UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

OFFICE OF
REGIONAL DIRECTOR

REGION IV

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

May 25, 1951

Memorandum

To: Landon Strobel, Exec utive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: DMA Docket 185, Monsoco mine, Tooele county, Utah

We are attaching the original and two copies of the report on DMA Docket 185, Monsoco mine, Tooele county, Utah.

The Field Team concurs with the recommendation that the loan be denied.

The original brochure is enclosed.

J. H. East, Jr.

J. H. East, Jr.

A. H. Koschmann

A. H. Koschmann

Attachments
Original by air mail
Two copies by regular mail

Copy to: DMA files ✓
Koschmann
Allsman
Wilson
Roberts

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

DEFENSE MINERALS ADMINISTRATION

REPORT ON EXAMINATION BY FIELD TEAM
REGION IV

DMA Docket 185, MENDOCINO MINE,
TOOELE COUNTY, UTAH

Stephen M. Wilson
Mining Engineer
U. S. Bureau of Mines

Roscoe M. Smith
Geologist
U. S. Geological Survey

Mining Division
Region IV

May 23, 1951

Memorandum

To: DMA Field Team, Region IV

From: Chief, Mining Division

Subject: DMA Docket 185, Manacco mine, Tooele county, Utah

I have reviewed the reports on the above property and note that the proposed exploration is unlikely to develop sufficient ore to repay the government portion of the cost of exploration and the amount of ore developed is likely to be insufficient.

I agree with the investigators that the loan should be denied.

Paul T. Allsman

P. T. Allsman

May 16, 1951

Memorandum

To: Paul T. Allsman, Chief, Mining Division, Region IV

From: Chief, Utah-Wyoming Branch, Mining Division

Subject: Mill Docket 165, Bonanza Mine, Tooele County, Utah--Your memorandum of May 4, 1951.

I have reviewed the analysis of the subject report as shown in your memorandum and submit the attached supplement which may aid you in conclusions on the property.

Stephen R. Wilson

MOROCCO MINE, TOOELE COUNTY, UTAH

SUPPLEMENT TO ENGINEERING REPORT BY STEPHEN R. WILSON

The most recent settlement sheets on ore shipments were based on the following quotations: lead, 17 cents per pound; copper, 24 cents per pound; gold, 35 dollars per ounce; silver, 90 cents per ounce. The gross value of the average ore shipped, on this basis, is $48.90 per ton. The gross value of the anticipated 2,000 tons of new ores, assuming an average assay value the same as that shipped, is $97,800. Deducting the amount for exploration, $46,000, leaves a balance of $51,800, or on a 2,000 ton basis, $25.90 per ton.

Recent smelter settlement sheets show the following charges against the shipments:

Smelting charge (average)	$ 7.50 per ton
Trucking to smelter	8.00 per ton
Sampling and assaying (average)	1.50 per ton
	$17.00 per ton

Payment for contained metal in the ores using the average assay value of ores shipped, and settlement of recent shipments, is as follows:

Lead 2.9 percent-58 pounds Deduct 50 percent and pay for 29 pounds @ $.10533	$ 3.05
Copper 6.4 percent-128 pounds Deduct 15 pounds and pay for 113 pounds @ $.21108	$23.85
Gold .019 ounce @ $21.61925	$ .40
Silver 4.5 ounces Pay for 95 percent @ $.90	$ 3.60
Total payment	$31.00

The net smelter return for the average ore will be approximately $18.00 per ton ($35.00-$17.00). Direct mining costs, maintenance of camp in an isolated area and repair of equipment will require at least $10.00 per ton, leaving a maximum net of $8.00 per ton. Thus, if 2,000 tons are

shipped, a net of $16,000 can be expected under the present status of prices and wages. This amount is insufficient to match the applicant's $23,000, his share of the proposed $46,000.

Return of $23,000 to the government on the maximum royalty of 5 percent on 2,000 tons of ore ($36,000 net smelter), would not be possible.

Mining Division
Region IV

May 4, 1951

Memorandum

To: S. R. Wilson

From: Chief, Mining Division

Subject: DMA Docket 185, Hoover Mine, Tooele county, Utah

The report on the above property has been reviewed. In making a rough analysis of the report, it indicates that for an expenditure of $16,000 ore of about the same quantity and grade as already produced might be found. This would have an approximate gross value of less than $100,000 in 2,000 tons of ore. Deducting the $16,000 for exploration leaves about $85 a ton. Considering the high cost of mining, trucking, high metal losses and treatment charges on oxidized ore, the operation would undoubtedly result in a loss. However, since the government would be contributing $32,000 or $16.50 a ton, considering 2,000 might be developed a small profit to the operator might be realized.

I suggest you analyzing the costs and smelter schedules on recent shipments and determine whether my rough analysis is true or not. Maybe my assumptions are too optimistic.

I am not returning the report and suggest your analysis be in the form of a supplement.

F. T. Allemann

Attachments
FTA/ab
cc-Gen files

Room 307, 320 South Main
Salt Lake City 1, Utah
19 April 1951

Memorandum

To: Regional Director, Field Team IV

From: Acting District Supervisor, Utah-Nevada District

Subject: Docket DMA--185, Monocco Mine, Gold Hill, Utah

Enclosed are twelve copies of a report on the Monocco Mine, Gold Hill, Utah by Roscoe M. Smith. The report contains sections on geology, ore deposits, and ore reserves. A geologic map and section of the mine area accompany the report.

Mr. S. A. Wilson of the U. S. Bureau of Mines examined the mine in conjunction with the Geological Survey and is in general agreement with Mr. Smith's conclusions and recommendations.

