REPORT TO STOCKHOLDERS

MOUNTAIN MINES COMPANY

Incorporated Under the Laws of the
State of Utah, December 24, 1935

EXECUTIVE, TRANSFER AND MINE OFFICE
426 Beneficial Life Bldg., Salt Lake City, Utah

OFFICERS AND DIRECTORS AS OF DECEMBER 1, 1947

Officers

CHARLES S. WOODWARD	President
GLEN A. FINLAYSON	Vice-President
REGINALD W. EDMUNDS	Secretary and Treasurer

Directors

CHARLES S. WOODWARD
GLEN A. FINLAYSON
JOHN E. ROTHROCK
OLIVER A. JONES
FRANK O. TAYLOR

Operating Officials

CHARLES S. WOODWARD	Manager

Annual Stockholders' Meeting

Fourth Tuesday in December of Each Year, 426 Beneficial Life Building, Salt Lake City, Utah

Report of President and Manager

STOCKHOLDERS,
MOUNTAIN MINES COMPANY

Salt Lake City, Utah
December 1, 1947

I submit the following report on operations of the Mountain Mines Company, at its mines, 20 miles south east of Salt Lake City, Utah, for the period ending December 1st, 1947.

PROPERTY

The holdings consist of the following claims.

Four patented lode mining claims, known as Thor, Venus, Germania and Timber Wold, located in Big Cottonwood Mining District, Salt Lake County, Utah.

Fifty-five unpatended lode mining claims, comprising approximately 1,000 acres, located in the Big Cottonwood Mining District, Salt Lake County, Utah.

The company has full ownership of all listed properties, with the exception of those held under contract and option. Our mine is equipped with all modern machinery necessary for good, economical mining.

We are buying under contract four patented, and fourteen unpatented lode mining claims from the Big Cotonwood Silver King Mining and Milling Company, upon which there is a balance due of $30,060, 33. Payments are to be made only from ore produced.

We hold an option to purchase twelve unpatented lode mining claims from the Mutual Metals Mining Company.

We also hold an option to purchase six patented lode mining claims from the Price Mining Company. (This option has been assigned to American Metal Mining Company.)

Following is resume in linear feet of all work done at the Mountain Mines properties since operations were commenced in May, 1936.

Tunnels Feet	Winzes Feet	Raises Feet	Total Feet
4,631	12	445	5,088

A good road has also been constructed from the main highway to the mine — a distance of 3 miles to the lower tunnel and an additional 1¼ miles to the upper workings. This road has cost approximately $23,000.00.

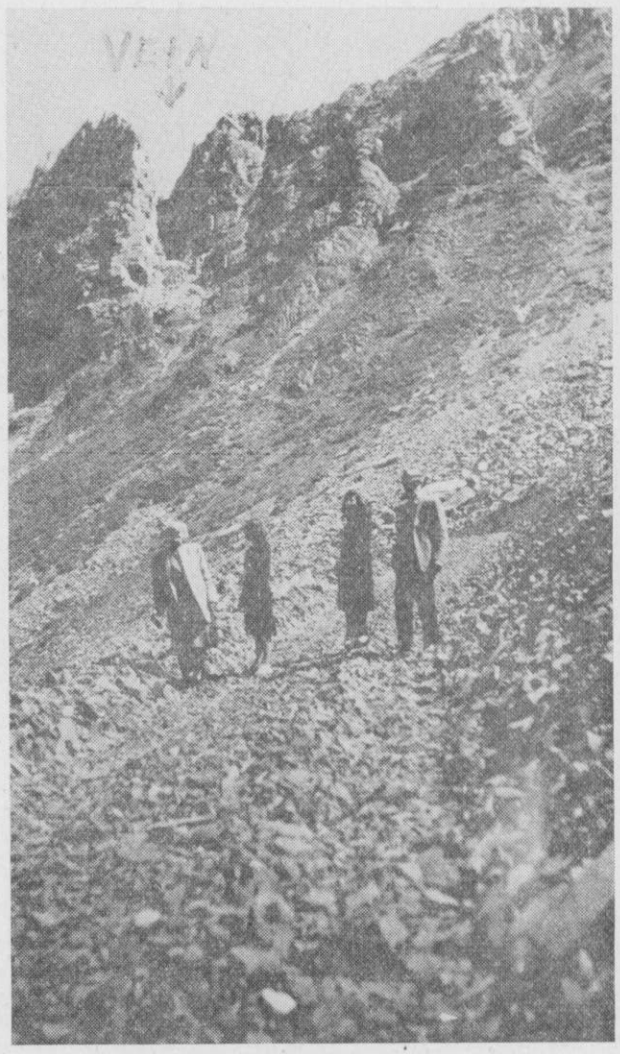
The following shipments of crude ore were the last shipped to the American Smelting and Refining Company at Garfield, Utah.

SHIPMENTS OF CRUDE ORE GIVE THE FOLLOWING RESULTS

		OUNCES PER TON		PERCENT METAL			
Lot	Pounds Crude Ore	Gold	Silver	Lead	Copper	Zinc	Iron
52	72,504	.215	20.55	2.45	.17		
53	32,852	.225	22.395	4.25	.20		
54	39,578	.195	17.20	1.90	.15		
55	60,364	.25	2.05	.80	.22		
56	37,932	.3025	29.797	5.55	.17		
57	32,742	.245	32.55	3.30	.18		
58	37,304	.2675	18.875	3.00	.16		
59	56,934	.2575	31.55	3.40	.25		
60	37,146	.2625	27.95	3.60	.23		
61	37,794	.25	22.40	3.90	.05		
62	12,558	.2575	2.02	------	.07		
63	73,158	.1675	21.45	2.50	----		
64	39,794	.21	13.90	3.25	.35		
65	36,396	.2525	24.752	3.25	.41		

Assays for zinc and iron were not run because payment was not made for these two metals at the Garfield Smelter. Lots 55 and 62 were taken from the lower tunnel. All others were taken from the upper levels by our lessees.

Above: New building erected at Main Lower Tunnel



Below: Showing the Silver King Vein which has now been hit in Main Lower Tunnel 2,000 feet below this point

LEASING AGREEMENT

In order to expedite the development of the Silver King vein in the upper regions of the property, the company has entered into leasing agreement with George C. Rich and associates covering the entire upper levels of the mine and to a depth of approximately 500 feet below the surface. These Lessees have organized the Mineral Fork Mining Company and expect to spend approximately $50,000.00 in developing the upper portion of the property. Since signing the agreement, the Lessees have changed and improved the road so that heavy trucks can now be taken to the different upper workings. They have also put in equipment, buildings etc. so as to carry on under modern mining methods. It is their plan to drive a short tunnel into the West side of Mineral Fork which will tap the Silver King Vein about 200 feet below the old upper level. This tunnel is now in 25 feet and will be completed by early Spring. They also plan to run a tunnel into the Silver King Vein on the East side of Mineral Fork which will tap the vein about 300 feet below the present upper workings on the East side. Heavy shipments of ore are anticipated by the Lessees during 1948. The Lessees paying the company as royalty 10% to 25% of the net smelter returns, after hauling charges from the mine to the smelter have been deducted.

LOWER TUNNEL DEVELOPEMENT

The lower tunnel was started to drain the water from the veins and to provide a transportation tunnel for the mine. This tunnel cut the Silver King Vein at a point 3,172 feet from the portal. A drift was extended 120 feet along the vein to the East and also 725 feet to the West. Seven ore shoots were encountered at intervals of approximately 100 feet apart thus far along the vein. No attempt has been made to raise on any of these ore shoots. The object has been, to drive West to Quartsite-Telite Contact and to the Big North South Cross Vein. Neither of these has as yet, been found. According to survey, the contact should be very close to the present face. The West drift is now under the high grade ore shoots found in the upper levels of the mine. The last 125 feet of this drift has been in a very promising ore shoot. Picked samples have shown as high as 16% Copper, 21% Lead and 255 ozs. Silver.

The management recommends that a raise be put up at this point and that the drift be continued to the West until the Contact and Cross Vein are reached.

On June 29, 1947, our main camp building was destroyed by fire. Tents were immediately erected to house the men. A new concrete block house has been completed which will house about 12 men, at a cost of approximately $4000.00.

The track has been repaired the entire length of the tunnel. The ventilating system completely changed so that it is now possible to blast several times each day if necessary.

Because of the death of three of our principal stockholders, during the past year, many of the pledges made for the purchase of Common Stock were not kept. This has resulted in our being unable to complete all the work outlined for this year. An effort will be made to place the mine on production from the showings encountered at the lower tunnel level, at the earliest possible date.

For the past few years it has become apparent that smelting companies and mine operators have been giving increasing attention to old mining districts as giving more assurance of ore development by the use of modern geological and metallurgical methods. In other words, instead of depending upon raw prospect mineral land, they are getting more satisfactory results in territory that has good production from the surface and which responds to great scientific development more quickly.

This is the situation in the property owned by the MOUNTAIN MINES COMPANY in the Big Cottonwood Mining District, Salt Lake County, Utah —immense surface production of years ago, shipments which started with "float" in glacial drifts and streams, and induced the "hardrock" miners to continue development and reap riches that were even phenomenal in those days of highest cost of production.

John S. Johnson, better known as "Regulator Johnson," was one of the persistent type to follow development which resulted in the discovery of the Silver King fissure from which he took fabulously rich ore running as high as eleven hundred dollars per sack. In fact, it is claimed by reliable sources that forty-three such sacks were taken from one shallow stope on the Silver King No. 3 claim, and that between the years 1870 and 1914, Johnson claims to have shipped over $200,000.00

worth of ore to smelters and reduction works in Salt Lake Valley. This is just one of the main cross veins which are cut by other recrossings, and this fissure is showing on the surface to run over 9,000 feet, varing from 12 to 21 feet or better.

The past history should be convincing.

GEOLOGY:

STATEMENT BY R. H. ABBOTT M. E.

"The Mine workings on the Silver King fissure are in the Cambrian or Pre-Cambrian formation. And from my practical knowledge and mining experience it appears to me to be favorable, as many of the gold mines that I have visited and worked in have made in this formation.

The surface indications show several fissures striking through the property. Some of these have been exposed in numerous places along the strike by shallow pits and short tunnels and most of the opening encountered mineralization and some values. However, the main fissure on which the greater part of the development work has been done, is the Silver King fissure, striking approximately north 45 degrees east and dips 70 degrees northwest. This fissure is extremely strong and from a point on the top of the ridge between the Mineral Fork and the Mill B. Canyons, it can be seen to extend in both directions for thousands of feet. In places it appears that the width will exceed 15 feet. This great strength indicates to me that it should go down to a considerable depth—to and below the lower tunnel level.

The lower and main transportation tunnel, is located 1326 feet below the upper workings. Of course, this appears to be a long jump between levels, but because of the steep topography between the upper and lower workings and the numerous snow and rock slides experienced in the past, making working and transportation conditions extremely difficult and expensive, and when taking into consideration that the lower location will greatly facilitate these conditions for year-around operations, the large jump is, I believe, warranted.

In conclusion I wish to state that when taking into consideration the excellent exposures made in the upper workings, and the geological conditions being favorable for depth, with no surface indication of large displacements which might tend to cut off or bottom the ore between the upper and lower workings, I do not hesitate to recommend the capital expenditure to prove this property being a worthwhile venture."

RECOMMENDATIONS OF GEORGE E. COXE, GEOLOGIST, IN HIS REPORT

"In view of the natural topographic conditions and the easy and accessible means of developing all veins from this one transportation drain tunnel, all pumping costs, a most serious menace in many of the Park City and Big Cottonwood mines, will be eliminated and provide gravitational mining methods throughout. I strongly advise that this tunnel be driven as it will provide an ideal operating base for all of your properties and reduce the mining costs at least one half from other methods now employed in the district.

This plan of development would, of necessity, require driving higher intermediate tunnels and drifts connected by shafts, upraises and ore chutes to facilitate mining and ventilation, and through which all ores could be diverted to the main transportation tunnel and from there taken to large ore bins to be constructed at the tunnel portal from which point a good mine road has been constructed which, in the opinion of the writer, has removed the last physical barrier to the mineral empire, requiring only energetic, economic and intelligent supervision to make a mine of unusual value and magnitude."

STATEMENT BY HARVEY D. HEIST, MINING ENGINEER, IN HIS REPORT

"It is a well-known fact that the entire pre-Cambrian area lying between the mouth of Little Cottonwood Canyon and Alta has had a gold production from small pockets for the past 65 years and when it is possible to mine this formation in a fissure carrying gold-silver ore, a condition which makes for permanence and depth, it is very probable that a mine can be opened upon the Silver King fissure which will make new gold history not only for Utah but will rank with other gold mines of the world."

STATEMENT BY R. E. MARSELL
DEPARTMENT OF GEOLOGY
UNIVERSITY OF UTAH

"From the fact that the Silver King vein is clearly exposed on the surface, both to the east and the west of the tunnel, for a known length in excess of a mile and it's now proven persistance and regularity in depth, one may not unreasonably expect, from the evidence at hand, that the Company is about to open up another big mine in the district. With anything like a reasonably well mineralized vein, the possible tonnages that may be developed are simply staggering, having as you do from 1,400 feet to 2,000 feet of vein above your present working level; and further, it should be remembered that from the nature of the vein where it is exposed in the lower tunnel the ore bodies should continue in depth also for many hundreds of feet. That the immediate area has been the site of strong commercial mineralization is demonstrated by the production of approximately $17,000,000.00 from the Cardiff Mine in the adjoining gulch to the east, but little more than a mile distant from the point where the lower tunnel struck the vein.

I wish to call particular attention to a further aspect of the Silver King Vein, a factor that I regard as being of the utmost significance, and that is, that this vein resembles veins like the famous Ontario fissure in the neighboring Park City District rather than those in the immediately adjacent Alta and Big Cottonwood Districts. It has the same marginal relations to the major igneous intrusions of the region, and is also similar in trend (strikes N. 50° E.) to the main ore-bearing fissures that have produced the big mines of the region.

Since the distribution and value of the ore bodies in the vein can be determined satisfactorily only by blocking the ore out by driving drifts and raises, I am thoroughly convinced that the indications as at present disclosed are such as to warrant the company in undertaking a vigorous development program at once, for it will be in the best interests of your stockholders to learn as quickly as possible something of the magnitude of your recent strike. I suggest that for the present you continue to drift southwestward, since the stopes in the Upper Tunnel lie in that direction and the ore shoot already opened up is expanding rapidly in the same direction.

In concluding this brief statement, it is my frank opinion that this is the most important strike in the Wasatch Mountains since the discovery of the New Park Vein in the Park City District some time ago. The Company is to be congratulated upon the successful completion of a well-planned mining project, in which both dogged faith and luck have played a part. I am grateful for the opportunity afforded me to study the deposit and for the hospitality offered me during my visits to the mine."

Respectfully Submitted
Charles S. Woodward
President and General Manager

MOUNTAIN MINES COMPANY

Balance Sheet as of November 30, 1947

ASSETS

Current:		
Farmers State Bank	$ 12.89	
Accounts Receivable	284.19	$ 297.08
Equipment and Supplies:		
Mine Tools and Equipment	14,924.29	
Mine Supplies	5,136.53	
Salt Lake Office Equipment	27.29	20,088.11
Fixed and Other Assets:		
Mining Claims	212,579.32	
Mine Buildings and Bins	5,917.57	
Pipe Line	993.00	
Road Construction	22,994.72	242,484.61
Development:		
To November 30, 1947	171,804.33	171,804.33
		$434,674.13

LIABILITIES

Current:			
Accounts Payable (Including Balance Due on New Living Quarters)		$ 4,919.84	$ 4,919.84
Deferred Liability:			
Balance Due on Properties of Big Cottonwood Silver King Mining & Milling Co.		30,060.33	30,060.33
Net Worth:			
Common Stock			
Authorized	1,000,000 Shares @ 50c	$500,000.00	
Unissued	387,164 Shares @ 50c	193,582.00	
	612,836 Shares @ 50c	306,418.00	
Less Treas. Stock	3,079 Shares @ 50c	1,539.50	
	609,757 Shares @ 50c	304,878.50	
Plus Liability to issue to holders of 10c Stock	11,564 Shares @ 50c	5,782.00	
	621,321 Shares @ 50c	310,660.50	310,660.50
Preferred Stock			
Authorized and Issued 500,000 Shares @ 10c			50,000.00
Net Surplus			39,033.46
			$434,674.13

EXHIBIT "G."

LEASE

This agreement made and entered into this 29th day of February, A. D. 1947, by and between THE MOUNTAIN MINES COMPANY, a Utah corporation, Lessor, and GEORGE A. RICH, CARL B. ANDERSON AND KARL J. McKAIN, HEREINAFTER CALLED THE lessees, (now known as Mineral Fork Mining Company. 1950)

W I T N E S S E T H :

That the said Lessor for and in consideration of the rents, royalties, covenants and agreements hereinafter expressed to be paid, kept and performed by the said Lessees has leased, let and demised and by these presents does lease, let and demise to the said Lessees the following described mining property and premises, situated in Big Cottonwood Mining District, Salt Lake County, State of Utah, to-wit:

Lake Blanche No. 7, Lake Blanche No. 8, Lake Blanche No. 9, Lake Blanche No. 1, Silver king No. 4-6307, Queen of the West, Diana, Christine Johnson, Silver King No. 2-6110, Elora No. 1, Silver King Extension No. 2, Gold and Silver No. 1, Silver King No. 1-6110, Gold and Silver No. 5, Gold and Silver No. 6, to a depth on said claims of approximately 326 feet below the level of what is know as the Main Regulator Johnson Tunnel located at an elevation of 9,870 feet. Also Lake Blanche No. 2, Cardelia No. 1, Silver King No. 3-6307.

To have and hold the above described premises for the purpose of mining from the 29th day of January, 1947, up to and including the 31st day of December, 1961, unless sooner forfeited or terminated throught the violation of any of the covenants and conditions herein contained.

