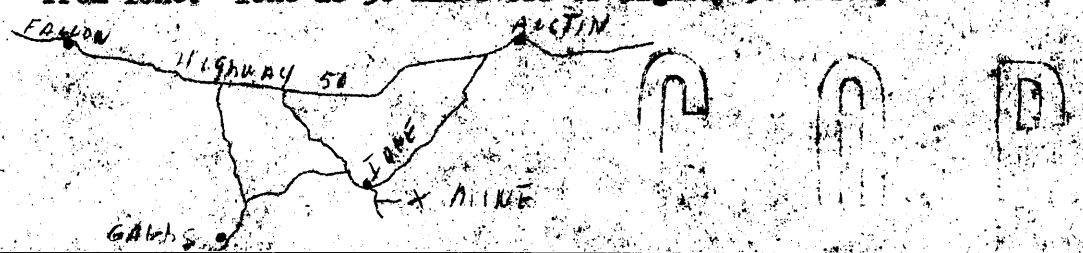
Access.

All working are open except shaft "B" and the recent snows caused timber at bottom to give way making it unsafe at this time.

I want to drive an X cut from "A" over to "B" a distance of 120 feet. This will expose considerable ore.

Location.

The mine is located in Nye County, Nevada, three miles from Ione. Ione is 30 miles off of highway 50 south.



COPY

January 29, 1951

Re: Docket No. DMA-204

Mr. Harold P. Newman
Ione, Nevada

Dear Mr. Newman:

Your application for a loan of $20,000 to equip your Copper King Mine and Mill near Ione, Nevada, and to carry on development and mining, has been considered by the Copper Branch.

We cannot make a favorable recommendation on the basis of the information submitted. The chief reason is that it is not made clear that the ore in sight, or probable, is of sufficient grade and tonnage to support a profitable operation. On this point, as also in regard to such things as location, ownership, access, operating costs and capital costs, and profit and loss estimates, we need the same kind of detailed information required by the R. F. C. in its loan applications, with which I should judge you must be familiar.

I shall await your reply before acting further on this application.

Very truly yours,

J. K. Richardson, Chief
Copper Branch

CRJohnson:pf

Copy to: Executive Officer, DMA Field Team Region III,
1415 U. S. Appraisers Building, San Francisco, California

Executive Secretary
Copper Commodity Committee
FILES

COPY

January 11, 1951

Re: Docket No. DMA-204

Mr. Harold P. Newman

Ione, Nevada

Dear Mr. Newman:

This acknowledges receipt of your application for a loan to develop and equip the Copper King group of mining claims, in Nye County, Nevada, for production of copper. The application has been assigned the above docket number and referred to the Copper Branch for consideration.

Very truly yours,

J. K. Richardson, Chief
Copper Branch

CHJohnson:ba

Copy to Mr. Strobel
Copper Commodity Committee
Files

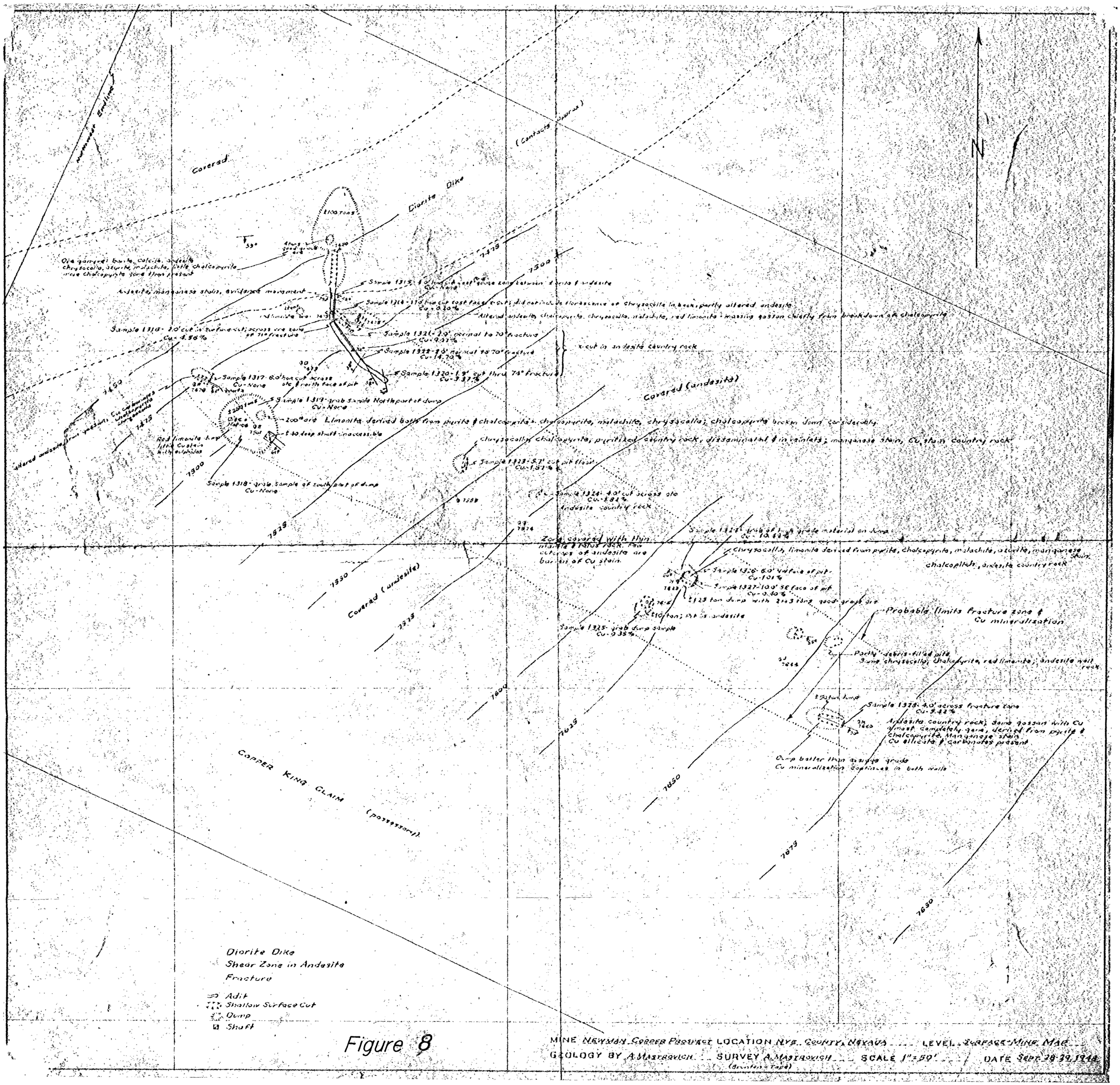


Figure 8

MINE Newman Copper Prospect LOCATION Nye County, Nevada LEVEL Surface Mine Map

GEOLOGY BY A. Mastrovich SURVEY A. Mastrovich (Brunton-Tape) SCALE 1" = 50' DATE Sept. 28-29, 1948