CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
1520 West Adams St.
Phoenix, AZ 85007
602-771-1601
http://www.azgs.az.gov
inquiries@azgs.az.gov

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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: SILVER COIN

ALTERNATE NAMES:
VERDUN MINING CO.
ARAVAIPA LEASING CO.
URBANA, R.F.
SAHNNON, F.A.
SPERRY, H.
SILVER COIN EXTENSION
MONTGOMERIE, E.
GRUNOW
HARRIS
GARDENHIRE

GRAHAM COUNTY MILS NUMBER: 195B

LOCATION: TOWNSHIP 7 S RANGE 20 E SECTION 11 QUARTER SW
LATITUDE: N 32DEG 50MIN 10SEC LONGITUDE: W 110DEG 16MIN 52SEC
TOPO MAP NAME: KLONDYKE - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
LEAD SULFIDE
COPPER
SILVER
GOLD
VANADIUM
MOLYBDENUM

BIBLIOGRAPHY:
USGS PP. 461, GEOLOGY OF THE KLONDYKE QUAD,
1964, P. 148
ROSS, CLYDE P., USGS BULL. 763, 1925, P. 86
ADMMR SILVER COIN FILE
ADMMR "U" FILE
USBM WAR MINERALS REPORT 130, VERDUN MINE
GRAHAM CO. AZ. 1943
ADMMR VERDUN MINE COLVO FILE

CONTINUED ON NEXT PAGE

CONTINUATION OF SILVE']IN

EAGLE-PICHER FILES S FOLDER
WAR MINERALS REPORT 130, 1943 3 PAGES
FLAGG VANADIUM REPORT BOOK V-II VERDUN MINING

United States Senate

MEMORANDUM

June 13, 1943

Dear Sam,

D'Autremond called me and asked who and what is the Silver Coin Mining Company and all about it and its properties.

I don't remember it. It is supposed to be around Phoenix?

Bill

June 15, 1943

MEMORANDUM

SILVER COIN MINING COMPANY
Query by d'Autremont

TO: W. C. Broadgate

FROM: J. S. Coupal

The Silver Coin Mining and Milling Company is the property located in Klondyke. This property was and, I believe, still is owned by Dan Lewis and W. W. Craig of Willcox.

It was formerly operated by the Verdun Consolidated Mines Company.

The Silver Coin Mining and Milling Company was formed by our former office manager (?) Miss Edna B. Montgomerie under a lease from Dan Lewis. The operation was not successful and the lease given up.

I am enclosing a mine owner's report which has but little information on it but will show the work, location, minerals, and so forth.

New York City.
10 January 1946.

File Silver Coin

Mr. Koupal, Director
State Department of Mineral Research
Phoenix, Arizona.

Dear Mr. Koupal:

Would you be kind enough to give me any information you might have in connection with the letter (copy of which is attached) I received from Mrs. Montgomerie some time ago.

I purchased some of the stock mentioned in this letter, the purchases taking place during 1939 and 1940. I heard from her constantly while I was buying the stock but since then I have not been able to get a reply to my letters, although I have written many times.

Can you give me Mrs. Montgomerie's correct home address or any facts in connection with the operation of the mine?

Wrote to Tucson Ariz. could probably get it -

Very truly yours,

Mary Helen Pounder

(Miss) Mary Helen Pounder
117 West 58th Street
New York City.

Silver Coin Mining & Milling Company
Phoenix, Arizona P.O. Box 1647
October 9, 1939 Home: 2022 Encanto Drive

President: H. Sperry
Secretary: E. B. Montgomerie
Treasurer: L. W. Wixen

Dear Miss Pounder:

Hearing of your beautiful typing from Miss Hansen, I hesitate to inflict my hunt and pick, even if it includes seven fingers; but both she and Miss Sperry wanted me to write you a line as they thought you were interested. I'll outline our set-up briefly:

We are incorporated, as you see above, and our assets are all recorded with the County Recorder at Safford, Arizona. We are a closed corporation and are not selling stock; neither has there been any promotion or stockselling on this property. Miss Sperry and I, together with a small group of our intimate friends in various parts of the country have financed all the operations. This trip East was in the strictest sense a good-will trip - the last opportunity for our friends to "get onto the band wagon," as it were. We have all our plans completed and money for operations continuously; but we could save time and get returns weeks quicker if we had additional cash to secure extra milling equipment. We HAVE a 50-ton mill already on the property, but in order to get the most values out of the rare metals, vanadium and molybdenum (used for hardening steel, and have sold as high as $4.00 pernpound and we have at least 40 pounds to the ton), we need some extra machinery, and one can get much better values if he has cahh in hand. For that reason we are accepting donations which have to be made in checks payable to me - Edna B. Montgomerie - and in return can later issue stock for it. If we sold stock, it would be illegal to sell for less than per value, $1.00 per share. Doing it as above, and issuing it from a certificate made out to Harriet Sperry, Silver Coin Trustee, we can give a half share extra for each dollar; i.e. 750 shares for $500.00 or 1500 for $1,000.00. We could legally issue stock,now, but to give additional shares, it is necessary to carry on the preorganization set-up which we used before incorporating, and it means paying about $800.00 for Federal tax on the Trustee's certificate and paying at the rate of $4.00 per thousand for each transfer from that certificate. So, we have not issued any stock yet, and do not want to until we get all the money we need for getting the mill into operations which is when we will all be earning returns on our investment. We issue a receipt now for the number of shares due each one, and probably within six weeks or two months we will issue the certificates.

I could write a dozen pages of details which you might or might not understand; however, I think the important thing to convey to you is that we have gone through all the prospecting and developing stages and it is now an assurred business, and mining IS the biggest business in our state and has always been in the nation. The heavy losses you hear about is due to the fact that so many promoters and swindlers make mining the avenue for enriching themselves without work, and the money is always spent on hotehs, travel and promotion and never on the property. All the money donated has been spent on the property and Miss Sperry and I have furnished our time, and cars

and the financing for the promoting and developing, the postage, supplies and paid the wages to the men who worked on the property. It is OUR OWN COMPANY, and we, WE, are legally as well as morally responsible the the representations.

We are convinced that we have the organization, machinery and the set-up to make a fortune for ourselves and for many of our friends. Mr. Nixon, our associate, who is one in a million, and I mean that literally no matter how hypobolus that might sound, has been working on the production end of it and from actual mine workings says we can guarrantee ten to twelve per cent a year, at least. I know it illegal to promise persons dividents, and I am not doing that; I am saying he is convinced from what he knows we have ax ready to take out of the ground and from what he knows he can sell it for, that he can be sure of earning us ten or twelve per cent a year on each share of stock. Our products are lead, silver, gold, copper, vanadium and molybdenum. It is a marvelous property and always has been, but others have failed to take it because there was a problem they did not understand of separating the rare metals from the lead ore, You seeg very few persons know how to accomplish this; and that is where we are fortunate, and what makes us sure of success - the fact that Mr. Nixon is not only a civil, mechanical and electrical engineer, but an expert in many other lines, including metalurgy.

I hesitate to dwell on many other interesting points, because you would not understand it unless you had had advanced chemistry and knew qualitative and quantitative analyses. The best thing I can say is that Miss Sperry and I who know the property and the problems connected with our venture, and the laws governing such enterprizes, are fully satisfied beyond a shadow of a doubt that we have the most wonderful opportunity in a life time. If you have confidence in us and our opinion and want to send your money, we will accept it, either as a contribution to the preorganization, or as a personal loan with a receipt for stock as security for six months, with the option on your part of cancelling the note and keeping the stock; or of returning the receipt and getting your money back. By that time, if our plans progress as outlined there will have been at least a cent a share paid, so you will be able to see whether or not it would be advantageous to keep the stock or take your money and six percent interest.

If there are any particular questions you would like answered, if you are interested, I shall be glad to take the time to write you. We are leaving here Wednesday, so I have given you our home address in Phoenix. By the way, all three of us officers are regustered voters and property owners and tax payers in the State. If you wish to inquire from other sources regarding us or the property, you could write to Florence Lange, Incorporating Division, Arizona Corporation Commission (about us not the property as she has not seen it, but she has our ARTICLES on file); E. H. Lundquist 1515 Mc Dowell Road, Phoenix; Chas. F. Willis, Editor of the Mining Journal, Title and Trust Bldg., Phoenix; Mr. Koupal, Director of the State Dept. of Mineral Research; Phoenix; and Col. Rutherford, Small Mine Owners Assn. Heard Bldg, Phoenix.

