June 1, 1951

Memorandum

To: Louden Stroebel, Executive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: DMA Docket 52, Joe Reserve Mining Company, Salt Lake City, Utah

We are enclosing the original and two copies of the report on the Joe Reserve Mining Company, Tintic District, Utah, DMA Docket 52.

We approve the recommendation of the field team that the application be denied.

J. H. Eastman, Jr.

A. H. Koschmann

Attachments
Original by air mail
Two copies by regular mail

JHE/AHK/mm
cc-Koschmann, Allsman, Wilson, Roberts, DMA files

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

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMA Docket 52, JOE BOWERS MINE TINTIC DISTRICT
JUAB COUNTY, UTAH

FOR GOVERNMENT USE ONLY

H. K. Timmer, Jr.
Mining Engineer
U. S. Bureau of Mines

David G. Arnold
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 Project 32, Joe Bowers Mining Company, Salt Lake City, Utah

The above report by H. E. Thurber, Jr., and the Summary Conclusions and Recommendations have been reviewed. I concur with the conclusions and recommendation that the loan be denied.

Paul T. Allsman

P. T. Allsman

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
200 New Customhouse
Denver 2, Colo.

May 29, 1951

Memorandum

To : Field Team, Region IV

From : A. H. Koschmann

Subject: Docket DMA-52, Joe Bowers Mining Company, Tintic District, Utah.

I herewith transmit the geologic report on the Joe Bowers mine, Tintic District, Utah, by David C. Arnold. This report has the approval of Ralph Roberts, Supervising Geologist, Utah-Nevada district.

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosure

Room 307, 320 South Main
Salt Lake City, Utah
May 23, 1951

Memorandum

To: Regional Director, Field Team IV

From: Acting District Supervisor, Utah-Nevada district

Subject: Docket DMA-32, Joe Bowers Mining Company, Tintic District, Utah.

Enclosed are twelve copies of a report on the Joe Bowers Mine, Tintic District, Utah, by David C. Arnold. The report contains sections on geology, ore deposits, ore reserves and conclusions and recommendations.

Mr. Thurber of the U. S. Bureau of Mines also examined the property, though not in conjunction with the examination by the Geological Survey. He is in general agreement with Mr. Arnold's conclusions and recommendations.

The mine workings are inaccessible. The data included in the report are based on an examination of the geology at the surface and a study of maps in the files of the Reconstruction Finance Corporation at Salt Lake City.

I concur in the conclusions and recommendations of Mr. Arnold. From the nature of the shoots previously mined, probably only a small tonnage could be expected if additional deposits were discovered. Past production from ore deposits in igneous rocks in the Tintic District has been insignificant as compared to the deposits in sedimentary rocks. It is not to be expected that this deposit would materially add to Utah mine production. I also concur with the conclusion reached in the Summary, Conclusions and Recommendations that the applicant's proposal is not feasible under the present DMA exploration program, and that the request for a loan therefore be denied.

R. J. R.
by H.D.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By H. K. Thurber and D. C. Arnold

Joe Bowers Mining Co., whose property lies in the SE 1/4, sec. 5, T. 11 S., R. 2 W. in the Diamond area of the Tintic district, Juab County, Utah, has requested a RMA loan of $35,000 to rehabilitate the Bowers vertical shaft and establish a surface plant to permit mining lead-zinc-copper ores reported to remain in old workings when operations ceased. During 1930 a fire completely destroyed the surface plant and approximately 160 feet of the shaft timbers.

The property was examined in April 1951 by personnel of the Bureau of Mines and the Geological Survey to determine the feasibility of the applicant's proposal.

Ores have been mined from parallel and branching veins in a fractured, silicified zone in monzonite porphyry striking approximately N. 20° E. The ore is localized along a brecciated fault zone which was silicified and replaced by later quartz and ore minerals. The ore shoots mined are small and appear to decrease in size downward.

Inadequacy of available maps and the inaccessibility of workings on the Bowers property make estimation of ore reserves infeasible. Production of the Joe Bowers mine from 1898 to the most recent leasing operation has not exceeded 2,600 tons. Records of a group of shipments totaling 506 tons mined from near the south end of the property, and indicative of the tenor of the ores, show the average assay value of the ores to be 5.04 percent lead, 2.53 percent zinc, 1.09 percent copper, 12.26 ounces of silver per ton and 0.023 ounce of gold per ton. Ore dressing tests conducted by a recent lessee show the ores to be readily amenable to concentration.

The applicant proposes to rehabilitate the Bowers vertical shaft for 600 feet, erect a headframe, and install a hoist and mine surface plant. The applicant's estimate of $35,000 seems inadequate in view of present high costs of material, equipment, and labor. The Bureau of Mines has estimated that $90,450 will be required to construct a surface plant and rehabilitate the shaft to the 400-foot level. This estimate does not include items for underground development since no maps of the area near the bottom of the Bowers vertical shaft exist, and this area has been inaccessible for more than 15 years. Until conditions in the working areas of the mine are examined, no estimate of the money required to bring the mine into actual production can be determined.

Labor, electric power, transportation, and available water appear adequate for the proposed project.

Production from deposits in the igneous rocks of the district has been small compared to production from the sedimentary rocks. From the nature of the ore shoots previously mined, probably only a small tonnage may be expected if additional ore bodies are found.

