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PRINTED: 06/24/2002

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: ST. LOUIS

ALTERNATE NAMES:
SAINT LOUIS

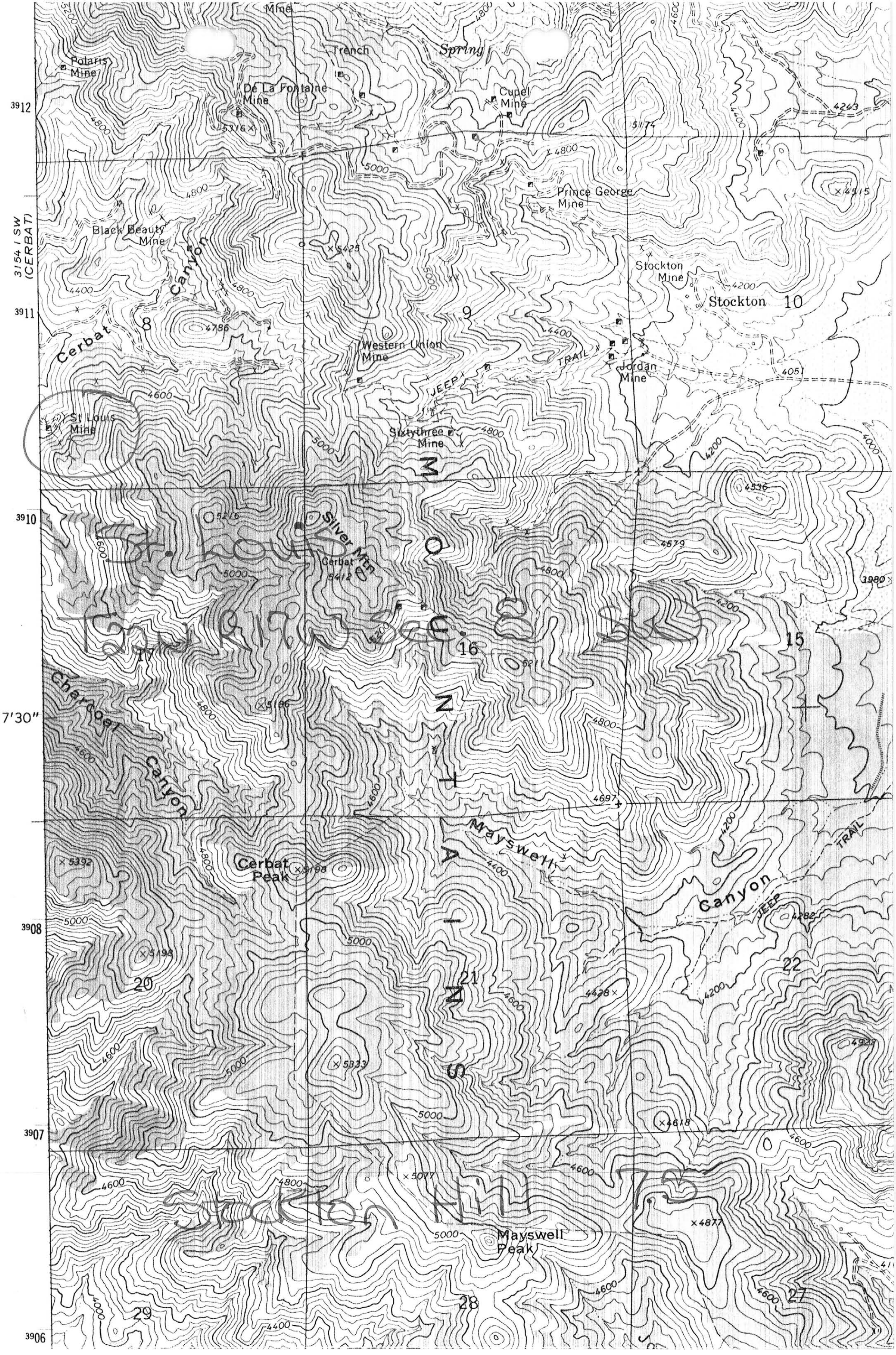
MOHAVE COUNTY MILS NUMBER: 89D

LOCATION: TOWNSHIP 22 N RANGE 17 W SECTION 8 QUARTER SW
LATITUDE: N 35DEG 18MIN 17SEC LONGITUDE: W 114DEG 07MIN 26SEC
TOPO MAP NAME: STOCKTON HILL - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
SILVER
LEAD SULFIDE
COPPER SULFIDE
GOLD LODE
URANIUM
IRON HEMATITE

BIBLIOGRAPHY:
ADMMR ST. LOUIS MINE FILE
SCHRADER, F.C. "MIN. DPSTS OF CRBT RNGE, BLCK MTN, GRND WSH CLFS, AZ" USGS BULL 397, P 105
DINGS, M. "WALLAPAI MNG DIST,AZ" USGS BULL 978-E, P. 147; 1952
HAURY,P.S. "Zn-Pb MINES, AZ"USBM RI 4101 P.40
A.E.C. PRELIM. RECONN RPT. 172-485, P. 73
MALACH, R. "MOHAVE CO. MINES", P. 59; 1977


Mine
Trench
Spring
Polaris
Mine
De La Fontaine
Mine
Cupel
Mine
Prince George
Mine
3154 I SW
(CERBAT)
Black Beauty
Mine
Canyon
Stockton
Mine
Stockton
Cerbat
Western Union
Mine
JEEP
TRAIL
Jordan
Mine
St Louis
Mine
Sixtythree
Mine
M
O
U
N
T
A
I
N
S
Silver Mtn
Cerbat
St. Louis
T21N R17W Sec. 8 SW
Charcoal
Canyon
Mayswell
Canyon
Cerbat
Peak
Mayswell
Peak
Stockton Hill 7.5
3912
3911
3910
17'30"
3908
3907
3906

Date Printed: 08/07/95

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION SUMMARY

Information from: **Herman Seideman**

Company: Baker Financial

Address: 11536 Harmony Lane
City, State ZIP: Sun City, Arizona 85373
Phone: 602-214-1115

MINE: **St. Louis**

ADMMR Mine File: St. Louis
County: **Mohave**
AzMILS Number: **89D**

SUMMARY

Herman Seideman called and requested information on the availability of lead smelters for custom ores.

He reported he plans to produce a lead-silver concentrate from the St. Louis Mine by jigging. He has over 500 tons of ore blocked out and developed. He explained that he has done jig tests on 10 pound samples and can make a 70% Pb concentrate with varying silver contents at a concentration ratio of 5 to 1. He hopes to refurbish one of the jigs at the Golden Gem mill site for use on his ore.

He explained that he was not new to the base metal business as he had worked for and is retired from Bunker Hill as a metallurgist. He said he made a hand sorted trial shipment to Bunker Hill's smelter a few years ago. For that trial shipment he hand selected 5 tons from 15 tons of mine run rock.

Ken A. Phillips, Chief Engineer Date: August 3, 1995

RH

ST. LOUIS MOHAVE COUNTY

AT Report - Mr. Nicholas Hughes was in and said that he and Mr. Virgil Keever own the St. Louis Mine, Mohave County, Berbat Dist. They bought the mine January 15, 1980. He will send information to start the file. 3/3/80

CJH WR 4/9/80: Walter Heinrich of Henrich Geophysical, Tucson, stated that the St. Louis Mine (Pb-Ag) in the Cerbats is being opened and operated by the Pan-A-Mint Mining Co.

CJH WR 5/14/80: Geoge McDvitt, Kingman, Arizona, stated the St. Louis Mine, near the ghost town of Cerbat, is tied up in court actions. It had been reported as being opened by the Pan-A-Mint Mining Co., by Walter Heinrich.

CJH WR 7/18/80: Lwtter from George McDivitt, 712 E. Beale St., Kingman, Arizona 86401. The St. Louis MIne north of Kingman, is still tied up in litigation although Mr. McDivitt reports activity and equipment being moved in.

CJH WR 7/29/80: SWAT (?) either owns or has leased the St. Louis Mine in the Cerbat Mountains just north of Kingman. The company attorney is a William Porter, 809 E. Beale Street, Kingman, Arizona 86401. There is a watchman at the mine. No work being done.