Mining Engineer

It was so nice to meet you after seeing the pictures, and...

Sincerely yours,

/s/ Edna B. Montgomerie.

January 15, 1946

Miss Mary Helen Pounder
117 West 58th Street
New York City

Dear Miss Pounder:

We have your inquiry about the Silver Coin Mining Company and Miss Montgomerie.

We understand that Miss Montgomerie has moved to Tucson, Arizona, but we do not know her address there.

We have very little information in our filed about this mine but a memorandum by Mr. J. S. Coupal, former director of this department, under date of June 15, 1943 states as follows:

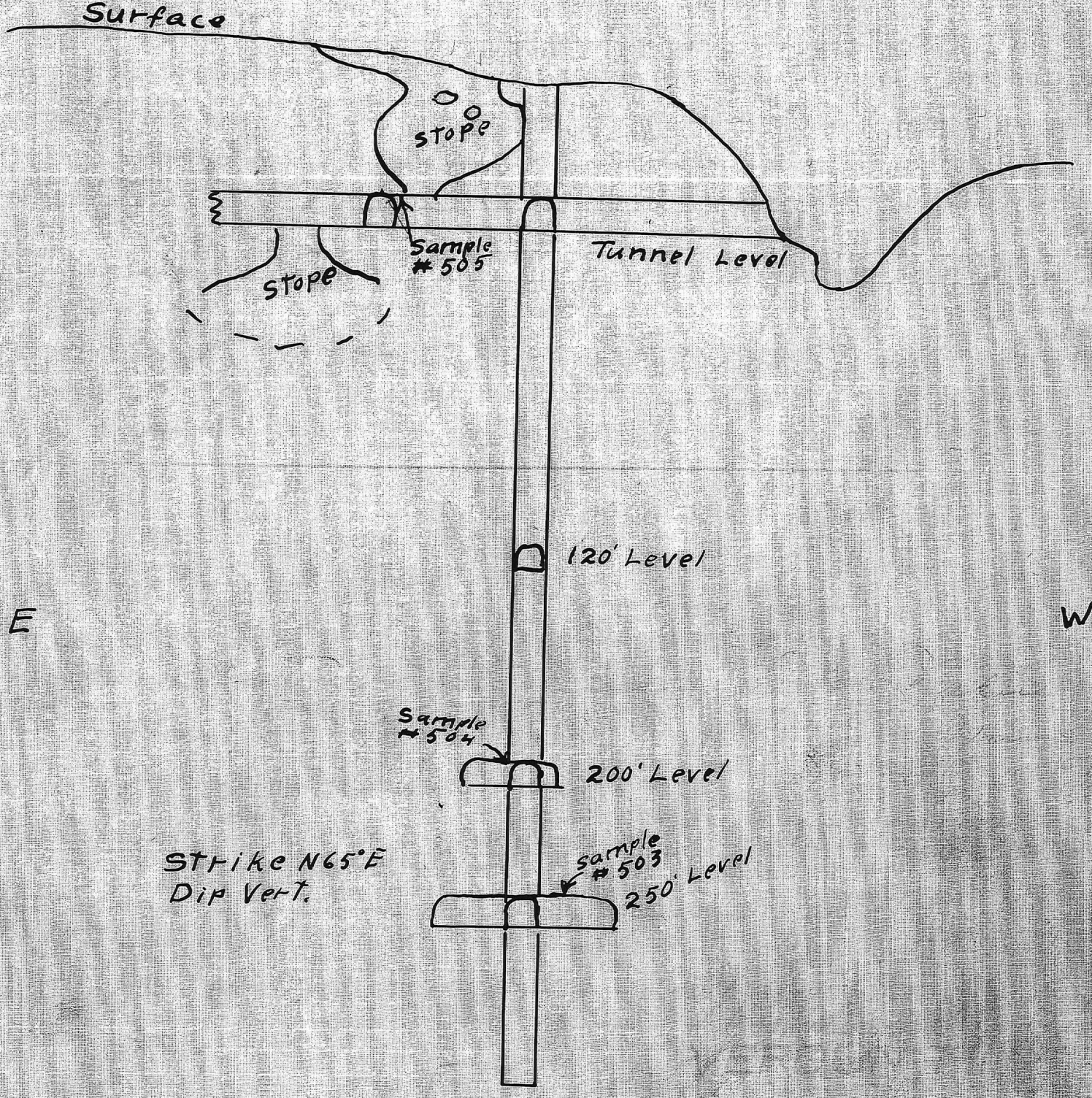
> "The Silver Coin Mining and Milling Company was formed by.....Miss Edna B. Montgomerie, under a lease from Dan Lewis. The operation was not successful and the lease given up."

In all probability that tells most of the story.

Yours very truly,

Chas. H. Dunning
Director

CHD:LP



SKETCH OF VERDUN MINE

0 10' 20' 50' 100' 150'

19005

USBM U - FILE

Graham County | Arizona State

Chief Mineral lead No. Pb 12

Accessory Minerals molybdenum vanadium

Property Name: Verdun Mines Co. (Silver Coin)

Location: 3½ mi. E of Klondyke, Ariz. For details see Exam File 19005/463.2 Sec 11, T7S, R20E unsur

Owner: Name . Address Date

Verdun Mines Co. Wilcox, Ariz. 10/1942

Operator:

? 10/1942

Production:

Total ? From to 10/1942

Present Rate per . Date

Source of Information:

USGS 763, p 87 for early history

Status	Date
?	10/1942
Active (MW)	1/1948

USBM Report: File No. ~~402~~/19005 (463.2/)

Engineer: Curtis G. Mohney

Also 463.1/143

Classification: Prospect

(See other side for general information)

D/1

Pb 12

General Information: 10/1942

In a quartzose vein 3 to 15' wide & outcropping 1200' or more occurs lead as dominant metal and molybdenum & vanadium as associate metals. Mine is developed by vertical shaft 350' deep with short levels at 120, 200 & 250' from which vein was xcut. In addition there is a 200' drift attaining 50' of back. 3 samples were taken. 1 over 3' assayed 5.6% Pb, 0.25% Mo & 0.05 Va_2O_3, second 12' 7.7% Pb, 0.49% Mo & 0.05% Va_2O_3, third 4' 15.5% Pb, 0.14% Mo & 0.05% Va_2O_3. Values are in lead carbonate with small galena inclusions. First location was in 1878.

[redacted]

Character of Ore:

Galena inclusions in cerussite with small amounts of wulfenite & vanadinite.

Equipment (Date 10/1942):

No list.

Mentioned 1948 Reopening mine. Knute G Anderson is owner.

FLAGG REPORT

REPORT ON VERDUN MINE

The Verdun Mine is located in the Arivaipa Mining District, Graham County, Arizona, at an altitude of about 4,000 feet, and approximately three and a half miles east of the town of Klondyke. The road leading to the mine from this point passes by easy grade up a rather broad canyon wash which becomes gradually narrower as one approaches the mine. Klondyke is the distributing point for the district, and is reached by an excellent gravel highway from Cork, a station of the S.P.R.R. a distance of 35 miles, where paved highway passes from Globe to Safford, Safford is 15 miles to the south. Klondyke may also be reached from Willcox from the south on good graded road.

HISTORY

The property consists of a contiguous group of 8 unpatented claims, which were originally located by Ted Quinn, about 1898, and developed by him for some time. The shaft was sunk for the purpose of a water supply for milling, etc. Prior to reaching the water, however, his funds were exhausted. He then secured the assistance of associates, and Arivaipa Leasing Company was formed. It was then decided to mill the ore so far developed by a dry process instead of going down to the water. A revolving tube roaster was installed, together with pneumatic concentrating units, etc. The process was not a success, and had to be abandoned.

GEOLOGY

The mine lies slightly southwest from the foot of the Santa Teresa Mountains, the latter standing out in bold relief from the surrounding country, and is probably a part of the granite batholith that extends for a considerable distance east and south of the mine area. The country rock incorporating the fractures or veins of the mine is a highly altered igneous rock, which the U.S. Geological Survey, according to their published report on the district have tentatively considered to have been probably a fine-grained granite. Some exposures resemble a monzonite porphyry, with considerable feldspar phenocrysts; others suggest a possible rhyolitic porphyry, the ground being very siliceous. The weathered and leached condition of the outcrops renders it extremely difficult to establish their true identities. To the south from the mine, and farther down to the west, the country forms low rounding ridges toward the lower flat country below. Near the mine there is evidence of Gila conglomerate of Pliocene age, which may form part of the above mentioned ridges, although they are almost entirely overlain or covered with unconsolidated or loose gravels, and detritus of Pleistocene and recent age.