A review of the tonnages, reported grade, and the net smelter returns of ores produced from the Bowers property, together with the fact that the workings are inaccessible and maps do not indicate existing or potential ore bodies, leads to the conclusion that the applicant's proposal is not feasible under the present DMA exploration program. The secretary-treasurer of the company has indicated that the Joe Bowers Mining Co. will be unable to provide funds on a matching basis. It is therefore recommended that the request for a loan be denied.

JOE BOWERS MINE

TINTIC DISTRICT, UTAH

Geology

By David C. Arnold
Geologist, U. S. Geological Survey

Geology

JOE BOWERS MINE

TINTIC MINING DISTRICT, UTAH

CONTENTS

	Page
Introduction	1
Geology	2
General Geology	2
Geology of the Mine	2
Ore Deposits	3
Ore Reserves	4
Conclusions and Recommendations	4

GEOLOGIC REPORT ON JOE BOWERS MINE

TINTIC DISTRICT, UTAH

Docket DMA-52

INTRODUCTION

The workings in the Joe Bowers Mine were flooded at the time the field investigation was conducted, therefore the examination was confined to a surface study of the property. The information obtained from the examination of the surface has been supplemented by data from the Reconstruction Finance Corporation files [1]. These files contain reports and mine and assay maps

---

[1] Cramer, Louis, Reconstruction Finance Corporation files, Salt Lake City, Utah, Docket No. 6058.

---

of the mine made during 1945 and 1946 in connection with a Reconstruction Finance Corporation loan granted the New Park Mining Company who held a lease on the property during World War II. Additional information was obtained from Mr. Deason of Salt Lake City, Utah. Mr. Deason operated the mine under a lease agreement during the years 1948 and 1949.

The Joe Bowers Mine is in Juab County, Utah, approximately 4 1/2 miles southeast of Eureka, Utah. It is in the southern part of the Tintic Mining district in Sec. 5, T. 11 S., R. 2 W., Salt Lake Base and Meridian. The mine is most easily reached by a secondary all weather road that extends eastward from U. S. Highway 6 at Silver City, Utah. A branch line of the Denver and Rio Grande Western Railroad to Silver City is in operation at the present time.

GEOLOGY

General Geology

The geology of the Tintic district has been described by Lindgren and Loughlin -/ and by Lovering -/.

-/Lindgren, Waldemar and Loughlin, G. F., Geology and ore deposits of the Tintic mining district, Utah: U. S. Geol. Survey Prof. Paper 107, 1919.

-/Lovering, T. S., Rock alteration as a guide to ore, East Tintic district, Utah: Econ. Geology, Monograph I, 1949.

The sedimentary formations in the district are mainly limestone, dolomite, and quartzite that range from Cambrian to Mississippian in age. Lenticular beds of gravel, talus, and water-laid tuff are intercalated in the lower part of an Oligocene (?) volcanic series.

Stocks and dikes of biotite monzonite and hornblende monzonite have intruded the sedimentary and volcanic rocks. The largest intrusive in the Tintic district is the Silver City stock which outcrops about one-half mile north of the Joe Bowers Mining property.

At least three periods of folding, high-angle faulting, and minor thrust faulting preceded the period of ore deposition. Post-ore faults of small displacement are common.

Geology of the mine

The mine is in monzonite porphyry. Because of alteration, identification is difficult, but the large euhedral phenocrysts in a fairly coarse-grained ground mass indicate that the rock is an intrusive. The rock exposed underground has been mapped as monzonite porphyry on the maps leaned by Reconstruction Finance Corporation.

Mineralization in the mine is along a fault-fissure that is known locally as the Showers and Bowers vein. This fissure strikes slightly east of north and dips 65° to 75° W.; it crops out on the surface as a prominent silicified zone. Examination of striated slickensided surfaces at places along the outcrop indicate that the latest movement was nearly vertical and the eastern side of the block has been upthrown. At the surface the silicified zone is bordered by argillic and chloritic alteration in the igneous country rock.

The Silver Spar vein, which is east of the Showers and Bowers vein, strikes northwestward and dips steeply to the east. Although this vein was productive to the southeast, no ore bodies of economical size have been found along it in the Bowers mine.

ORE DEPOSITS

All of the ore shipped from the property has been mined along the Showers and Bowers vein. Approximately 3,000 tons of ore with a total value of about $90,000 has been mined from the property. The principal ore minerals are galena, sphalerite, and pyrite; chalcopyrite and a small amount of enargite and tetrahedrite are also present.

The assay maps of the 375 and 400 levels that accompany the report indicate good lead-zinc ore north and west of the Showers shaft; all of the ore along these shoots from the 400 level to 300 level, however, was mined by Mr. Deason in 1948 and 1949. Mr. Deason states that at the time he stopped operation in 1949 a small quantity of good ore was left above the 300 level. The ore between the 300 and 400 levels shipped by Mr. Deason averaged 8 percent Pb, 6 percent Zn, 10 oz. Ag and .03 oz. Au. The downward extension of the ore shoot was small but of slightly higher grade, however this ore was on the endline of the property.

The level maps of the mine included with this report show that the ore shoots in the lower levels are smaller and less continuous than those in the upper levels. The liquidation report obtained from the Reconstruction Finance Corporation states that the ore developed on the 400 and 500 levels was of good grade, but the bodies were small and were less continuous than on the 375 level. The decrease in size and continuity of the ore bodies with increase of depth is in accord with the district habit. According to Loughlin and Lindgren, no ore bodies in the igneous rocks extended more than 600 feet below the surface.