NAME OF MINE: ST. LOUIS
OWNER: A. T. Lietzow

COUNTY: MOHAVE
DISTRICT: CERBAT
METALS: PB

OPERATOR AND ADDRESS: DATE:		MINE STATUS DATE:	
5/1/44	A. T. Lietzow, Kingman Ariz.	5/1/44 2/46	Developing & shipping

[redacted]

ST. LOUIS

Pb, Zn, Ag

Mohave 8 - 10 T 22 N, R 17 W

A. T. Lietzow, Kingman '43

5-6-42

Lietzow, A. T.
Kingman, Arizona

See L File
Re - ASMOA and Pay Dirt Publication - also kind of loans

See ST. LOUIS - Re Field Engineer's Report 12-2-42

See ST. LOUIS - Re "C" loan application 1-4-43

See L file - Re request for bulletins 1-28-43

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ST. LOUIS Date December 2, 1942

District Wallapai, Mohave Co., Ariz. Engineer Elgin B. Holt

Subject:

R E P O R T

OWNER: A. T. Lietzow, Kingman, Arizona.

METALS: Lead, zinc and silver.

AREA & LOCATION:

The St. Louis group consists of 10 unpatented mining claims, located near the old town of Cerbat, about 14 miles northeast of Kingman, Arizona, in Secs. 8 & 17, Township 22 North, Range 17 West of the G. & S. R. B. & M. The property is reached from Kingman by following U. S. highway 93 around 9 miles north; thence by a good dirt road around 5 miles to the camp buildings below the mine.

HISTORICAL, VEINS, ETC.:

F. C. Schrader, in U. S. Geological Survey Bulletin No. 397, says in part as follows:

"The ore deposits of this district contain principally gold, silver and lead. They occur in fissure veins, which in general have a northwesterly trend and a steep northeasterly or southwesterly dip. Those situated north of Cerbat Wash are chiefly gold bearing; those to the south contain principally silver and lead. The gangue is mainly quartz and the values usually favor the hanging wall. The principal minerals are pyrite, chalcopyrite, galena, zinc blende, stibnite and native gold.

"The St. Louis mine is about half a mile east of Cerbat and the Gem mine and the same distance southeast of Cerbat Wash and several hundred feet above it. The mine was discovered about 1865.

"Five distinct veins are reported to occur in pre-Cambrian gneiss. Several of the veins are said to converge near the southeast end of the St. Louis claim. Three of the veins trend northwest and dip 80 degrees northeast, and two trend about north and south and dip 85 degrees east. xxxxxxxxx. These veins average about five feet in width and are said to be richer than the northwest-southeast veins and to contain more silver. The richest ore they contain is said to be steel galena. The ore occurs in shoots or bunches varying from 2 to 16 inches in width. It contains about $3.00 in gold and 12 ounces in silver to the ton and 55 to 75% of lead."

VISIT:

This property was visited by me on November 27, 1942, in company with Mr. A. T. Lietzow, owner of property, who is making arrangements to apply for a preliminary development loan from R. F. C., in the sum of $5,000.

MINE WORKINGS:

The Lower Tunnel was started at an elevation of 4,500 feet above sea level, and was driven in a meandering southeasterly direction about 840' with about 300 feet of cross-cutting. About 300 feet from the portal of this tunnel, a cross-cut was run south 72 feet, cutting a parallel vein, on which a drift was run 260 feet southeasterly to a point where the main productive ore shoot of property was found, and on which the said drift was continued for a distance of 160 feet. This is the same shoot of high grade lead ore as was found in the Middle Tunnel, as will be described in the next paragraph.

The Middle Tunnel was started at an elevation around 181 feet above the Lower Tunnel referred to, and was driven S. 25 degrees E. a distance of 255 feet, or to a point where the parallel vein mentioned was encountered. At this point there is a raise in ore to the Upper Tunnel and thence on to the surface.

From the said raise, the Middle Tunnel was continued southeasterly, to one side of the pay-vein, around 75 feet to a point where the said pay-vein was picked up again. Thence, the said tunnel, or drift, was continued directly on the ore shoot, S. 35 degrees E., around 100 feet, all in ore; the entire vein being 5 to 6 feet wide, with a pay-streak of steel galena on the hanging and another on the foot wall of this vein. The foot wall streak of steel galena is from 2 to 3 inches wide, while the hanging wall streak ranges from one to 3 feet wide. Here both overhand and underhand stoping has been carried out on the said pay-shoot, which as stated is proven for a length of 100 feet. But, if the 75 feet of drift that was run to one side of the ore shoot could be added, that would make the entire length of ore shoot about 175 feet, instead of 100 feet. The underhand stope mentioned is about 75 feet deep, at the deepest point, with three feet of steel galena in the bottom, which is now covered with "gob", per Mr. Lietzow.

PRODUCTION:

Mr. Lietzow stated that around 15 car loads of ore, of 40 tons each, have been shipped from this productive area of the mine, averaging from 35% to 69% lead and about 10 ounces of silver per ton.

The Upper Tunnel was started at an elevation 47 feet above the Middle Tunnel, and was driven on a low grade lead-silver vein about 180 feet. From a point around 75 feet from the portal of this tunnel, a cross-cut was run northeast 70 feet where the said ore shoot was picked up, near the raise mentioned, and 30 feet of drifting was done on ore in a southeasterly direction.

Per Mr. R. C. Jacobson, over 2,000 feet of underground work has been done on this property, the greater portion of which is valueless, from a mining standpoint.

CHARACTER OF ORE:

One shipment of ore from the St. Louis property is set forth below, in order to show the grade and character of ore:

Date of shipment: April 6, 1938.

Tons shipped: 46.8785.

Shipped to: International Sm. & Ref. Co., Salt Lake City, Utah

Assays:

Copper	0.22%
Lead	50.00%
Zinc	2.70%
Silver	8.6 ozs.
Gold	0.02 oz.
Insol.	14.1%
Iron	8.0%
Sulphur	11.8%
Lime	Trace.

OBJECTIVE OF $5,000 LOAN:

Applicant plans to use the said loan, when and if granted, to clean out and retimber, where necessary, the Lower Tunnel to the productive ore shoot mentioned, in order to make the same accessible for sampling by R. F. C. engineers. Then, in the event the said sampling should prove satisfactory, applicant will then apply for a $20,000 development loan, from R. F. C., to be used in blocking out an underground supply of shipping and milling ore.

CONCLUSION:

From facts herein set forth, I am of the firm opinion and belief if this mine could be largely developed along intelligent lines, it would, or such work would result in uncovering an underground supply of ore that would warrant the erection at property of a milling plant with a capacity of at least 75 tons of ore per day.

Elgin B. Holt

Elgin B. Holt,
Field Engineer.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ST. LOUIS Date July 13, 1943
District Wallapai, Mohave County, Arizona Engineer Elgin B. Holt
Subject:

BRIEF REPORT

OWNER: A. T. Lietzow, Kingman, Arizona.

METALS: Lead, Zinc, and silver; lead predominating.

AREA & LOCATION: The St. Louis group consists of 10 unpatented claims, located near the old town of Cerbat, about 12 miles north of Kingman, Arizona. The property is reached from Kingman by following U. S. Highway 93 around 9 miles northwesterly; thence 3 miles east to property.

HISTORICAL: This property was discovered about 1865, and has been worked intermittently since that time.

VEINS: Five distinct veins occur in pre-Cambrian gneiss, Several of the veins are said to converge near the southeast end of the St. Louis claim. Three of the veins trend northwest and dip 80 degrees northeast, and two trend about north and south and dip 85 degrees east. The veins average about five feet in width. The richest ore they contain is steel galena, occurring in shoots and bunches, varying from 2 to 16 inches in width.

VISIT: This property was visited by me on November 27, 1942, in company with Lietzow, owner, who at that time had made application for a $5,000 preliminary development loan, which was later granted. With this money Lietzow is cleaning out the main tunnel, retimbering the same and putting it in shape for examination by RFC engineers, with a view to applying for a development loan from RFC.