The movements that created the veins at the mine probably took place during the Tertiary period, and that they were intense is evidenced in the Silver Coin, or main vein the Verdun Group. Here the vein exposure near the shaft shows exceptional brecciation and shearing, extending fifty or more feet into the wall rock. This brecciated condition in the vein has undoubtedly been an aid to the mineralizing solutions in migrating along the vein, and have permitted them to mineralize the wall rocks for several feet away from the main fracture in places.

DEVELOPMENT

The Silver Coin vein is a very strong one, and is traced for a distance of a mile and its strike in an easterly direction. In general, the vein show silicification, with considerable secondary quartz, along with the other minerals. An adit tunnel was driven approximately fifty feet below the collar of the shaft on the vein, and connected with the shaft at about 75 feet from the portal. The tunnel continues beyond the shaft to practically the 200 foot point. Along the drift several short cross-cuts were driven, to cross-cut the vein, and the ore shows varying widths from 5 to 15 feet. At a point 165 feet from the portal, and 8 X 8 foot winze was sunk 50 feet deep. This shows ore for practically the full width, the entire distance including the bottom where drifts were run each way about 10 feet. Samples from these faces show: silver 1.2 oz., lead 12.4% and a 6 feet width across bottom ran silver 1.2 oz. and lead 16.0%. At the shaft on tunnel level a sample was take across the vein 13 feet wide that gave: gold .094 oz., silver 1.0 oz., and lead 13.5%. Immediately east of the shaft a small stope has been started and a sample of the high grade portion about 10 inched in width yielded gold .045 oz., silver 3.2 oz. and lead 37.5%. Twenty-five feet east from the shaft is a stope that extends up to the surface. It is reported that 500 tons were extracted from it.

The shaft is vertical, with 4 x 4 ½ foot hoisting compartment, and 2 ½ x 4 ½ manway, extending to the 300 foot level, with a 20 foot sump. On the 100 foot level only a station is cut. The vein here shows a value of silver 1.0 oz. and lead 12.4%. On the 200 foot level a short cross-cut was driven to vein where two short drifts were run, with values reported of: silver 1.0 oz. and lead 19.2%. On the 300 foot level and 8 x 10' cross-cut intercepts the vein where drifts were run 25 feet each way. Assays show: silver .7 oz. and lead 12.4% on the west side, with silver 1.0 oz. and lead 10.9% on the east side. From the surface down to the bottom level, the ore body for the most part is leached and oxidized. Small amounts of galena are in evidence throughout, together with cerrusite (lead carbonate) and occasional wulfenite (lead molybate) but no iron pyrites were noted, although the slightly iron stained gangue suggests pre-existing pyrites that have been subsequently oxidized and dissipated in the gangue. To the west from the shaft both on the surface and lower levels vanadium and molybdenum ore appears to increase. On the surface the outcrop shows molybdenum for a considerable distance indicating a possible large tonnage. It is stated that determinations have been made for molybdenum and vanadium, and that .94% of each was reported. This proves a valuable asset insamuch as these metals command a high price on the market.

The oxidized zone apparently extends approximately to the 300 foot level, at which point appears to be a line of demarcation immediately above the drift bottom that shows a greater amount of sulphides than above, and as the water was encountered just below this level, it may be inferred to be the permanent water level. The water table however, may have stood at different levels from time to time, which would create an overlapping of oxide and sulphide zones, sometimes evidenced by finding considerable oxides intermixed with sulphides below the water level.

No copper zone appears in any part of this section, but on the surface along the strike of the vein, beyond tunnel zone, is an exposure of copper bearing ore, that assays

show to contain 4.5% copper, 2.0 oz. silver, and 6.8% lead. Two other assays were taken across the bottom of the above open cut stope and a depth of 35 feet, 4 foot width gave copper 2.85%, silver 3.9 oz. and lead 30.8%. On the surface 300 feet east of the shaft another sample indicated silver 5.95 ozs. and lead 35.4%. The copper being principally in the form of carbonates (malachites).

In passing to the east roughly along strike of the vein, north about on half mile, in apparently a cross vein exposed in the gulch striking north 50 degrees west, with a dip of 55 degrees to the north, showing a strong mineralization. Continuing the same course, about ¾ mile from the tunnel portal, is another cross-vein striking north 65 degrees west, and dipping 58 degrees to the north. A short tunnel has exposed vein material about 5 feet wide, with an 8 inch streak in the center, carry gold .04 oz., silver 1.6 oz. and lead 40.8%. The remainder of vein has superficial enrichment, that would average well for milling. Another vein parallels the Silver Coin vein, some 300 or 400 feet to the north, and is called the LaClede. A short incline shaft has exposed the vein about 4 feet in width, showing manganese oxide (pyrolusite) with other oxides, and carbonates including copper. It is said this vein runs very well in silver, and that the Verdun holdings cover this portion of the vein. A mile or so to the west on this vein is located the La Clede mine workings. A series of assays were seen by the writer from these workings indicating an average mill ore of 15.0 ozs. silver, and specimen samples running into several hundred ounces silver, all carrying some copper, but apparently no lead.

The amount of ore that can be considered actually blocked out would be a trapezoid 200 feet on the tunnel level, and 50 feet on the 300 foot level and assuming an average width of 6 feet allowing 15 cubic feet to the ton, would yield 15,000 tons. But from the apparent uniform condition of the vein material in the various openings it would not be unreasonable to assume that the ore extended the same distance on the 300 level as on the tunnel level, which would make block containing 24,000 tons, plus 1,200 tons in the block east of the shaft, and 1000 tons west of the shaft, from tunnel level to surface, making a total of 26,200 tons besides the copper ore exposed on the surface which is not taken into account.

The shaft is equipped with an 18 H.P. gasoline hoist, with 500 feet of ¾ inch steel cable, all in excellent condition. A 50 ton ore bin, with and 8 x 18 steel sectional jaw crusher mounted over it, and powered with a gasoline engine. Ore cars, hoisting buckets and water tanks together with a 50 ton capacity ball mill and an extra 10 or 15 H.P. gasoline engine completes the list of equipment that is in good condition and can be used on new operations.

RECOMMENDATIONS

The shaft should be sunk 100 feet deeper, or at least deep enough to insure necessary water for immediate milling purposes, etc. Then the drifts on the lower levels should be extended in order that adequate stoping facilities may be secured while development work proceeds to increase future ore reserves. The latter to include further

shaft sinking to investigate the ore below water level. The outlying veins could be take care of in the future when the more pressing work had been completed.

Before installation of a mill is undertaken an exhaustive and complete mill test should be made on generous average ore samples, what will leave no doubt as to the maximum recovery to be expected, and which can be accomplished. In connection with this the fact must not be overlooked that the character of the ore below water level will be different to some extent from that above, a feature that should be given due attention in making the test.

The ore bin and crusher together with the ball mill and perhaps the extra gas engine can be utilized in a 50 ton capacity mill design all of which would aid considerably in the initial cost of the plant.

A preliminary laboratory mill test has been made indicating a concentrating ratio of 6 to 1. Assuming this ration and taking the average lead value conservatively at 12%, an example will illustrate what may be reasonably expected from the lead content, disregarding the other values. Eight tons of concentrates should be produced from a 50 ton per day operation, and at the present price of lead $4.00 per 100 lbs. 1 ton of concentrates would equal $57.50 and 8 tons $460.60 gross per day. From this is deducted mining and milling at $6.00 per ton of ore, or $300.00, leaving $160.80 per day for operations. Less 10 cents per ton mile or $3.50 per ton concentrates truck haul, plus $3.60 railroad to smelter on this class of ore, plus $2.50 per ton smelting charge equals $76.80 per day on concentrates, leaving a net profit of $84.00 per day. The silver, gold and copper will, of course, add very materially to the total recovery value. As to molybdenum and vanadium, these metals must separated before they can be marketed. The smelters do not as a rule pay for included rare metals in ore or concentrates. A provision in the mill would be necessary to make this separation.

As soon as the mill successfully operates, attention should be given to the LaClede vein, previously mentioned, because of it's higher silver content. A portion of this ore added to the general mill run would help raise the apparent low ratio of silver to lead in the Silver Coin vein, and insure a higher grade of concentrate.