The said Lessees, in consideration of the premises, have covenanted, contracted and agreed and by these presents do covenant, contract and agree to and with the said Lessor, its transferees, successors and assigns as follows:

To enter upon said leased premises and to work the same in a minerlike fashion and in a manner necessary to good and economical mining so as to take out the greatest amount of ore possible with due regard to the development and preservation of said mine, or mining premises, as a workable mining property and to the special covenants herein contained.

To repair all old timbering wherever it may become necessary and to well and sufficiently timber said mine and mining premises, except such tunnels, winzes, raises, stopes and other working as the parties hereto shall agree in writing may be abandoned and need not be maintained and repaired, at all points where proper and necessary in accordance with good and safe mining, continuing the timbering in the working addits now upon said premises with timber of the same dimensions as heretofore used unless it becomes necessary, for safety, to use larger timber, in which event timbers of sufficient size for safety and permanent mining shall be used.

To allow the Lessor, or its agent, from time to time to enter upon and descent into all parts of said leased premises for the purpose of inspection, surveys or taking samples therefrom, and to render to said parties proper assistance in making such inspection, surveys or examination.

To occup and hold as the property of the Lessor all cross and parallel lodes, spurs and mineral deposits of every kind which may be uncovered, disclosed or discovered within said leased ground by the said Lessees, or any person or persons under or in privity with them, with privileges to said Lessees to work and mine the same as part and parcel of said premises.

To keep at all times the drifts, shafts, tunnels and other workings, except such tunnels, winzes, raises, stopes and other workings as the parties hereto shall agree in writing may be abandoned and need not be maintained and repaired, thoroughly drained and clear of loose rock and rubbish unless prevented by extraordinary mining casualties.

To stow no waste underground except with the consent and under direction of the Lessor.

To make all working shafts, drifts, trnnels, winzes and raises of the size to be determined by the said Lessor.

To assume all responsibility in case of accident to said Lessees or any of their employees in and about said property, and to maintain and pay for Compensation Insurance for the protection of all said employees.

To comply with all rules and regulations of the State of Utah and the United States Government, including compliance with Social Security laws, Unemployment Insurance, Old Age Pension and other welfare measures which now or may hereafter be passed.

To pay all taxes assessed against said demised premises for ores mined and shipped under this lease.

Lessor and Lessees to agree as to which Smelting Co. ores are shipped.

The said Lessees covenant and agree to pay and allow the Lessor as royalty upon all ores mined, shipped and sold from said leased premises in any manner during the life of this lease, as follows, to-wit:

10% on all ores having the value of $20.00 per ton or less,
15% on all ores having the value of Twenty Dollars and one Cent ($20.01) and not more than $30.00 per ton,
20% on all ores having the value of Thirty Dollars and One Cent ($30.01) and not more than $50.00 per ton,
25% on all ores having the value of Fifty Dollars and One Cent ($50.01) or more per ton.

All royalty payments are to be made directly to said Lessor by the Mill or Smelting Company receiving ores. All settlements shall be made upon the net smelter rates with deductions allowable for all hauling and transportation costs, said deductions to be agreed upon between the Lessor and the Lessees on a competitive basis.

It is understood and agreed that the Lessees may, if they so desire, construct such roads, bins, tram-lines and machinery upon the property of the Lessor as necessary insofar as such installations do not interfere with the operations of the Lessor.

The Lessees agree to pay the said Lessor 25 cents per ton for each ton of ore shipped by the Lessees, in consideration for which the Lessee has the right to use all roads and other means of access to the property described herein, and also agrees to keep said roads in proper repair. This, however, does not give said Lessees the right to use the lower development and drainage tunnel.

The Lessor further agrees that upon the completion of the intermediate tunnel on the east side of Mineral Fork at an elevation of approximately 9,540 feet by the said Lessees, the Lessor hereby agrees to permit Lessees to construct a "raise" from its main lower development tunnel located at an elevation of approximately 8,450 feet, the location of said raise to be agreed upon and located at the most advantageous place by the Lessees and Lessor, and the Lessees shall have the surface rights to the north and west from the portal of said lower tunnel for the purpose of building ore bons and such buildings as are necessary, including also the disposal of waste material. The Lessees shall be entitled to all of the ore for a distance of 50 feet in all directions from the center of said raise along the entire length of said raise. Said surface rights shall not interfere with the use of said surface by the Lessor in its operations, and Lessees shall furnish all equipment, ore cars, etc., necessary to carry out any proposed work through said lower tunnel and shall pay in addition to the rental hereinbefore set forth for the use of said tunnel the sum of 25 cents per ton on all ores transported through said lower tunnel and on all waste material after the raise has been completed the sum of 5 cents per ton.

All bills and expenses incurred by the Lessees or those in privity with them shall be promptly paid by the Lessees, and such prompt payment shall prevent the filing of any and all liens of the miners, mechanics or material men against said leased premises, and if by reason of the failure of said Lessees to pay such bills or expenses may lien or liens shall be filed aginst said premises, the said Lessor may forthwith pay off and discharge the same and the said Lessees hold themselves bound to pay to said Lessor all sums so advanced or paid to clear said premises from liens which may be filed aforesaid, and the said Lessor may at its election declare forfeiture of this lease.

Further, that Lessees will deliver to said Lessor quiet and peaceable possession of said demised premises in good order and condition, with all drifts, tunnels and other passages thoroughly drained and cleared of loose rock and rubbish and said premises, except such portions of said premises as the parties hereto have agreed in writing need not be maintained or repaired and may be abandoned pursuant to the provision hereinabove contained, ready for immediate continued working without demand by further notice on the 31st day of December, 1961, at noon, or at any time previous thereto upon demand for forfeiture, and it is mutually understood that all machinery and tools which may be placed upon said premises by said Lessees may be removed therfrom within a reasonable time after termination of this lease, with the exception, however, of rails placed undergound, provided, however, that no such tools or machinery shall be so removed while said Lessees may be in any manner indebted to the said Lessor under any obligation incurred under this lease, and the Lessees shall have a reasonable time to remove all stock pile ore from said premises.

It is hereby agreed by the Lessees that they will perform or have performed not less than 150 man shifts per month during the full term of this lease, except when weather conditions are such to make this requirement not possible.

It is understood and agreed that all machinery or equipment, tram-lines, bins, compressors, buildings, etc., which have been constructed, or in any other way placed upon the property by said Lessees for use in the operation of said property shall, at the termination of this or other subsequent leases, be the property of said Lessees, with the exception of the rails heretofore mentioned, can be disposed of as the Lessees shall desire.

Lessees agree that they will construct during the term of this lease a tunnel into the Silver King Vein on the east side of Mineral Fork at an elevation of approximately 9,540 feet, and also to construct a tunnel near the head of Mineral Fork on the west side of the Fork which will hit the Silver King Vein approximately 200 feet below the present lower tunnel on the said west side of Mineral Fork. In the event that the tunnels in this paragraph described are completed during the term of this lease, then and in that event the Lessees shall have the option to lease said property for an additional term of ten years, upon the same terms and conditions contained herein.

Time is the essence of this agreement, and each and every clause of this indenture and all the covenants and condtions contained herein expressed or implied shall extend to the successors, heirs, executors, administrators and lawful assigns of all of the parties hereto.

IN WITNESS WHEREOF, the Lessees have hereunto set their hands and seals and the Lessor has caused this Agreement to be executed by its President and its corporate seal to be hereto affixed, attested by its Secretary, pursuant to a resolution of its Board of Directors heretofore duly passed and adopted.

Dated this 30th day of January, A. D. 1947.

MOUNTAIN MINES COMPANY

By Charles S. Woodward
President
Lessor

ATTEST:

R. W. Edmunds
Secretary

George A. Rich

Carl B. Anderson

Karl J. McKain

Lessees

SUPPLEMENTAL TO THE ABOVE LEASE AGREEMENT

Said Lessees hereby agree that they will cause to be posted at at least three conspicuous places on the land covered by this lease agreement, a "TO WHOM IT MAY CONCERN NOTICE" stating that the property is being worked under lease from the Mountain Mines Company, a Utah Corporation and that the said Mountain Mines Company and the Big Cottonwood Silver King Mining and Milling Company will not be responsible for any debts contracted for equipment, labor or supplies by said Lessees or their assigns during the life of said Lease.

George A. Rich

Carl B. Anderson

Karl J. McKain

FILE COPY
SURNAME:

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

JAN 30 1952

Mr. Charles E. Woodward
Mountain Mines Company
21 South West Temple Street
Salt Lake City 1, Utah

Subject: Docket DMA-288

Dear Mr. Woodward:

This Administration has been advised by Mr. G. E. Johnson, Acting Chief, Lead-Zinc Branch, Defense Materials Procurement Agency, that he has informed you of the reference of your application under docket DMA-288 to this Administration for reconsideration.

Please be advised that with the information on hand, your application cannot be reconsidered but we will be pleased to accept a new application from you for exploration project assistance.

Sincerely yours,

C. O. Mittendorf

Acting Administrator
Defense Minerals Exploration
Administration

1-30-52

Enclosures

REAdams:mp
1/28/52
cc: G. E. Johnson, DMPA-GSA
Adm. Reading File
Mails and Files
Mr. Mittendorf

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : Mr. C. O. Mittendorf, Acting Admin. DMEA **DATE:** Jan 11/52

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

SUBJECT: DMA-288, Mountain Mines Co.
Mr. Charles Woodward, President

We are referring this docket to your office for reconsideration.

The Mountain Mines Co. has made an application for a direct loan of $100,000. In the opinion of the USGS and the Lead-Zinc Branch this loan cannot be approved. Their application was denied on October 9, 1951, and on October 30th, the applicant wrote us again stating he had shipped two lots from a new streak of good shipping ore. He asked for reconsideration of this application for a direct loan.

We do not feel that his status has been altered by this new information and still believe this to be a matter for an exploration loan. We have advised the applicant that the entire case has been referred to DMEA and that he will be notified by your office of any action taken.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 14 1952

G. E. Johnson

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

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

a. Lu. e

OCT 5 1951

Re: Docket DMA-288
Mountain Mines Company
Mountain Mines, Salt
Lake County, Utah.
Exploration loan, $42,600
Lead, copper, silver, gold

Memorandum

To: Reports and Records Unit
Administrative Management Div.

From: Chief, Lead-Zinc Branch

Subject: Recommendation for denial of application for exploration loan submitted by Mountain Mines Company, Salt Lake City, Utah.

The property, which has been examined and reported on by the field team, is in the western part of the Big Cottonwood District, Salt Lake County, Utah.

The country rock of the area is pre-Cambrian quartzite and slate overlain by tillite and basal quartzite of Cambrian age. The sediments strike northwest and dip about 35° NE. Cutting these rocks is the Silver King fissure which strikes N. 60° E, and dips 60° to 70° NW. The fissure is a normal fault of rather small throw but is persistent along strike and down dip.

The mineralized part of the fissure ranges from 1 to 48 inches in width, the ore occurring in stringers and pods in the quartz vein filling.

Early production from the property is reported to have had a value of about $280,000, principally in gold and silver, which came from relatively shallow workings at two widely separated locations along the outcrop of the vein. More recently some production has come from the upper tunnel which intersects the vein about 600 ft. below the outcrop. This ore had an average assay of 2.5% Pb, 0.21% Cu, 0.8 oz. Ag, and 0.01 oz. Au.

The present company has driven a 3200 ft. crosscut to intersect the Silver King fissure about 1,900 ft. below the outcrop. From the intersection with the fissure, a 2,000 ft. drift has been driven to the southwest along the fissure. From the crosscut some ore averaging 0.7% Pb, 0.34% Cu, 0.2 oz. Ag, and 0.003 oz. Au per ton was obtained.

The drift along the vein passed through about 1,200 ft. of tillite and is in the underlying quartzite. Mineralization consists of pyrite and small amounts of lead, zinc, silver, and gold in a

quartz gangue. Raising at several points along the drift revealed no ore shoots.

In a letter dated September 8, 1951, the applicant claims that after the examination by the field team an iron sulfide vein containing 0.142% Ni was encountered in the drift along the Silver King fissure. However, this small a percentage of nickel in a deposit of this type has little economic significance.

In the same letter it is stated that an ore shoot containing 22% to 60% Pb and 14 to 124 oz. Ag was found in the upper levels of the mine. No description of the samples from which these values were obtained is given and the percentages quoted would indicate grab samples which are of little value in appraising a property.

The applicant proposes to extend the drift southwesterly on the Silver King fissure an additional 500 ft. and to put in 600 ft. of raise at various locations along the vein. Total estimated cost of this project is $42,600.

Because the ore found in both the upper and lower tunnels was submarginal in grade and the present drift along the Silver King fissure has revealed no significant change in mineralization in the various formations, the field team recommends that this application be denied. The Lead-Zinc Branch concurs with this recommendation.

The following material is attached:

1 copy of Form NSRB-146 with supporting exhibits
DMA correspondence and memoranda
1 copy of field team report.

T. P. Billings, Chief
Lead-Zinc Branch

Approved:

Director, Supply Division

FILE COPY
SURNAME: 350

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

OCT 9 1951

a.e.c.

Lyons (Etc)
McCurdy
Brewer
Collings

not stripped in R&R.

Re: Docket DMA-288
Mountain Mines Company
Mountain Mines, Salt Lake County, Utah.
Exploration loan, $42,600
Lead, copper, silver, gold

Memorandum

To: Reports and Records Unit
Administrative Management Div.

From: Chief, Lead-Zinc Branch

Subject: Recommendation for denial of application for exploration loan submitted by Mountain Mines Company, Salt Lake City, Utah.

The property, which has been examined and reported on by the field team, is in the western part of the Big Cottonwood District, Salt Lake County, Utah.

The country rock of the area is pre-Cambrian quartzite and slate overlain by tillite and basal quartzite of Cambrian age. The sediments strike northwest and dip about 35° NE. Cutting these rocks is the Silver King fissure which strikes N. 60° E, and dips 60° to 70° NW. The fissure is a normal fault of rather small throw but is persistent along strike and down dip.

The mineralized part of the fissure ranges from 1 to 48 inches in width, the ore occurring in stringers and pods in the quartz vein filling.

Early production from the property is reported to have had a value of about $280,000, principally in gold and silver, which came from relatively shallow workings at two widely separated locations along the outcrop of the vein. More recently some production has come from the upper tunnel which intersects the vein about 600 ft. below the outcrop. This ore had an average assay of 2.5% Pb, 0.21% Cu, 0.8 oz. Ag, and 0.01 oz. Au.

The present company has driven a 3200 ft. crosscut to intersect the Silver King fissure about 1,900 ft. below the outcrop. From the intersection with the fissure, a 2,000 ft. drift has been driven to the southwest along the fissure. From the crosscut some ore averaging 0.7% Pb, 0.34% Cu, 0.2 oz. Ag, and 0.003 oz. Au per ton was obtained.

The drift along the vein passed through about 1,200 ft. of tillite and is in the underlying quartzite. Mineralization consists of pyrite and small amounts of lead, zinc, silver, and gold in a

quartz gangue. Raising at several points along the drift revealed no ore shoots.

In a letter dated September 8, 1951, the applicant claims that after the examination by the field team an iron sulfide vein containing 0.142% Ni was encountered in the drift along the Silver King fissure. However, this small a percentage of nickel in a deposit of this type has little economic significance.

In the same letter it is stated that an ore shoot containing 22% to 60% Pb and 14 to 124 oz. Ag was found in the upper levels of the mine. No description of the samples from which these values were obtained is given and the percentages quoted would indicate grab samples which are of little value in appraising a property.

The applicant proposes to extend the drift southwesterly on the Silver King fissure an additional 500 ft. and to put in 600 ft. of raise at various locations along the vein. Total estimated cost of this project is $42,600.

Because the re found in both the upper and lower tunnels was submarginal in grade and the present drift along the Silver King fissure has revealed no significant change in mineralization in the various formations, the field team recommends that this application be denied. The Lead-Zinc Branch concurs with this recommendation.

The following material is attached:

1 copy of Form NSRB-146 with supporting exhibits
DMA correspondence and memoranda
1 copy of field team report.

T. P. Billings, Chief
Lead-Zinc Branch

A B Parsons/ Approved

STAMPED

for Director, Supply Division

EJLyons:emp
G 10-3-51

Copies to: J. H. East, Jr. Region IV (2)
Chief, Lead-Zinc Branch
E. T. McKnight 4204 GSA
O. M. Bishop
Directors. r. files 4214 GSA
Br. r. files 4214 GSA

Administrators r. file
DMA docket files

FILE COPY
SURNAME:

350

Lyons (EJ)
McKnight
Bishop
Edwards

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

Re: Docket DMA-288

OCT 9 1951

Mr. Charles S. Woodward, President
Mountain Mines Company
21 South West Temple Street
Salt Lake City 1, Utah

Dear Mr. Woodward:

We have received a report based upon the field team's examination of the property of the Mountain Mines Company in Salt Lake County, Utah.

Although there has been some production from the surface workings of your property, the ore which has been produced from the upper and lower tunnels has been of low or submarginal grade and there is no indication of increase in grade with depth. The 2000 ft. of drifting which has been done on the Silver King fissure on the lower tunnel level has revealed no ore bodies of commercial size and grade. The nickel occurrence which you mentioned in your letter of September 8, has little economic significance in view of the geologic environment in which it occurs. The amount of nickel present is about one-tenth of that which is necessary in order to profitably mine large, low-grade deposits having larger amounts of base metals than are present on your property.

In view of the above further exploration does not appear warranted and we are unable to justify an expenditure of public funds for the work you propose. I regret, therefore, that your application must be denied.

We wish to thank you for bringing this property to our attention.