I also concur in the conclusions and recommendations stated by Mr. Smith. The property is one that has been productive on a small scale, and may well continue to be productive. The geologic probability of making a significant discovery is small, however, and the deposit does not promise to add materially to Utah copper production. Accordingly, it is recommended that the application for exploratory funds be denied.

Ralph J. Roberts

Ralph J. Roberts

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By Roscoe M. Smith and Stephen R. Wilson

The Monocoo mine is in Tooele County, Utah, T. 8 S., R. 18 W., S.L.B.M., approximately 65 miles southerly from Wendover, Utah. The mine was examined April 5 and 6, 1951, by personnel of the U. S. Geological Survey and Bureau of Mines.

Intermittent production of copper-lead-silver ores from the property has yielded 2,015 tons of ore during the past 54 years, resulting in recovery of 259,269 pounds of copper and 118,297 pounds of lead.

Ores are found in limestone of the Permo-Carboniferous Oquirrh formation adjacent to a quartz monzonite stock. Small shoots or pods of ore are found along steep fissures and in limestone beds cut by mineralized fissures.

The mine contains no measured ore reserves. Suggested exploration may encounter new ore bodies similar to those that have been mined, but the probable production resulting from a successful exploration program is not expected to be sufficient to repay the proposed loan or to contribute significantly to the supply of critical metals. It, therefore, is recommended that the application be denied.

MOROCCO MINE, GOLD HILL, UTAH

Docket DMA-185

Geology

By Roscoe M. Smith
Geologist, U. S. Geological Survey

Geology

MONOCCO MINE, GOLD HILL, UTAH

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ILLUSTRATIONS

Figure 1. Geologic map of the Monocco Mine, Gold Hill, Utah.

Figure 2. Idealized Section through A-A' - Monocco Mine, Gold Hill, Utah.

GEOLOGIC REPORT ON THE

MONOCOO MINE, GOLD HILL, UTAH

Docket DMA-185

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

By

Roscoe M. Smith and Steven R. Wilson

The Monocoo Mine is located in Tooele County, Utah, T. 6 S., R. 18 W., Salt Lake Base and Meridian, about 60 miles south of Wendover, Utah. It was examined for Defense Minerals Administration on April 5 and 6, 1951.

Intermittent production of copper-lead-silver ore has yielded a little over 2,000 tons in the past 14 years from which about 259,000 pounds of copper and 118,000 pounds of lead have been recovered.

The ore is found in limestone of the Permo-Carboniferous Oquirrh formation near a large intrusive stock of quartz monzonite. Small shoots or pods of ore are found along steep fissures and in limestone beds cut by mineralized fissures. Primary sulfides have been almost completely oxidized to carbonates, sulfates, and oxides of the ore metals.

The mine contains no measurable reserves of ore. Proposed exploration from four places in the mine might encounter new ore bodies similar to those that have been mined, but the probable production resulting from a successful exploration program is not expected to be sufficient to fully repay the loan, or to contribute significantly to the supply of critical metals. It is therefore recommended that the application be denied.

INTRODUCTION

The Monocco Mine was examined April 5 and 6, 1951 at the request of the Copper Commodity Committee. Mr. W. C. Card, General Manager of the Monocco Mine supplied information on recent shipments of ore and on proposed development plans pertaining to increased mine production. A Brunton-tape survey and 40 scale map were made during the course of the examination (Figs. 1 and 2).

The mine is located in the Clifton mining district, Tooele County, Utah, T. 8 S., R. 18 W., Salt Lake Base and Meridian, on the northwest slope of the Montezuma Peak at an altitude of approximately 6800 feet. The property is owned by the Kimball Estate and is being leased to the recently formed Monocco Mining Company of which the applicant, Richard P. Kimball is an officer.

The mine is reached from Wendover, Utah south via U. S. Highway 50 for 28 miles and southeast over county road 28 miles to Gold Hill, Utah, thence south 3 1/2 miles to Clifton Flat, and thence approximately 3 miles on the main travelled road leading eastward from Clifton Flat. It is accessible with difficulty during winter months.

The tracks of the Deep Creek railroad shown on the topographic sheet, Gold Hill Quadrangle, have been removed. The nearest Post Office and rail service is at Wendover, a division point on the Western Pacific railroad. Ore is trucked to the American Smelting and Refining Company smelter at Garfield, Utah.

Production of ore from the Monocco Mine (Table 1) has been intermittent and limited to small shipments of hand-sorted ore yielding $25.00 to $50.00 per ton gross smelter return. (See American Smelting and Refining Company settlement sheet attached).

Table 1

Production from Monocco Mine, 1917-1951

Total Production of Crude Ore

Date	Dry Tons	Gold Ounces	Silver Ounces	Copper Pounds	Lead Pounds
1917	196	1	858	33,535	11,620
1918	535	—	1,602	112,444	2,282
1919	26	—	125	7,389	—
1920	29	—	180	6,473	—
1926	122	2	728	6,137	15,290
1929	37	1	285	8,649	—
1930	19	—	122	3,579	—
1931	24	1	151	4,862	—
1934	180	6	2,246	13,531	16,609
1935	203	7	3,403	13,297	22,888
1936	339	11	4,589	21,823	27,931
1937	112	3	759	10,364	7,786
1949	4	—	42	—	703
1950)	139	5	1,545	15,156	6,755
1950)	4	—	34	45	471
1951	46	1	537	1,985	4,962
Total	2,015	38	17,206	259,268	118,297
Average		Oz./ton	Oz./ton	Percent	Percent
		.019	8.5	6.4	2.9

GEOLOGY

In the region of Montezuma Peak two formations are exposed: the Oquirrh formation of Pennsylvanian and Permian age composed of interbedded limestones, sandstones, and dolomites about 8,000 feet thick; and an intrusive quartz monzonite stock of Tertiary age that covers about one-tenth of the quadrangle.