In conclusion, there is no reason why this property should not develop into a paying investment, and become eventually one of the larger mines in the state. The problem of mining the ore is very simple and can be done very cheaply. The milling problem is more intricate, especially if the rare minerals are separated. However, if these metals persist in economic amounts there is no doubt of its being satisfactorily solved to enjoy the added revenue these metals would bring. Also, if the anticipated improvement in silver and lead takes place, it would raise the earning capacity considerably. The mine is located at an altitude that makes climatic conditions ideal for all year operations. It is to be deplored that this property has remained inactive so long, with the possibilities it holds.

The accompanying map shows substantially the present conditions of the mine workings, and the cross section of vein is more or less an ideal section. The limited time available at the property prevented more accurate measurements, as well as complete sampling in all instances. A few samples were taken, however, to check previously taken samples and some of the latter used in addition to those taken, The photographic views will serve to give an idea of the general surface conditions.

Yours very truly
(signed) E.H. Lundquist, M.E.
May 24, 1934

Immediately after submitting this report, my attention was called to a very enlightening letter that has been received from Mr. Karl S. Reinhardt, Chemical Engineer, of New York City. He has made analysis on this ore for the rare metals molybdenum and vanadium, placing great stress on the value of these metals, amounting to over $2,000,000 in gross value for the vanadium, not taking the molybdenum into account. In view of this, I would advise that the work be concentrated on the extraction of this, as well as other values.

Yours very truly
(signed) E.H. Lundquist, M.E.

Transcribed by Jim Christensen, June 2006

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date July 4, 1939.

Mine Silver Coin Extension.

District Arivaipa, Graham County

Location 3½ miles east from Klondyke.

Former name

Owner Chas. Grunow, Frank Harris, T. J. Gardenhire

Address Willcox, Ariz.

Operator Chas. Grunow

Address Willcox, Ariz.

President No corporation

Gen. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Silver, Lead, Gold Copper, Zinc. Vanadium, Molyb., Carnotite

Men Employed 2 Assessment work

Production Rate Not established.

Mill: Type & Cap.

Power: Amt. & Type None

Operations: Present Assessment work

Operations Planned This is a large scale development and will take capital.

Number Claims, Title, etc. Twelve unpatented lode claims on public domain.

Description: Topog. & Geog. Covers a wide dike that cuts two divide/between Buford and Tiffany canyons, with San Miguel canyon between.

Mine Workings: Amt. & Condition Location tunnels and open cuts . Workings all open.

(over)

Geology & Mineralization Predominating country rock is schist, cut by an immense basic porphyry dike. Other country rocks are rhyolite, diorite, quartzite. The basic porphyry dike cuts all of the other formations. Quartz veins highly mineralized occur in the dike, parallel with the axis of same. Mineralization to a lesser degree occurs throughout the dike.

Ore: Positive & Probable, Ore Dumps, Tailings
Ore is exposed in practically all of the openings, but no developed tonnage is claimed.

Mine, Mill Equipment & Flow Sheet No mine or mill equipment.

Road Conditions, Route From Willcox property is reached over an improved dirt road to Klondyke 65 miles, then over Verdun mine road 3½ miles to within 3/4 miles of the property. A road to the principal workings can be built up San Miguel canyon from the Verdun camp at a cost of a few hundred dollars.

Water Supply Buford canyon has running water most of the year. The Verdun shaft at a depth of 300 feet has water in considerable quantity, and the same condition will doubtless be found upon development of this property.

Brief History The property was first located about 1926, and was relocated by the present owners in 1930. The Verdun property was located about forty years ago. The shaft was sunk during the world war period and production of ten or more car loads was made of lead-silver ore. There has been no production as yet from the Silver Coin Extension.

Special Problems, Reports Filed No reports available.

Remarks Owners represent this property as a prospect for developing into a mine of magnitude. So far the district has been worked primarily for lead and silver with zinc. There has been little attention paid to the rare metals, tho during the war period lead-molybdate was produced and shipped.

If property for sale: Price, terms and address to negotiate. For sale or lease on very attractive terms to operator. Owners could direct preliminary development if desired. Would be entirely willing to take the price of the property as agreed upon as a royalty on production.

Signed..... Chas. Simpson .....

Use additional sheets if necessary.

MS 27

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date 8/12/39

Mine Silver Coin Mine

District Aravaipa

Location 3 miles E. of Klondyke

Former name

Owner Miss Harriet Sperry and Miss Edna B. Montgomerie

Address 2022 Encanto Drive, Phoenix

Operator

Address

President

Gen. Mgr. Lyman W. Mixon

Mine Supt.

Mill Supt. Whit Craig

Principal Metals Pb, Ag & Au, Cu, Molybdenum & Vanadium

Men Employed 5

Production Rate

Mill: Type & Cap.

Power: Amt. & Type

Operations: Present Cleaning out old workings and preparing for tests & production plans

Operations Planned To erect concentrator, now timbering shaft & sinking

Number Claims, Title, etc. 7 - unpatented - held by bond & lease from Verdun Consolidated Mines Co., W. W. Craig - director & trustee, Willcox

Description: Topog. & Geog. Rugged country

Mine Workings: Amt. & Condition 300' shaft - double compartment, partly timbered
Adit tunnel 200 ft.

(over)

Geology & Mineralization Lead, molybdate & lead vanadate

Ore: Positive & Probable, Ore Dumps, Tailings See report

Mine, Mill Equipment & Flow Sheet Mining equipment comp. - 50-ton ball mill & crusher

Road Conditions, Route Auto road direct from highway to mine

Water Supply Water in shaft - will be developed for milling

Brief History See reports

Special Problems, Reports Filed See reports

Remarks

If property for sale: Price, terms and address to negotiate.
Would consider right parties to assist in financing

Signed Two Owners

Use additional sheets if necessary.

MS27

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date 8/12/39

Mine Silver Coin Mine

District Aravaipa

Location 3 mi. E. of Klondyke.

Former name

Owner Miss Harriet Sperry + Miss Edna B. Montgomerie

Address 2022 Encanto Drive Phoenix.

Operator

Address

President

Gen. Mgr. Lyon W. Wilson

Mine Supt.

Mill Supt. Wilent Craig

Principal Metals Pb - Ag + Au. - Cu - MoO_3 Moly + Vanadium

Men Employed 5

Production Rate —

Mill: Type & Cap.

Power: Amt. & Type —

Operations: Present Cleaning out old workings + preparing for tests + production plans.

Operations Planned To erect concentrator. Now timbering shaft + sinking

Number Claims, Title, etc. 7 - unpatented - Held Bond + Lease from Verdun Consd. Mines Co. W. W. Craig - Director + Trustee Wilent.

Description: Topog. & Geog. Rugged country.

Mine Workings: Amt. & Condition 300 ft. shaft — double compart. partly timbered Adit. Tunnel 200 ft.

(over)

Geology & Mineralization Lead Molybdate & Lead Vanadate.

Ore: Positive & Probable, Ore Dumps, Tailings See report.

Mine, Mill Equipment & Flow Sheet. Mining Equip Comp.
50 Ton ball mill & crusher.

Road Conditions, Route. Auto road direct from Highway & mine

Water Supply Water in shaft. - will be developed for milling

Brief History See reports

Special Problems, Reports Filed See reports.

Remarks

If property for sale: Price, terms and address to negotiate.
Would consider right parties & assist in financing.

Signed Two owners

Use additional sheets if necessary.

DEPARTMENT OF MINERAL RESOURCES
State of Arizona
MINE OWNER'S REPORT

Date Nov 5, 1947

1. Mine: Silver Coin

2. Location: Sec. ______ Twp. 7 S Range 20 E Nearest Town Klondyke

   Distance 3 mi. Direction West Road Condition Fair

3. Mining District & County: Aravaipa Graham

4. Former Name of Mine: Same

5. Owner: R. F. Urbana, Klondyke — Dr F. A. Shannon

   Address: Phoenix

6. Operator: R. F. Urbana, Klondyke, Phoenix

   Address:

7. Principal Minerals: Pb Ag (?)

8. Number of Claims: 7 Lode ✓ Placer

   Patented Unpatented ✓ (surveyed)

9. Type of Surrounding Terrain: Rough high mountains

ENGIN. + MINING JNL - 1-48 - VOL. 149 - NO. 1

10. Geology & Mineralization: Vein 8' wide strike N 70 E Dip 80° E Vein Quartz monzonite porphry country rock.

Mineralization noted c. scatte & malachite slight Galena reported by owner but not observed.