Very truly yours,

SIGNED for
Jon Lyon, Director
Supply Division

EJLyons:emp
G 10-3-51
Copies to: J. H. East Jr. (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
O. M. Bishop
Directors r. files 4214 GSA
Br. r. files 4214 GSA

Administrators xl files
DMA docket files

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

DEFENSE MINERALS ADMINISTRATION
WASHINGTON, D. C.
OCT 1 10 35 AM '51

DEPARTMENT OF THE INTERIOR
RECEIVED
OCT 1 1951
Defense Minerals Administration,
Production Expansion Division,

224 New Customhouse
Denver 2, Colorado

September 26, 1951

No reply necessary
DEA
file

Memorandum

To: Tom Lyon, Chairman, Coordinating Committee
Defense Minerals Administration

From: Executive Officer, DMA Field Team, Region IV

Subject: DMA Docket 288, Mountain Mines Company, Salt Lake County, Utah

This is in reply to your letter of September 20, regarding the above docket. The field report was submitted to Washington September 20, 1951.

J. H. East, Jr.

read 9-24-51
sent to
Lead Zinc
name
date

OFFICIAL FILE COPY

To	Initials	Date
350	a.e.c.	10-1
210		

OCT 1 1951

5

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

224 New Customhouse
Denver 2, Colorado

September 26, 1951

Memorandum

To: Tom Lyon, Chairman, Coordinating Committee
Defense Minerals Administration

From: Executive Officer, DMA Field Team, Region IV

Subject: DMA Docket 288, Mountain Mines Company, Salt Lake County, Utah

This is in reply to your letter of September 20, regarding the above docket. The field report was submitted to Washington September 20, 1951.

J. H. East, Jr.

JHE:ld

cc: DMA
Koschmann

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

[illegible] Federal Building
Denver [illegible], Colorado

Air Mail

September 21, 1951

Memorandum

To: Executive Secretary, Defense Minerals Administration

From: [illegible] Area, Region IV

Subject: Final Report - [illegible] Pocket 288, Contact Mines Co., [illegible] Tooele County, Utah

Enclosed are original and two copies of the final report on the above application for an exploration loan.

We concur with the findings of the examining team and recommend that the application be denied.

for J. W. Frost, Jr.

[illegible] Chairman

Enclosures

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D. C.
SEP 24 10 31 AM '51

OFFICIAL FILE COPY

To	Initial	Date
20		

350

FILE COPY
SURNAME:

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

Billings
McKnight
Boyd
Thayer

Air Mail

SEP 20 1951

DMA-288
Mountain Mines Co.

a.e.e

Mr. J. H. East, Jr.
Executive Officer, Reg. IV
224 New Customhouse Building
Denver 2, Colorado

Dear Mr. East:

This is to advise that we received a letter from the applicant with respect to the status of DMA 288 - Mountain Mines Company.

The docket for a field examination of the property was sent to you some time ago and as yet we have received no report. Please advise when we may expect your report for further review.

Very truly yours,

BJ 9/20

Tom Lyon, Chairman
Coordinating Committee

Approved:

For Bureau of Mines

Thayer
For Geological Survey

TPBillings'lm
9/17/51

cc: Admn. Reading File
T. Lyon
Mote
McKnight
Billings
√ DMA Docket File

Mining Division
Region IV

September 20, 1951

Memorandum

To: [illegible] Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report DMA Docket 228, Mountain Mines Co., Salt Lake City, Utah

Enclosed are eight copies of the Summary, Conclusions and Recommendations, eight copies of the geologic report and eight copies of the engineering report on the above application for an exploration loan estimated to cost $42,600.00.

The lower workings consist of a crosscut tunnel 3,200 feet long, and approximately 2,000 feet of drifting on the vein. The workings on the vein are approximately 2,000 feet below the outcrop. At the elevation, the vein consists of quartz with pyrite and small amounts of lead, zinc, silver and gold. No production of any consequence has been made from this level. The examining Team concludes that continuation of the drift will encounter the same formation and recommends that the loan be denied. We concur with their recommendations.

Paul T. Allaman

Paul T. Allaman

9

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

September 17, 1951

Memorandum

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

From: Chief, Utah-Wyoming Branch, Mining Division

Subject: DMA 288, Mountain Mines Co., Salt Lake County, Utah

Attached are 8 copies of the subject brochure, including The Summary, Conclusions and Recommendations section. The geologic section was submitted by the Survey August 13, 1951.

/s/ Stephen R. Wilson

Enclosure

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Defense Minerals Administration
200 New Customhouse
Denver 2, Colorado

August 22, 1951

Concerning

To: DMA Field Team, Region IV

From: G. H. Roschmann

Subject: DMA Project 228, Mountain Lime Company, Salt Lake City, Utah

Enclosed are eight copies of the geologic report by Myron J. Sharp and J. [illegible] Wasler of the U. S. Geological Survey covering the above deposit.

G. H. Roschmann
G. H. Roschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (16)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Room 307, 320 South Main
Salt Lake City 1, Utah
17 August 1951

Memorandum

To: A. H. Roschmann, Field Team, Region IV

From: Ralph J. Roberts

Subject: Docket RMI-288, Mountain Mines Company, Salt Lake City, Utah

Enclosed are eight copies of the report of the geological examination of the Mountain Mines Company in response to a request from Field Team IV. Also enclosed is one copy of Summary, Conclusions and Recommendations; Proposed Exploration; and Conclusions and Recommendations which has been included in the Bureau of Mines report.

The lead-silver ore deposits are in Pre-Cambrian Pillite and quartzite. The past production has been of sub-marginal grade. It is concluded that the possibility of finding commercial grade ore is unfavorable because the metal content appears to decrease downward. It is recommended that the application for an exploration loan be denied.

/s/ Bonnie M. Stagg
for - Ralph J. Roberts

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

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

Docket DMA 288, Mountain Mines Company, Salt Lake County, Utah

Byron J. Sharp and J. W. Hasler, Geologists
U. S. Geological Survey

July 23-25, 1951

MOUNTAIN MINES CO.
SALT LAKE COUNTY, UTAH

GEOLOGY, CONCLUSIONS AND RECOMMENDATIONS

By A. E. Young and
J. W. Hasler

Mountain Mines Co., Big Cottonwood district, Salt Lake County, Utah, has requested an exploratory loan of $42,600 to conduct underground exploration. The property was examined by members of the Bureau of Mines and Geological Survey and data assembled for evaluation of the proposed loan.

The predominant rocks in the area are pre-Cambrian quartzite and slate overlain by tillite and the basal quartzite of the Cambrian formation. A strong fissure, the Silver King, strikes N. 60° E. and dips 60° to 70° to the northwest. The fissure is a normal fault of small throw, but is persistent down dip and along the strike. The fissure has produced ores from points near the surface, but little ore has been mined from the present exploratory adit, approximately 2,000 feet below the vein outcrop. At this elevation the vein consists of quartz with pyrite and small amounts of lead, zinc, silver and gold.

It is concluded that the proposed exploration will disclose non-commercial ore comparable in grade to that encountered in drifting on the vein on the lower adit. It is therefore recommended that the loan request be denied.

MOUNTAIN MINES CO.
SALT LAKE COUNTY, UTAH

Engineering Report

By W. E. Young
Mining engineer
U. S. Bureau of Mines

MOUNTAIN MINES CO.
SALT LAKE COUNTY, UTAH

CONTENTS

	Page
Engineering report	
Introduction	2
Location and physical features	2
History and production	2
Description of the deposit	3
Minable ore reserves	3
Present status	3
Conclusions and recommendations	4

INTRODUCTION

Mountain Mines Co. property in the western part of the Big Cottonwood district, Salt Lake County, Utah, was examined by the Geological Survey during July 1951. A preliminary examination had previously been made by the Bureau of Mines. Data have been assembled for evaluating an exploratory loan proposal under DMA docket 288.

LOCATION AND PHYSICAL FEATURES

The mine lies at the head of Mineral Fork of Big Cottonwood Canyon. The portal of the lower adit is located at the bottom of a large cirque surrounded by precipitous canyon walls. The main vein crosses the highest ridges and peaks in the area. A fair road with steep grades extends from the Big Cottonwood Canyon road to the portal of the lower adit. The road from this adit to the upper workings is extremely steep with several switchbacks. Deep snows and severe conditions make travel difficult during winter months.

HISTORY AND PRODUCTION

Early-day production from this property is reported to have totalled approximately $280,000, principally in gold and silver. Ores were mined from relatively shallow workings at two widely separated locations along the outcrop of the vein.

During the past few years, the company has been conducting an ambitious program for development of the vein at depth, completing

a 3,200-foot crosscut to intersect the vein 2,000 feet below its outcrop. Nearly 2,000 feet of drifting has been completed on the vein. No production of any consequence has been made from the latter workings.

In addition to the above work, the company has leased parts of the surface workings. Some ore has been shipped as a result of this work, but the quantity has been small and the grade low.

DESCRIPTION OF THE DEPOSIT

The rocks included in the area are pre-Cambrian quartzite and slate, overlain by tillite and the basal quartzite of the Cambrian formation. The regional strike of the formations is slightly west of north with an easterly dip. They have been cut by the strong Silver King fissure that strikes N. 60° E. and dips 60° to 70° to the northwest. The eastern extension of the fissure is being developed by the American Metals Co. from the Little Cottonwood Canyon side. Its western extension can be traced on the surface through Mineral Fork Basin across the ridge and into Mill "B" South Fork.

Ores have been mined from shallow, near-surface stopes at two widely separated locations on the fissure.

MINABLE ORE RESERVES

There are no minable ore reserves known at this time.

PRESENT STATUS

A crosscut has been driven 3,200 feet to intersect the vein at 2,000 feet below its outcrop. Approximately 2,000 feet of drifting

has been done along the fissure.

The mine is equipped with compressor, pneumatic drills, pipe, track, and ventilation system. Tramming is done with a horse-drawn train of small mine cars. A large office and dormitory is located near the portal of the tunnel. There is no milling equipment on the property.

The applicant proposes to complete 500 additional feet of drifting in a westerly direction along the vein on the lower adit. The cost of this work is estimated at $30 per foot, or $15,000. Also proposed is 600 feet of raising to be done at various locations along the vein from the lower level. The cost of this work is estimated at $46 per foot, or $27,600.

The total cost of the project is estimated at $42,600.

CONCLUSIONS AND RECOMMENDATIONS

The Silver King vein has been explored by approximately 2,000 feet of drifting along its strike and no ore shoots of commercial grade and size have been found. The work was accomplished by driving 3,200 feet of crosscut to intersect the vein at approximately 2,000 feet below its outcrop. For the first 1,200 feet, the drift has explored the vein through the tillite and the remaining footage of the drift in the underlying quartzite. No appreciable change in mineralization was encountered in either formation. In view of the

probability that continuation of the drift will encounter the same formation, no additional work is recommended. Several attempts to find ore shoots by raising at various points along the drift met with failure. It is recommended that the loan application be denied.

Docket DNA 233, Mountain Mines Company

GEOLOGY

The mine workings are mainly in tillite and associated rocks of pre-Cambrian age which strike northwest and dip about 35° SE. These rocks are cut by the Silver King fissure which strikes N. 50° E. and an average dip of 70° NW. The fissure is a normal fault of rather small throw, but is persistent both down dip and along the strike.

The mineralized zone along the vein ranges in thickness from 1 to 48 inches. The ore was localized along the vein and occurs as narrow stringers in the quartz vein filling.

The lower drift extends westward along the fissure into pre-Cambrian quartzite of the Big Cottonwood series which are unconformably below the tillite but have roughly the same attitude here in this area.

ORE DEPOSITS

The ore occurs in stringers and pods in quartz which fills the extensive Silver King vein. The upper close to the surface yielded some low grade ore. The lower tunnel (see Fig. 2) which cuts the vein at a depth of 1,900 feet revealed considerable pyrite, but little commercial ore.

The chief ore minerals of the mine are pyrite, galena, and some secondary lead carbonate and iron oxides. The gangue is chiefly quartz.

The ore shipped from the upper workings averaged 2.5 percent lead, .21 percent copper, .8 oz. silver and .01 oz. gold to the ton. Near the surface, the ore was somewhat enriched and could be shipped at a small profit.

Shipments from the lower workings averaged .7 percent lead, .34 percent copper, .2 oz. silver, and .003 oz. gold to the ton. At current market prices this ore has a gross value of only $4.29 a ton.

It is likely that further exploratory work at depth will disclose vein material comparable in grade to the material shipped from the lower tunnel.

Docket No. 22[illegible], Mountain Mines Company

OREREVIEWS

There are no ore reserves of commercial value in the Mountain Mines Company workings. The stoped ore from the upper tunnels was of sub-marginal grade. The ore shipped from the lower tunnel was lower in value than the one which was shipped from the upper tunnel. Further exploratory work is not likely to find any ore of commercial grade.

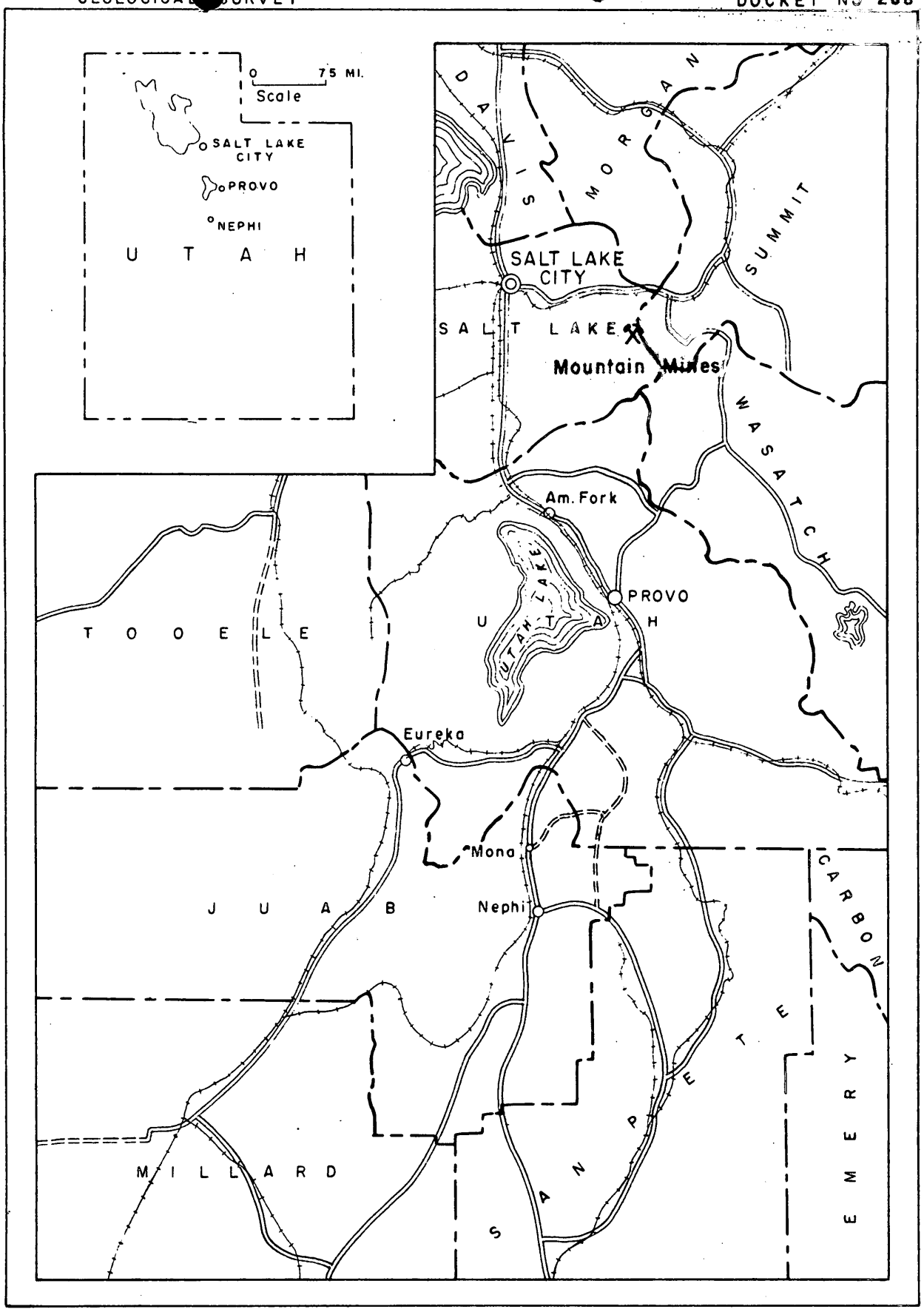


FIG. 1 INDEX MAP OF UTAH

0 5 10 15 20 MILES
Scale

FILE COPY
SURNAME:

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

Billings
McKnight
Bishop

DMA-288

SEP 19 1951

A.E.C.

Mr. Charles S. Woodward
Mountain Mines Company
21 South West Temple Street
Salt Lake City 1, Utah

Dear Mr. Woodward:

Your letter of September 8, 1951, respecting new developments on your property has been received.

As yet we have not received the field team report covering your application. Today we are dispatching an air mail letter to Mr. Jack West, Jr., Executive Officer, Region IV, requesting him to send in his report in order that we can expedite your application for final action.

Very truly yours,

9-19

T. P. Billings, Chief
Lead-Zinc Branch

TPBillings'lm
9/17/51

cc: Admn. Reading File
Mote
McKnight
Billings
DMA Docket File

CHARLES S. WOODWARD
PRESIDENT

DEFENSE MINERALS
ADMINISTRATION
WASHINGTON, D. C.
8 48 AM '51

GEO. H. BLUNCK
SECRETARY

MOUNTAIN MINES COMPANY

21 SOUTH WEST TEMPLE STREET
SALT LAKE CITY 1, UTAH

MINES AT
BIG COTTONWOOD CANYON
SALT LAKE COUNTY

September 8, 1951

Defense Minerals Administration
Washington, D. C.

Gentlemen: Re; DMA-288

Since filing our application for a development loan in January, 1951, we have continued on with the development of our properties near Salt Lake City, Utah. It is rather discouraging not to receive any definite word from the DMA in regard to the matter under consideration.