ORE RESERVES

Because the mine workings were inaccessible, no reserves could be calculated. A study of the mine maps is of little assistance because most of the ore shown on the maps has been mined since the maps were made.

CONCLUSIONS AND RECOMMENDATIONS

The ore deposits in igneous rocks in the district have been small and very irregular. Production from deposits in the igneous rocks as compared to production from the sedimentary rocks has been insignificant. Ore reserves for the Joe Bowers mine could not be computed, and from the nature of the ore shoots previously mined probably only a small tonnage could be expected if additional ore bodies were found.

Engineering

JOE BOWERS MINE
TINTIC DISTRICT
JUAB COUNTY, UTAH

Engineering Report

By M. K. Thurber, Jr.
Mining engineer
U. S. Bureau of Mines

JOE BOWERS MINE
TINTIC DISTRICT
JUAB COUNTY, UTAH

CONTENTS

Page

Engineering Report

Introduction..... 2
Acknowledgments..... 2
Location, topography, and physical features..... 2
History and production..... 3
Ownership and extent..... 6
Description of the deposits..... 6
Minable ore reserves..... 8
Present status..... 9
Project proposals and costs..... 9
Production plan..... 11
Proposed financing..... 12
Conclusions..... 12
Recommendations..... 13

TABLES

No.
1 New Park Mining Co. shipments..... 5
2 Distribution of company's proposal..... 10
3 Bureau of Mines cost estimate..... 10

ILLUSTRATIONS

Fig.
1 Location map..... 2
2 View of the Showers and the Bowers surface area looking S 45° W..... 3
3 View of the caved shaft collar of the Joe Bowers vertical shaft..... 9
4 Plan map of claims, topography and surface..... 3
5 Composite plan map of the Showers and Bowers properties 6

INTRODUCTION

Joe Bowers Mining Co., whose property is in the Diamond area of the Tintic district, Juab County, Utah, has requested a DMA loan of $85,000 to rehabilitate the Bowers vertical shaft and establish a surface plant. With this work the company proposes to reopen old workings and to begin mining lead-zinc-copper ores reported to remain at the time operations ceased about 1930.

Personnel of the Bureau of Mines and Geological Survey examined the property during April 1951 to determine the feasibility of the applicant's proposal.

ACKNOWLEDGMENTS

The Bureau of Mines wishes to acknowledge the aid in assembling the information for this report given by Augustus Reeves, secretary of the mining company, who made available all the company maps, assay records, smelter returns, and pertinent historical facts. W. J. Demson of Salt Lake City, former lessee of the property, also supplied information.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The three patented claims of the Joe Bowers Mining Co. lie in the SW 1/4, sec. 5, T. 11 S., R. 2 W., S.L.B.&M., Tintic mining district, Juab County, Utah. The relation of the property to Eureka, Utah and a key map of the state are shown on figure 1.

The topography of the immediate area is not rugged although Treasure Hill, one-half mile to the west, is a prominent feature and the ground on the opposite side of the canyon rises steeply to an altitude of 7,400 feet. The altitude at the Joe Bowers dump is approximately 6,525 feet. Vegetation of the area consists of low, scrub brush near the mine and sparse cedar trees at higher elevations. The vegetation and topography are illustrated on figure 2, a photograph of the Bowers and adjoining Showers properties, looking approximately S. 45° E.

Rainfalls are not sufficient to preclude all-year operation of the property and the road grade and surface allow access from U. S. Highway 6, 4.1 miles distant via Silver City. A spur of the Union Pacific Railroad in Silver City, with loading facilities to which ores are trucked, ends 3 miles from the mine.

HISTORY AND PRODUCTION

Joe Bowers Mining Co., a Utah corporation, was incorporated in 1898 and soon after started production of lead-zinc ores from an inclined shaft near the south end of the property. This shaft is indicated on figure 4 as the Bowers incline. During the first year's operation company records and smelter receipts show a total production of 1,057 tons of ores for which a net smelter return of $41,[illegible].42 was received. During this period payment was based on 50 cents per ounce for silver, 3 cents per pound for lead, and a penalty for zinc. No assay records are available on this early production.

The northward rake of the ore body and operating factors indicated the advisability of sinking a vertical shaft approximately 600 feet north of the inclined shaft. This shaft was completed and a steam-powered Cornish pump was installed to pump the water encountered.

The Showers property to the south was being worked independently during the same period and on the same or a branching vein. A dispute between the operators of the two companies resulted in both mines ceasing operations early in 1901.

A fire occurred at the Revere vertical shaft during 1920, destroying the headframe, surface plant, and approximately 100 feet of shaft timber. No attempt has been made to rehabilitate the shaft, thus ores mined from the Revere property since the shaft surface plant burned have been hoisted through the Showers incline.

Recent work of record has been done by lessees, all of whom have had agreements on both the Showers and the Revere properties. The continuity of the vein from one property to the other and the fact that the Showers incline is the only open shaft on either property, make this arrangement necessary.

The two properties were operated under lease by the New Park Mining Co. from 1945 to 1947, with funds for exploration and production supplied by the Reconstruction Finance Corporation. During this period 306 tons of ores was mined from exploratory drifts on the 275-, 500-, and 600-foot levels of the Showers incline. The ores averaged 4.94 percent lead, 2.82 percent zinc, 1.09 percent copper, 12.88 ounces of silver per ton and 0.025 ounce of gold per ton. Table 1 is a record of shipments by New Park Mining Co.