11. Dimension & Value of Ore Body:

8' by 300 ± by ~~300~~ 250 vert. exposed by 250' vert. shaft 1½ Comp. and 300' tunnel intersecting shaft on about 60' level. Winzes off tunnel 43' & 1-24' both vert. in vein driven in center of drift.

12. Ore "Blocked Out" or "In Sight":

Ore Probable:

13. Mine Workings—Amount and Condition:

	No.	Feet	Condition
Shafts	1	250	1½ Comp. Vert. good.
Raises	1	7	Air 2 minutes
Tunnels	1	300	5×7 Good
Crosscuts			none
Stopes			none

14. Water Supply: none observed. manager says can be developed in west end property at 60' depth.

15. Brief History:

16. Signature:

17. If Property for Sale, List Approximate Price and Terms: not for sale

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Silver Coin Mine Date Aug. 12, 1952.

District Aravaipa Dist., Graham Co. Engineer Axel L. Johnson

Subject: Mine Report ---- Information from Dan Lewis, owner.

Location 4 miles east of Klondyke store. Go south-east from Klondyke on the Klondyke-Willcox road for about 1/2 mile, then turn east and go 4 miles east to the mine.

Number of Claims 6 claims.

Owners Dan Lewis, Box 602, Willcox, Ariz.
Dr. Fred Shannon---- at present in Korea.
Bob Davis, Willcox, Ariz.
Jess Stuart, Willcox, Ariz.

Operators Same as above.

Metals Present Lead with small Gold and Silver Values. Carbonates down to the 250 level. Mixed carbonates & sulphides from 250 to 300. Sulphides below 300 ft. Minerals are Cerrusite, Anglesite, Pyromorphite, Mimetite, Wulfenite, Galena.

Men Employed 2 men doing the assessment work. This assessment work was started last June.

Production Rate No ore production; all exploration & development, mainly by open cuts.

Milling Facilities None. A mill is needed to treat this ore, as it is too low grade for direct shipping.

Geology Ore vein is about 10 ft. wide and is almost vertical. Strike is about East and West.

Ore Values Assays show from 4 to 6 % Lead, from $1.00 to $2.00 per ton in Silver, and about $1.00 per ton in Gold. Carbonates down to the 250 ft. level, mixed carbonates and sulphides from 250 to 300 ft., sulphides below the 300 ft. level.

Old Workings 1 vertical shaft --- 300 ft. deep. Present owners timbered this shaft down to the 250 ft. level, and sank the shaft from the 250 to the 300.

Present Operations Assessment work consisting mainly of open cutting along the vein in order to prove up the ore body.

Proposed Work Plan on diamond drilling the property to determine the extent, depth and length of the deposit, and average grade of same. If this diamond drilling proves up enough ore to warrant the construction of a mill, the owners will then plan for the construction of a mill for milling this ore.

STUART, JESS, et al (OWNERS)
Ford Agcy.,
Willcox, Ariz.

MINE- SILVER COIN MINE - 4½ mi. East Klondyke-Klondyke Dist.,
Graham County. 10-15-52

DEPARTMENT OF MINERAL RESOURCES
State of Arizona
MINE OWNER'S REPORT

Date Oct. 15, 1952.

1. Mine: Silver Coin Mine

2. Location: Sec. s 11 & 12 Twp. 7 S Range 20 E Nearest Town Klondyke

   Distance 4 1/2 mi. Direction East Road Condition Poor. Need Jeep or 4 wheel Dr.

3. Mining District & County: Klondyke District --- Graham County

4. Former Name of Mine:

5. Owners Dan Lewis, Box 602, Willcox, Ariz. ---- 1/4 int.
   Dr. Fred Shannon, in Korea ---- 1/4 int.
   Address: Robert Davis, Box 602, Willcox, Ariz. --1/4 int.
   Jess Stuart, Ford Agcy., Willcox, '' --1/4 int.

6. Operator: Property acquired by present owners in 1950.
   Address: Dan Lewis is in charge of the mining operations.

7. Principal Minerals: Lead ores---- carbonates principally--- Cerussite, Anglesite, Mimetite, Wulfenite, and Pyromorphite. Copper none. Zinc trace.

8. Number of Claims: 5 Lode yes Placer

   Patented no Unpatented yes

9. Type of Surrounding Terrain: Mountainous. High ridges and steep canyons.

10. Geology & Mineralization: The vein is a fissure vein, with an East and West strike, dipping almost vertical. The width of the vein is 3 to 4 ft. wide of milling grade material ore. Country rock is a Schist, probably the Pinal Schist, and Andesite. Most of the ore on the upper levels are carbonates, oxides, etc. Cerussite, Anglesite, Mimetite, Wulfenite, and Pyromorphite is found. There is practically no copper and very little Zinc. On the 250 ft. level, a small amount of Galena is found. Vein is not mineralized to any great extent along a considerable distance of the vein. Other places the grade of the ore seems to be rather low, and is too low a grade for direct shipping.

11. Dimension & Value of Ore Body:

    Ore body has been developed for a length of 130 ft. above the 50 ft. level, but most of the good ore above this level has been stoped out. Ore body has been developed for a length of 50 ft. on the lower levels, the 100 ft. and 250 ft. levels. Part of this area is apparently low grade milling grade ore, and parts of it would be too low grade even for mill feed. The man in charge, Dan Lewis, claims to have made tests to prove that the ore can be milled to produce a good concentrate. However, he had no figures available to show the percentage of recovery obtained from these mill tests.

    Value of the ore body would be dependent on the operation of a mill at the site, with enough water for milling purposes, and efficient milling operations.

12. Ore "Blocked Out" or "In Sight": About 1,250 tons of milling grade ore.

Ore Probable: About 5,000 tons of milling grade ore, above 250 ft. level. More ore may reasonably be expected in depth.

13. Mine Workings—Amount and Condition:

No.	Feet	Condition
Shafts 1	300	Good
~~Raises~~ Winzes 2	70	Good
Tunnels 1	130	Good
Crosscuts 6	180	Good
Stopes 1	50 x 50 x 4	

14. Water Supply: Operators now obtain enough water fromthe shaft from bottom level of same to supply them with water for mining and camp purposes. Operators believe that sinking the shaft an additional 50 ft. to the 350 ft. level, and crosscutting to the north for a distance of 20ft. to100 ft. on the 350 ft. level will provide them with enough water to run a 50 ton mill.

15. Brief History: Mr. Ted Quinn located the mine about 1925. Mr. Quinn sank the present shaft down to the 250 ft. level, and drove the 130 ft. tunnel. Mr. Quinn is reported to have shipped 3 or 4 carloads of lead ore to the smelter. He is also reported to have concentrated about 50 tons of the ore, using a dry concentrator.

In 1928, the property was acquired by Robert Davis, Jess Stuart, Whit Craig, et. al. Soon after that, they sold the property to Thomas P. Jones, who organized a company called the Verdun Mining Co. This company sold some stock, but did very little mining, and went bankrupt in 1930, the property reverting to the Thomas P. Jones Estate. Property idle for 9 years from 1930 to 1939.

Property leased in 1939 to Edna Montgomery, who operated same from 1939 to 1941. Miss Montgomery repaired and retimbered the shaft, and sank it 50 ft. deeper to the 300 ft. level, but shipped no ore. She was forced to give up the lease on account of lack of capital for development and mill construction. Mill tests made for Miss Montgomery by the Denver Equipment Co. said to be favorable.

Mine idle until acquired by present owners in 1950.

Work Required to get Property into Operation

(1) Develop water supply by additional shaft sinking & drifting, etc.
(2) Build 50 ton mill on the site.
(3) Repairs on shaft and orebin, build new head frame, install mach.

16. Signature: Axel L. Johnson — Field Engineer, Dept. of Mineral Resources

17. If Property for Sale, List Approximate Price and Terms: Present owners now doing the assessment work, until such a time as they sell or lease the property. They would like to lease the property with an option to buy--- 10 % royalty--- no down payment---optional purchase price about $35,000. Wants party that has the capital for mill construction.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA

FIELD ENGINEERS REPORT

Not for publication

Mine Silver Coin Mine Date June 5, 1957

District Aravaipa District, Graham County. Engineer Axel L. Johnson

Subject: Present Status. Information from Borden Burleson. No visit.

References Report of April 4, 1957.

Location About 4 miles east of Klondyke store. For more details see Apr. 4 report.

Number of Claims 6 unpatented claims.