The Bureau Of Mines has examined on two occasions and the engineers for DMA have examined during the past two months.

Since the examination by DMA, we have encountered a vein of iron sulphides on the 2000 foot level of the mine, which carries ~~XXXX~~ .142% Nickel. Samples of this material were sent to the Bureau Of Mines at Salt Lake City, and also to the International Nickel Company at Sudbury, Ontario. No report of their findings has been received to date.

On September5, 1951, our Lessees in the upper levels of the mine have encountered what appears to be the finest strike ever made on this property. Assays of the material have shown from 22% to 60% Lead and from 14 to 124 Ozs. Silver. The vein is six feet wide and shows much promise. The Lessees have been six years driving a lower tunnel to get under the ore shoot which showed considerable strength in the surface workings.

This property shows much promise, but we are not in a position to speed up the development of the property without financial assistance from some scource.

On April 18, 1951, we wrote you indicating our willingness to provide one half of the project funds.

Yours very truly,

Charles S. Woodward

Charles S, Woodward

Mining Division
Region IV

May 7, 1951

Memorandum

To: W. M. Traver

From: Chief, Mining Division

Subject: DMA Docket 288, Mountain Mines Company

Herewith is submitted the brochure on the above application, together with a copy of a letter from the Field Team, Region IV. and a memorandum from the Coordinating Committee, DMA, which gives considerable instruction upon the type of information that they would like provided.

Please make the investigations indicated and report as soon as possible.

P. T. Allsman

Attachments

PTA/cl
cc-dma files

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

OFFICE OF
REGIONAL DIRECTOR

REGION IV

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

May 4, 1951

Memorandum

To: P. T. Allsman and Ralph Roberts

From: DMA Field Team, Region IV

Subject: DMA Docket 288, Mountain Mines Company

We are attaching the brochure of the Mountain Mines Company, DMA Docket 288.

Please read the subject letter carefully and make the investigation requested.

We are forwarding the brochure to Mr. Allsman, for forwarding to Ralph Roberts.

J. H. East, Jr.

A. H. Koschmann

Attachments
Coordinating Committee memo
Brochure

Mining Division
Region IV

MAY 10 1951
RECEIVED

May 7, 1951

Memorandum

To: S. R. Wilson

From: Chief, Mining Division, Region IV

Subject: DMA Docket 288, Mountain Mines Company, Salt Lake City, Utah

Attached are copies of letters from the Field Team, Region IV, and the Coordinating Committee, DMA, regarding the above docket.

The brochure is being sent to Ralph Roberts as directed by the Team. If there is anything you can do to assist Mr. Roberts in the examination, please do so.

P. T. Allsman

Attachments

Copy to Ralph Roberts (with brochure)
DMA files
Allsman

PTA/cl

U.S. ... MAY 9 1951 ... DIVISION

May 4, 1951

Memorandum

To: [illegible] Allsman and Ralph Roberts

From: DMA Field Team, Region IV

Subject: DMA Docket 288, Mountain Mines Company

We are attaching the brochure of the Mountain Mines Company, DMA Docket 288.

Please read the subject letter carefully and make the investigation requested.

We are forwarding the brochure to Mr. Allsman, for forwarding to Ralph Roberts.

J. [illegible] East, Jr.

A. H. Koschmann

Attachments
Coordinating Committee memo
Brochure
[illegible]/cl
cc-d 1 files

FILE COPY
SURNAME:

McKnight
Kirkes

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

April 24, 1951

File Send to

Memorandum

To: Executive Officer of Field Team, Region IV

From: Coordinating Committee, D. M. A.

Subject: Application of
Mountain Mines Company
Charles S. Woodward, President
21 South West Temple Street
Salt Lake City 1, Utah
Mine on Mineral Fork of Big Cottonwood Canyon,
Salt Lake County, Utah

Re: Docket DMA-288

Subject docket was previously denied as essentially a gold-silver proposition (see Lead-Zinc Branch memo of January 29, copies of which were sent to field team; also letter of same date to applicant). Although the point was not made in letter to applicant, much of the appraisal of this property was based on mapping the mine by Max Crittenden of the Geological Survey. The appraisal was that applicant was in an unfavorable stratigraphic horizon for lead-zinc, was proposing to explore in a direction away from the center of mineralization, and had gambled on finding good base metal ore below surface enrichment of precious metals but that enough work had already been done at the lower level to pretty well prove that the gamble had failed.

Applicant made a vigorous protest that he had been turned down without an examination of his property. In reply to this, the Lead-Zinc Branch pointed out to applicant the considerations on which the denial had been made, including study of a published report on the Cottonwood district, and of unpublished mapping carried on by the Geological Survey in the mine area in recent years, also pointing out the negative results achieved by the exploration to date. (See letter of March 12, copies of which were sent to field team). However, applicant was told that if, after reviewing the reasons for the previous denial, he wished to submit an application for assistance under the exploration program, it might be possible that further consideration might be given to his proposal.

In a letter of April 18, applicant applies for exploration aid, cutting the amount from $100,000 in the original application to $53,100 to cover an abbreviation of the original proposal.

Application is forwarded to the field team with request that an additional field examination be made that can either modify the original decision, or which can be used to bolster a final denial.

Gritteden will write to Ralph Roberts concerning where to find his original mapping, which can be used as a basis for a further examination. Also, some of the Bureau of Mines engineers in the Salt Lake region may be familiar with this property and may be able to contribute to the question of whether this property can be expected to produce lead and zinc as a result to the exploration proposed.

As analysis of the application has been made by the Lead-Zinc Branch in the memo accompanying the original denial, and in the letter of March 12 sent to the applicant, no further analysis is necessary.

Tom Lyon

Chairman

Approved:
DMA Coordinating Committee

Lowell B. Moon

L. B. Moon

/s/ Shaver for

Olen N. Rove

ETMcKnight:emp 4/24/51

Copies to: J. H. East, Jr. (2)
Region IV
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
L. B. Moon
R. H. Mote
L. F. Strobel
C. O. Mittendorf
Files

FILE COPY
SURNAME:

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

McKnight
Express
Thanks for Love
Moden

April 24, 1951

Re: Docket DMA-2[illegible]

Mr. Charles S. Woodward, President
Mountain Mines Company
21 South West Temple Street
Salt Lake City 1, Utah

Dear Mr. Woodward:

Upon receipt of your letter of April 10, stating that you will match funds on your proposed project on a tributary of Cottonwood Creek, we are forwarding your application to the field team, Mr. J. H. East, Jr., 224 New Customhouse, Denver 2, Colorado, for further consideration and advice. We will advise you when we have received a report from the field.

Very truly yours,

Tom Lyon, Director
Supply Division

ETMcKnight:emp G 4/24/51
Copies to: J. H. East, Jr
Region IV (2)
Chief, Lead-Zinc Br.
E. T. McKnight
L. B. Moon
R. H. Mote
L. F. Strobel
C. O. Mittendorf
Files

FILE COPY
SURNAME:

McKnight
Hersey
Wheeler
Dyson

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

March 12, 1951

Re: Docket [illegible]-280

Mr. Charles H. Woodward
21 South West Temple Street
Salt Lake City 1, Utah

Dear Mr. Woodward:

This will acknowledge your letter of February 19, regarding the enclosed letter declining your application for Federal aid under the Defense Production Act of 1950.

I am in agreement with the sentiments expressed in your letter, that all possible domestic sources of strategic minerals should be encouraged, if they show any promise of significant production. Of the two metals that I am particularly concerned with, the expected supply of lead during the next few years should be ample for requirements, unless some unforeseen condition develops. Zinc production, on the other hand, must be expanded in order to satisfy the requirements. Both metals are included under the exploration program recently approved for the Defense Minerals Administration. Under this program, the Government will loan half of the funds needed for exploration on an approved project, the other half to be financed by the applicant. However, only the more promising projects are being approved, those that, on geologic probability, may yield significant tonnages of lead or zinc metal.

After receipt of your letter, we had the application of Mountain Mines Company re-examined. The fact that the deep level development already carried out was proposed as a gold project (statements of Harvey B. Heist, R. L. Abbott) would be no argument against the possibility that this development might also discover lead-zinc ores, provided geologic conditions were favorable for lead or zinc occurrence. However, the geologic setting is not very favorable for discovery of any significant tonnage of base metals in the Cambrian and pre-Cambrian quartzites in this area; and the failure of over 1500 feet of drifting already made on the vein to find any lead or zinc that is economically workable, would seem to substantiate the conclusions based on geologic considerations.

The Defense Minerals Administration has based its geologic interpretations on the published report of the Cottonwood area, and on unpublished mapping carried out by the Geological Survey in recent years in the area that includes your mine. These interpretations are supported on certain details by the reports accompanying your application.

On the basis of considerations set forth above, the Lead-Zinc Branch feels that the chances for finding new lead-zinc deposits by the exploration that you propose are not promising. After reviewing the information set forth above if you wish to submit an application for assistance under the exploration program soon to be published, it may be possible that further consideration might be given to your proposal.

Your letter of January 29, from [illegible], Director of Supply Division, Defense Minerals Administration, is returned to you herewith as per your request.

Very truly yours,

C.[illegible] Chief
Lead-Zinc Branch

Enclosure

EMcKNIGHT:cmp:ks
G 3/12/51
Copies to: Chief, Lead-Zinc Br.
USGS-McKnight
L. B. Moon
H. H. Mote
2 copies to Exec. Officer
Regional Field Team, Region IV
Strobel
Mittendorf
Files

CHARLES S. WOODWARD
PRESIDENT

~~LANDON F. SMITH~~

R. W. EDMUNDS
SECRETARY

Mr. Harres
Files (DMA) 288

MOUNTAIN MINES COMPANY

21 SOUTH WEST TEMPLE STREET
SALT LAKE CITY 1, UTAH

MINES AT
BIG COTTONWOOD CANYON
SALT LAKE COUNTY

February 10, 1951

Mr. Otto Harres, Chief
Lead-Zinc Branch
Defense Minerals Administration
Washington, D. C.

Dear Mr. Harres:

I want to thank you for your letter of January 31, 1951. I am certain, along with the mining men of the west, that you are going to do all in your power to bring about a constructive program to develop new mines for America-and the Lord only knows that we need them.

Enclosing a letter just received today from S. H. Williston, Director Supply Division Defense Minerals Administration, which I wish you would return to me.

It is beyond me to understand how the Defense Administration can write me that our property is not acceptable, without first determining by a carefull examination just what the merits of the property are. Surely those men know that many of the big Lead-Zinc-Copper Mines of the nation were essentially Gold-Silver mines to a depth of approximately 600 feet from the surface. Why all this double talk about the shortage of Lead-Zinc not being acute? Cut off the supply of these metals from abroad and where are we as nation ?

Anyone familiar with the situation in America, knows that the country is dangerously short of blocked-out Zinc-Lead ore deposits and especially those of a highgrade nature.

Such hasty decisions as that contained in the letter from Mr. Williston to our company, may cause the country to overlook some of the very best bets- to open new and large deposits of Lead-Zinc-Copper ores.

After all, only development work can determine whether a deposit is a promising one or not. That is the program we have been led to believe was in the minds of those choosen to guide our country in regard to the development of new mines.

We still have confidence that your influence will eventually be felt there in working out a deal which will show the proper consideration to the small producer and mine operator.

Yours very truly,

Charles S. Woodward

Charles S. Woodward

UNITED STATES
DEPARTMENT OF TH NTERIOR
BUREAU OF M
DEFENSE MINERALS AD TRATION

REFERENCE SLIP

DATE 2/19/51

FERRED TO:

1. Mr. Hewel
2.
3.
4.

R:

_____Action
_____Approval
_____Comment
_____Recommendation
_____Reply for signature of
X Your information

MARKS:

Check (X) before the items needing attention.

LANDON F. STROBEL
Initials of sender.

nterior – Bureau of Mines, Pittsburgh, Pa.

CHARLES S. WOODWARD
PRESIDENT

LANDON F. STROBEL

GEO. H. BLUNCK
SECRETARY

MOUNTAIN MINES COMPANY

21 SOUTH WEST TEMPLE STREET
SALT LAKE CITY 1, UTAH

MINES AT
BIG COTTONWOOD CANYON
SALT LAKE COUNTY

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 20 1951
LANDON F. STROBEL
Executive Secretary

April 18, 1951

Defense Minerals Administration
Mr. Otto Harres, Chief Lead-Zinc Branch
Washington, D. C.

Re: Docket DMA-288

Dear Mr. Herres:

After receiving a copy of the Release of April 11, 1951, by the Defense Minerals Administration entitled" MINERAL EXPLORATION PROGRAM REGULATIONS ISSUED BY DMA", we have decided to furnish 50% of the expenses of the proposed project, as outlined in the above named Release.

It has been determined however, to modify the statement on page one of the application of December 30, 1950, to read as follows:

NATURE OF EXPENDITURE

1. Purchase of 1 Drifter with Rails, Pipe, Bits and Steel	$2,500.00
2. Extending West Drift 500 feet	15,000.00
3. 600 feet of Raising in two places on Ore Shoots developed in West Drift	27,600.00
4. Management and Engineering for 2 Years	8,000.00
Total	$ 53,100.00

No engineer has been on our property during the past 10 years that has given us an adverse report, as to the possibilities of developing vast tonages of Gold, Silver, Lead, Zinc and Copper Ores. Mr Allsman, until recently, head of the Bureau Of Mines at Salt Lake City, Utah, has encouraged us to seek Government aid in the completion of this development program.

The expenditure of $284,481.00 by our company thus far, has been to prove the existence of the vein at this great depth and to reach the territory which the drift is now in. We do feel that this property offers one of the best possibilities of developing large tonages of the above named ores.

The next six months offers our best operating season and we would like very much to get underway with the proposed work at the earliest possible date.

Yours very truly,

Charles S. Woodward

Charles S. Woodward, President

APR 23 1951

Strobel

dma

4625-288

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

MOUNTAIN MINES CO.

[illegible] Your letter in [illegible] has based its geologic interpretations on the published report of the Cottonwood area, and on unpublished [illegible] reports and on the [illegible] survey in recent years in areas that include your mine. These interpretations are [illegible] on certain details by the reports [illegible] your application.

[illegible] of considerations set forth above, the Lead-Zinc Branch finds that the chances for finding new lead-zinc deposits by the application that you propose are not promising. After reviewing the information set forth above if you wish to submit an application for prospecting under the exploration program soon to be published, it may be possible that further consideration might be given to your proposal.

[illegible] letter of January 22, from [illegible] Illington, Director of Supply [illegible], Atomic Energy Commission, is returned to you herewith [illegible] your report.

Very truly yours,

[illegible] Chief
Lead-Zinc Branch

Enclosure

[illegible]
[illegible] 3/13/51
Copies to: [illegible], Lead-Zinc Br.
[illegible] Knight
[illegible] Moon
[illegible] Mote
[illegible] to Exec. Officer
[illegible] Regional Field Team, Region IV
✓ Strobel
[illegible] Ittendorf
[illegible] Files

Chief, Lead/Zinc Br.

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

March 16, 1951

Re: Project [illegible]-[illegible]

Mr. Charles [illegible] Woodward
61 South West Temple Street
Salt Lake City 1, Utah

Dear Mr. Woodward:

This will acknowledge your letter of February 15, regarding the enclosed letter declining your application for Federal aid under the Defense Production Act of 1950.

I am in agreement with the sentiments expressed in your letter, that all possible domestic sources of strategic minerals should be encouraged, if they show any promise of significant production. Of the two metals that I am particularly concerned with, the expected supply of lead during the next few years should be ample for requirements, unless some unforeseen condition develops. Zinc production, on the other hand, must be expanded in order to satisfy the requirements. Such details are included under the exploration program recently approved for the Defense Minerals Administration. Under this program, the Government will pay half of the funds needed for exploration on an approved project, the other half to be financed by the applicant. However, only the more promising projects are being approved, those that, on geologic probability, may yield significant tonnages of lead or zinc metal.

After receipt of your letter, we had the application of Mountain Lines Company re-examined. The fact that the deep level development already carried out was proposed as a gold project (statements of Harvey S. Hoist, [illegible]) would be no argument against the possibility that this development might also discover lead-zinc ores, provided geologic conditions were favorable for lead or zinc occurrence. However, the geologic setting is not very favorable for discovery of any appreciable tonnage of these metals in the underground prospect possible in this area; and the failure of over 1500 feet of drifting, already made on the vein to find any lead or zinc ores is deep Derby workable, would seem to substantiate the conclusions based on geologic considerations.

The Defense Minerals Administration has based its geologic interpretations on the published report of the Cottonwood area, and on unpublished mapping carried out by the Geological Survey in recent years in the area that includes your mine. These interpretations are supported on certain data furnished by the records accompanying your application.

On the basis of considerations set forth above, the Lead-Zinc Branch feels that the chances for finding new lead-zinc deposits by the exploration that you propose are not promising. After reviewing the information set forth above if you wish to submit an application for assistance under the exploration program soon to be published, it may be possible that further consideration might be given to your proposal.

The letter of January 19, from L. W. Hillsten, Director of Supply Division, Defense Minerals Administration, is returned to you herewith as per your request.

Very truly yours,

Chief
Lead-Zinc Branch

Enclosure

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6 3/13/51
Copies to: Chief, Lead-Zinc Br.
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Moon
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2 copies to Exec. Officer
Regional field team, Region IV
Strobel
Mittendorf
Illes

FILE COPY
SURNAME:

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

Lyons
McKnight
Kerrs
Neeley

January 29, 1951

Mr. Charles S. Woodward
Mountain Mines Company
21 South West Temple Street
Salt Lake City 1, Utah

Dear Mr. Woodward:

Your request (No. DMA-288) for assistance under the Defense Production Act of 1950 has been reviewed by the Lead-Zinc Branch of the Defense Minerals Administration.