MINE WORKINGS: This property has been developed by over 2000 feet of tunnels, raises, cross-cuts and winzes, the greater portion of which work is valueless, from a mining standpoint; but no attempt will be made to describe this work in detail, except to say that the productive ore shoot found in the Lower Tunnel workings has a length of approximately 175 feet, a width of 2 feet and a depth of 200 feet more or less, and containing about 7,000 tons of milling ore, estimated by Lietzow to run: Zinc, 2.0%; lead, 15%; and silver about 3.0 ounces per ton.

PRODUCTION: Lietzow states that around 15 car loads of ore have been shipped, from the productive area of the mine, each car containing about 40 tons of ore averaging from 35% to 69% lead and about 10 ounces silver per ton. One shipment of ore from this property is set forth below:

TONS SHIPPED: 46.8785. Date: April 6, 1938

SHIPPED TO: International Smelting & Refining Co., Salt Lake City, Utah.

ASSAYS:

Copper	0.22%
Lead	50.00%
Zinc	2.70%
Silver	8.6 ounces
Gold	0.02 oz.
Insol.	14.10%
Iron	8.00%
Sulphur	11.80%
Lime	trace

ST. LOUIS MINE

ESTIMATED DAILY PRODUCTION: In the event Lietzow succeeds in raising adequate development money from RFC, or from some other source, it is believed that St. Louis mine could produce daily. while development work proceeds, around 25 tons of ore averaging: Lead, 15%; zinc, 2.0%; and silver 3.0 ounces per ton.

/s/ Elgin B. Holt
Elgin B. Holt
Field Engineer

R E P O R T O N

S T. L O U I S M I N E P R O P E R T Y

M O H A V E C O U N T Y

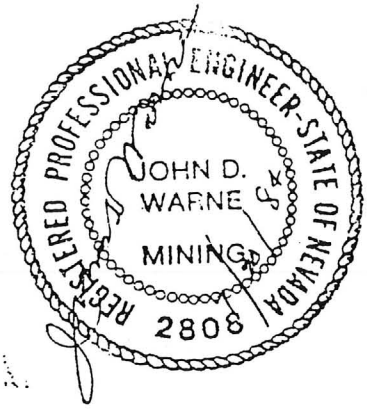
A R I Z O N A

EVALUATION, EXPLORATION, AND GEOCHEMICAL SURVEY

JULY 20, 1984

by

JOHN D. WARNE, P.E.
Consulting Mining Engineer
Professional Engineer - Mining No. 2808, Nv.
712 East Musser Street
Carson City, NV. 89701



C O N T E N T S

INTRODUCTION

A survey, and appraisal of the St. Louis Mine property was made during July 16-20, 1984 by John D. Warne.

The purpose of this survey was to research previous production records and maps; and examine the property to determine the nature, location, and present value of the deposit.

A compilation of the ore reserve blocks are outlined and illustrated to serve as exploration targets. An exploration program is planned and estimated with regard to the quantity of potential ore reserves.

This evaluation of the mine includes reminants and extensions of ore bodies previously mined; plus the reserves contained in the "Jewelry Store" vein, reported by the author on July 31, 1980.

CONCLUSIONS AND RECOMMENDATIONS

1. Ore reserves of all classes within the St. Louis Mine are estimated at 8500 tons with a present value of about $1.8 million. (@ $211.76/TON)

2. Exploration to prove and measure reserves is warranted. An initial exploration program (Stage I) featuring core drilling from both surface and underground sites would cost about $50,000.00, or only 2.7% of the estimated gross value of estimated reserves.

3. Depending upon the success of Stage I; further underground exploration drilling, drifting and development work is estimated at an additional cost of about $76,000.00, or about 4.4% of the presently estimated gross value of ore reserves.

   The locations of drilling and underground exploration sites are illustrated on maps included with this report (Map No. 4).

4. Surveying and mapping is planned within the exploration program to lay-out both surface and underground drilling, drifts, shafts, and other work to conform to the geologic features of the deposit.

5. The recommended exploration program would be greatly enhanced by an increase in the price of silver which is now less than one-half of the prevailing prices before 1980.

6. It is recommended to proceed to patent with the claims during the exploration program by proper applications, sampling, and affording access to the B.L.M. mineral examiner.

LOCATION AND ACCESSABILITY

The St. Louis Mine is located within the Wallapai Mining District, Mohave County, Arizona. It is situated near the southern end of the Cerbat Mountains, about 8 airline miles north of Kingman, Arizona, and about half a mile east of the old Cerbat town site. (Map No. 1) The claims lie in Sections 7, 8 and 17 Township 22 North, Range 17 West, G. & S.R.M. at an elevation of about 4200 to 4800 ft. above sea level (See Map No. 2).

From Kingman, the property is reached by ordinary vehicle by traveling northward along U.S. Highway No. 93 a distance of 8.9 miles to historical marker describing "Cerbat Mining Town", at mile-post No. 62. Thence, eastward along a canyon, 2.6 miles via an improved graveled county road to Cerbat. Access jeep roads traverse various mines within the district.

The dumps and adit portals to various levels of the St. Louis Mine can be seen from near the eastern terminus of Cerbat Canyon, near the south end of the large mining district. The lower mine working on the claims including the "Jewelry Store" working are accessible by jeep from Cerbat Canyon.

The main line of Atchison, Topeka and Santa Fe railroad affords ore shipping facilities at Kingman, Arizona. Both Kingman, (11 miles south) and Las Vegas, Nevada (100 miles north) via U.S. Highway No. 93 are the nearest sources for mining supplies.

HISTORY AND PROPERTY OWNERSHIP

The St. Louis Mine was discovered about 1865 according to F.C. Schrader. *(1) During his inspection of the mine, in 1905, mining operations were under the St. Louis Consolidated Mining and Milling Company of Los Angeles, California (owners).

Mining work was on a moderate scale, during intermittent periods. Development was principally by drift adits and shafts within a vertical range of about 400 ft. below the surface. Five separate veins were exploited within the upper levels. No mining or exploration was done below the strong ore exposure within the "Jewelry Store" drift near the base of the mountain, at the access road level, about 4150 ft. in elevation.

Records of past operations and production from the mine are incomplete, but production records compiled by the U.S. Bureau of Mines from 1901 through 1948 are listed in U.S.G.S. Bulletin 978E, p. 147 (3).

*Nos. in parenthesis are references listed at the end of this report.

During 1942 the property was examined by an Arizona State engineer in company with Mr. A.T. Leitzow (the last mine owner and operator, prior to the present owners). About 400 tons of ore had been produced by this operator prior to that time.

The mine property consists of ten un-patented claims named: St. Louis and St. Louis Nos. 2 through 10, inclusive; which were purchased from the estate of A.T. Leitzow in 1981.

Present owners of the mine are: Clifford O. Keever, 4349 Bramblewood Street, and W.C. Barnes, 331 Cincinatti Avenue, Las Vegas, Nevada 89117.

A composite Mineral Survey Map of the mining claims was prepared for the present owners by Jack M. Kesler, R.L.S. and U.S.M.S. on February 27, 1982 (Map No. 2).

No work has been done since about 1948 by former owner A.T. Leitzow. Acquisition of the property by the new owners, and recent litigation, has impeded any recent mining activity.

A report dated July 31, 1980, by this author describes the most promising "Jewelry Store" deposit; which supplements reserves from previously mined veins considered in this report.

DESCRIPTON OF THE DEPOSIT

The geology and descriptions of deposits in the Wallapai mining district are described by Mc Clelland G. Dings[3] in Geological Survey Bulletin 978-E and others.

Deposits previously mined on the upper levels of the St. Louis Mine are described by Schrader[1] (page 105-106) in 1909. "The two veins being worked are known as Numbers 2 and 3. They are about 3 ft. wide and the ore varies from 4 to 6 inches in width...the ore is said to average 60 percent lead and $2.00 in gold and 14 ounces of silver to the ton." Ore was shipped as mined during that period.

The report by E.B. Holt[2] lists the grade of ore shipped as typical of a 46.8785 ton shipment on April 6, 1938 as follows: Copper 0.22%, Lead 50%, Zinc 2.70%, Silver 8.6 oz/ton, Gold 0.02 oz/ton, Insolvents 14.1%, Iron 8%, Sulphur 11.8%, and Lime-trace.