Owners Dan Lewis, Box 602, Willcox, Ariz., et. al. (see previous reports).

Lessees Pacific Uranium Co. (See report of Apr. 4 for names of officers)

Principal Minerals Lead ores, principally carbonates.

Present Mining Activity Mine closed down on June 1, 1957.

Other Items See report of Apr. 4, 1957.

Recent Events Operators are reported to have shipped one carload of ore to A. S. & R. smelter at El Paso, Texas a few weeks ago. The lead content in this car load ran only 7 % of lead. Another carload of ore is reported as standing on the siding at Cork, and not being shipped. Still another carload of ore is reported to be piled on the ramp at Cork.

Mine is reported to have shut down about 3 or 4 days ago, and workers paid off. A disagreement between the operating partners is also reported.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Silver Coin Mine | Date April 4, 1957

District Aravaipa District, Graham Co. | Engineer Axel L. Johnson

Subject: Present Status. Information from C. W. Keith, Manager.

References Reports of Aug. 12, 1952 and Oct. 15, 1952.

Location Secs. 11 & 12 -- T 7 S -- R 20 E. About 4 miles east of Klondyke store. Drive SE from Klondyke on the Klondyke-Willcox road for a distance of 1/2 mile. Turn left (east) and drive east on mine road for about 4 miles. Road rough with steep ~~xx~~ grades/.

Number of Claims 6 unpatented claims.

Owners Dan Lewis, Box 602, Willcox, Ariz., et. al. (See previous reports)

Lessees and Operators Pacific Uranium Co.
L. E. Broadhurst, 1505 N. 15th Ave., Phoenix, Ariz. represent.
Henry Rupelius, Phoenix, Ariz.--- attorney for Mr. Broadhurst.
C. W. Keith, 407 N. Hill St., Globe, Ariz.--Mine manager.

Principal Minerals Lead ore. Carbonates principally. (See previous reports)

Present Mining Activity Retimbering the 300 ft. vertical shaft. Shaft is timbered down to the 100 ft. level now. Plan to retimber the shaft the rest of the way. 5 men working (one shift) Repairing headframe at time of visit

Geology and Mineralization See report of Oct. 15, 1952.

Ore Values See report of Aug. 12, 1952.

Milling and Marketing Facilities No mill on or near the property. Operators plan on building a mill to treat the ore on Aravaipa Creek, near Klondyke.

Past History and Production See report of Oct. 15, 1952.

Old Mine Workings and Condition " " " " " "

Proposed Plans Retimbering the rest of the shaft.
Opening up other mine workings.
Building a mill as stated above.

Additional Remarks M. H. Grauer, Pima, Ariz. was negotiating with the operators for hauling the ore to Cork Siding for shipment to the smelter. Mr. Grauer stated that he charges $ 4.25 for hauling the ore to Cork Siding, which figures about 12 cents per ton mile.

To build new road

Bob Bush - Atlas Powder - Thatcher said Lewis + Shannon were owners. Pacific U. agent a Mr Robert, Bush said he was U6 + saw "20 ft face 20% Pb, 2% Cu" and that "a X-cut showed 4 ft high grade galena".

K

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Not for publication

Mine Silver Coin Mine Date June 5, 1957

District Aravaipa District, Graham County. Engineer Axel L. Johnson

Subject: Present Status. Information from Borden Burleson. No visit.

References Report of April 4, 1957.

Location About 4 miles east of Klondyke store. For more details see Apr. 4 report.

Number of Claims 6 unpatented claims.

Owners Dan Lewis, Box 602, Willcox, Ariz., et. al. (see previous reports).

Lessees Pacific Uranium Co. (See report of Apr. 4 for names of officers)

Principal Minerals Lead ores, principally carbonates.

Present Mining Activity Mine closed down on June 1, 1957.

Other Items See report of Apr. 4, 1957.

Recent Events Operators are reported to have shipped one carload of ore to A. S. & R. smelter at El Paso, Texas a few weeks ago. The lead content in this car load ran only 7 % of lead. Another carload of ore is reported as standing on the siding at Cork, and not being shipped. Still another carload of ore is reported to be piled on the ramp at Cork.

Mine is reported to have shut down about 3 or 4 days ago, and workers paid off. A disagreement between the operating partners is also reported.

Visited the Silver Coin Mine, gate locked. GWI WR 9/5/70

SILVER COIN MINE GRAHAM COUNTY

Mine visit - Silver Ray Mine (Bopp) no one around. GWI WR 9/14/71

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

VERBAL INFORMATION SUMMARY (SHORT FORM)
May be Reproduced
May Be Inserted Into Mine File Or Added To "Rumor Page"

1. **Information from:** BLM state office

   Address:

2. **Phone:**
3. **Mine:** SILVER COIN
4. **ADMMR Mine File:**
5. **County:** Graham
6. **MILS Number** 195B
7. **Operational Status:** Past Producer - Inactive
8. **Summary of information received, comments, etc.:**

   BLM Sections 3, 10, 11, 12, 13, 14 & 15 (part) T7S,R20E were exchanged in 1978 and are now State trust land.

Date: November - 1988 H. Mat

(signature) ADMMR

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA

MM-K090 Pyromorphite

Graham Co.
Verdum Mine MILS # 1958

3 mi. E. of Klondyke

10-AC4 Silver Coin (Bill)

SILVER COIN MINE

GRAHAM COUNTY

USGS Bull. 763 p. 87

War Minerals Report 130 (1943) C.F. Willis library, 3 pages, Dept. Of Interior,

A. L. Flagg vanadium report - Book V-II - Verdun Mining Co.

See: Eagle-Picher [redacted] Files "S"

OWNERS

HARRIS, Frank B., Box 549
GRUNOW, Chas.
GARDENHIRE, T.J., Willcox, Ariz.

MINE

SILVER COIN EXTENSION
Graham Co

This specimen is now catalogued in the ADMR Museum (see K number)

L-13

MINERAL SPECIMEN FOR DEPARTMENT OF LIBRARY AND ARCHIVES K090

(Do not write in this space)

Ore _____

Cabinet _____

No. _____

(Wrap each specimen separately, or place it in a substantial bag, by itself, with a number attached, identical with the number on this card.)

Specimen No. 31 /, collected by Newton Wolcott
Field Engineer

Name of ore [redacted]

Minerals contained Pyromorphite, cerussite, wulfenite.

Gangue Silicious

Depth at which taken 150 foot level

Approximate mineral content (in terms of average per ton) Not known

Name of mine or claim Verdun

Group Verdun

District Klondyke-Aravaipa Mining District

Location (distance and direction by highway from what town) 3 Mi. East of Klondyke

Owner of property Verdun Mining Co.

Operator Verdun Mining Co.

Mine active or inactive Active

If inactive, when operated _____

Specimen presented by Dan Lewis

Date April 4, 1940 ✓

Notes (Any general information regarding the history of the property.) This was formerly known as the Silver Coin Mine, and was operated years ago for the lead and silver values in the ore. The present operators are planning to recover molybdenum and vanadium also

If more space is desired for notes, use other side.

11 oz 9.0 x 6.5 x 5.5 cm

DEPARTMENT OF MINERAL RESOURCES.

News Items

Date 6/9/39

Mine Verdun

Location 3½ Mi. East of Klondyke

Owner Dan Lewis and W.W.Craig

Address Klondyke

Under bond and lease to

Operating Co. Edna B. Montgomery & Associates

Address Phoenix, Ariz.

Pres.

Genl. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Silver, lead, molybdenum

Men Employed None

Production Rate None at present

Mill, Type & Capacity

Power, Amt. & Type

Signed

(Over)

Present Operations

New Work Planned

New operators have formed tentative plans to retimber and sink the shaft deeper for development of both ore and water.

Miscl. Notes

Dan Lewis and Adrion Skinner who have recently been operating at Aravaipa have left there and are living on the Verdun property pending activities by new parties.

DEPARTMENT OF MINERAL RESOURCES.

News Items

Date December 7, 1939.

Mine Silver Coin (Formerly the Verdun)

Location 3½ Miles east of Klondyke

Owner ?? Edw B. Newfarmer

Address

Operating Co.

Address

Pres.

Genl. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Lead, silver, molybdenum, vanadium and gold.

Men Employed 5 or 6

Production Rate Not started

Mill, Type & Capacity

Power, Amt. & Type

Signed

(Over)

Present Operations Crew is at work re-timbering shaft.