As explained in the enclosed press release, before a loan for development will be made by the Reconstruction Finance Corporation, the Defense Minerals Administration must certify that the minerals sought are necessary for national defense. Furthermore, projects to be approved by the Defense Minerals Administration must, in its judgment, show definite promise of yielding material of acceptable grade, physical character, and specifications in amounts that will significantly improve the mineral supply position for national defense.

The evidence supporting your application indicates that your property was essentially a producer of gold and silver and that the ore is rather low in zinc and lead. Because at the present time the shortage of lead and zinc is not as acute as that of some other minerals, only the more promising lead-zinc projects can be considered.

Under these circumstances, therefore the Lead-Zinc Branch of the Defense Minerals Administration feels that an expenditure of public funds to support a project such as you propose is not justifiable.

The Lead-Zinc Branch, Defense Minerals Administration, wishes to thank you for bringing this property to its attention.

Very truly yours,

S. H. Williston, Director
Supply Division
Defense Minerals Administration

copy to: Chief, Lead-Zinc Branch
Geological Survey - McKnight
J. H. Hedges
R. H. Mote
2 copies to Executive Officer,
Regional Field Team, Region IV
Strobel
Mettendorf
Files

Enclosure 1
EJLyons:jeh
G-1/29/51

January 29, 1951

Mr. Merle [illegible] Leonard
Mountain [illegible] Company
21 South [illegible] Street
Salt Lake City, Utah

Dear Mr. [illegible]

[illegible] request (No. [illegible]-2[illegible]) for assistance under the Defense Production Act of 1950 has been reviewed by the Leasing Branch of the Defense Minerals Administration.

[illegible] the nation's present [illegible], before a loan for [illegible] will be made by the Reconstruction Finance Corporation, the Defense Minerals Administration must certify that the mineral account [illegible] for national defense. Furthermore, projects to be approved by the Defense Minerals Administration must, in its judgment, show [illegible] to the [illegible] national [illegible] made [illegible], physical character, [illegible] in accounts that will significantly improve the mineral supply position for national defense.

[illegible] supporting your application indicate that your property [illegible] mainly a producer of gold and silver and that the ore is rather low in zinc and lead. Because of the [illegible] time the shortage of [illegible] is not as acute as that of some other minerals, only the [illegible] containing base-line projects can be considered.

[illegible] these circumstances, therefore, the Leasing Branch of the Defense Minerals Administration feels that an expenditure of public funds to support a project such as you propose is not justifiable.

[illegible] Leasing Branch, Defense Minerals Administration, wishes to thank you for bringing this property to its attention.

Very truly yours,

[illegible] Director
Supply Division
Defense Minerals Administration

copy to: Chief, Leasing Branch
Geological Survey - Wenright
J. H. Herger
R. L. Hote
2 copies to Executive Officer,
Regional Field Team, Region IV
Strobel
[illegible]
Files

JLyons:jeh
2-1/29/51

FILE COPY
SURNAME:

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

Memorandum L. F. Strobel January 29, 1951

To: Executive Secretary
Through: Operating Committee, DMA

From: Lead-Zinc Branch, DMA

Subject: Docket DMA-233
Mountain Mines Company, Salt Lake City, Utah

The Mountain Mines Company application, submitted by Charles S. Woodward, president, has been reviewed by the Lead-Zinc Branch, DMA.

The applicant requests $100,000 to be used to purchase and install new equipment, to drive 1,000 feet of tunnel and an equivalent amount of raises, and to assist a group of persons who have leased the upper levels of the mine. The property has not been in operation since October 1, 1950.

The information accompanying the application does not include an estimate of the ore reserves nor a statement of the grade of the ore to be mined. Assays of the ore already mined from the tunnel show that it was essentially a gold and silver ore and the lead and zinc content averaged about 2.5% and 1.5% respectively.

The Lead-Zinc Branch, DMA, therefore, recommends that no loan be granted to the Mountain Mines Company and that the attached letter be sent to the applicant.

OTTO HERRES, Chief
Lead-Zinc Branch, DMA

copy to: Chief, Lead-Zinc Branch
Geological Survey - McKnight
J. H. Hedges
R. H. Mote
2 copies to Executive Officer,
Regional Field Team, Region IV
Strobel
Mettendorf
Files

Approved:
DMA Operating Committee

/s/
Chairman

/s/
J. H. Hedges

/s/
Olaf N. Rove

AWHevl:jeh G-1/29/51

CHARLES S. WOODWARD
PRESIDENT

LANDON F. STROBEL

R. W. EDMUNDS
SECRETARY

DMA-288

MOUNTAIN MINES COMPANY

21 SOUTH WEST TEMPLE STREET
SALT LAKE CITY 1, UTAH

MINES AT
BIG COTTONWOOD CANYON
SALT LAKE COUNTY

January 5, 1951

James Boyd, Director
U. S. Bureau Of Mines
Washington, D. C.

Dear Sir:

December 30, 1950, we submitted to your office an application for a loan, under Sec. 302 of Defense Production Act of 1950. We now discover that only three copies were mailed on above date.

The fourth copy is enclosed herewith.

Since 1935, our company has spent $284,481.60 in the equiping and developing of this property.

It is the first real deep development ever to be completed in the Big Cottonwood Mining District- the lower level being 2,000 feet below the surface outcrops. The showings are most encouraging and there is every evidence that a major mine is being developed.

Yours very truly,

Charles S. Woodward

Charles S. Woodward, President

BUREAU OF MINES
WASHINGTON, D.C.
JAN 9 2 52 PM '51

DMA 288

256

EXHIBIT "E"

Dec. 28, 1950

Mountain Mines Company
21 South West Temple
Salt Lake City, Utah

Attention: Mr. Chas. S. Woodward

Gentlemen:

Pursuant to our telephone conversation of yesterday, we take pleasure in quoting you as follows upon the equipment which you propose to install at the mine upon resuming operations:

AIR COMPRESSOR

1 - Class WBE Gardner-Denver stationary water-cooler air compressor complete with pilot for constant speed control - powered through V-belt drive by Class UD18A International diesel engine - complete with air receiver - engine and compressor mounted on extended steel base - price includes air receiver - complete with all necessary piping, bolts, etc.
Price FOB Salt Lake City, Utah . . . . . $7800.00.

DRIFTING DRILL & ACCESSORIES

1 - Model CF70 Gardner-Denver automatic feed drifting drill complete with chuck for 1-1/8" round lugged steel - with CF130 movable cone mounting with aluminum alloy shell for 30" steel change.
Price FOB Salt Lake City, Utah . . . . . $ 995.00.

1 - 3-1/2" x 6' single screw column complete with clamp and saddle.
Price FOB Salt Lake City, Utah . . . . . 180.00.

2 - 50' lengths 3/4", 3-braid, type 14-46 Air hose complete with 18EX couplings FOB Salt Lake City . . . . . 44.00 each.

2 - 50' lengths 1/2", 3-braid, type 14-46 Water hose with nipples and clamps. Price FOB Salt Lake City . . . . . 27.65 each.

1-1/8" Round hollow Crucca drill steel made up with lugged shanks and threaded for Timken H bits as follows:

6 - 30" lengths. Price FOB Salt Lake City . . . . . 6.85 each.
6 - 60" lengths. " " " " " 8.60 each.
6 - 90" lengths. " " " " " 11.30 each.

MISCELLANEOUS

5 Tons (10,000 lbs.) 10-lb. Rail.
Price FOB Salt Lake City, Utah . . . . . $7.90 per cwt.

Bulletins descriptive of the above units are attached for your reference.

Shipment of all the material quoted upon above can be made in three or four weeks from receipt of your order.

Very truly yours,

GARDNER-DENVER COMPANY

By J. B. Matheson
District Manager

FBM:IM

EXHIBITS "E"

HARVEY D. HEIST, CONSULTING ENGINEER
MINING AND OIL
314 Dooly Block Salt Lake City, Utah

Mr Charles S. Woodward,
415 Vermont Building,
Salt Lake City, Utah

Dear Sir:

It is the purpose of this paper to discuss the mineral possibilities of that certain area of the western Alta district, Salt Lake County, Utah, particularly referring to the area embraced by the holdings of Big Cottonwood Silver King Mining and Milling Company and to adjacent claims known as the Wasatch group, located in Mineral Fork and Mill "B" Fork canyons, both tributaries of Big Cottonwood canyon.

FOREWORD:

Ore was first discovered in the Alta mining district in the year 1864, the rich Emma mine struck its mammoth ore body in 1869, other mines were discovered the following few years and the most productive period of the district was between 1871 and 1877. The U. S. Geological Survey in its publications estimates the mineral production of the district between the years 1867-1917 as being about $26,000,000.00 of which about 55% was in gold and silver.

Geologically the ores of the district come from a wide range of horizons, that is, ore has been mined from every geological measure, from the pre-Cambrian, upword several thousand feet to the Thaynes formation (Lower Triassic).

The ore deposits are generally in one of three classes, fissures, contact deposits and bedded deposits. The district does not produce a large amount of replacement ores due no doubt, to the character of the limestone.

In this discussion we are chiefly concerned with the Cambrian and pre-Cambrian formations and with ore in fissures. In the Alta district we find in the Cambrian and pre-Cambrian quartzite and shales, the Toledo, the Branborg, Cardiff (upper tunnel), the Thor and Venus; in the adjacent American Fork district, the Pacific and one of the Live Yankee veins, all of which mines mine ore from fissures.

Another feature which should be noted, is that most of the fissure deposits strike northeast and southwest and have steep, northwest dips.

PROPERTY:

The property comprises 4 patented claims, viz: Sur. No. 6110, Silver King Nos. 1 and 2, Sur. No. 6307, Silver King Nos. 3 and 4, 82.013 acres of patented land and 22 locations surrounding these patents. Plat of the patented land hereto attached, while the locations have not been surveyed and therefore their positions are not definitely known. Their general location was pointed out to the writer by Nels H. Johnson, former lessee of the property as being adjoining the patented land on its east, north and south sides. Including all patented and uppatented land the total area of the property is about 550 acres.

Located along the divide between Big and Little Cottonwood Canyons for a distance of about 2 miles and extending down the north slope of the dividing ridge for a distance of about one-half mile, in the area beginning about 1300 feet of the divide between Mineral Fork and South Fork Mill "B" canyons and running westerly across the head of Mineral Fork canyon to 500 feet west of South Fork Mill "B" canyon

The area is accessible by a wagon road in that portion falling in Mineral Fork canyon and by drag road to the portion falling in Mill "B" South fork canyon.

With relation to the productive properties of the Alta district which are well known, the Carbonate mine lies 1½ miles northeast, the Maxfield mine 3½ mile due north, the cardiff 3/4 mile and the Kennebec 1 mile, both due east, while practically all of the product mines of the Alta district lie within a radius of 1½ miles.

GEOLOGY:

The eastern portion of the area has several hundred feet of Cambrian quartzite, the base being marked by the steep cliff which runs northeasterly and southwesterly through the common end line of the Silver King Nos. 1 and 2 lodes. West of this line is mainly pre-Cambrian, alternating beds of quartzite, slate and conglomerate. The dip of the sedimentary beds is to the east, so that in proceeding westward on the property one goes deeper into the formation. It is known that the thickness of the pre-Cambrian formation is this area should be about 11,000 feet, at least this is its thickness a few miles to the west.

The igneous rocks of the Cottonwood-American Fork ares extend into this area and are found following fault lines and fissures and appear to have an affinity with ore.

STRUCTURE:

The entire area of this property falls within the Alta structure of northeasterward dipping rocks, but it has not here the complex fracturing and overthrust movements so common in that area.

The main fissure of the property follows the center lines of the 4 Silver King claims, and which will show that when the fissure crosses the Mineral Fork-Mill "D" Fork divide its course is S.42°45'W. and in a distance of 4500 feet its course is S.57°18'W. Due to the northdip of this vein and its lower elevation towards the west, this change in course is thus accounted for.

This fissure, in the opinon of the writer, is one of the strongest and longest fissures so far uncovered in the area. Several small north-south breaks have been noticed along the fissure with a small accompanying displacement.

While there is intruded prophry along the entire course of the vein with a certain amount of ore, it however, is at these breaks where the largest amount of intruded rock will be found and also incidently the largest deposits or ore.

Other minor fissures are found on the property all of the same general course and if northeast-southwest will have a certain amount of mineral

In the opinon of the writer the Silver King fissure is the most important fissure of the property and should have the most attention in future operations.

MINERALIZATION:

From all indications this property has been worked for many years prior to its location as the Silver King group. There is a record in the U. S. Public Survey office where the main portion of the Silver King Nos. 1 and 2 claims was located in the year 1886 and was mines from that year until after 1895 for lead, iron and a combination of gold and silver. Pack trails leading up South Fork Mill "B" canyon to workings in that canyon must have been during an early period.

The Silver King vein has been opened up at seven points along 3500 feet of its course and from all indications an ore of shipping grade mined from the shallow workings. Later in Mineral Fork a tunnel was driven into the mountain 300 feet below the outcrop and at a distance of 212 feet struck the vein and drifted along it towards the northeast.

At 182 feet to the northeast in this tunnel one of the north-south breaks occurred. At this point ore was stoped up to the Discovery tunnel and a winze was sunk 90 feet and from this winze 2 other drifts were opened up on the vein.

Other stoping towards the surface was done for a considerable distance from this tunnel level in the next 400 feet towards the northeast and it is very probable that the large amount of ore shipped by the late "Regulator" Johnson came from this tunnel, stopes and winze.

It was from the vicinity of the winze that a shipment was made during 1928, of which the writer has knowledge of, which assayed Gold, 0.29 ozs., Silver 20 ozs., Lead 3.5%, Iron 22%.

A record of shipments made to the old Germania smelter, Murray from the year 1889 to 1901 was examined by the writer and he found a record of 186.33 tons shipped at intervals, in which the range of the ore was as follows:

Gold, highest in a shipment 1.00 oz.
Lowest in any shipment 0.30 oz.
Silver, highest in a shipment 139.0 ozs.
lowest, in any shipment 28.6 ozs.
Lead, highest in any shipment 13.5%
lowest in any shipment 1.5%
Iron ranged from 19% to 32%

This ore had its origin from the Silver King Extension mine, the predecessor of the present group and very probably represented ore from the surface workings.

This vein, the Silver King, can be traced on the surface for a distance of about 5500 feet and by all the rules of fissures should persist to great depths. In the one place where it was cut at 300 feet from the outcrop the ore was of the same general character and the width of the vein had increased in places.

It follows that there should be no gamble in any venture which would undertake to cut this vein at a much lower depth.

CONCLUSIONS:

A mine in the pre-Cambrian formation, when in a strong fissure such as the Silver King, and especially when intrusive rocks are found in the fissure, will make for a deep and long-lasting mine. The pre-Cambrian being the gold formation of the world's large gold mines.

The terrain is such that at least 1000 feet can be obtained by means of tunnels.

The slope of the mountain fronting Mineral Fork upon which the vein is found is 35°, the dip of the vein towards the north is 70°. It took a distance of 212 feet of tunnel to obtain about a depth of 300 feet, therefore if it was contemplated to get a depth of another 300 feet below the present tunnel, the distance to the vein will be about 425 feet. If such a scheme was to be intered into, it is suggested that this tunnel be placed so that its objective would be the intersection of the north-south break and the vein and that the intersection be made below the present winze.

In this scheme a large amount of ore could be economically produced not only from the vein but also from the break on both sides of the vein at this point.

As soon as this tunnel reached the ore it is suggested then that the deep tunnel be started from near the canyon floor. This last named tunnel would upon reaching the ore, by all reasoning, produce a large amount of ore and from it the vein could be explored southwest into the granite area and northeast to the Cambrian quartzite contact.

The quartzite contact which crosses this property has never been prospected and it contains possibilities which should be investigated.

It is a well known fact that the entire pre-Cambrian area lying between the mouth of Little Cottonwood canyon and Alta has had a gold production from small pockets for the past 65 years and when it is possible to mine this formation in a fissure carrying gold silver ore, a condition which makes for permanance and depth, it is very probable that a mine can be opened up on the Silver King fissure which will make new gold history not only for Utah but will rank with other gold mines of the world.

The question of a road for the transportation of ore is not entered into here. The present road is sufficient to do the necessary work to open up the ore at greater depth, at that time the road question or possibly a tramway will be merely routine.

The 22 claims surrounding the patented claims also should await the major operations. Some of them are necessary for contemplated tunnel rights of way. The chief value of the property today is that of the Silver King fissure and the development plan should have that as its main objective.