The most promising ore deposit presently exposed on the property termed the "Jewelry Store" vein. This vein on the St. Louis Number 2 claim averages about 3 ft. in width, strikes South 35° East, and dips about 75° Southeast. Bulk samples taken from a surface open-cut exposure of this vein contains approximately 60 oz. of silver and 57% lead per ton (see sample analysis). Run-of-mine, or shipping grade ore, should average

over 15 oz, of silver per ton, and 60% lead, with a trace of gold. The gold content of the ore could add to the value of a shipping grade ore.

Edson S. Bastin[5] describes the mineral deposits of the Cerbat Mountains (page 18), as worked mainly for their silver content. They are described as many veins of prevailing northerly and northwesterly strike and steep dip. Most of the wall rocks are granites, gneisses, schists and amphibolite. "Cerargyrite (horn silver) and native silver are the dominant silver minerals of these ores. In the lower part of the oxidized zone ruby silver (proustite) was commonly present." Most of the rich oxidized ores have been previously mined, and the silver values are contained in the high lead sulphide (galena) veins.

DEVELOPMENT

Principal development of the ore deposits at the St. Louis Mine consists of a lower tunnel or adit at 4220 ft. above sea level, and a middle adit driven at 4281 ft. higher in elevation. Mineralized portions of some veins or ore shoots exceed 175 ft. in length; and extended throughout a vertical range of about 400 ft. below the surface exposures. Some original mining was done at higher elevations by short drift adits and shafts.

Most of these mines are still accessible and show remnants of excellent grade ore in veins from several inches to over 4 ft. in width. Good wall rock allowed open stoping (without supports) throughout the mine, however, some timber above drifts was used to allow for waste gob. Veins average from S. 20° - 45° E. and generally dip steeply in a Northeast direction. (See Map No. 3)

The "Jewelry Store" vein development consists of an inclined shaft about 48 ft. in depth, and a drift on ore about 25 ft. in length, on the St. Louis Number 2 claim. This is the lowest and most promising ore exposure on the property. The vein dips about 75° N.E. and strikes about N. 35 W.

CHARACTER OF THE ORE

Analysis and description of the following samples were taken during this and previous examinations of the St. Louis Mine property, to determine the character and tenure of the ore:

Sample No.	Oz. Gold	Per Ton Silver	% Lead	Description
1.		122	62	Bottom of Jewelry Store shaft
2.	.02	43	55	Taken from Jewelry Store dump
3.	.01	129.9	52	Dozer cut on lower level (mineral specimen)
4.	-	15.8	22	Upper dump
5.	-	122.82	48	Second level drift (mineral specimen)
6.	.03	53.02	61	Jewelry Store drift (mineral specimen)
7.	-	96	63	Chip sample-Jewelry Store
8.	.04	190	58	15' from winze in drift (mineral specimen)
9.	-	10.4	83	Upper level
10.	.04	30.7	66.8	Surface open cut
11.	.01	68.2	57.1	Surface open cut
12.	.01	36.3	33.1	Lower surface dozer cut
13.	-	108.8	67.15	Jewelry Store drift (mineral specimen)
14.	-	53.3	35.82	Open cut ¼ mesh
15.	.01	60.3	61	Jewelry Store dift bottom
16.	-	25.16	18.65	Dump grab sample - Jewelry Store vein
17.	.01	57.1	61.1	Selected 1" mesh - AG PB -
AVERAGE -	.02	72 oz	53%	

REFERENCES

1. Schrader, F.C., 1909, Mineral Deposits of the Cerbat Range, Black Mountains, and Grand Wash Cliffs; Mohave County, Arizona: U.S. Geol. Survey Bulletin 397.

2. Holt, E.B., 1942, Department of Natural Resources, State of Arizona

3. Dings, Mc Clelland G., 1951, The Wallapai Mining District, Cerbat Mountains, Mohave County, Arizona: Geol. Survey Bulletin 978-E.

4. U.S.G.S. Bulletin 871, 1936, Mineral Resources of the Region Around Boulder Dam (Various Authors).

5. Bastin, E.S., 1924, Origin of Certain Rich Silver Ores near Chloride and Kingman, Arizona: U.S. Geol. Survey Bulletin 750, pp 17-39.

6. Robert L. Peterson, Chief, Branch of Records and Data Management, Bureau of Land Management. Letter dated June 3, 1980, to Nicholas M. Hughs, President of Jewelry Mountain Mines, Inc.

7. Haury, P.S., U.S. Bureau of Mines, R.I. No. 4101

APPENDIX A-2

NOTICE OF INTENTION TO HOLD MINING CLAIMS (P3833.2-3)

1. Names of Claims: St. Louis & St. Louis Nos. 2-10 (Incl.) (10 Claims)

2. Serial Nos: A MC 29 470 to A MC 29479(Incl.)

3. Names & Addresses of Present Owners:

   W.C. Barnes, 331 Cincinatti Avenue, Las Vegas, Nv. 89114 and Clifford O. Keever, 4349 Bramblewood St., Las Vegas, Nv. 89117

4. Location of Claims: Secs. 7, 8 & 17; T.22N.; R.17W.; G & S.R.B. & M.; as recorded in Mohave, Co., Arizona, Book N.3N., pp. 109-118.

5. Labor & Improvements:

   "Proof of Labor Upon Mining Claim" (Attached)

   Evaluation, Exploration & Geochemical Survey report by John D. Warne, P.E. Registered Professional Engineer, No. 2808 (Mining) State of Nevada. Dated July 30, 1984.

6. Basic findings of survey: (1) Sampling and analysis indicate ore values in excess of 10 oz./Ton of silver, and 60% lead ore exposed within underground workings. (2) An estimated 2790 tons of ore exists on the "Jewelry Store" vein; and 5710 tons of ore still exists underground on the "main vein of the St. Louise mine. (3) Ores can be explored by both surface and underground drilling; and exploited by extending existing workings.

7. Qualifications of John D. Warne, P.E., Consulting Mining Engineer, 712 E. Musser St., Carson City, Nv. 89701:

   (a) Practiced at above address for past 10 years. B.S. Mining Engineering, University of Texas, College of Mines & Metallurgy, 1938. Professional Engineer (Mining) Cert. No. 2808, 5/16/69, State of Nevada. (Copy of Resume attached.)

   (b) Engineer's report to satisfy annual assessment work under General Mining Laws of 1872; P.L. 85-876, act of Sept. 2, 1958 (72 Stat. 1701 30 U.S.C. 28-1-2); B.L.M. Circ. No. 2898, Part. 3850, & 3851-2, & Circ. No. CFR 3833.2.

APPENDIX A-3 EMPLOYMENT RECORD AND RESUME

JOHN D. WARNE
Consulting Mining Engineer
712 E. Musser Street
Carson City, Nevada 89701
Telephone: 702-882-6394

PROFESSIONAL ENGINEER - MINING
NEVADA NO. 2808

GENERAL INFORMATION

Birth Date:	1-25-16, El Paso, Texas
Education:	8-38; B.S. Mining Engineering, University of Texas, College of Mines and Metallurgy. Civil Engineering, Mt. San Antonio College, Walnut, California, 1961-63.
General:	Married - 8-41 to present, four children (married). Travel Status: single. Weight: 195; Height: 6'1"; Health: Good. Residence - 712 E. Musser St., Carson City, Nevada; land in Douglas Co.,Nevada.
Profession:	Mining Engineer. Registered Professional Engineer No. 2808 Nevada, 1969 (written examination). SS# 527-05-2637.

EXPERIENCE

1936-37	Miner-A.S. & R. Co., Silver City area, New Mexico.
1937-38	Jr. Mining Engineer - Nevada Cons. Copper Corp., Ray, Arizona.
1938-39	Surveyor - Construction Q.M., U.S.G.S.,El Paso, Texas.
1939-41	Inspector Core Boring - U.S. Engineer Office, Texas, Arkansas, Missouri.
1941-48	Shaft & Tunnel Foreman, Mining Engineer and Project Mine Engineer - U.S. Bureau of Mines. The following major exploration projects were supervised and my final Reports of Investigations, were published:

Arkansas - Batesville Manganese (Shaft & Tunnel Foreman).
Colorado - Boulder - Tungsten: diamond drilling, shafts, tunnels, and mech. trenching. Silver Plume Lead, Zinc, Silver; mine rehabilitation, drifts,& diamond drilling. Northgate - Fluorspar; drifts, shafts, trenching and drilling.
Utah - Moab area diamond drilling - Uranium & Vanadium.
Alabama - Eastern portion, red iron ore exploration, deep rotary core drilling to 2000'.
Florida - Heavy minerals in sand, 1,000 holes drilled by rotary and drive pipe methods. Field lab.