Table 1.--New Park Mining Co. shipments

Date	Lot No.	Weight, tons	Percent Lead	Percent Zinc	Percent Copper	Oz./ton Silver	Oz./ton Gold
1946							
Feb. 20	1	54.051	0.8	1.25	0.75	6.7	0.015
	2	42,042	1.55	1.9	2.2	15.45	.045
	3	51,447	.4	0.95	4.35	23.25	.065
May 4	4	58.527	3.65	1.65	1.09	15.85	.029
	5	37.038	7.55	3.58	1.45	27.0	.05
Nov. 23	1	46.445	7.65	2.68	.45	9.78	.02
1947							
June 26	11	46.423	10.4	4.57	.18	9.3	.017
July 2	13	47.707	9.58	4.3	.23	9.9	.01
July 19	14	40.216	4.75	2.71	.11	3.3	.01
Oct. 21	16	59.127	6.20	3.4	.25	6.60	.009
1948							
Feb. 26	1	54.999	5.50	2.72	.2	5.7	.01
Total		505.816	5.04	2.52	1.09	12.26	.025

During 1947 and 1948 the Showers and Bowers properties were under lease to W. J. Deason of Salt Lake City. The lessee produced approximately 880 tons of ores from the 575-foot level and above, netting the shipper $19,000. The average assay value of the ores was 8.2 percent lead, 5.8 percent zinc, 0.02 ounce of gold per ton, and 12.1 ounces of silver per ton.

The Bowers vertical shaft dump was sorted and shipped under this lease and is included in the above tonnage. The average assay value of approximately 250 tons was 4.8 percent lead, 0.55 percent copper, and 10.7 ounces of silver per ton. The lessee discontinued operations because of electrical equipment failure and not because of change in the grade or width of the ore body.

OWNERSHIP AND TITLE

The Joe Bowers Mining Co. holds three patented mining claims, the Hardtack Mine, survey 3805, Joe Bowers No. 2, survey 3801, and Jennings Mine, survey 3803, a total of 32.58 acres. The claims are shown in figure 4 in relation to other claims in the area. The underground workings are mainly on the Joe Bowers No. 2 claim south of the vertical shaft as indicated on figure 5. The workings are contiguous with those of the Showers property as the two properties have been leased as a unit and worked from the Showers incline.

Although the main vein continues north of the Bowers vertical shaft, no workings are reported in this direction. The claim map indicates that the Bowers property extends approximately 1,800 feet north of the shaft.

The patented claims of the group are held by the original corporation, the Joe Bowers Mining Co., David L. Freed, president, Robert L. Bink, vice-president, and Augustus Reeves, secretary-treasurer. The company is free of debts, but the only tangible assets are the mining claims.

DESCRIPTION OF THE DEPOSITS

The ores have been mined from parallel and branching veins in a fractured, silicified zone striking approximately S. 10° E. The zone is apparently the result of faulting in the monzonite porphyry country rock, followed by silicification and replacement of the breccia by quartz and ore minerals.

The main fissure, or group of fissures, wherein most of the deep exploration was done by New Park Mining Co. is not on the Bowers property at the south end where the work was done, but enters the property at the south boundary of the Jennings lmr claim (fig. 4). This fissure dips 75° to 80° to the west and strikes at various points along its course N. 5° W. to N. 10° E.

A second major fissure which is present at the south end of the Joe Bowers No. 2 claim is the Silver Spar. Maps which show the 400- and 600-foot levels indicate the strike of the fissure to be approximately N. 15° W. The dip varies from vertical to 85° to the east. It is probable that the two fissures intersect or join west of the Bowers property. The Silver Spar fissure may have been responsible for the reported caving of the Bowers incline at the 300-foot level. Cross fissures, from which some ores have been mined, connect the two main fissures. They dip approximately 65° to the northwest. The most recent production, the 600 tons mined by W. J. Dawson, came from a stope on a cross fissure and above the 375-foot level at the south end of the Joe Bowers No. 2 claim.

Conversations with a recent lessee, W. J. Dawson, indicate that the workings stand well except in zones of badly broken ground or in openings in the altered monzonite porphyry. In his operation, Mr. Dawson used only stulls in raising, but square sets were required in stoping.

The ores can be mined cleanly because of the easily discernible character of the vein material in contrast to the wall rock. An exceptional example of this was Dawson's lease under which 18 cars of ores were mined yet no waste was hoisted to the surface or gobbed. The vein in this limited area was of economical mining width, but generally the widening and pinching of the fissures will necessitate handling waste in mining and development.

MINABLE ORE RESERVES

A reliable estimate of ore reserves on the Bowers property is not possible because of the inadequacy of available maps and the inaccessibility of the workings. Further, the records of shipments do not differentiate between the Showers and the Bowers properties as the source of ores because the properties have been operated as a unit. The 660 tons of ores produced on the Dawson lease, however, is known to have been mined mainly from within Bowers ground and above the 375-foot level. This area is indicated on figure 5.

The original Joe Bowers inclined shaft produced approximately 1,057 tons of ores with a total net smelter return of $41,[illegible].48. Company records indicate that these ores were mined from near the surface to the 375-foot level, the apparent connection with the Showers workings.

The total production of ores from the Bowers property is less than 2,000 tons. The average assay value of lots for which assay reports are available, a total of 1,186 tons, is 6.95 percent lead, 5.25 percent zinc, 0.46 percent copper, 12.16 ounces of silver per ton and 0.022 ounce of gold per ton.