The beds of the Oquirrh formation strike north to northeast and dip gently eastward toward the contact with the quartz monzonite. Dikes of quartz monzonite extend westward from the stock into the sedimentary rocks. One such dike is exposed in the Monocco Mine workings.

Ore Deposits

The Monocco Mine is one of the group of copper-lead-silver ore deposits that has been subdivided by Nolan [1] into three groups: "...those associated

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[1] Nolan, T. B., Gold Hill Mining District, Utah; U. S. Geol. Survey PP 177, p. 103, 1935.

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with the arsenic ore bodies, those in the Oquirrh formation, and those characterized by barite in the gangue". As the Monocco Mine occurs in the Oquirrh formation it is properly classed in the second subdivision.

Structural control of the deposition is the result of the heterogeneous structure pattern imposed on the control by selective replacement of limestone. As shown on the map, mineralization has occurred along fissures of almost every possible attitude. The ore is localized along faults that strike northeast and dip steeply northwest and in places extends outward from the faults as much as 20 feet along thin limestone beds. The maximum observed length of ore shoots is 60 feet and the average thickness is less than 4 feet.

Ore minerals include chrysocolla, malachite, anglesite, cerusite, azurite, and "copper pitch" a mixture of copper oxides. No sulfide minerals were observed in place although a specimen containing galena was found on the dump. Distribution of the oxidized ore in fissures that have no apparent continuous relation to paths of descending ground waters suggests that oxidation and redeposition has occurred essentially in place.

Locally the limestone is altered to clay minerals. No consistent relation between ore and intensity of alteration was observed. Recrystallized limestone occurs in several places and appears to be the result of contact metamorphism above the sill of quartz monzonite that intrudes the limestone in the mine. Iron oxides that accompany the ore minerals were probably derived from pyrite.

Reserves

There are no blocked-out reserves in the mine. Production for the past six months has yielded ore of successively lower grade and all developed reserves have been extracted except for a very few tons that may be obtained by careful sorting of material from the peripheries of existing stopes. The last ore to be mined came from the drift off the bottom of the shaft.

Possible ore reserves that might be developed by a well-directed exploration program may not be expected to differ greatly in grade from those already extracted.

Proposed Exploration

Proposed exploration for which DMA funds are requested has not been precisely delineated by the applicant. Mr. W. C. Card verbally proposed four development plans listed in order of his preference:

1. Exploration in shaft

Proposal - Equip shaft (as proposed in application) and drive a crosscut SE from the 38 level to cut main fault. Follow fault to cut NE-SW fissures. If above work is successful in developing ore, then sink the shaft an additional 50 to 100 feet and develop another level.

Comment - Most of the ore body referred to in the application had been extracted at the time of the examination by one round of 17 holes. The size of the stope above the 38 level is 15 feet long, 5 to 8 feet wide and extends approximately 4 feet above the back of the drift. Not all of the rock extracted by this round was ore, and hand sorting was required to bring the rock up to shipping grade. Ore now left in the stope ranges from 6 to 12 inches wide.

Quartz monzonite is present about 1000 feet north of the workings, and probably underlies the workings at fairly shallow depth. As most ore bodies in the district bottom where they enter the quartz monzonite, plans for exploration below the bottom of the shaft should take this fact into consideration. It would be hazardous to plan development work even 50 feet below the bottom of the shaft without preliminary exploration.

A crosscut 280 feet long will be required to cut the fault and an additional 100 feet of drifting will cut any fissures that persist to this depth from the level above. This would be costly and it is doubtful whether sufficient ore would be found to pay for the work.

2. Exploration on adit level

Proposal - From the north drift raise on the vertical vein at the contact of limestone with quartz monzonite and follow mineralization upward toward old surface workings.

Comment - The surface is approximately 150 feet above the drift at this point. Ore bodies may occur in the block above the main stopes but there is no certainty that they will be of minable size.

3. Exploration on adit level - SE face

Proposal - Drift ahead about 500 feet (SE) on mineralization showing in present face to develop ore under the surface exposures of the 13 unpatented claims Silver King etc. Also raise approximately 100 feet on mineralization exposed in present face.

Comment - Both mineralization and structure exposed in this drift are weak and no ore was stoped from this section of the mine.

4. Exploration on adit level - SW face

Proposal - Drift south about 300 feet along main fault to develop claims as in proposal No. 3 and sink to pick up favorable bedding as may be required.

Comment - This proposal has the advantage of following one of the ore-control structures although no evidence was seen to demonstrate that this fault is a major or critical ore control. Proposal No. 1 would accomplish the same objective from a lower level.

Conclusions and Recommendations

Continued exploration of this property is expected to yield new ore bodies of small size and good grade similar in size and shape to those previously extracted.

All of the four proposals for exploration are believed to have merit insofar as the finding of new ore bodies is concerned. It is not believed, however, that any ore body that may be discovered is likely to return much more than the cost of its discovery and exploitation.

The maximum probable rate of repaying the requested loan of $25,000 on the basis of 3 percent of net smelter returns is estimated to be about $1,800 per year.

Because the total maximum production of copper during the next ten years will be, on the basis of the applicant's figures, 240,000 pounds, and because the attainment of this maximum is considered unlikely, it is recommended, subject to the national demand for copper, that the application be denied.