1948-51	Shaft and tunnel foreman - L.A. Dept. of Water & Power, 11 miles of large bore water power tunnels near Bishop, California.
1951-59	Mine Examination & Exploration Engineer - U. S. Bureau of Mines and Office of Mineral Exploration, Nevada, California and Hawaii. Examination of Mines, mining areas planning & supervising exploration projects for many minerals.
1959-62	Supervisory Highway Engineer; Valuation Engineer (mining); Department of Interior, Bureau of Indian Affairs & Land Management. Nevada and Wyoming. Supervising surveys, planning and construction of roads; Evaluation of mines and minerals on Government lands.
1962-74	Civil Engineer – Los Angeles Regional County Engineer - Mapping Division -Detailed surveys, calculations and preparation of accurate coordinate maps of areas, streets, freeways, tracts, flood control, channels, sewers, deeds, etc..
1974-present	Consulting Mining Engineer - 712 E. Musser St. Carson City, Nevada. Examinations, evaluations, mapping and exploration of mines.

APPENDIX B-1

ESTIMATE OF ORE RESERVES

Ore reserves in previously mined underground areas (Map No. 3):

Block	Dimensions	Tons*	Class
A	100x47	4700x3÷10 = 1410	Prev. Mined
B	50x50	2500x3÷10 = 750	Prev. Mined
C	100x90 - 50x50	6500x3÷10 = 1950	Indicated
D	100x90	9000x3÷10 = 2700	Inferred
E	60x60	3600x3÷10 = 1080	Prev. Mined
F	60x60	3600x3÷10 = 1080	Indicated

Ore reserves in "Jewelry Store" vein. (Map No. 3)

G	30x10	300x3÷10 = 90	Measured
H	60x30	1800x3÷10 = 540	Indicated
I	80x112.5 -30x60	7200x3÷10 = 2160	Inferred

*(Note. Use average vein thickness at 3.0 & tonage factor of 10 cu ft./ton.)

SUMMARY OF ORE RESERVES:

Previously mined (1865-present). . . . . .3240 tons

Known - (positive or measured ore) . . . . . 90 tons

Indicated - (exposed on one side). . . . . .3550 tons (Use)

Inferred - (geologic evidence & proximity. . .4860 tons

(a) Estimated ore reserves (all classes). . .8500 tons (Use)

(b) Estimated present value per ton F.O.B. @Smelter:

Silver - 15 oz/T. @ $8.00/oz = $120.00/T.

Lead - 400 lbs/T. @ $0.24/lb = $ 96.00/T.

Total Value/T. . . . . = $216.00/T.

APPENDIX B-1 (Contd)

(c) Estimated valuation - ore blocks**

Blocks A, B & E (previously mined)		
Block G (measured)	90x$216	$ 19,440.00
Blocks C, F & H (Indicated)	3550x$216	$ 766,800.00
Blocks D & I (Inferred)	4860x$216	$1,049,760.00
Total estimated value (all classes)	8500 (Tons) =	$1,836,000.00

**(Note: Measured ore - exposed on 4 sides; indicated ore - exposed on one side; inferred ore - geologic evidence & proximity to ore.)

APPENDIX B-2

STAGE I

SURFACE & UNDERGROUND DRILLING (90-Day Period)

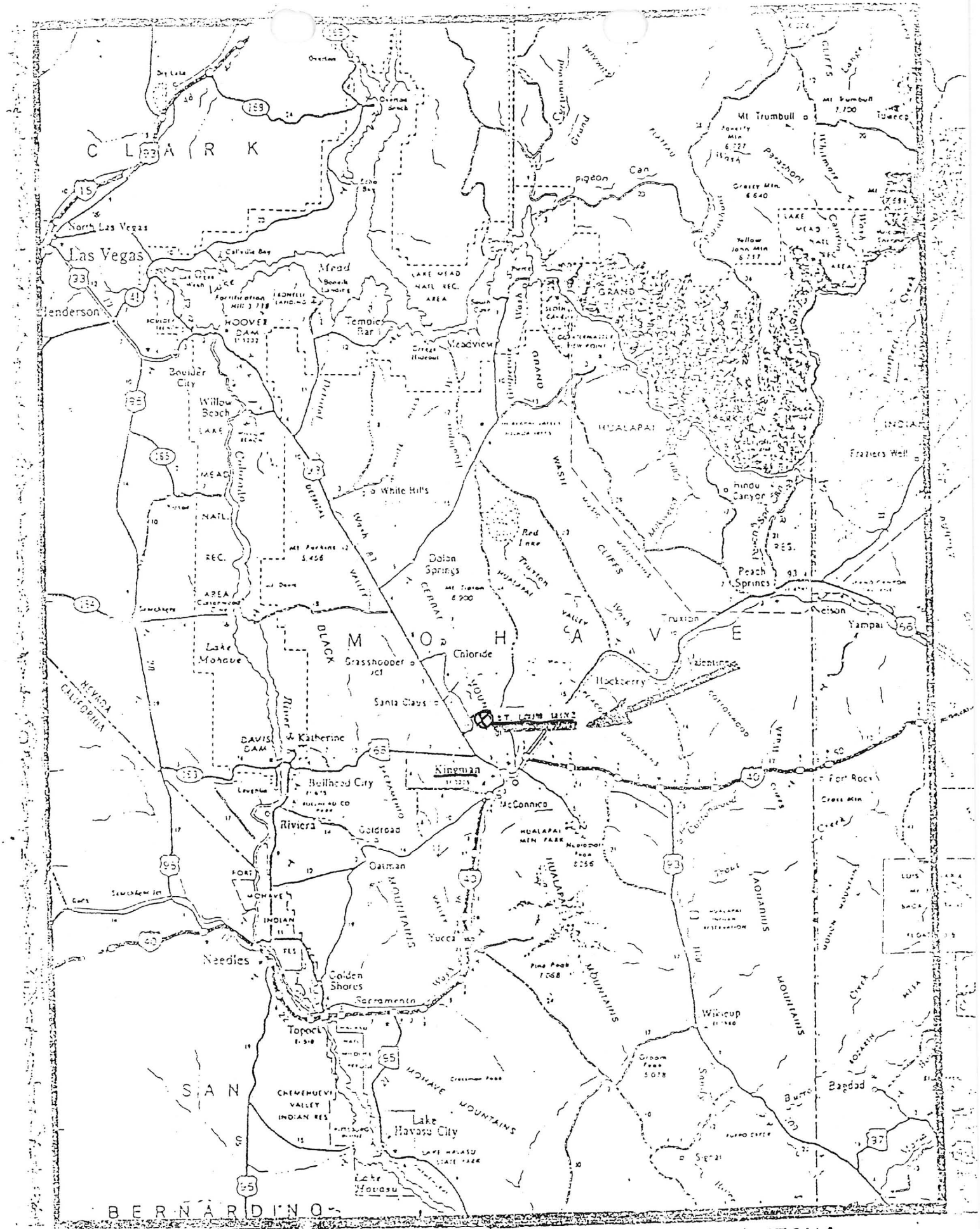
1.	Preparatory surveying & engineering	$ 2,000.00
2.	Supervisor & engineer (3 mo.)	$ 6,000.00
3.	Laborer, field asst. & sampler (3 mo.). . .	$ 3,000.00
4.	Drilling 1500' @ $15.00/ft.	$22,500.00
5.	Preparation of drill sites.	$ 600.00
6.	Transportation @ $1000/mo..	$ 3,000.00
7.	Drilling & sampling supplies.	$ 1,000.00
8.	Power development	$ 1,500.00
9.	Camp & supplies	$ 3,000.00
10.	Mail, telephone & misc.	$ 1,000.00
	Subtotal.	$43,600.00
	Total - Stage I (plus 15% contingencies). .	$50,140.00
	Use . .	$50,000.00