PRESENT STATUS

The surface plant of the Bowers mine was destroyed by fire about 1930 and, since then, no rehabilitation has been attempted. The fire is reported to have burned the shaft timbers to an approximate depth of 100 feet, resulting in caving at the surface (figs. 2 and 3).

Cessation of leasing activities at the south end of the property has caused water to rise to a point just above the 375-foot level of the Bowers incline, thus blocking entry to any workings on the Bowers property. Available maps do not show the conditions of any of the workings adjacent to the Bowers vertical shaft, and conversations with recent lessees reveal that no one has been in these workings for several years.

Although the water has reached a stable level, the flow is not great enough to hinder any persistent mining effort. No measurement has been made of the volume of flow, but the operators of the Beacon lease kept the water down by pumping every third day.

PROJECT PROPOSALS AND COSTS

The applicant's request for a government loan to rehabilitate the Joe Bowers vertical shaft suggests construction of a headframe, ore bin, hoist house, and other surface appurtenances, and rehabilitation of the shaft to the sump. The company has requested $85,000 to do this work and place the mine on an operating basis as given in table 2.

Table 2.—Distribution of company's proceeds

Improvements and equipment	$15,000
Supplies	5,000
Labor	15,000
Total	$35,000

In view of today's high labor and material costs this sum is considered inadequate. Because of the limited vertical range of the ores already mined from the Showers property and the south end of the Bowers property, it would appear that rehabilitation of the shaft to the 600-foot level would be sufficient. It will be noted that the levels are designated from the collar of the Showers vertical shaft, but since the collar elevations of the two vertical shafts are approximately the same, little difference will result in the designation of levels in either mine.

An estimate of funds required to complete the proposed work on the Bowers property is shown in table 3.

Table 3.—Bureau of Mines cost estimate

Headframe and shaft collar rehabilitation	$ 800
Surface buildings (hoist house, compressor house, office, shop, and miscellaneous storage buildings)	600
Ore bin	1,150
Shaft timber (including 2 stations)	4,000
Equipment	
Mine equipment, surface and underground	25,800
Labor	
Total labor, including shaft rehabilitation and surface plant construction	13,600
Supplies and services	
Mining supplies, including powder, caps, and hand tools	800
Operating fund and contingencies	5,000
Total	$50,450

An adequate county road passes over the claims and a short access road connects the Bowers dump and Showers shaft. A spur of the Union Pacific Railroad, with loading facilities, exists in Silver City, 5 miles distant.

During the New York Mining Co.'s operations of the Showers property a power line was constructed from the Utah Power & Light Co.'s line near Silver City. This 5,000 volt line passes within 200 feet of the Bowers vertical shaft thus power for the proposed operation is readily available.

Water for construction is not available at the mine but must be hauled from a small reservoir near Diamond, a mile and one-half by road from the property.

Demands of military projects in Tooele County and seasonal requirements of local farming make the labor supply in the Eureka area somewhat scarce but not as yet critical. A sufficient number of men probably could be recruited from Eureka, Dividend, or other small communities in the Tintic area.

PRODUCTION PLAN

The applicant estimates that the rehabilitation would be completed in 6 months. This is a fair estimate although the proposed work might be completed in a shorter period dependent upon delivery of equipment and the availability of labor.

No mining plan has been advanced by the applicant and from available maps little is known about conditions of wall rock, minable widths of the veins, and consistency of ore shoots. The most recent

lessee used a square set method in limited stoping operations. Conversations with the lessee indicate that the stops reached a maximum width of 10 feet.

The property has not been in continuous operation thus little is known concerning a daily anticipated tonnage. The limiting factor in the proposed operation probably would be the hoisting operation which cannot handle more than 75 to 80 one-ton cars per shift in the single compartment shaft.

PROPOSED FINANCING

The applicant suggests repayment of the proposed loan by 10 percent royalty from production plus additional funds from actual profits from an operation. The company lists the mining claims as the only collateral. The secretary-treasurer has indicated that the Joe Bowers Mining Co. will be unable to provide funds on a matching basis with the government to conduct the proposed project.