February 12, 1936

Respectfully submitted

H. D. Heist

ORE SHIPMENTS MADE BY WASATCH GOLD MINES INC.
AND MOUNTAIN MINES COMPANY

UPPER LEVEL OF MINE

DATE	LOT NO.	POUNDS DRY	OZS. GOLD	OZS. SILVER	% LEAD	% COPPER	% ZINC	% INSOL.	% IRON	% LIME	% SULPHUR
8-13-37	1	115,698	.165	3.6	1.0	.10	1.2	62.7	14.8	14.5	2.1
8-20-37	2	88,800	.115	5.9	.5	.10					
8-28-37	3	92,800	.117	5.68	.4						
9-1-37	4	91,532	.085	4.25	.3						
9-10-37	5	87,408	.087	5.35	.7	.10					
10-6-37	6	49,250	.205	4.5	.65						
10-11-37	7	52,764	.395	5.8	1.35						
12-23-37	8	20,146	.26	7.1	3.0	.175					
8-22-38	9	11,400	.24	1.4	.6	.15					
9-9-38	10	54,062	.22	8.75	1.1	.05					
9-16-38	11	38,524	.15	8.75	1.2	.06					
9-30-38	12	36,848	.242	8.6	1.2	.085					
10-19-38	13	21,430	.425	9.82	1.75	.075					
10-22-38	14	17,748	.227	4.87	.75	.065					
8-8-39	15	22,600	.315	5.67	.9	.30					
8-14-39	16	20,764	.445	43.1	5.75	.525					
8-25-39	17	11,556	.33	25.4	5.45	.19					
8-25-39	18	53,582	.247	17.87	3.3	.23					
8-25-39	19	3,568	.252	15.15	3.65	.315					
8-30-39	20	16,838	.232	17.3	1.8	.17					
9-16-39	21	21,616	.32	25.5	4.3	.335					
9-11-39	22	15,204	.445	40.15	8.15	.225					
9-20-39	23	19,380	.315	7.9	1.25	.285					
10-17-39	24	15,366	.42	36.45	8.0	.20	1.8	48.7	13.9	.9	5.6
10-21-39	25	15.174	.362	24.85	4.7	.285					
10-28-39	26	23,244	.352	17.9	3.95	.185					
10-9-40	27	53,392	.457	21.5	2.0	.225					
8-15-40	28	35,072	.26	10.75	2.4	.165					
8-17-40	29	31,894	.195	6.77	2.0	.495					
8-17-40	30	15,804	.17	6.3	1.1	.11					
8-28-40	31	42,332	.282	18.56	2.9	.175					

DATE	LOT NO.	POUNDS DRY	OZS. GOLD	OZS. SILVER	% LEAD	% COPPER	% ZINC	% INSOL.	% IRON	% LIME	% SULPHUR
9-16-40	32	42,444	.27	28.75	3.0	.26					
9-17-40	33	44,000	.347	32.40	4.5	.30					
9-24-40	34	35,502	.322	30.2	5.72	.52					
9-28-40	35	52.038	.253	25.15	4.5	.27					
10-11-40	36	83,700	.215	7.4	1.5	.21					
10-14-40	37	3,628	.513	36.42	4.4						
10-31-40	38	87,786	.167	23.75	2.4	.25					
11-8-40	39	55,930	.23	3.47	2.25	.15					
12-4-40-	40	5,320	.302	12.55	2.50	.27					
12-4-40	41	19,380	.307	8.95	3.35	.45					
7-23-41	42	18,220	.27	11.7	2.25	.12	2.4	56.8	12.8		7.9
8-19-41	43	46,230	.28	7.97	2.3	.25					
8-27-41	44	20,006	.51	18.7	2.65	.22					
9-6-41	45	65,438	.195	13.52	1.5	.27					
9-18-41	46	57,388	.295	29.1	5.35	.22					
9-24-41	47	52,562	.24	22.95	2.8	.40					
9-17-41	48	19,672	.342	8.3	4.05	.11					
10-1-41	49	61,664	.17	17.25	2.15	.22					
10-14-41	50	54,644	.33	43.85	6,7	.37					
10-22-41	51	4,444	.25	3,32	1.95	.25					
8-4-42	52	72,504	.215	20.55	2.45	.17					
8-10-42	53	32,852	.255	22,39	4.25	.20					
8-15-42	54	39,578	.195	17.2	1.9	.15					
8-24-42	55	60,364	.25	2.05	.8	.22					
9-1-42	56	37,932	.302	29.80	5.55	.17					
8-31-42	57	32,742	.245	32.55	3.3	.18					
9-1-42	58	37,304	.267	18.87	3.0	.16					
9-14-42	59	56,934	.257	31.55	3.4	.25					
9-18-42	60	37,146	.262	27.95	3.6	.23					
10-2-42	61	37,794	.25	22.4	3.9	.05					
9-30-42	62	12,558	.257	2.02		.07					
10-13-42	63	73,158	.167	21.45	2.5						
10-8-42	64	39,794	.21	13.9	3.25	.35					

DATE	LOT NO.	POUNDS DRY	OZS. GOLD	OZS. SILVER	% LEAD	% COPPER	% ZINC	% INSOL.	% IRON	% LIME	% SULPHUR
10-22-42	65	36,396	.252	24.72	3.25	.41					
8-21-43	66	20,618	.265	12.8	1.95	.15					
9-17-43	67	92.814	.345	19.5	2.2	.17		53.6	13.8	.60	
9-24-43	68	23,976	.252	.725		.37		26.0	22.5		18.8 From Lower Tunnel
9-25-43	69	24,300	.272	6,75	1.5	.45					
9-26-46	70	35,570	.182	6.9	1.05	.20					
10-11-46	71	37.648	.14	3.9	.80	.31					
10-11-46	72	57.238	.155	7.1	1.55	.175					
				LOWER TUNNEL SHIPMENTS							
8-29-50	1	61,318	.038	5.15	1.0	.35	.6	48.1	19.7	1.0	16.1
10-11-50	2	52,850	.042	6.95	1.25	.315	1.3	48.5	19.2		17.0

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DEPARTMENT OF GEOLOGY

UNIVERSITY OF UTAH
Salt Lake City

October 27, 1941.

Mountain Mines Company
Room 600 Beneficial Life Building
Salt Lake City, Utah

Attention Mr. Charles S. Woodward, Pres. & Gen'l. Manager.

Gentlemen:

In compliance with your request for a statement regarding my findings resulting from my recent examination of your property in Mineral Fork, Big Cottonwood Mining District, Utah, I offer the following brief summary:

On September 4, 1941, while engaged in a geological survey in the vicinity of the Mountain Mines Tunnel, I was invited to examine the property, which I did, devoting practically the whole of that day to an investigation of both the Upper Workings and the present operating adit tunnel. Later, on October 24, 1941, I revisited the property to see if the vein encountered on September 12, shortly after my first visit, was in fact the Silver King Vein present in the Upper Workings, the long sought objective of the lower tunnel which has been driven to intersect the Silver King Vein at much greater depth and to unwater the winzes and stopes in the older Upper Workings near the surface.

My examination and survey on October 24th, disclosed that beyond a doubt the vein encountered is unmistakably the Silver King Vein. Its geological features are identical with those observed where the vein is exposed in the tunnel and stopes of the Upper Workings. It has the same narrow porphyry dike in the hanging wall, the same ore minerals and gangue (the former being unoxidized due to depth), and almost identical dip and strike. That it is the same vein is further indicated by the fact that it was encountered but a few feet beyond its calculated position even though the lower tunnel where it intersects the vein is 1,400 feet lower in elevation than the Upper Tunnel, as measured on the projected dip of the vein from the Upper Workings. The rapid lowering of the water level in the flooded winzes and stopes on the vein in the Upper Workings is further evidence, if more were needed, to establish the identity of the vein. A careful examination of the surface shows that the area is free of complex faulting and the vein is confined to a single homogeneous wall rock, which points to the absence of complications that might interfere or greatly increase the cost of mining the vein.

At the time of my second visit the vein had been drifted on and opened up for a distance of 30 feet in a southwesterly direction from the point where it had first been struck, and already the seam of coarse-grained heavy sulphide ore had increased in width to over 5 feet. Evidently the lower tunnel cut the vein at the eastern margin of an ore shoot of most promising character. From the fact that the Silver King vein is clearly exposed on the surface, both to

the east and west of the tunnel, for a known length in excess of a mile and it's now proven persistance and regularity in depth, one may not unreasonably expect, from the evidence at hand, that the Company is about to open up another big mine in the district. With anything like a reasonably well mineralized vein, the possible tonnages that may be developed are simply staggering, having as you do from 1,400 feet to 2,000 feet of vein above your present working level; and further, it should be remembered that from the nature of the vein where it is exposed in the lower tunnel the ore bodies should continue in depth also for many hundreds of feet. That the immediate area has been the site of strong commercial mineralization is demonstrated by the production of approximately $17,000,000.00 from the Cardiff Mine in the adjoining gulch to the east, but little more than a mile distant from the point where the lower tunnel struck the vein.

I wish to call particular attention to a further aspect of the Silver King Vein, a factor that I regard as being of the utmost significance, and that is, that this vein resembles veins like the famous Ontario fissure in the neighboring Park City District rather than those in the immediately adjacent Alta and Big Cottonwood Districts. It has the same marginal relations to the major igneous intrusions of the region, and is also similar in trend (strikes N. 50° E.) to the main ore-bearing fissures that have produced the big mines of the region.

Since the distribution and value of the ore bodies in the vein can be determined satisfactorily only by blocking the ore out by driving drifts and raises, I am thoroughly convinced that the indications as at present disclosed are such as to warrant the company in undertaking a vigorous development program at once, for it will be in the best interests of your stockholders to learn as quickly as possible something of the magnitude of your recent strike. I suggest that for the present you continue to drift southwestward, since the stopes in the Upper Tunnel lie in that direction and the ore shoot already opened up is expanding rapidly in the same direction.

In concluding this brief statement, it is my frank opinion that this is the most important strike in the Wasatch Mountains since the discovery of the New Park Vein in the Park City District some time ago. The Company is to be congratulatedupon the successful completion of a well-planned mining project, in which both dogged faith and luck have played a part. I am grateful for the opportunity afforded me to study the deposit and for the hospitality offered me during my visits to the mine.

Respectfully yours,

Signed: R. E. Marsell

PROSPECTUS

MOUNTAIN MINES COMPANY

OFFICE 426 BENEFICIAL LIFE BLDG.

SALT LAKE CITY, UTAH

After March 1, 1949, office address will be 21 South West Temple, Salt Lake City 1, Utah

Located near the famous town of Alta, in the Big Cottonwood Mining District, Salt Lake County, Utah.

Showing the Silver King Vein which is being developed at depth by the Mountain Mines Company.

Twenty miles southeasterly from Salt Lake City, Utah, in Mineral Fork of Big Cottonwood Canyon.

The shares being offered are assessable and therefore subject to such payments, in addition to the offering price, as shall be levied by the issuer's Board of Directors within the limits allowed by law.

These shares have not been registered under the Securities Act of 1933. They are offered under the exemption from registration provided by Rule 240 of Regulation A-M under the Act. The Securities and Exchange Commission has neither approved nor disapproved these shares and has not passed upon the accuracy or completeness of the statements in this prospectus.

DATED JANUARY 1, 1949

PROSPECTUS

Dated January 1, 1949

Relating to

A PROPOSED OFFERING OF NOT MORE THAN 130,000 SHARES OF COMMON STOCK OF MOUNTAIN MINES COMPANY (A Utah Corporation)

Fifty (50c) Cents per share **Incorporated.....December 24, 1935**

OFFICERS, DIRECTORS AND PROMOTERS

MANAGEMENT

PRESIDENT AND DIRECTOR.....CHARLES SANFORD WOODWARD
1028 So. 10th East St., Salt Lake City, Utah

VICE-PRESIDENT AND DIRECTOR.....GLEN ARDEN FINLAYSON
973 Diestel Road, Salt Lake City, Utah

SECRETARY AND TREASURER.....REGINALD WILLIAM EDMUNDS
1186 So. 5th E. St., Salt Lake City, Utah

DIRECTOR.....FRANK OAKLEY TAYLOR
1004 W. 10th St., Wilmington, Delaware

DIRECTOR.....JOHN ERNEST ROTHROCK
61 Kells Ave., Newark, Delaware

DIRECTOR.....OLIVER AUGUSTUS JONES
Bacchus, Utah

II.

Total Authorized Capitalization $550,000.00.

Authorized capitalization consists of 1,000,000 shares of Common Stock with a par value of fifty cents per share and 500,00 shares of Preferred Stock with a par value of ten cents per share. All authorized stock has equal voting power. All stock either is or will be, issued as fully paid, there are no bonds, or funded indebtedness. No dividends will be declared to the common stockholders until the preferred stock shall have been retired at par value. At the retirement of the preferred stock, the preferred stockholder will receive as a bonus, one share of the common stock for each five shares of preferred stock held.

Total outstanding capitalization as for the date of this Prospectus—$386,050.83—divided as follows:
669,251 shares Common Stock (Assessable)

Consideration		
Mining Claims	$138,800.00	
Cash	128,615.55	
Supplies and Services	59,258.82	$326,674.37

500,000 shares Preferred Stock (Non-Assessable)

Consideration	
Cash	$ 37,445.48

III.

There is a statutory limit in Utah on assessments which can be levied at any one time on corporate stock of ten percent of the par value. The assessment must be paid in cash. No new assessment can be levied while a portion of a previous one remains unpaid. Assessments are levied by an order of the Board of Directors fixing a term certain for the notice of assessment, which must follow the statutory form and be served personally on each stockholder, or in lieu of personal service must be mailed to each stockholder at his place of residence, and must also be published once a week for four successive weeks in a newspaper of general circulation in the county in which the mine is located. The directors must also fix the date upon which the unpaid assessment becomes delinquent, not less than thirty nor more than sixty days from the time of making the order levying the assessment, and must also fix a day for the sale of delinquent stock not less than fifteen nor more than sixty days from the date the stock is declared delinquent. Notice of delinquency must be published in the form set forth in the Statute in a daily newspaper for ten days or in a weekly or semi-weekly in each issue thereof for two weeks previous to the day of sale. The first publication of delinquent sales must be at least fifteen days prior to the date of sale. The stock must be sold to the highest bidder and only so much thereof sold as is necessary to pay the amount of the delinquent assessment. If there are no bidders the corporation may purchase the stock for the delinquent assessment. The stock thereafter to be treated by the corporation as treasury stock.

Following the commencement of this offering, it is not the intention of the management to levy assessments upon the common stock of the corporation within a period of one year unless required to meet expense of operation. In any event not more than one assessment of one cent per share will be levied within a period of one year.

The issuer agrees to mail to the last known address or to deliver to each holder of the class of security being offered, with each assessment notice following the commencement of the offering, a statement containing the information required under Paragraph 'G' of Rule 240 of Regulation A-M of the Securities and Exchange Commission.

IV.

The company proposes to offer not more than 130,000 shares of its common stock at Fifty (50c) Cents per share.

The company will make offers to rescind to the purchasers of 1641 shares of common stock, these shares being in excess of the number of shares authorized in the prospectus previously filed. If the sales of these shares are ratified by the purchasers, the stock will be deemed to have been sold as a part of this offer.

The aggregate offering price is $65,000.00.

V.

Frank O. Taylor of 1004 W. 10th St[illegible], Wilmington, Delaware, will be the principal UNDERWRITER. The underwriter will be paid 25 percent of the sale price per share or 12½c per share on all sales made by him.

VI.

The mining property on which this company is prospecting and developing is held by the company as follows:

4 patented claims owned by the company
49 unpatented mining claims owned by the company
4 patented claims
14 unpatented claims in the possession of the company under a contract of purchase with the Big Cottonwood Silver King Mining & Milling Company at a total purchase price of $35,000.00.

There has already been $4930.64 paid on this last mentioned contract and the contract provides for future payments as follows:

The remaining balance of $30,069.36 will be paid out of royalty payments received from ore sold to the smelters. Any net proceeds received from sale of ore, after deducting hauling, smelting charges, mining and all charges incident to the producing of said ore, shall be paid to the Big Cottonwood Silver King Mining & Milling Company until the full balance due under this contract has been paid in full.

The original contract of April 6, 1938, with the Big Cottonwood Silver Mining and Milling Company contains the following forfeiture clause:

> The purchaser agrees that in the event of its failure to comply strictly with all terms and conditions herein to be performed by it including payment of each of said sums of money and the royalty promptly at the time or times hereinbefore specified or within fifteen days after such payment becomes due as herein specified, then the said purchaser shall have no further right, title or interest under this contract or under any right now claimed by it and the said seller shall retain all sums of money that may have been paid by the said purchaser under this contract as agreed rental and compensation for the use of the property herein described, time being of the essence of this contract in all particulars.

The schedule of royalty payments in this contract, however, was changed by an amendment dated October 25, 1943, which reads as follows:

> That all payments provided for in said contract of April 6, after the 1st day of October, 1942 are hereby changed from those prescribed in said contract of April 6 to the following:
>
> The royalty schedule of payments as provided in said contract of April 6 shall remain in full force and effect and all payments thereunder shall be made the same as though this amendment had not been agreed to; and in addition thereto there shall be paid by purchaser to the seller all the net proceeds received by the purchaser from the production and sale of ores mined from the property described in said agreement of April 6.
>
> It is understood and agreed that the net proceeds from the sale of ore mined by lessees under sublease from the purchaser deemed to be the royalty paid by the lessees to the purchaser, otherwise net proceeds of sales of ore produced by purchaser from said property, shall be the net proceeds as shown by smelter returns less purchaser's actual cost of mining and transporting said ore.
>
> That said pay[illegible]ts shall continue from date hereof uninterruptedly u[illegible] the full balance of said purchase price of $30,069.3[illegible] shall have been paid in full. Said contract of April 6, 1938 shall be extended to and continue through the period of said payments and shall remain in full force and effect in all other respects other than therein amended.

The mining claims owned by Mountain Mines Company and the Big Cottonwood Silver King Mining & Milling Company join and are considered one mine. The development work done to date commences in one property and extends into the other. It is impractical to attempt to develop each property separately.

The mining property of the corporation is located twenty miles southeasterly from Salt Lake City, Utah, in Mineral Fork of Big Cottonwood Canyon. The main Big Cottonwood Highway passes within 2½ miles of the mine. The last 2½ miles of road is a dirt road and is in fair condition for a mine road.

VII.

The upper workings of the mine consist of approximately 2,000 feet of tunneling and raises. These workings are in fair condition.

Many openings have been made along the Silver King vein, near the surface, and all indicate the presence of ore. It is reported that considerable ore was taken from these workings by selective mining, in the early history of the property, but no records are available as to the grade of the ore or monies received from sale of ores from these workings. Since 1936, these upper levels have been worked by lessees who have shipped a total of 1,312 tons of ore of an average value of $12.25 per ton. The company received as royalty from these shipments a total of $1,822.61. These shipments indicate clearly the average value of the ore exposed in the upper levels of the mine. The ore shoots in these workings are going down strong and there is reason to believe that they will continue to considerable depth.

These ores are especially desirable at the Garfield Plant of the American Smelting and Refining Company because of the high silica content, which is needed as a flux in the treatment of the large tonnages of copper ores treated at this smelter.