STAGE II

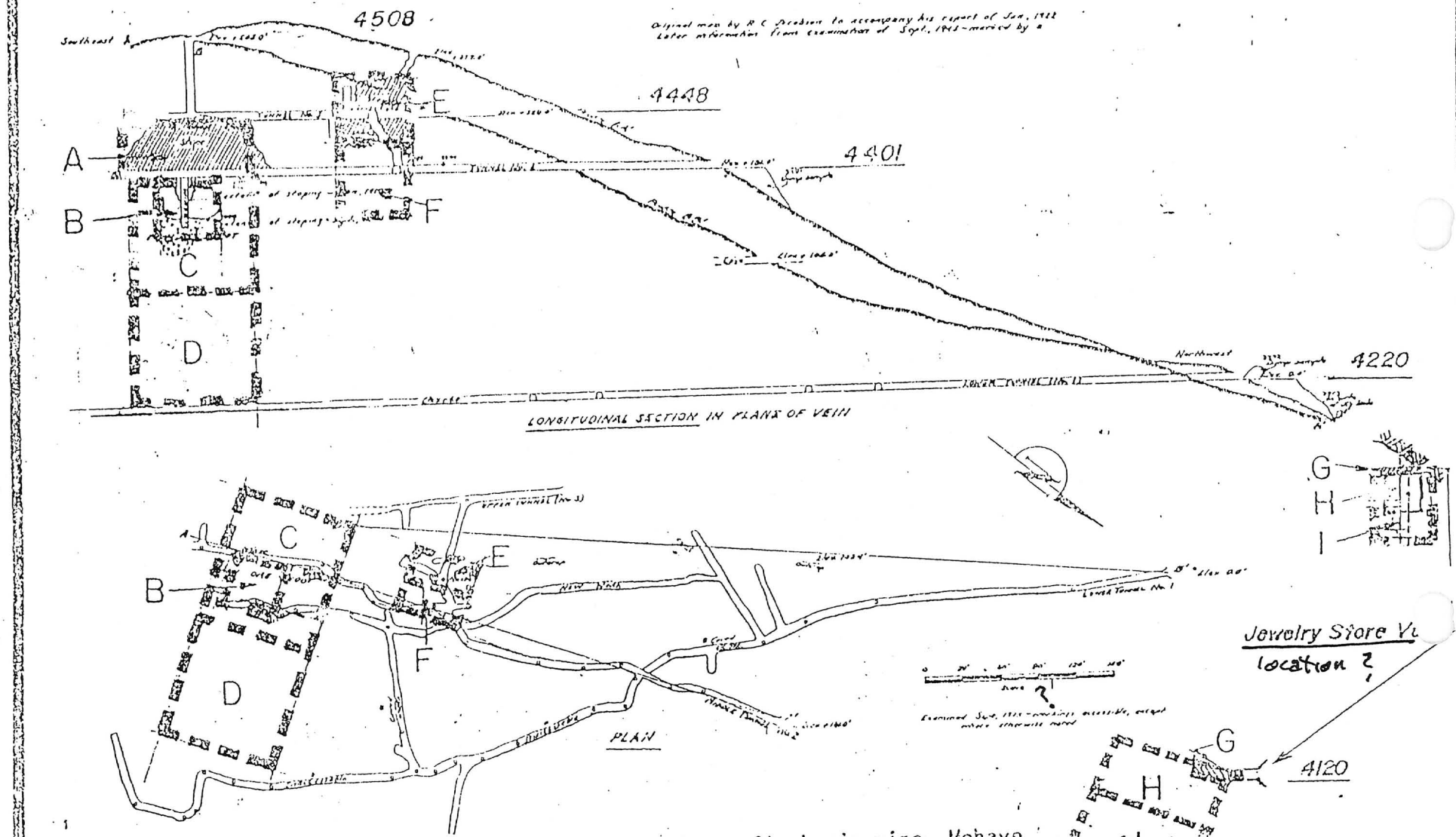
UNDERGROUND CORE DRILLING & DRIFTING (90 DAY PERIOD)

Total cost month, same personnel:

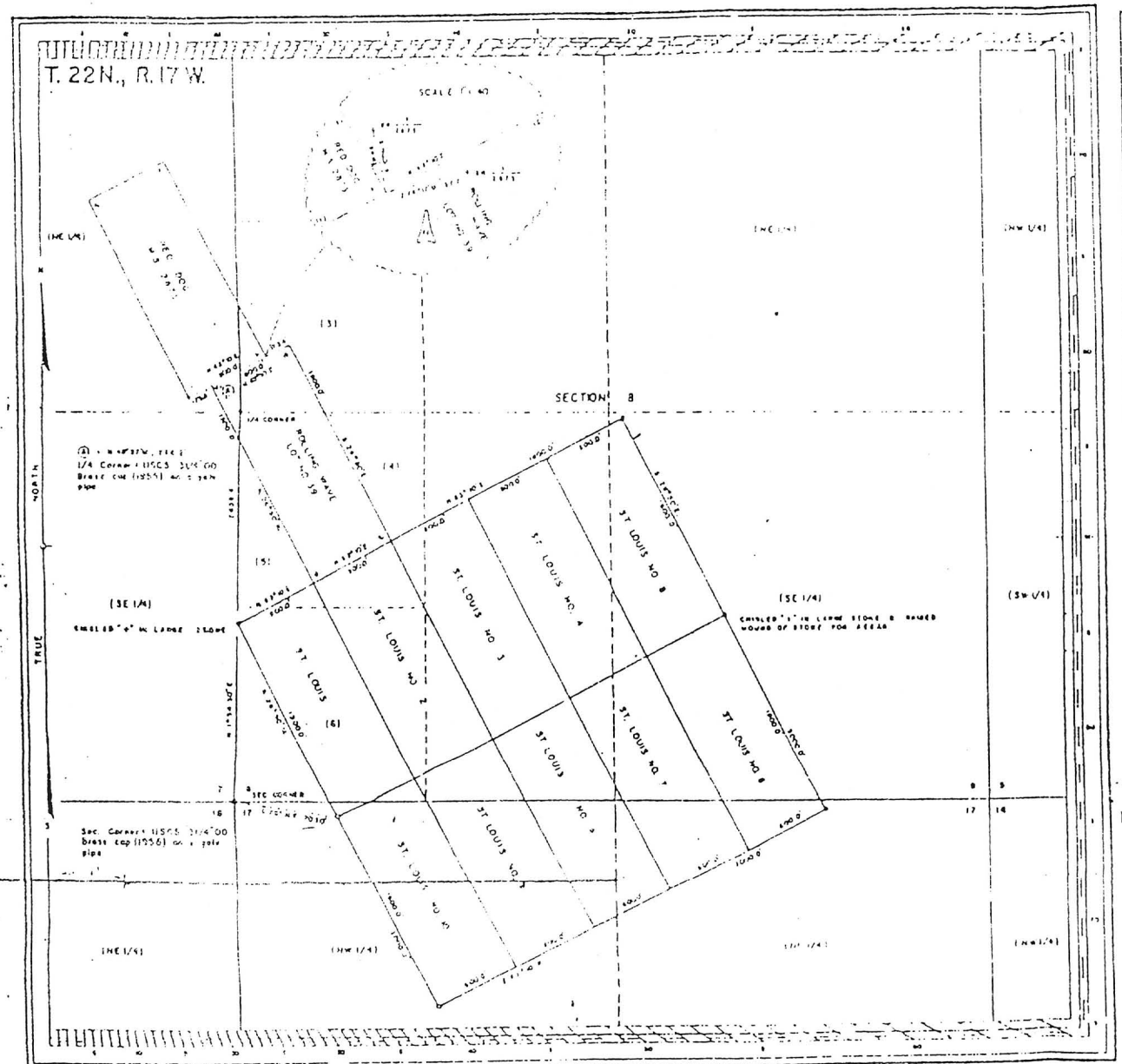
1.	Labor & supplies - $7,000.00/mo. (3 mo.) . .	$21,000.00
2.	Drilling 1000' @ $15.00/ft..	$15,000.00
3.	Underground - shafts, drifts, drill sites, rehabilitation, etc.	$30,000.00
	Subtotal:.	$66,000.00
	Total (plus 15% contingencies), Use.	$76,000.00