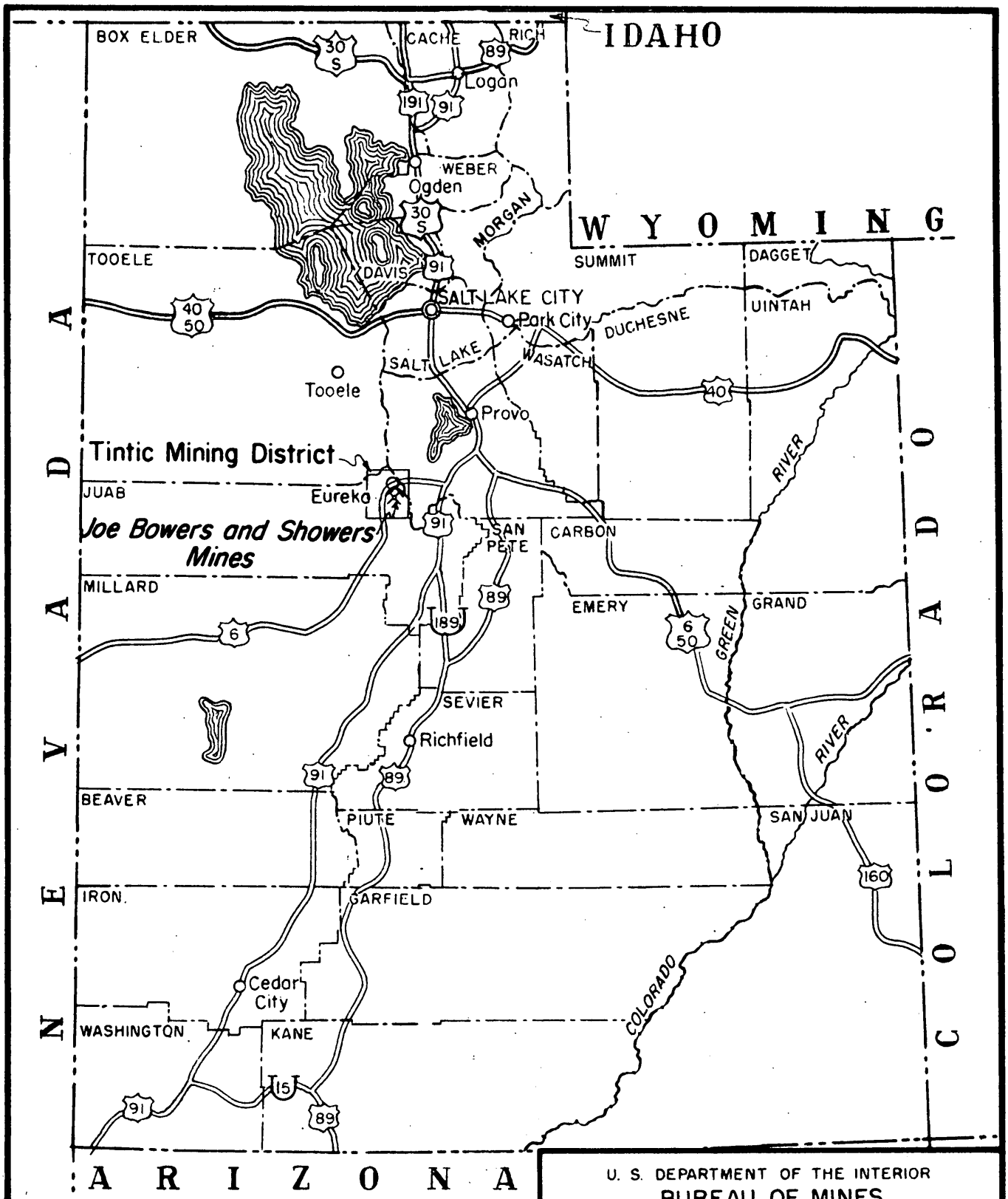
CONCLUSIONS

A possible alternative to operation of the Bowers vertical shaft in mining ores from this property would be use of the inclined shaft and workings on the Showers property. Recent lessees have utilized the inclined shaft but reported royalty demands by owners of the Showers property and the necessity of handling ores several times underground make this solution unattractive at present. The Showers inclined shaft will require a surface installation comparable with that required on the Bowers vertical shaft.

A review of the tonnages, grade, and net smelter returns of ores produced from the Bowers property, the inaccessibility of the workings, and inadequacy of available maps to indicate existing or potential ore bodies leads to the conclusion that the applicant's proposal is not feasible under DMA exploration project requirements.

RECOMMENDATIONS

On the basis of available information it is recommended that the loan requested by the Joe Bowers Mining Co. be denied.



U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Fig. 1 Proj. No

Location Map
JOE BOWERS AND SHOWERS MINES
TINTIC DISTRICT, JUAB COUNTY, UTAH

ENGINEER:	DATE: MAY 14, 1951
TRACED: MAY, 51, A.P.T.S.	1500-1063-E
CHECKED:	