In 1937, a lower drainage and development tunnel was started at a point 1,400 feet lower in elevation than the upper levels of the mine. The Silver King vein was cut in this tunnel 3,172 feet from the portal. A drift was extended 120 feet along the vein to the east and 1210 feet to the west. The main tunnel was also extended to the south a distance of 500 feet beyond the Silver King vein and toward the Garfield vein. This tunnel is in very good condition. The vein is very heavily mineralized in this tunnel. The mineralization encountered thus far is principally iron sulphides, showing values in gold, silver, copper, lead and zinc.

This mineralization is most encouraging. The best ore shoots found in the upper levels are approximately 600 feet further to the west of the present lower tunnel drift face.

Veins of the type of the Silver King vein are not considered as being composed entirely of commercial ore. Ore appears in what is termed 'shoots', at intervals along the strike of the vein. This condition appears in the upper levels of the mine. The Silver King vein at the drainage

tunnel level has about the same width as in the upper levels —from 8 to 12 feet. The vein has approximately the same width both east and west as far as the work has progressed at the drainage tunnel level. Eleven ore shoots have been discovered in the drifting done thus far on the Silver King Vein at the Lower Tunnel Level. These ore shoots are from six inches to seven feet in width and all show values in gold, silver, lead, copper and zinc. The values are not high enough as yet, to be considered commercial. The purpose of the present proposed development program is, by drifting and raising, to explore the ore shoots already found and to explore the vein for additional ore shoots which were found in the upper levels of the mine. All work to be done at the lower tunnel level. The mine is yet in the exploratory and development stage.

VIII.

The mine is equipped with a 210 foot compressor driven by a 55 HP Caterpillar Diesel Motor, also mine cars, rails, air drill, ventilating equipment and other necessary mine tools.

IX.

Although ore is showing in all workings on the property, yet sufficient work has not been done so that an estimate can be given of actual developed ore, based upon accepted engineering practices. The company cannot claim dependence on returns from proven ore reserves for self-sustaining operations and must depend upon stock sales or assessments to finance the proposed development work at this time. It is proposed, however, to continue leasing operations in the upper levels of the mine.

X.

All legal papers relating to land owned by the issuer have been exhibited to the attorneys for the company, McKay, Burton, Neilson and Richards, also the contract agreement with Big Cottonwood Silver King Mining and Milling Company, and they have found them to be in order. These are on file in the office of the company, open to inspection at any time. The company is not delinquent on any payments of any kind on its contract with Big Cottonwood Silver King Mining and Milling Company, and is rightfully in possession of the properties now being developed by it.

XI.

Cash received from Jan. 1, 1947 to Dec. 31, 1948:

Sale of Stock	$30,995.00	
Insurance Adjustment	1,500.00	
Assessment No. 3—½c per share	5,897.56	
Office Rent	90.00	$38,482.56
Taxes, traveling and miscellaneous expense	$ 7,912.85	
Accounts and notes payable	3,487.39	
Salt Lake Office expense	1,137.30	
Tunneling and Drifting	17,270.11	$29,807.65

Amount Paid Officers and Directors — January 1, 1947 to December 31, 1948:

C. S. Woodward, President, Director and Manager	$3,810.00	
R. W. Edmunds, Secretary and Accountant	233.46	
Glen A. Finlayson, Director and Engineer	284.25	
O. A. Jones, Director	360.00	
J. E. Rothrock, Director	397.50	
F. O. Taylor, Director	243.98	
F. O. Taylor, Underwriter	3,345.72	$8,674.91

XII.

The money realized from the sale of this stock is to be used for the following purpose and in the following order:

1. Change to be made in road to take it out of snow-slide area.

2. Allowance for additional equipment needed to carry out program on a two shift basis.

3. Extend the west drift at least 600 feet to a point vertically under the west-ridge workings of the Lessees, where one of the most interesting Ore shoots on the Silver King Vein, is being developed to a depth of 300 feet below the surface, by the Lessees.

4. It is important that the Lessees at the upper levels of the mine complete their west-ridge tunnel. It is suggested that Mountain Mines Company advance said Lessees $5.00 per linear foot of tunnel driven, up to a total of 400 feet of tunnel. Said money advanced to be returned to the company, out of ore shipments made by them.

5. Drive at least 3 raises on the several ore shoots now developed, to a height of 200 feet each: A. One, where the main lower Drainage and Development Tunnel intersects with the Silver King Vein. B. One, 437 feet west of Raise "A". C. One, in the vicinity of the present face of the West drift. The remaining money to be used for taxes, licenses, repairs and maintenance of buildings, and other corporate purposes.

If the full amount of money can be realized, the entire program will be completed, but no representations are made that the full amount will be raised.

In the event only a portion of the proceeds are realized, the money will be invested in the development of the property as it is received, and in the order above set forth.

XIII.

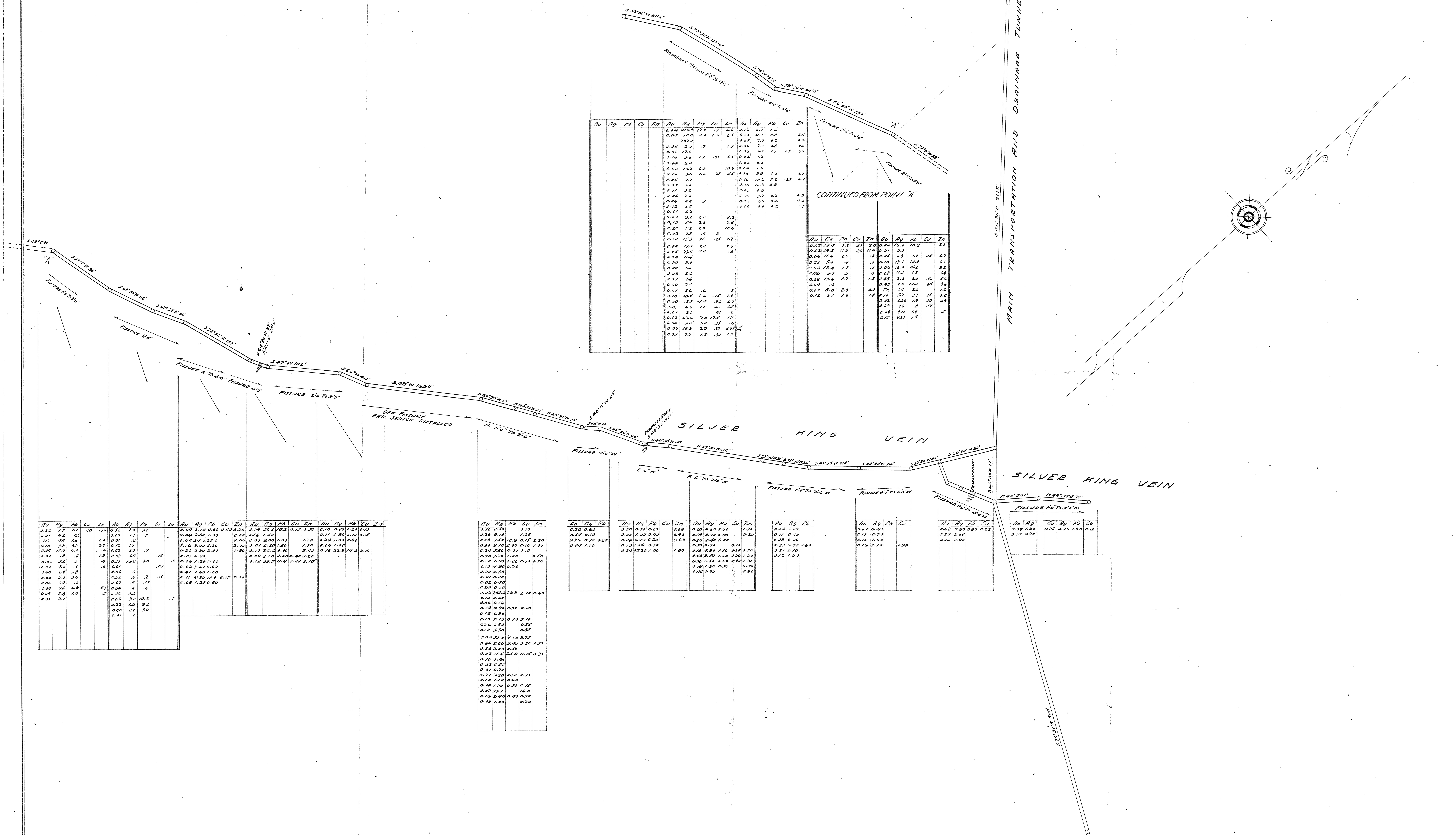
The underwriters will be paid a commission of 25% or 12½c per share or in the event the entire issue is sold a total of $16,250.00.

The President and Manager will receive $150.00 per month.

Each Director will be paid $10.00 for each meeting held. Approximately twelve meetings will be held during the year.

MOUNTAIN MINES COMPANY
426 Beneficial Life Building
Salt Lake City, Utah
Charles Sanford Woodward
President.

New address: 21 South West Temple, Salt Lake City 1, Utah



Au	Ag	Pb	Cu	Zn

Au	Ag	Pb	Cu	Zn
0.04	214.8	17.0	.7	4.0
0.04	10.0	4.0	1.0	6.5
	237.0			
0.04	2.0	.7		1.3
0.02	17.0			
0.16	3.6	1.2	.25	5.5
0.04	2.4			
0.02	13.2	6.2		10.9
0.16	3.6	1.2	.25	5.5
0.06	2.2			
0.03	1.0			
0.11	3.9			
0.06	2.2			
0.04	4.4	.8		
0.12	3.5			
0.01	1.2			
0.02	9.2	2.2		8.2
0.15	5.6	2.6		2.8
0.20	5.2	2.0		10.6
0.02	2.8	.4	.2	
0.10	15.9	3.8	.25	3.7
0.04	17.4	2.4		2.6
0.05	73.4	11.4		.8
0.04	11.4			
0.20	2.0			
0.02	1.4			
0.03	8.4			
0.02	2.6			
0.06	7.4			
0.05	3.6	.6		.3
0.10	18.5	1.6	.15	1.0
0.08	12.5	1.4	.36	2.0
0.05	6.8	1.5	.41	1.5
0.01	2.0		.41	.2
0.03	63.4	7.0	17.5	1.5
0.04	5.15	1.0	.35	.6
0.09	18.9	2.9	.32	4.92
0.05	7.3	1.3	.30	1.3

Au	Ag	Pb	Cu	Zn
0.12	6.7	1.6		
0.10	31.1	4.8		2.4
0.05	7.0	6.2		0.2
0.06	7.2	0.8		0.4
0.06	6.0	1.7	1.5	0.8
0.02	1.2			
0.02	0.2			
0.04	1.6			
0.06	9.8	1.6		3.7
0.16	11.2	3.2	.25	4.7
0.10	16.3	8.8		
0.06	4.6			
0.04	3.2	0.2		0.3
0.02	2.6	0.6		0.2
0.06	6.0	0.2		1.3

Au	Ag	Pb	Cu	Zn
0.07	13.4	2.3	.35	2.0
0.02	18.2	11.8	.26	11.4
0.06	11.6	2.5		1.8
0.22	5.4	.4		.4
0.06	12.4	1.4		.5
0.08	3.0	.5		.4
0.08	13.6	2.7		1.5
0.04	.4			
0.03	8.0	2.3		3.0
0.12	6.7	1.6		1.8

Au	Ag	Pb	Cu	Zn
0.04	16.0	10.2		3.3
0.01	0.4			
0.05	6.8	1.0	.15	6.7
0.10	13.1	10.0		6.1
0.06	16.0	15.2		8.2
0.08	11.5	1.2		1.4
0.48	3.6	3.0	.50	5.6
0.03	9.0	10.4	.65	3.6
Tr.	1.4	2.6		1.2
0.10	5.7	3.7	.15	4.4
0.02	6.26	1.9	.30	0.9
0.04	7.6	.8	.15	
0.04	9.12	1.4		.5
0.15	9.63	1.5		

Au	Ag	Pb	Cu	Zn
0.36	1.7	1.1	.10	.70
0.01	4.2	.25		
Tr.	4.4	1.8		2.0
0.10	3.8	3.2		2.7
0.04	37.4	4.4		.6
0.02	.8	.4		1.3
0.02	5.2	.5		.4
0.02	4.0	.5		.4
0.48	2.4	1.8		
0.04	5.6	3.6		
0.02	1.0	.3		
0.04	9.6	6.8		5.3
0.04	2.8	1.0		.5
0.05	2.0			

Au	Ag	Pb	Cu	Zn
0.52	2.3	1.0		
0.08	1.1	.5		
0.01	.2			
0.12	1.5			
0.02	2.8	.5		
0.02	6.4		.15	
0.03	16.8	3.0		.3
0.01			.05	
0.06	.6			
0.02	.8	.2	.15	
0.04	.4	.15		
0.06	.4	.6		
0.06	2.6			
0.06	8.0	10.2		1.5
0.22	6.8	9.6		
0.40	2.2	3.0		
0.01	.2			

Au	Ag	Pb	Cu	Zn
0.09	2.10	0.60	0.40	3.20
0.04	2.80	1.00		2.00
0.04	34.0	25.0		9.00
0.16	3.00	3.20		2.00
0.26	2.30	2.00		1.80
0.01	0.20			
0.06	1.20	1.00		
0.02	3.60	0.60		
0.41	1.60	1.00		
0.11	9.20	11.0	0.15	7.40
0.08	1.20	0.80		

Au	Ag	Pb	Cu	Zn
0.14	51.3	18.2	0.15	6.50
0.16	1.50			
0.03	8.00	1.00		1.70
0.01	2.20	1.80		1.70
0.10	24.6	8.00		3.40
0.09	2.10	0.60	0.40	3.20
0.12	33.5	11.4	1.22	3.10

Au	Ag	Pb	Cu	Zn
0.10	0.80	0.20	0.10	
0.11	1.90	0.70	0.15	
0.24	1.00	0.80		
0.04	1.00			
0.16	22.3	14.6	2.10	

Au	Ag	Pb	Cu	Zn
0.30	2.50		0.10	
0.28	8.10		1.25	
0.30	7.50	12.9	0.15	2.20
0.30	8.10	2.00	0.10	1.30
0.24	5.80	0.60	0.10	
0.30	3.70	1.00		0.50
0.10	1.90	0.20	0.30	0.70
0.10	4.90	0.70		
0.20	4.80			
0.01	0.20			
0.02	0.40			
0.24	0.60			
0.06	255.2	20.3	2.70	0.60
0.12	0.20			
0.06	0.16			
0.10	0.90	0.30	0.20	
0.12	0.80			
0.10	7.10	0.30	3.10	
0.26	1.80		0.95	
0.12	5.90		0.85	
0.08	53.4	4.40	3.75	
0.86	2.60	3.40	0.20	1.50
0.26	2.40	0.50		
0.02	11.4	21.0	0.15	0.30
0.10	4.80			
0.02	0.50			
0.01	0.70			
0.21	3.20	0.50	0.30	
0.10	1.10	0.40		
0.14	1.70	0.50	0.15	
0.07	37.2		16.0	
0.16	2.40	0.40	0.50	
0.03	1.00		0.20	

Au	Ag	Pb
0.20	0.60	
0.54	0.10	
0.36	0.70	0.20
0.44	1.10	

Au	Ag	Pb	Cu	Zn
0.50	0.30	0.20		0.08
0.20	1.00	0.40		0.80
0.24	0.40	0.20		0.60
0.10	17.50	0.30		
0.24	37.20	1.00		1.80

Au	Ag	Pb	Cu	Zn
0.28	4.60	2.00		1.70
0.19	3.30	0.90		0.20
0.20	2.40	1.80		
0.50	0.70		0.10	
0.18	4.80	1.50	0.25	0.50
0.43	3.50	1.60	0.20	1.20
0.30	3.50	0.50	0.40	2.30
0.18	1.20	0.50		6.50
0.46	0.60			4.80