MONOGCO MINE
TOOELE COUNTY, UTAH

Engineering

Engineering Report

By Stephen R. Wilmot
Mining engineer
U. S. Bureau of Mines

MONOCOO MINE
TOOELE COUNTY, UTAH

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INTRODUCTION

The Monocoo copper-lead-silver mine, Tooele County, Utah was examined April 5 and 8, 1951, by members of the Geological Survey and Bureau of Mines. The examination was made at the request of the Field Team, D. M. A., Region IV. The application for a loan was submitted by Richard P. Kimball, an officer in the Monocoo Mining Co.

The applicant has requested a loan of $25,000 to provide additional mining equipment and facilities and supply funds for exploration of areas thought to contain copper-lead-silver ores. This report outlines the feasibility of the proposed program.

ACKNOWLEDGMENTS

Historical data for this report were obtained from officials of the Monocoo Mining Co. Production records were supplied by Paul Luff of the Economics Division, Bureau of Mines, Salt Lake City, Utah. Additional detail was taken from T. B. Nolan's work in the area.[1] W. C. Gard, manager of the property, was helpful in providing present operating information.

LOCATION, TOPOGRAPHY AND PHYSICAL FEATURES

The Monocoo mine lies at the south end of the Clifton district in T. 6 S., R. 18 W., S.L.B.M., Tooele County, Utah (fig. 1). The property may be reached from Wendover, Utah, the nearest rail point, by driving southerly 28 miles on U. S. Highway 50, thence 28 miles easterly to Gold Hill, Utah, over graveled county road, thence southerly 7 miles by dirt roads to the mine.

1/ Nolan, T. B., The Gold Hill Mining District, Utah; U. S. Geol. Survey Professional Paper 177, 1935.

The altitude at the property is approximately 6,800 feet. The workings lie on the western face of Montezuma Peak, a prominent topographic feature which attains an altitude of approximately 7,575 feet. Westerly from the mine slopes are gradual to the area of Clifton Flat at an altitude of 6,000 feet.

Access to the mine area is often difficult during the winter months because of moderately heavy snow falls and resultant drifts. No difficulty is encountered during travel between Wendover and Gold Hill.

The mine area is sparsely covered with pinon and cedar scrub growths. The region supports a winter range for the sheep industry.

HISTORY AND PRODUCTION

The present operating company, Monocoo Mining Co., was incorporated in Utah March 27, 1951. Heirs of the Kimball family, the original operator, are officers in the newly formed company. Present property consists of one patented claim, the Monocoo, Lot 58, owned by the company, and 15 unpatented claims held under lease from the heirs of Ollie Young, an early-day prospector in the area.

The Monocoo claim was patented in 1892, but records of ore production between this date and 1917 are not available. Production from 1917 to March 1951 is shown in table 1.

Table 1.—Production of crude ores 1917-1951

Date	Dry tons	Gold ounces	Silver ounces	Copper pounds	Lead pounds
1917	196	1	858	33,535	11,620
1918	535	—	1,602	112,444	2,282
1919	26	—	125	7,389	———
1920	29	—	180	6,475	———
1926	122	2	728	8,157	15,290
1929	37	1	285	8,649	———
1930	19	—	122	5,579	———
1931	24	1	151	4,862	———
1934	180	6	2,246	15,531	16,609
1935	203	7	3,405	13,297	22,888
1936	339	11	4,589	21,823	27,931
1937	112	3	759	10,564	7,786
1948	4	—	42	———	705
1950)	139	5	1,543	15,156	6,755
1950)	4	—	34	45	471
1951	46	1	557	1,985	4,392
Total	2,015	38	17,206	259,269	118,297
Average		Oz./ton .019	Oz./ton 8.5	Percent 6.4	Percent 2.9

The Western Pacific Railroad Co. constructed a branch line from Wendover to Gold Hill during 1917, at which time mining operations in the area were active. The line was operated until 1937 during which year virtual cessation of mining in the district resulted in removal of the tracks. Ores shipped from the area now are either trucked to Wendover and transferred to railroad cars at that point or trucked direct to smelters in Salt Lake and Tooele Valleys.

DESCRIPTION OF THE DEPOSITS

The Monocco copper-lead-silver ores occur as replacements of limestone adjacent to fissures with variable attitudes (figs. 2 and 3). In general the ore shoots are localized along northeasterly striking faults. Shoots are small, the average thickness being less than 4 feet.

Exposed ores in the mine are almost completely oxidized, and as no continuity of descending ground water channels exists, it appears that oxidation of ore minerals, solution and precipitation have occurred virtually in place.

The ores consist of various combinations of copper and lead oxides, including chrysocolla, malachite, azurite, copper pitch, cerussite and anglesite, with a high content of iron oxides. Chalcopyrite and galena are the probable chief primary ore minerals, but neither are conspicuously present.

The ores are mined in irregular, small stopes with little timber. This system is the most feasible for sorting ores in the stopes and providing space for rejection of waste. The limestone host rock stands well and requires little timber for support.

MINABLE ORE RESERVES

No measured ore reserves are present on the property. A few tons of ores probably could be sorted from existing exposures in drifts and from stopemargins. Ores comparable in grade to those mined may be disclosed by additional exploration.

PRESENT STATUS

The main underground workings on the Mesecoe property consist of an adit driven easterly for approximately 700 feet with numerous short crosscuts and small stopes extending from the adit. A vertical shaft 51 feet deep has been sunk from a point near the portal of the adit. An inclined working has been driven northeasterly from the bottom of the shaft, a total distance of approximately 125 feet. The difference in elevation between the adit and the bottom of the inclined working from the shaft is approximately 38 feet. All present operations are conducted from the two workings.