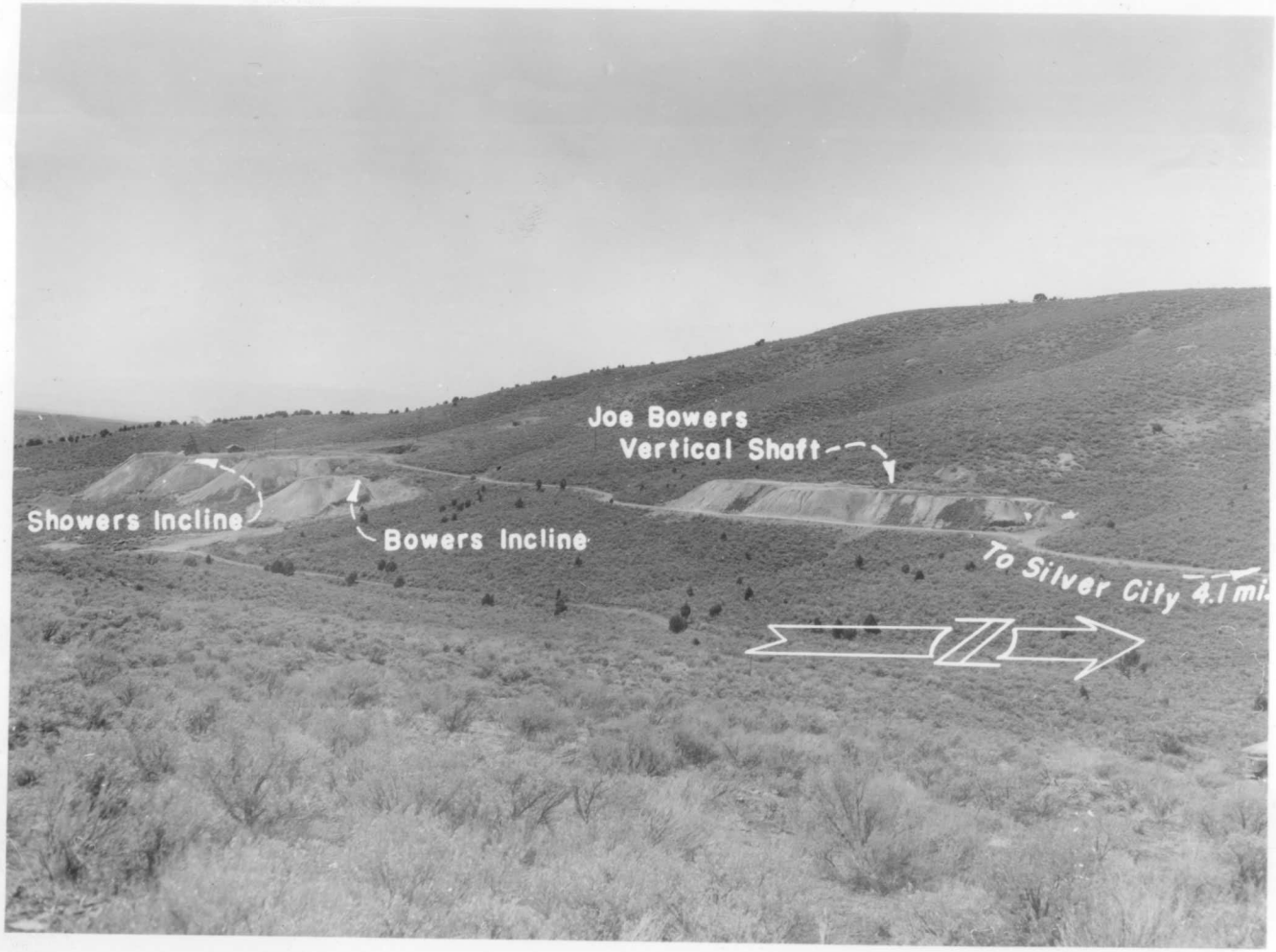
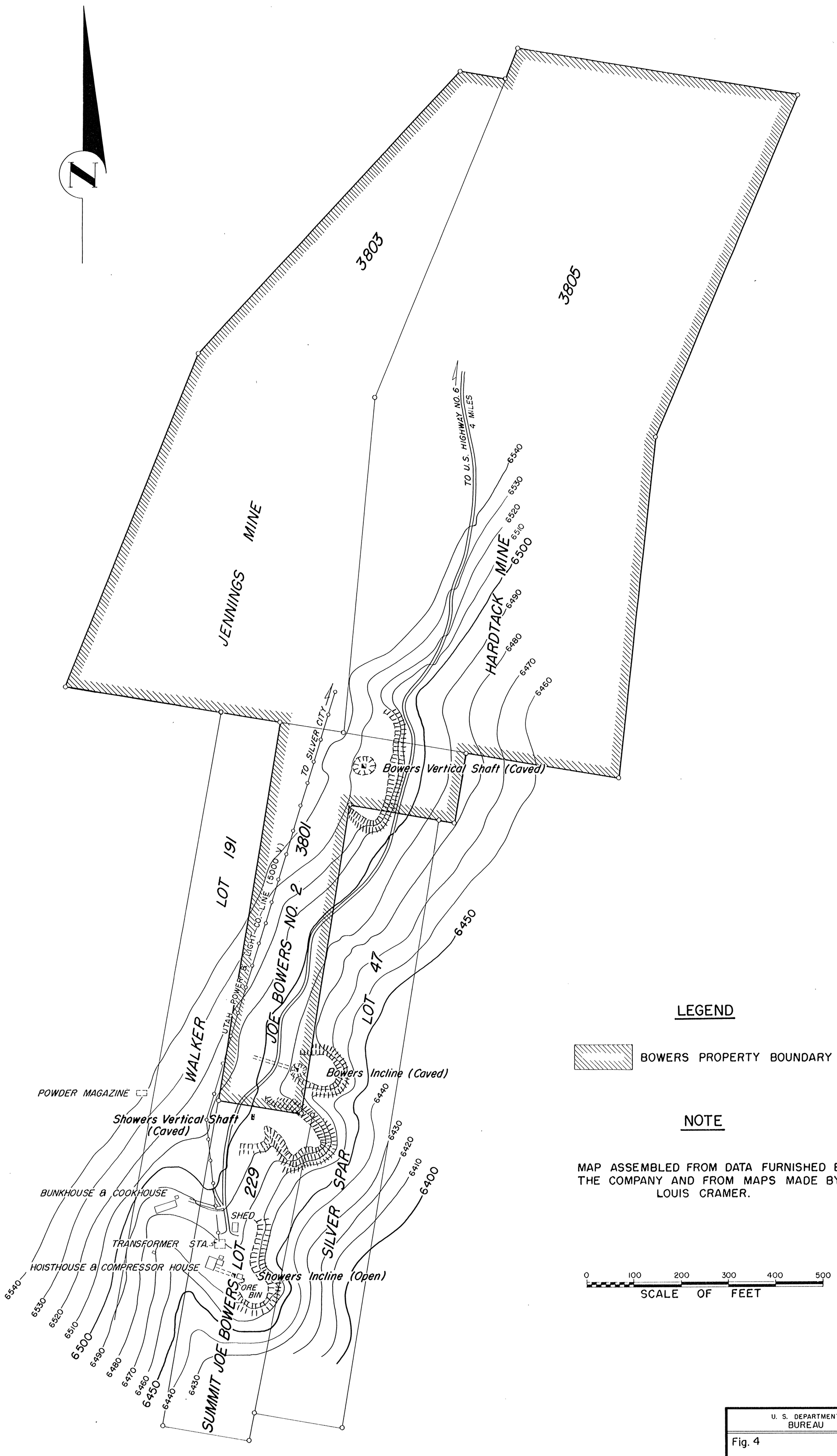


Figure 2.- View of the Showers and the Bowers surface area looking S 45° W.