New Work Planned Will timber all the way to bottom (300 ft. level), then sink another 50 feet to develop water supply and storage for mill. Will also extend development along vein on the lower levels and

Miscl. Notes prepare for stoping.

Plan also to build mill using flotation, tables and jigs. Expect to produce molybdenum and vanadium concentrates as well as silver-lead.

1876 Quinn

DEPARTMENT OF MINERAL RESOURCES

News Items

Date Nov 5, 1947

Mine Silver Coin

Location Klondyke

Owner R. F. Urbons + Dr. F. A. Shannon

Address Klondyke + Phoenix, Ariz

Operating Co.

Address 7 claims Lode unpatented

Pres. R F Urbano

Genl. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Pb Cu Ag.

Men Employed 9 + mgt

Production Rate Dev. only

Mill, Type & Capacity none

Power, Amt. & Type 110 A.C. Gas powered Gen. ~~Gas~~ Compressor

Signed

(Over)

Present Operations

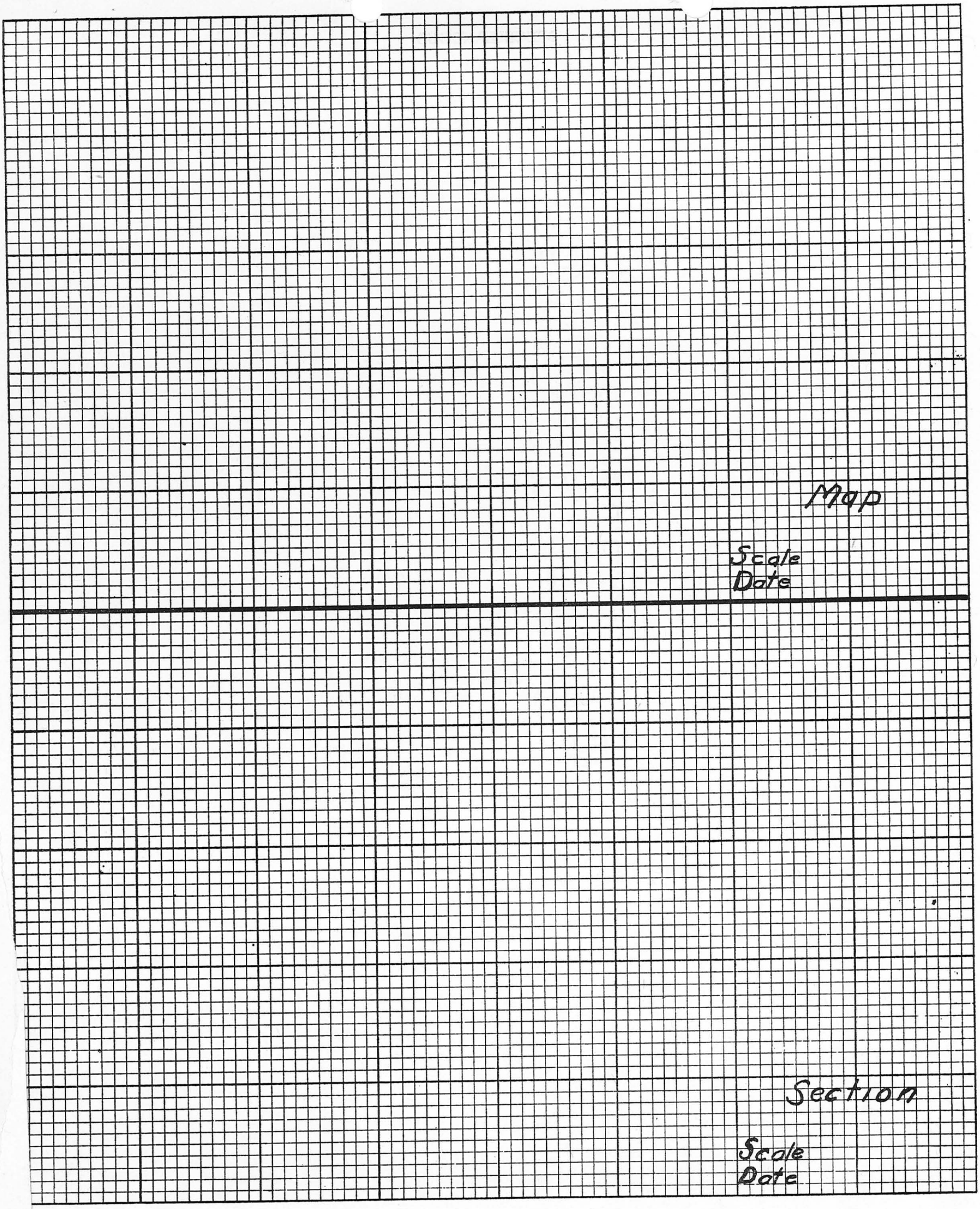
Dev.

New Work Planned

Miscl. Notes

Vein 8'
Strike N70E
Dip 80° E
HW & F.W. phyl
Min. Noted slight
Malachite
Gange Quartz Barn

1 Vert. 250 deep 11/2
2 Winzes 43 & 24
Driving drift to connect
Tunnel –
3 other shafts


Map
Scale
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A-180-51

C-1950

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A-180-50

REPORT ON VERDUN MINE

The Verdun Mine is located in the Aravaipa Mining District, Graham County, Arizona, at an altitude of about 4,000 feet, and approximately 3½ miles east of the town of Klondyke. The road leading to the mine from this point passes by easy grade up a rather broad canyon wash which becomes gradually narrower as one approaches the mine. Klondyke is the distributing point for the district, and is reached by an excellent gravel highway from Cork, a station of the S. P. R. R. a distance of 35 miles, where paved highway passes from Globe to Safford, Safford is 15 miles to the South. Klondyke may also be reached from Willcox from the south on good graded road.

HISTORY

The property consists of a contiguous group of 8 unpatented claims, which were originally located by Ted Quinn, about 1898, and developed by him for some time. The shaft was sunk for the purpose of a water supply for milling, etc.; prior to reaching the water, however, his funds were exhausted. He then secured the assistance of associates, and Aravaipa Leasing Company, was formed. It was then decided to mill the ore, so far developed by a dry process instead of going down to the water. A revolving tube roaster was installed, together with pneumatic concentrating units, etc. This process was not a success, and had to be abandoned.

GEOLOGY

The mine lies slightly south-west from the foot of the Santa Teresa mountains, the latter standing out in bold relief from the surrounding country, and is probably a part of a granite batholith that extends for a considerable distance east and south beyond the mine area. The country rock incorporating the fractures or veins of the mine is a highly altered igneous rock, which the U. S. Geological Survey, according to their published report on the district have tentatively considered to have been probably a fine-grained granite. Some exposures resemble a Monzonite porphyry, with considerable feldspar phenocrysts; others suggest a possible Rhyolitic porphry, the ground being very siliceous. The weathered and leached condition of the outcrops renders it extremely difficult to establish their true identities. To the south from the mine, and farther down to the west, the country forms low rounding ridges toward the lower flat country below. Near the mine there is evidence of Gila conglomerate of Pliocene age, which may form part of the above mentioned ridges, although they are almost entirely overlain or covered with unconsolidated or loose gravels, and detritus of Pleistocene and recent age.

The movements that created the veins at the mine probably took place during the Tertiary period, and that they were intense is evidenced in the Silver Coin, or main vein in the Verdun group. Here the vein exposure near the shaft shows exceptional brecciation and shearing, extending 50 or more feet into the wall rock. This brecciated condition in the vein has undoubtedly been an aid to the mineralizing solutions in migrating along the vein, and have permitted them to mineralize the wall rocks for several feet away from the main fracture in places.

DEVELOPMENT

The Silver Coin Vein is a very strong one, and is traced for a distance of a mile, and its strike in an easterly direction. In general, the vein shows silicification, with considerable secondary quartz, along with the other minerals. An adit tunnel was driven approximately 50 feet below the collar of shaft on the vein, and connected with the shaft at about 75 feet from portal. The tunnel continues beyond shaft to practically the 200 foot point. Along the drift several short cross-cuts were driven, to cross-cut the vein, and the ore shows varying widths from 5 to 15 feet. At a point 165 feet from portal, an 8 x 8 foot winze was sunk 50 feet deep. This shows ore for practically the full width, the entire distance including the bottom where drifts were run each way about 10 feet. Samples from these faces show: Silver 1.2 ozs. Lead 12.4% and a 6 foot width across bottom ran: Silver 1.2 ozs. Lead 16.0%. At the shaft on tunnel level a sample was taken across

vein 13 feet wide, that gave: Gold .094 oz. Silver 1.0 Lead 13.5%. Immediately east of the shaft a small stope had been started and a sample of the high grade portion about 10 inches in width yielded Gold .045 ozs. Silver 3.2 Ozs. Lead 37.5%. Twenty-five feet east from the shaft is a stope that extends up to the surface. It is reported that 500 tons were extracted from it.