Mining equipment in use on the property includes a 230 cfm. compressor, one small air hoist, jackhammers, water and air hose, pipe, rails, mine car and miscellaneous small tools. An ore bin has been erected at the end of the dump near the portal of the adit for loading ores directly into a truck at the toe of the dump.

Living accomodations on the property are only sufficient for three men.

No concentrating equipment is present as all ores have been direct shipping ores.

PROJECT PROPOSALS

The applicant has requested a loan of $25,000 to purchase equipment and conduct exploration on the Monocoo property. The proposed expenditure is divided in the application as shown in table 2.

Table 2.—Proposed expenditure

Hoist and headframe	$ 1,000
Drilling machines	1,000
Bunkhouse construction	500
Wages and supplies	7,500
Truck purchase	5,000
Exploration	10,000
Total	$25,000

No specific exploration proposals are outlined in the application. W. C. Card, manager of the Monocoo property, made verbal suggestions for exploration at the time the property was examined. The proposals are as follows:

1. Equip the vertical shaft with headframe and hoist and crosscut from the 58-foot level in a southeasterly direction approximately 500 feet to intersect the main fault. Drifts could then be driven to cut the northeasterly striking fissures. If this work proves successful in developing ore, it is proposed that the shaft be deepened and a second level be developed similarly.

2. Drive a raise from a point in the north drift of the adit level to explore the vertical vein at the monzonite-limestone contact, following the vein upward toward surface workings.

3. Drift southeast for 500 feet on mineralization exposed in face of the adit level to explore downward extensions of mineralization exposed at the surface on unpatented claims held under lease.

4. Drift southerly on the adit level, following the strike of the main fault, and sink to explore favorable beds.

The exploratory work as suggested verbally by W. C. Card, manager, would involve a greater expenditure than estimated in the application. The amount as estimated by the Bureau of Mines for the work is shown in table 3.

Table 3.—Bureau of Mines cost estimate

Hoist and headframe	$ 2,000
Drifter and attachments	1,100
1,000 feet of drifts at $25	25,000
300 feet of crosscuts at $25	7,500
100 feet of winzes at $50	5,000
150 feet of raises at $25	3,750
Surface buildings	650
Contingencies	5,000
Total	$48,000

Any of the suggested proposals may develop ore, but if exploratory work is done, it appears the most favorable objective should be chosen for initial exploration. Information may be obtained which will be useful in determining the advisability of completing or rejecting the remaining suggested proposals.

Ores mined from the property recently have been trucked direct to the Garfield smelter of the American Smelting & Refining Co. The total truck haul is 175 miles. Roads are adequate from the mine to U. S. Highway 50, a distance of 55 miles. The remaining distance from this point to the smelter is covered by oil surfaced highway.

A total of six miners would be sufficient for proposed exploration. Three men were employed on the property at the time of examination. Three additional men probably could be recruited from farming areas within a 75-mile radius of the property.

No sources of power are available in the area. The compressor is driven by Diesel engine.

All water for underground and domestic use is hauled to the property from Gold Hill, 7 miles distant, or Ibapah, 12 miles westerly from the property.

Salt Lake City is the nearest source of adequate mining supplies.

PROPOSED FINANCING

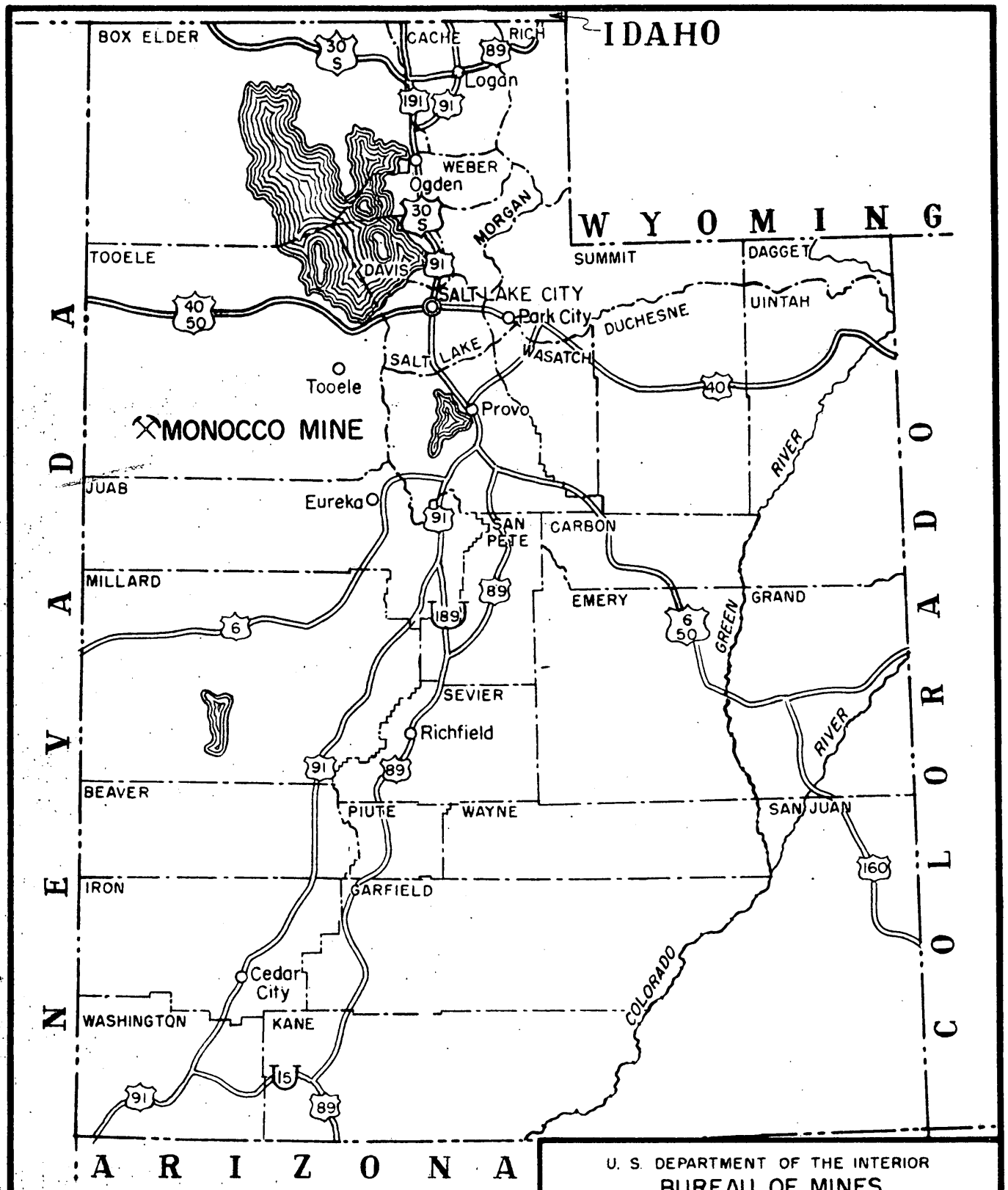
The exploration proposals suggested by the property manager will require an expenditure of approximately $46,000 over a period of 2 years. It is believed that the company will be able to provide funds on a matching basis with the government either with funds already subscribed or from sale of stock in the corporation.