MAP NO. 1 - LOCATION OF ST. LOUIS MINE - MOHAVE CO. ARIZONA



MAP NO. 3 - Longitudinal section and plan - St. Louis mine, Mohave County, Arizona - Showing Location of Ore Reserves



MINERAL SURVEY (UNPATENTED)

CLAIM OF:
Mr. Virgil Keever, 2208 Wendell Ave.,
Las Vegas, Nevada 89101
JEWETT MOUNTAIN MINES, INC.
2208 WENDELL AVENUE
LAS VEGAS, NEVADA 89101
KNOWN AS THE:

ST. LOUIS, ST. LOUIS NOS. 2-10

SITUATE IN:
Sections 8, 17, T 22N., R 17W., G & S R M., Mohave County, Wallapai Mining District, Arizona
Lat 35° 18' 32" N., Long 114° 07' 40" W. at W1/4 Cor. S 8

Feet

Magnetic Declination, 13° 48' East

Surveyed, January, February, 1982
By: Jack M. Kesler, RLS, USMS

NOTES:
1.) Basis of Bearings: True North by Solar Observations
2.) Location Notices Recorded in Book 3N of Mines, Pages 117-118
3.) [illegible]
4.) Amended Location Notices Recorded in Book [illegible] of M.R.P.S., Pages [illegible]
5.) [illegible]

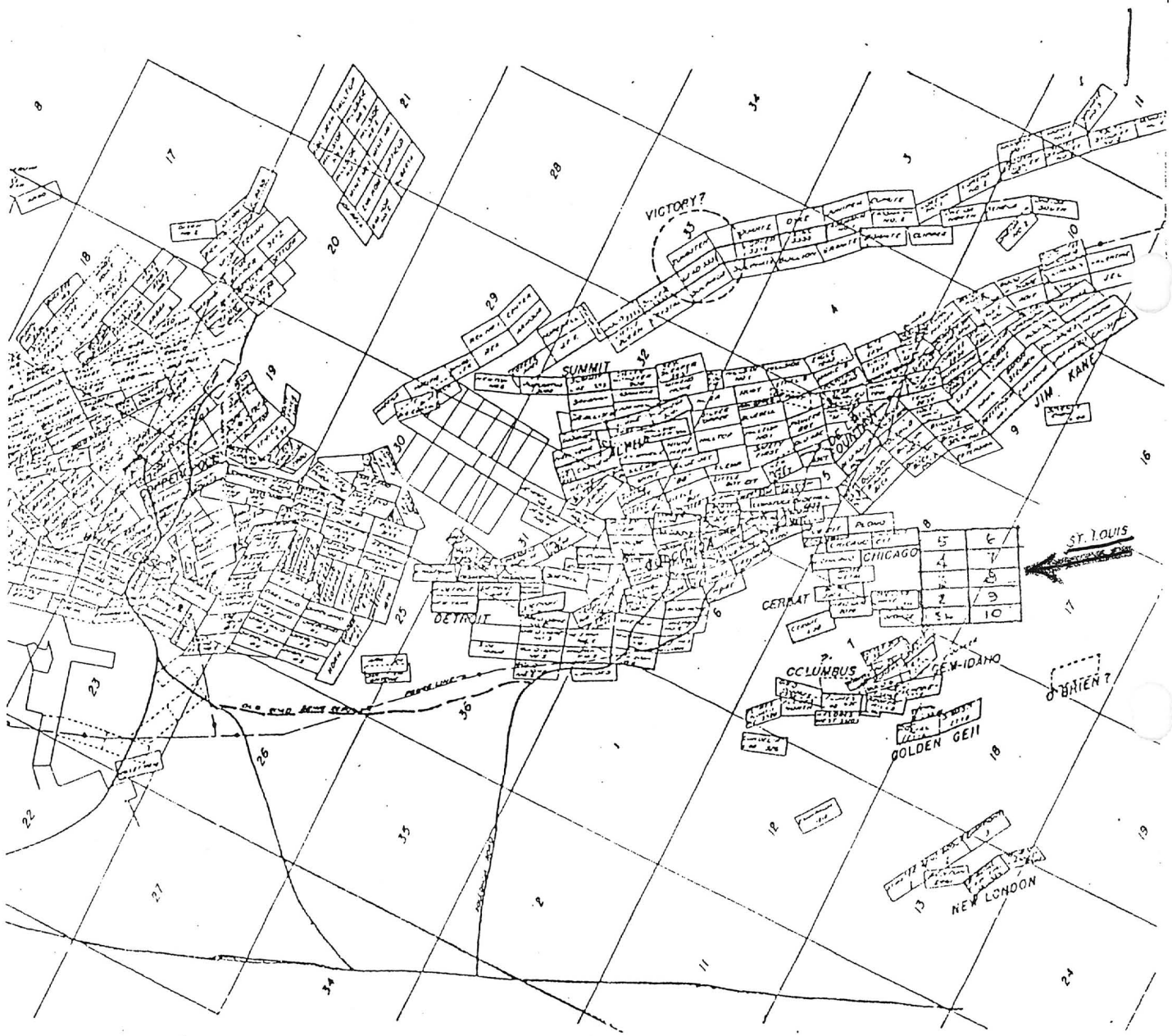
Date of this print: 2-8-82

PREPARED FOR: Mr. Virgil Keever, 2208 Wendell Avenue, Las Vegas, Nevada 89101

JOB NO. 284 | DRAWN BY: J.M.K. | DATE: February 27, 1982

JACK M. KESLER, R.L.S., USMS | SHEET 1 OF 1

MAP NO 2



f Wallapai mining district, Mohave County, Ariz.. —

The Mining Journal
January 15, 1946

St. Louis

May 27, 1957

ST. LOUIS GROUP

MOHAVE CO.
CERBAT DIST.

This property idle.

MARK GEMMILL

61

NAME: SAINT LOUIS

COUNTY: MOHAVE

T 22 N R 17 W SEC. 8 SW¼ Elev. 4400 W. Center

DISTRICT: WALLAPAI ~~CERBAT~~ CERBAT STOCKTON HILL

Mineralization: Pb, Zn, Cu, Ag, Au

Geology: Qtz. vns in fault fissures

Type Operation:

Production:

References: USGS 397 P 105, AEC Microfilm; USBM RI #101; Clipping file

The Mining Journal
January 15, 1946

[redacted]

May 27, 1957

ST. LOUIS GROUP

MOHAVE CO.
CERBAT DIST.

This property idle.

MARK GEMMILL

NAME OF MINE: ST. LOUIS
OWNER: A. T. Lietzow
COUNTY: MOHAVE
DISTRICT: CERBAT
METALS: PB

OPERATOR AND ADDRESS: DATE:		MINE STATUS DATE:	
5/1/44	A. T. Lietzow, Kingman Ariz.	5/1/44 2/46	Developing & shipping

ST. LOUIS

Pb, Zn, Ag

Mohave 8 - 10 T 22 N, R 17 W

A. T. Lietzow, Kingman '43

5-6-42

Lietzow, A. T.
Kingman, Arizona

See L File
Re - ASMOA and Pay Dirt Publication - also kind of loans

See ST. LOUIS - Re Field Engineer's Report 12-2-42

See ST. LOUIS - Re "C" loan application 1-4-43

See L file - Re request for bulletins 1-28-43

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ST. LOUIS Date July 13, 1943
District Wallapai, Mohave County, Arizona Engineer Elgin B. Holt
Subject:

BRIEF REPORT

OWNER: A. T. Lietzow, Kingman, Arizona.

METALS: Lead, Zinc, and silver; lead predominating.

AREA & LOCATION: The St. Louis group consists of 10 unpatented claims, located near the old town of Cerbat, about 12 miles north of Kingman, Arizona. The property is reached from Kingman by following U. S. Highway 93 around 9 miles northwesterly; thence 3 miles east to property.