Figure 3.– View of the caved shaft collar of the Joe Bowers vertical shaft.



U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

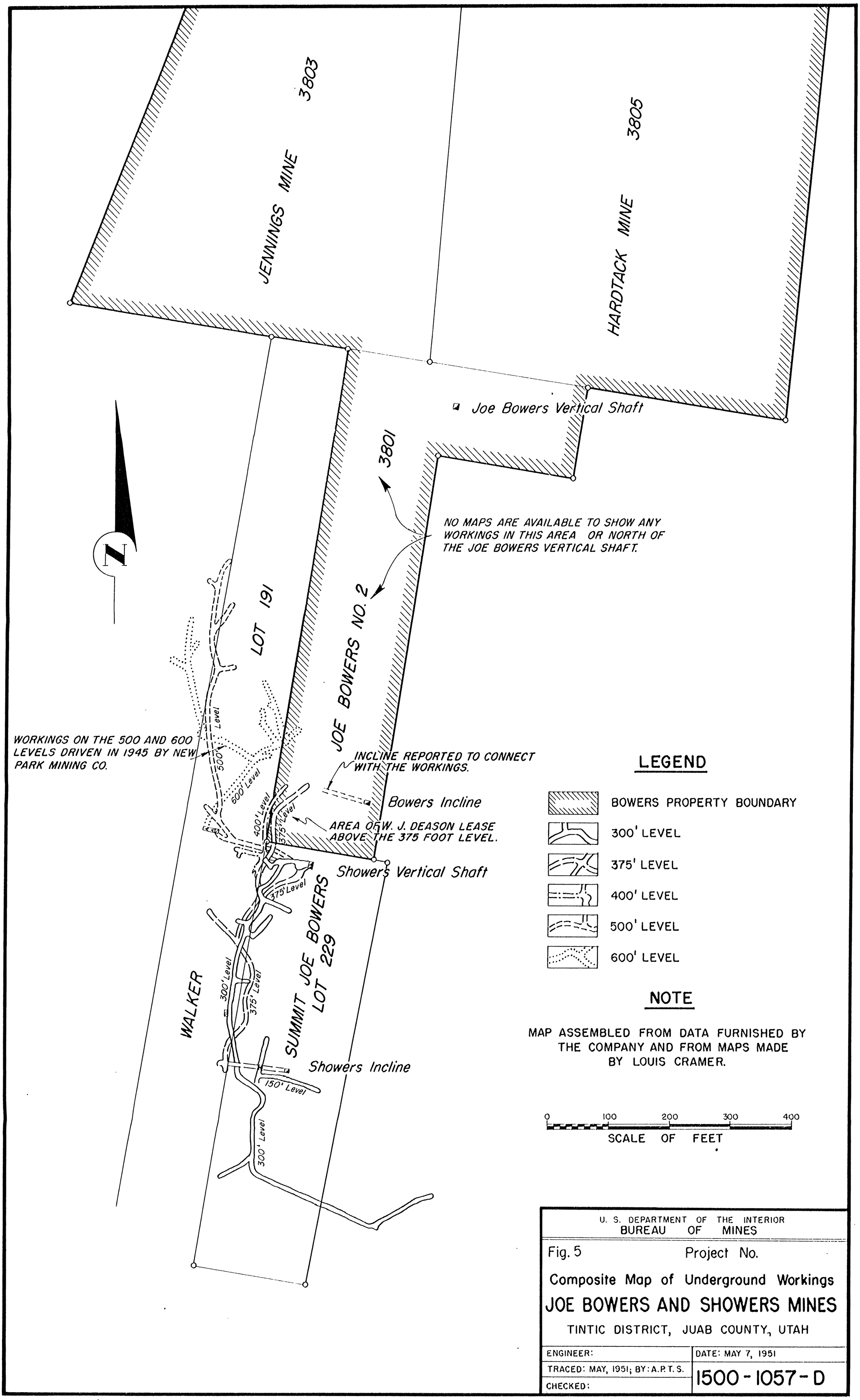
Fig. 4 Project No.

Claims, Topography and Surface Features

JOE BOWERS AND SHOWERS MINES

TINTIC DISTRICT, JUAB COUNTY, UTAH

ENGINEER:	DATE: MAY 4, 1951
TRACED: MAY, 1951; BY: A. P. T. S.	1500 - 1056 - B
CHECKED:	



U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Fig. 5 Project No.

Composite Map of Underground Workings

JOE BOWERS AND SHOWERS MINES

TINTIC DISTRICT, JUAB COUNTY, UTAH

ENGINEER:	DATE: MAY 7, 1951
TRACED: MAY, 1951; BY: A.P.T.S.	1500-1057-D
CHECKED:	