CONCLUSIONS

The Monocoo mine has produced small tonnages of oxidized copper and lead ores intermittently since 1917. Production has been derived from ore shoots in limestone adjacent to and occurring in fissures of various attitudes. No ore reserves are present in the mine but it is believed that exploration as suggested in the company's proposals will result in discovery of ore bodies similar in size, shape and grade as those already mined. However, the small size of the ore shoots and the amount of work involved in finding new shoots make exploration costly. It is unlikely that additional ores discovered and shipped from the property will return enough to make an overall profitable operation.

RECOMMENDATIONS

The suggested exploratory program at the Monocoo mine may disclose ore bodies of similar character to those mined intermittently since 1917. However, because of the small size of the ore shoots, the development required to open the ore areas and the probability that maximum copper production for a 10-year period even though new ore shoots are found will be less than 240,000 pounds, it is recommended that the application be denied.



U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

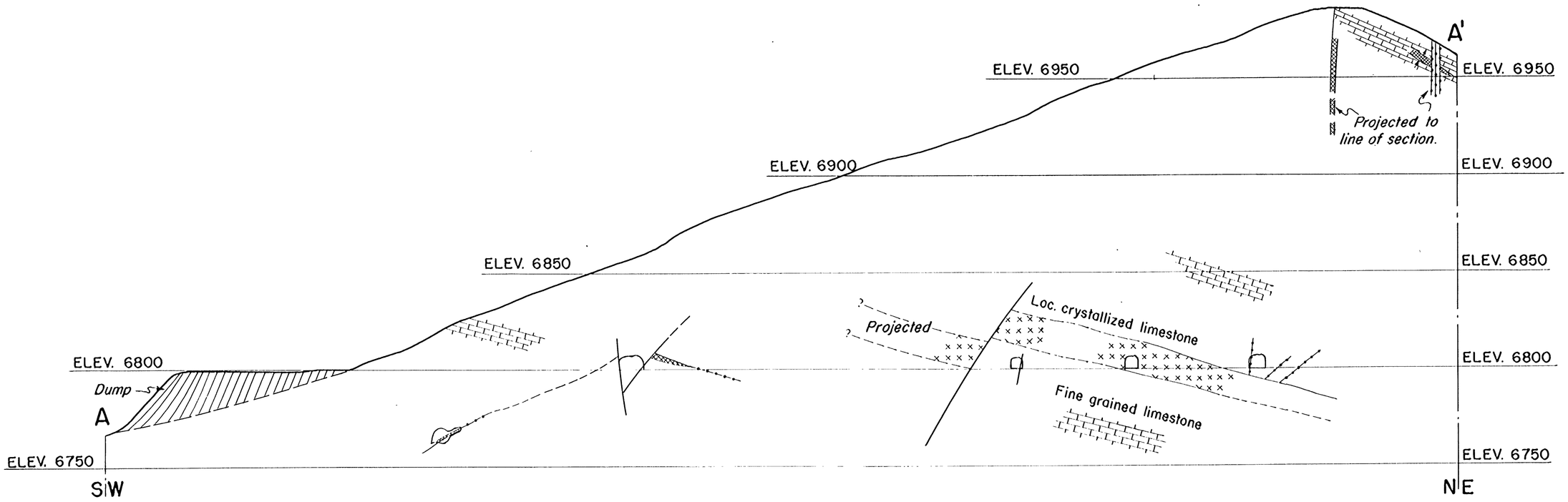
Fig. 1 Proj. No.

Location Map

MONOCCO MINE

CLIFTON DISTRICT, TOOELE COUNTY, UTAH

ENGINEER:	DATE: MAY 2, 1951
TRACED: MAY, 1951, A.P.T.S.	1500-1055-E
CHECKED:	



LEGEND

- QUARTZ MONZONITE
- LIMESTONE
- ORE VEIN WITH STRIKE
- ORE VEINLETS
- CONTACT, (DASHED WHERE APPROXIMATELY LOCATED)
- FAULT, (DASHED WHERE APPROXIMATELY LOCATED)
- STOPE

NOTE

DATA TRACED FROM U. S. GEOLOGICAL SURVEY.