Au	Ag	Pb
0.24	1.20	
0.11	0.40	
0.08	0.20	
0.23	5.70	2.60
0.21	2.10	
0.12	1.00	

Au	Ag	Pb	Cu
0.60	0.40		
0.17	0.70		
0.14	1.00		
0.16	7.30		1.94

Au	Ag	Pb	Cu
0.82	0.80	0.80	0.22
0.25	2.05		
0.24	2.90		

Au	Ag
0.09	1.30
0.15	0.80

Au	Ag	Pb	Co
0.25	2.20	1.00	0.20

MOUNTAIN MINES COMPANY

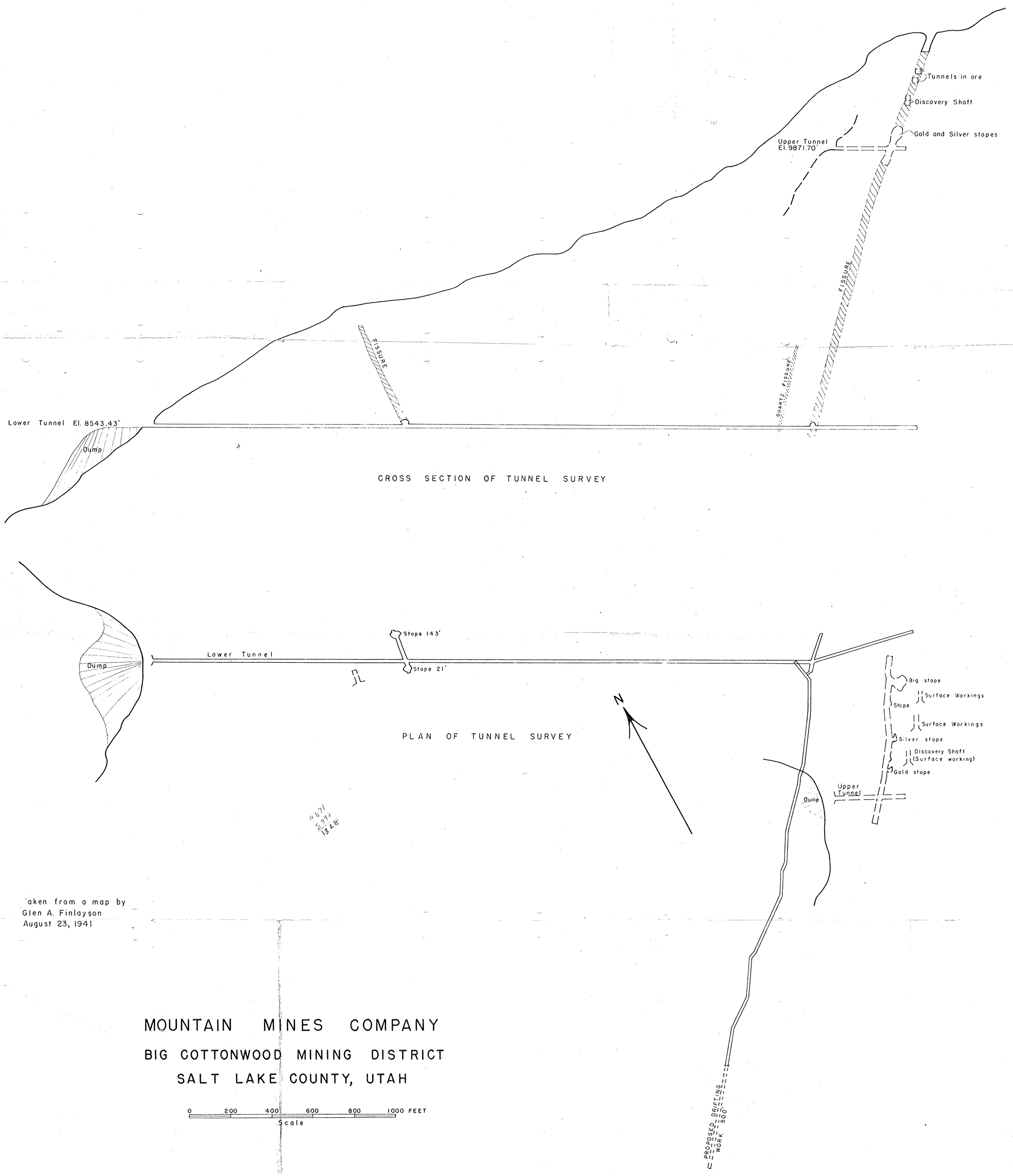
MINERAL FORK

BIG COTTONWOOD MINING DISTRICT

SALT LAKE CITY UTAH

GLEN A FINLAYSON ENGINEER

SCALE 50' = 1" DATE 12-1-47



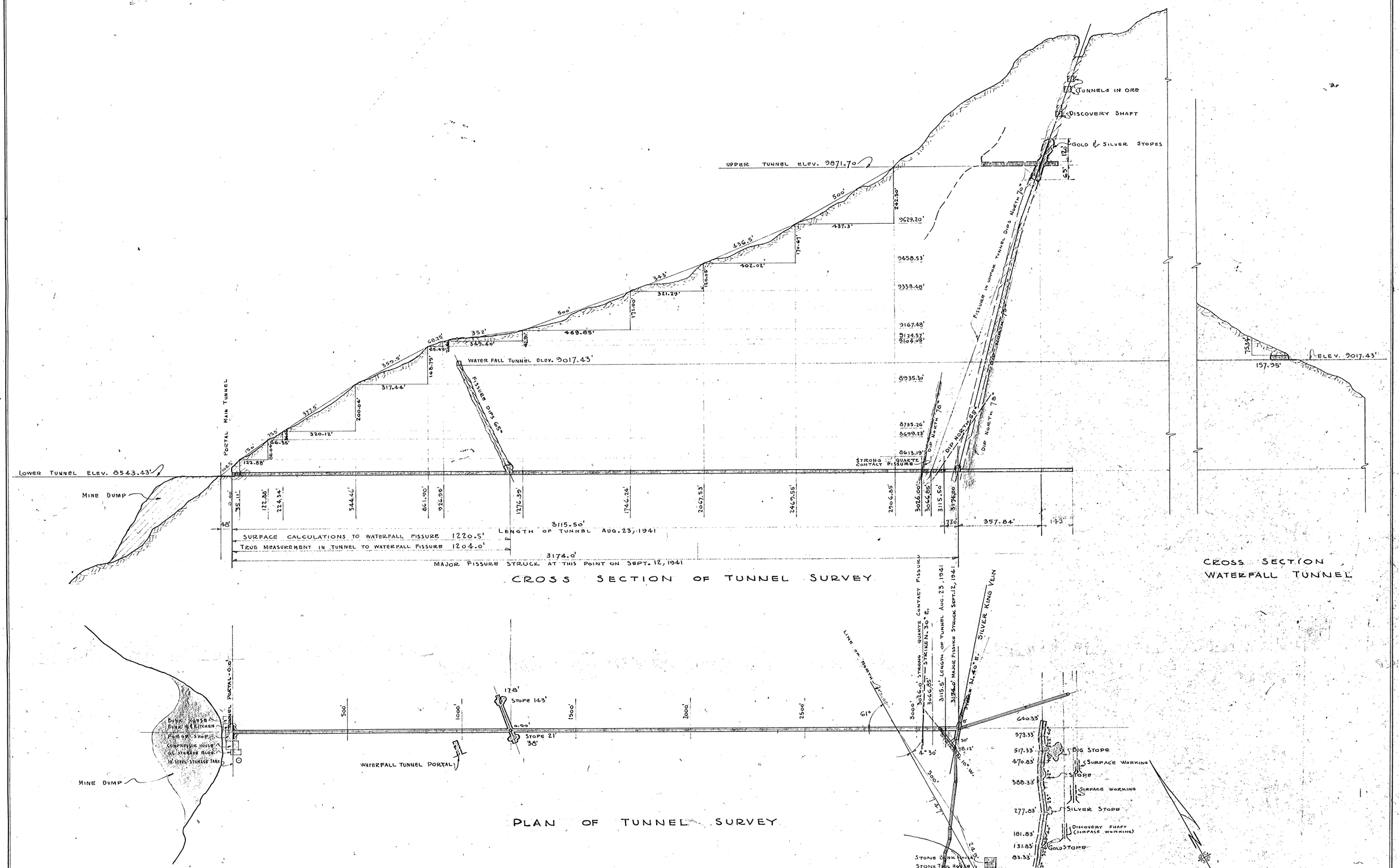
Taken from a map by
Glen A. Finlayson
August 23, 1941

MOUNTAIN MINES COMPANY

BIG COTTONWOOD MINING DISTRICT
SALT LAKE COUNTY, UTAH

0 200 400 600 800 1000 FEET
Scale

FIG. 2



MOUNTAIN MINES COMPANY

FORMERLY

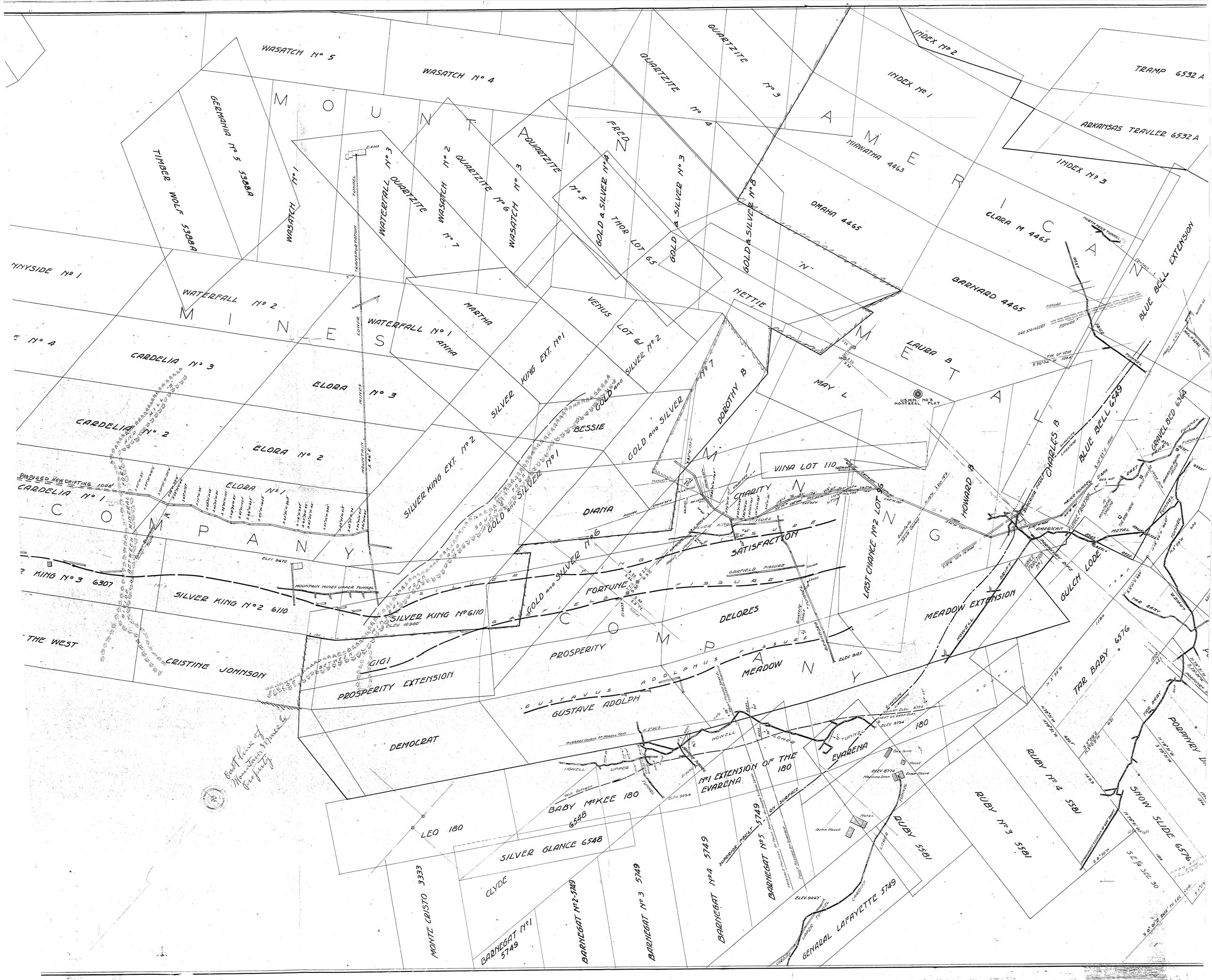
WASATCH GOLD MINES INC.

MINERAL FORK

BIG COTTONWOOD MINING DISTRICT SALT LAKE CITY UTAH

SCALE - 1" = 200' AUG. 23, 1941

GLEN A. FINLAYSON ENGINEER


WASATCH Nº 5
WASATCH Nº 4
GERMANIA Nº 5 5388A
TIMBER WOLF 5388A
WASATCH Nº 1
WATERFALL QUARTZITE Nº 3
WASATCH Nº 2
QUARTZITE Nº 6
WASATCH Nº 3
QUARTZITE Nº 7
QUARTZITE Nº 4
QUARTZITE Nº 3
FRED Nº 5
GOLD & SILVER Nº 4
THOR LOT 65
GOLD & SILVER Nº 3
GOLD & SILVER Nº 8
INDEX Nº 2
INDEX Nº 1
HIAWATHA 4463
OMAHA 4465
"N"
TRAMP 6532 A
ARKANSAS TRAVLER 6532 A
INDEX Nº 3
CLARA M 4465
BARNARD 4465
LAURA B
MAY L
METTIE
VENUS
LOT 61
SILVER Nº 2
MARTHA
WATERFALL Nº 1
ANNA
WATERFALL Nº 2
HAYSIDE Nº 1
CARDELIA Nº 3
ELORA Nº 3
CARDELIA Nº 2
ELORA Nº 2
ELORA Nº 1
CARDELIA Nº 1
SILVER KING EXT. Nº 1
SILVER KING EXT. Nº 2
GOLD AND SILVER Nº 1
BESSIE
GOLD AND SILVER
DOROTHY B
VINA LOT 110
CHARITY
DIANA
SILVER KING Nº 6
SATISFACTION
LAST CHANCE Nº 2 LOT
HOWARD
CHARLES B
BLUE BELL 6549
BLUE BELL EXTENSION
GRAVEL BED 6384
MEADOW EXTENSION
GULCH LODE
TAR BABY 6576
PODPHYRY DIKE
SNOW SLIDE 6576
RUBY Nº 4 5581
RUBY Nº 3 5581
RUBY 5581
SILVER KING Nº 3 6307
SILVER KING Nº 2 6110
SILVER KING Nº 6110
ELEV 10300'
THE WEST
CRISTINE JOHNSON
GIGI
PROSPERITY EXTENSION
PROSPERITY
DELORES
MEADOW
GUSTAVE ADOLPH
DEMOCRAT
EVARENA
Nº1 EXTENSION OF THE EVARENA
180
BABY McKEE 180
6548
LEO 180
SILVER GLANCE 6548
CLYDE
MONTE CRISTO 3333
BARNEGAT Nº 1 5749
BARNEGAT Nº 2-5749
BARNEGAT Nº 3 5749
BARNEGAT Nº 4 5749
BARNEGAT Nº 5 5749
GENARAL LAFAYETTE 5749
MOUNTAIN MINES COMPANY
SILVER KING FIELD COMPANY
AMERICAN MINES COMPANY
PROPOSED NEW DRIFTING 1000'
MOUNTAIN MINES UPPER TUNNEL
TRANSPORTATION TUNNEL
LOWER MINES TUNNEL
NORTH PRICE TUNNEL
U.S.M.M. NO 3 MONTREAL PLAT
ELEV 9125
ELEV 9094
ELEV 9067'
ELEV 8776
ELEV 8794
SE 1/4 SEC 30
East Line of Mountain Mines Co. Property

MAP
PART OF BIG COTTONWOOD MINING DISTRICT
SALT LAKE COUNTY UTAH
SHOWING RELATIVE POSITIONS
OF THE FOLLOWING MINING DEVELOPMENTS
AMERICAN METAL MINING CO
MOUNTAIN MINES CO
CARDIFF MINING CO
HOWELL MINING CO
KENNEBEC MINING CO
TAR BABY MINING CO
SCALE: 1 IN = 200 ft
DATE: JULY 3 1949
GLEN A FINLAYSON
ENGINEER
MOUNTAIN MINES COMPANY
AMERICAN METAL MINING COMPANY
WASATCH Nº 5
WASATCH Nº 4
QUARTZITE Nº 3
QUARTZITE Nº 4
INDEX Nº 2
INDEX Nº 1
TRAMP 6532 A
HOBO 3970
JUNE BUG 6407
INDEX Nº 3
SUCCESS 6133
GERMANIA Nº 5 3388A
TIMBER WOLF 3388A
WASATCH Nº 1
WATERFALL Nº 5
QUARTZITE Nº 2
WASATCH Nº 2
QUARTZITE Nº 6
WASATCH Nº 6
QUARTZITE Nº 5
PACIFIC
GOLD & SILVER Nº 4
THOR LOT 62
GOLD & SILVER Nº 3
GOLD & SILVER Nº 5
THURMONA 4463
OMAHA 4465
ELDER Nº 4465
BARNARD 4465
SUNNYSIDE Nº 1
WATERFALL Nº 2
WATERFALL Nº 1
MARTHA
VENUS LOT 61
HETTIE
LAURA & MAY L
BLUE BELL EXTENSION
HERMIT
SNOW FLAKE 117
EAST CARBONATE PLACER
LILLIE 6490
HOMESTEAD 6490
ALICE
PYTHIAN 6424
VERA 127
GENEVA
6424
LAKE BLANCHE Nº 5
LAKE BLANCHE Nº 4
CARDELIA Nº 3
ELDORA Nº 3
SILVER KING EXT. Nº 1
LAKE BLANCHE Nº 6
LAKE BLANCHE Nº 3
CARDELIA Nº 2
ELDORA Nº 2
SILVER KING EXT. Nº 2
GOLD & SILVER Nº 1
BESSIE
GOLD & SILVER Nº 7
DOROTHY B
LAKE BLANCHE Nº 7
LAKE BLANCHE Nº 2
CARDELIA Nº 1
ELDORA Nº 1
VINA LOT 110
CHARITY
DIANA
SILVER KING Nº 6
SATISFACTION
LAKE BLANCHE Nº 8
SILVER KING Nº 4 6307
SILVER KING Nº 3 6307
SILVER KING Nº 2 6110
SILVER KING Nº 6110
GOLD & SILVER Nº 6
FORTUNE
DELORES
LAST CHANCE Nº 2 LOT
HOWARD
BLUE BELL 6320
BOULDER
GOLDEN
DEGAN
VICTORY
6490
6424
LAKE BLANCHE Nº 9
LAKE BLANCHE Nº 1
QUEEN OF THE WEST
CRISTINE JOHNSON
GIGI
PROSPERITY
MEADOW
MEADOW EXTENSION
GULCH LODE
MOUNTAIN DOVE 4941
PROSPERITY EXTENSION
GUSTAVE ADOLPH
DEMOCRAT
TAR BABY 6576
POPPINEY DIKE Nº 2 6576
POPPINEY DIKE 6576
POPPINEY DIKE Nº 3 6576
POPPINEY DIKE Nº 1 6576
SNOW SLIDE 6576
GUSTAVE ADOLPH EXTENSION OF THE EVARENA 180
EVARENA
BABY McKEE 180
6520
LEO 180
SILVER GLANCE 6348
CLYDE
GUSTAVE ADOLPH
GUSTAVE ADOLPH Nº 1 5201
GUSTAVE ADOLPH Nº 3 5201
GUSTAVE ADOLPH Nº 2 5201
MOON SILVER LISTED
DARNECOURT Nº 1 5749
DARNECOURT Nº 2 5749
DARNECOURT Nº 3 5749
DARNECOURT Nº 4 5749
DARNECOURT Nº 5 5749
GENERAL LAFAYETTE 5749