The shaft is vertical, with 4 x 4½ foot hoisting compartment, and 2½ x 4½ manway, extending to the 300 foot level, with a 20 foot sump. On the 100 foot level only a station is cut. The vein here shows a value of Silver 1.6 Ozs. Lead 12.4%. On the 200 foot level a short cross-cut was driven to vein where two short drifts were run, with values reported of: Silver 1.0 oz. Lead 19.2 %. On the 300 foot level an 8 x 10' cross-cut intercepts the vein where drifts were run 25 feet each way. Assays show: Silver .7 oz. Lead 12.4%, on the west side, with Silver 1.0 oz. Lead 10.9 % on the east side. From the surface down to the bottom level, the ore body for the most part is leached and oxidized. Small amounts of galena are in evidence throughout, together with cerrusite (lead carbonate) and occasional wulfenite (lead molybdate) but no iron pyrites were noted, although the slightly iron stain gangue suggests pre-existing pyrites that have been subsequently oxidized and dissipated in the gangue. To the west from the shaft both on the surface and lower levels Vanadium and Molybdenum ore appears to increase. On the furface the outcrop shows Molybdenum for a considerable distance indicating a possible large tonnage. It is stated that determinations have been made for Molybdenum and Vanadium, and that .94% of each was reported. This proves a valuable asset inasmuch as these metals command a high price on the market.

The ozidized zone apparently extends approximately to the 300 foot level, at which point appears to be a line of demarcation immediatly above the drift bottom that shows a greater amount of sulphides than above, and as the water was encountered just below this level, it may be inferred to be the permanent water level. The water table however, may have stood at different levels from time to time, which would create an overlapping of oxide and sulphide zones, sometimes evidenced by finding considerable ozides intermixed with sulphides below the water level.

No copper appears in any part of this section, but on the surface along the strike of vein, beyond tunnel zone, is an exposure of copper bearing ore, that assays show to contain 4.5% copper, 2.0 ozs. Silver, and 6.8% Lead. Two other assays were taken across the bottom of the above open cut stope at a depth of 35 feet, 4 foot width gave Copper 2.85%, Silver 3.9 ozs. Lead 30.8%. On the surface 300 feet east of shaft another sample indicated Silver 5.95 ozs. Lead 35.4%. The copper being principally in the form of carbonates (malachites.)

In passing to the east roughly along strike of vein, about ½ mile is apparently a cross vein exposed in the gulch striking North 50 degrees west, with a dip of 55 degrees to the North, showing a strong mineralization,. Continuing the same course, about 3/4 mile from the tunnel portal, is another cross-vein striking North 65 degrees West, and dipping 58 degrees to the North. A short tunnel has exposed vein material about 5 feet wide, with an 8 inch streak in the center, carrying Gold .04 oz. Silver 1.6 oz. Lead 40.8 %. The remainder of vein has superficial enrichment, that would average well for milling. Another vein parallels the Silver Coin vein, some 300 or 400 feet to the North, and is called the LaClede. A short incline shaft has exposed the vein about 4 feet in width, showing manganese oxide (pyrolusite) with other oxides, and carbonates including copper. It is said this vein runs very well in silver, and that the Verdun holdings cover this portion of the vein. A mile or so to the west on this vein is located the LaClede mine workings. A series of assays were seen by the writer from these workings indicating an average mill ore of 15.0 ozs. silver, and specimen samples running into several hundred ounces silver, all carrying some copper, but apparently no lead.

The amount of ore that can be considered actually blocked out would be a trapezoid 200 feet on the tunnel level, and 50 feet on the 300 foot level and assuming an average width of 6 feet allowing 15 cubic feet to the ton would yield 15,000 tons. But from the apparent uniform condition of the vein material in the various openings it would not be unreasonable to assume that the ore extended the same distance on the 300 level as on the tunnel level, which would make a block containing 24,000 tons, plus 1,200 tons in the block east of shaft, and 1,000 tons west of the shaft, from tunnel level to surface, making a total of 26,200 tons besides the copper ore exposed on the surface which is not taken into account.

The shaft is equipped with an 18 h. p. gasoline hoist, with 500 feet of 3/4 inch steel cable, all in excellent condition. A 50 ton ore bin, with an 8 x 18 steel sectional jaw crusher, mounted over it, and powered with a gasoline engine. Ore cars, hoisting buckets and water tanks together with a 50 ton capacity ball mill and an extra 10 or 15 h. p. gasoline engine completes the list of equipment that is in good condition and can be used on new operations.

RECOMMENDATIONS

The shaft should be sunk 100 feet deeper, or at least deep enough to insure necessary water for immediate milling purposes, etc. Then the drifts on the lower levels should be extended in order that adequate stoping facilities may be secured while development work proceeds to increase future ore reserves. The latter to include further shaft sinking to investigate the ore below water level. The outlying veins could be taken care of in the future when the more pressing work had been completed.

Before the installation of a mill is undertaken an exhaustive and complete mill test should be made on generous average ore samples, that will leave no doubt as to the maximum recovery to be expected, and which can be accomplished. In connection with this the fact must not be overlooked that the character of the ore below water level will be different to some extent from that above, a feature that should be given due attention in making the test.

The ore bin and crusher together with the ball mill and perhaps the extra gas engine can be utilized in a 50 ton capacity mill design, all of which would aid considerably in the initial cost of plant.

A preliminary laboratory mill test has been made indicating a concentrating ratio of 6 to 1. Assuming this ratio and taking the average lead value conservatively at 12%, an example will illustrate what may be reasonably expected from the lead content, disregarding the other values. Eight tons of concentrates should be produced from a 50 ton per day operation, and at the present price of lead $4.00 per 100 lbs. 1 ton of concentrates would equal $57.60, and 8 tons $460.80 gross per day. From this is deducted mining and milling at $6.00 per ton of ore, or $300.00, leaving $160.80 per day for operations. Less 10 cents per ton mile or $3.50 per ton concentrates truck haul, plus $3.60 railroad to smelter, on this class of ore, plus $2.50 per ton smelting charge, equals $76180 per day on concentrates, leaving a net profit of $84.00 per day. The silver, gold and copper will, of course, add very materially to the total recovery value. As to Molybdenum and Vanadium, these metals must be separated before they can be marketed. The smelters do not as a rule pay for included rare metals in ore, or concentrates. A provision in the mill would be necessary to make this separation.

As soon as the mill successfully operates, attention should be given to the LaClede vein, previously mentioned, because of its higher silver content. A portion of this ore added to the general mill run would help to raise the apparent low ratio of silver to lead in the silver Coin vein, and insure a higher grade concentrate.

In conclusion there is no reason why this property should not develop into a paying investment, and become eventually one of the larger mines of the State. The problem of mining the ore is very simple, and can be done very cheaply. The milling problem is more intricate, especially if the rare metals are separated. However, if these metals persist in economic amounts there is no doubt of its being satisfactorily solved to enjoy the added revenue these metals would bring. Also, if the anticipated improvement in silver and lead takes place it would raise the earning capacity considerably. The mine is located at an altitude that makes climatic conditions ideal for all year operations. It is to be deplored that this property has remained inactive so long, with the possibilities it holds.

The accompanying map shows substantially the present conditions of the mine workings, and the cross section of vein is more or less an ideal section. The limited time available at the property prevented more accurate measurements, as well as complete sampling in all instances. A few samples were taken however, to check previously taken samples and some of the latter used in addition to those taken. The photographic views will serve to give an idea of the general surface conditions.

Yours very truly
E. H. Lundquist, M. E. (Signed)
May 24, 1934

Immediately after submitting this report, my attention was called to a very enlightening letter that has been received from Mr. Karl S. Reinhardt, Chemical Engineer, of New York City, He has made analysis on this ore for the rare metals Molybdenum and Vanadium, placing great stress on the value of these metals, amounting to over $2,000,000 in gross value for the Vanadium, not taking the Molybdenum into account. In view of this, I would advise that the work be concentrated on the extraction of this, as well as the other values.

Yours very truly,
E. H. Lundquist, M. E.