0 50 100 150 200

SCALE OF FEET

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

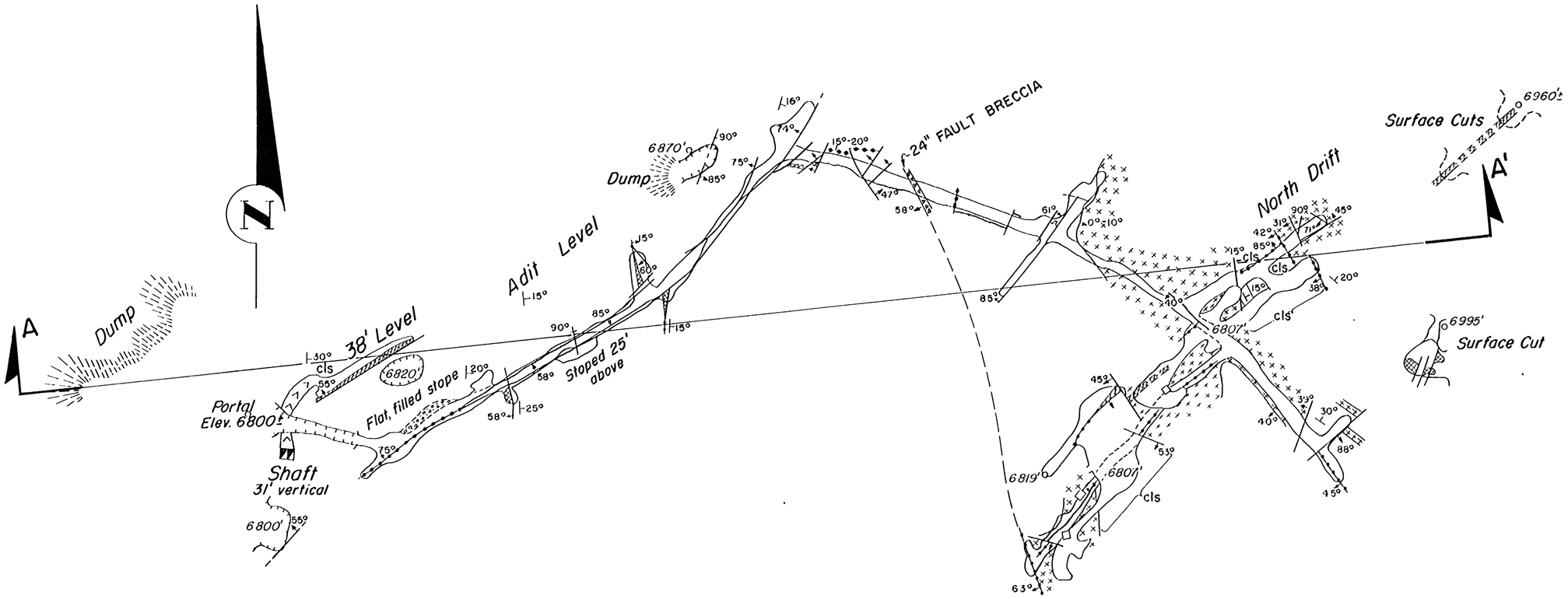
Fig. 3 Proj. No.

Idealized Section A - A'

MONOCCO MINE

CLIFTON DISTRICT, TOOELE COUNTY, UTAH

ENGINEER:	DATE: May 1, 1951
TRACED: May, 1951; by: A. P. T. S.	1500-1053-D
CHECKED:	



LEGEND

- Cls — OQUIRRH FORMATION
- QUARTZ MONZONITE
- 55° — ORE VEIN, SHOWING DIP
- 75° — ORE VEINLETS, SHOWING DIP
- 40° — CONTACT, SHOWING DIP (DASHED WHERE APPROXIMATELY LOCATED)
- STOPE
- 39° — FAULT, SHOWING DIP (DASHED WHERE APPROXIMATELY LOCATED)
- 16° — STRIKE AND DIP OF BEDDING
- OPEN CUT
- INCLINED WORKINGS
- CHUTE

NOTE

DATA TRACED FROM U. S. GEOLOGICAL SURVEY.

0 50 100 150 200

SCALE OF FEET

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Fig. 2 Proj. No.

Geologic Plan of Underground Workings

MONOCCO MINE

CLIFTON DISTRICT, TOOELE COUNTY, UTAH

ENGINEER:	DATE: April 30, 1951
TRACED: April, 1951, by: A. P. T. S.	1500 - 1052 - D
CHECKED:	