HISTORICAL: This property was discovered about 1865, and has been worked intermittently since that time.

VEINS: Five distinct veins occur in pre-Cambrian gneiss. Several of the veins are said to converge near the southeast end of the St. Louis claim. Three of the veins trend northwest and dip 80 degrees northeast, and two trend about north and south and dip 85 degrees east. The veins average about five feet in width. The richest ore they contain is steel galena, occurring in shoots and bunches, varying from 2 to 16 inches in width.

VISIT: This property was visited by me on November 27, 1942, in company with Lietzow, owner, who at that time had made application for a $5,000 preliminary development loan, which was later granted. With this money Lietzow is cleaning out the main tunnel, retimbering the same and putting it in shape for examination by RFC engineers, with a view to applying for a development loan from RFC.

MINE WORKINGS: This property has been developed by over 2000 feet of tunnels, raises, cross-cuts and winzes, the greater portion of which work is valueless, from a mining standpoint; but no attempt will be made to describe this work in detail, except to say that the productive ore shoot found in the Lower Tunnel workings has a length of approximately 175 feet, a width of 2 feet and a depth of 200 feet more or less, and containing about 7,000 tons of milling ore, estimated by Lietzow to run: Zinc, 2.0%; lead, 15%; and silver about 3.0 ounces per ton.

PRODUCTION: Lietzow states that around 15 car loads of ore have been shipped, from the productive area of the mine, each car containing about 40 tons of ore averaging from 35% to 69% lead and about 10 ounces silver per ton. One shipment of ore from this property is set forth below:

TONS SHIPPED: 46.8785. Date: April 6, 1938

SHIPPED TO: International Smelting & Refining Co., Salt Lake City, Utah.

ASSAYS:

Copper	0.22%
Lead	50.00%
Zinc	2.70%
Silver	8.6 ounces
Gold	0.02 oz.
Insol.	14.10%
Iron	8.00%
Sulphur	11.80%
Lime	trace

ST. LOUIS MINE

ESTIMATED DAILY PRODUCTION: In the event Lietzow succeeds in raising adequate development money from RFC, or from some other source, it is believed that St. Louis mine could produce daily while development work proceeds, around 25 tons of ore averaging: Lead, 15%; zinc, 2.0%; and silver 3.0 ounces per ton.

/s/ Elgin B. Holt
Elgin B. Holt
Field Engineer

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ST. LOUIS Date December 2, 1942

District Wallapai, Mohave Co., Ariz. Engineer Elgin B. Holt

Subject:

R E P O R T

OWNER: A. T. Lietzow, Kingman, Arizona.

METALS: Lead, zinc and silver.

AREA & LOCATION:

The St. Louis group consists of 10 unpatented mining claims, located near the old town of Cerbat, about 14 miles northeast of Kingman, Arizona, in Secs. 8 & 17, Township 22 North, Range 17 West of the G. & S. R. B. & M. The property is reached from Kingman by following U. S. highway 93 around 9 miles north; thence by a good dirt road around 5 miles to the camp buildings below the mine.

HISTORICAL, VEINS, ETC.:

F. C. Schrader, in U. S. Geological Survey Bulletin No. 397, says in part as follows:

"The ore deposits of this district contain principally gold, silver and lead. They occur in fissure veins, which in general have a northwesterly trend and a steep northeasterly or southwesterly dip. Those situated north of Cerbat Wash are chiefly gold bearing; those to the south contain principally silver and lead. The gangue is mainly quartz and the values usually favor the hanging wall. The principal minerals are pyrite, chalcopyrite, galena, zinc blende, stibnite and native gold.

"The St. Louis mine is about half a mile east of Cerbat and the Gem mine and the same distance southeast of Cerbat Wash and several hundred feet above it. The mine was discovered about 1865.

"Five distinct veins are reported to occur in pre-Cambrian gneiss. Several of the veins are said to converge near the southeast end of the St. Louis claim. Three of the veins trend northwest and dip 80 degrees northeast, and two trend about north and south and dip 85 degrees east. xxxxxxxxx. These veins average about five feet in width and are said to be richer than the northwest-southeast veins and to contain more silver. The richest ore they contain is said to be steel galena. The ore occurs in shoots or bunches varying from 2 to 16 inches in width. It contains about $3.00 in gold and 12 ounces in silver to the ton and 55 to 75% of lead."

VISIT:

This property was visited by me on November 27, 1942, in company with Mr. A. T. Lietzow, owner of property, who is making arrangements to apply for a preliminary development loan from R. F. C., in the sum of $5,000.

MINE WORKINGS:

The Lower Tunnel was started at an elevation of 4,500 feet above sea level, and was driven in a meandering southeasterly direction about 840' with about 300 feet of cross-cutting. About 300 feet from the portal of this tunnel, a cross-cut was run south 72 feet, cutting a parallel vein, on which a drift was run 260 feet southeasterly to a point where the main productive ore shoot of property was found, and on which the said drift was continued for a distance of 160 feet. This is the same shoot of high grade lead ore as was found in the Middle Tunnel, as will be described in the next paragraph.

The Middle Tunnel was started at an elevation around 181 feet above the Lower Tunnel referred to, and was driven S. 25 degrees E. a distance of 255 feet, or to a point where the parallel vein mentioned was encountered. At this point there is a raise in ore to the Upper Tunnel and thence on to the surface.

From the said raise, the Middle Tunnel was continued southeasterly, to one side of the pay-vein, around 75 feet to a point where the said pay-vein was picked up again. Thence, the said tunnel, or drift, was continued directly on the ore shoot, S. 35 degrees E., around 100 feet, all in ore; the entire vein being 5 to 6 feet wide, with a pay-streak of steel galena on the hanging and another on the foot wall of this vein. The foot wall streak of steel galena is from 2 to 3 inches wide, while the hanging wall streak ranges from one to 3 feet wide. Here both overhand and underhand stoping has been carried out on the said pay-shoot, which as stated is proven for a length of 100 feet. But, if the 75 feet of drift that was run to one side of the ore shoot could be added, that would make the entire length of ore shoot about 175 feet, instead of 100 feet. The underhand stope mentioned is about 75 feet deep, at the deepest point, with three feet of steel galena in the bottom, which is now covered with "gob", per Mr. Lietzow.

PRODUCTION:

Mr. Lietzow stated that around 15 car loads of ore, of 40 tons each, have been shipped from this productive area of the mine, averaging from 35% to 69% lead and about 10 ounces of silver per ton.

The Upper Tunnel was started at an elevation 47 feet above the Middle Tunnel, and was driven on a low grade lead-silver vein about 180 feet. From a point around 75 feet from the portal of this tunnel, a cross-cut was run northeast 70 feet where the said ore shoot was picked up, near the raise mentioned, and 30 feet of drifting was done on ore in a southeasterly direction.

Per Mr. R. C. Jacobson, over 2,000 feet of underground work has been done on this property, the greater portion of which is valueless, from a mining standpoint.

CHARACTER OF ORE:

One shipment of ore from the St. Louis property is set forth below, in order to show the grade and character of ore:

Date of shipment: April 6, 1938.

Tons shipped: 46.8785.

Shipped to: International Sm. & Ref. Co., Salt Lake City, Utah

Assays:

Copper	0.22%
Lead	50.00%
Zinc	2.70%
Silver	8.6 ozs.
Gold	0.02 oz.
Insol.	14.1%
Iron	8.0%
Sulphur	11.8%
Lime	Trace.

OBJECTIVE OF $5,000 LOAN:

Applicant plans to use the said loan, when and if granted, to clean out and retimber, where necessary, the Lower Tunnel to the productive ore shoot mentioned, in order to make the same accessible for sampling by R. F. C. engineers. Then, in the event the said sampling should prove satisfactory, applicant will then apply for a $20,000 development loan, from R. F. C., to be used in blocking out an underground supply of shipping and milling ore.

CONCLUSION:

From facts herein set forth, I am of the firm opinion and belief if this mine could be largely developed along intelligent lines, it would, or such work would result in uncovering an underground supply of ore that would warrant the erection at property of a milling plant with a capacity of at least 75 tons of ore per day.

Elgin B. Holt

Elgin B. Holt,
Field Engineer.