D.M.A. Docket 185 - April 6, 1951

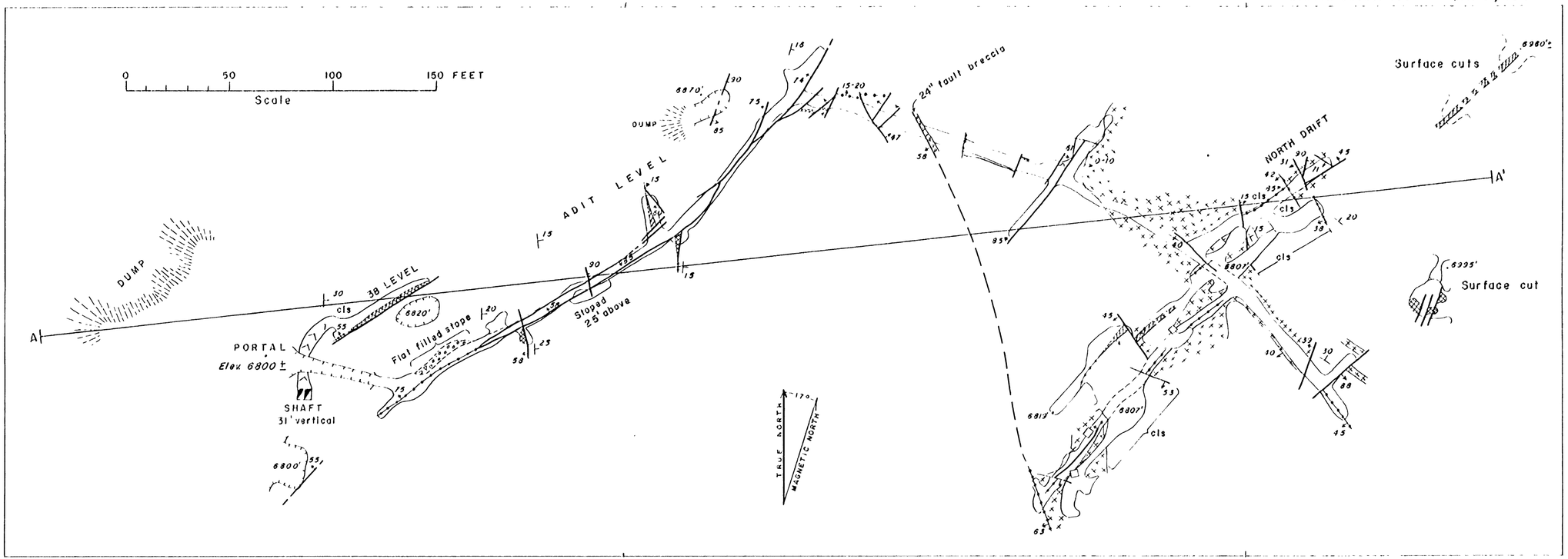


Fig. 1. GEOLOGIC MAP OF THE MONOCCO MINE, GOLD HILL, UTAH

EXPLANATION

Oquirrh formation (Limestone and crystalline limestone). Carboniferous

Quartz monzonite Tertiary

Ore vein, showing dip

Ore veinlets, showing dip

Contact, showing dip (Dashed where approximately located)

Fault, showing dip (Dashed where approximately located)

Strike and dip of bedding

Open cut

Inclined workings

Ore chute

Stope

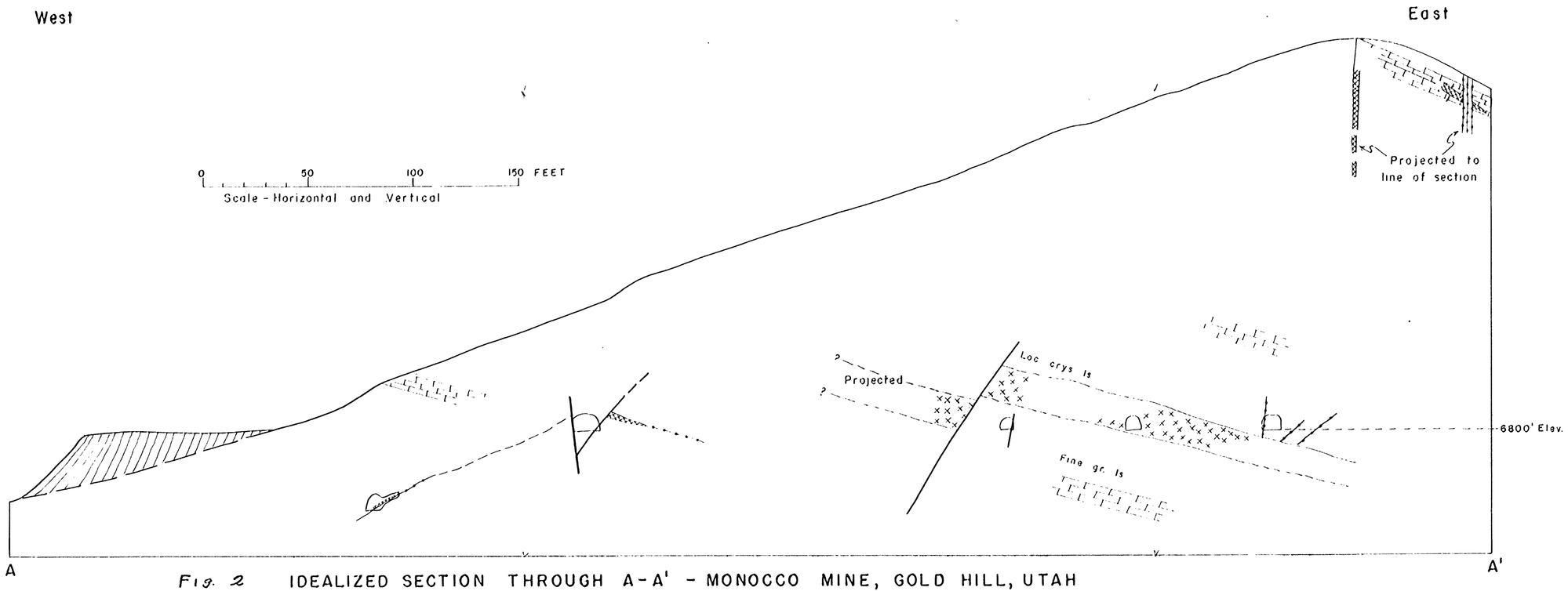


Fig. 2 IDEALIZED SECTION THROUGH A-A' - MONOCCO MINE, GOLD HILL, UTAH