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PRINTED: 07/09/2002

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: RED CLOUD MINE

ALTERNATE NAMES:

LA PAZ COUNTY MILS NUMBER: 296

LOCATION: TOWNSHIP 4 S RANGE 23 W SECTION 2 QUARTER N2
LATITUDE: N 33DEG 06MIN 00SEC LONGITUDE: W 114DEG 35MIN 55SEC
TOPO MAP NAME: PICACHO - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
- LEAD CARBONATE
- ZINC CARBONATE
- SILVER
- VANADIUM
- MOLYBDENUM MOLYBDATES
- MANGANESE
- IRON
- BARIUM BARITE
- FLUORINE FLUORSPAR
- TUNGSTEN
- SPECIMENS WULFENITE
- SPECIMENS VANADINITE
- SPECIMENS FL WILLIMITE

BIBLIOGRAPHY:

- KEITH, S.B., 1978, AZBM BULL. 192, P. 177
- ADMMR RED CLOUD FILE
- ADMMR "U" FILE
- A.L. FLAGG VANADIUM RPT, BOOK VI & VIII
- AZBM BULL 115, P 13
- AZBM BULL 134, P 65
- AZBM BULL 140, P 104
- AZBM BULL 158, P 90, 96
- ADMMR FLUORSPAR BOOK, P. 43
- MINES HANDBOOK 1920
- AZ MNG JNL, V 9, NO. 7, P 9-10, 60-62; AZ MNG JNL V 8, NO. 16, P 3-4
- ADMMR MAPS - UPSTAIRS FLAT DRAWER 6

RED CLOUD MINE

YUMA COUNTY

USBM "U" file

A. L. Flagg vanadium reports - Book VI & VIII

ABM Bull. 115 p. 13
ABM Bull. 134 p. ~~63~~ 65
ABM Bull. 140 p. 104
ABM Bull. 158 p. 90, 96

DMR - Fluorspar p. 43

SMR, 2/5/77, p. 23

Arizona Mining Journal Vol. 9, No. 7, p. 9-10 and 60-62
" " " Vol. 8, No. 16, p. 3-4

MILS Sheet sequence number 0040270338

MAPS_ In Drawer 6 - Upstairs - Flat File

Mines Handbook 1920
BM Bul. 192, p. 177

?13(82) Geology and Mineral Resources of the Los Angeles, Needles, Salton Sea, San ino, and Trona 1 x 2 NTMS Quadrangles, Page 121

See: (Geology File) Parker, Frank Z., "The Geology and Mineral Deposits of the Silver District, Trigo Mtns., Yuma Co., AZ." 1966

See: IC 8969 -- Gold and Silver Leaching Practices in the US; p. 16

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION FROM MINE CARDS IN MUSEUM

~~USA~~, ARIZONA
La Paz ~~Yuma~~ Co.
Red Cloud mine

MM M 903 Wulfenite

MILS # 296
O - AKA's
Red Cloud Mine #2

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA

LaPaz County

Yuma area

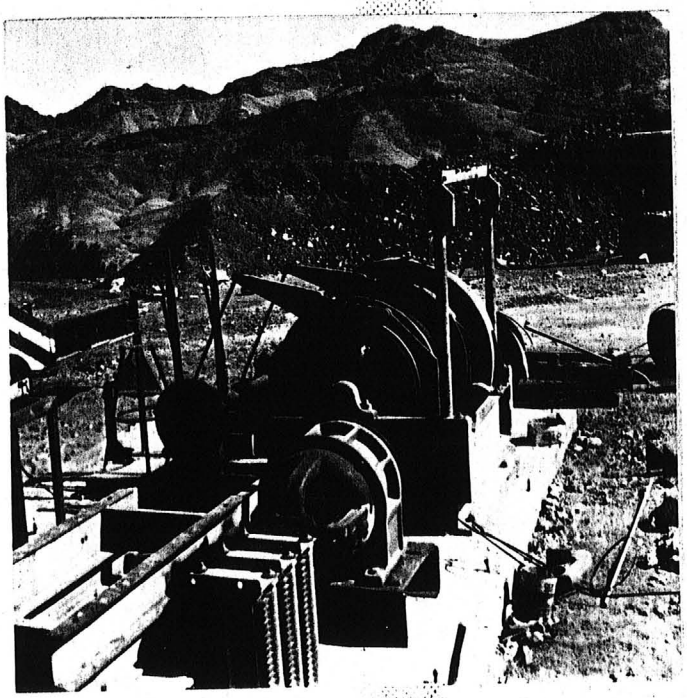
Silver mining district

RED CLOUD MINE (Gold)

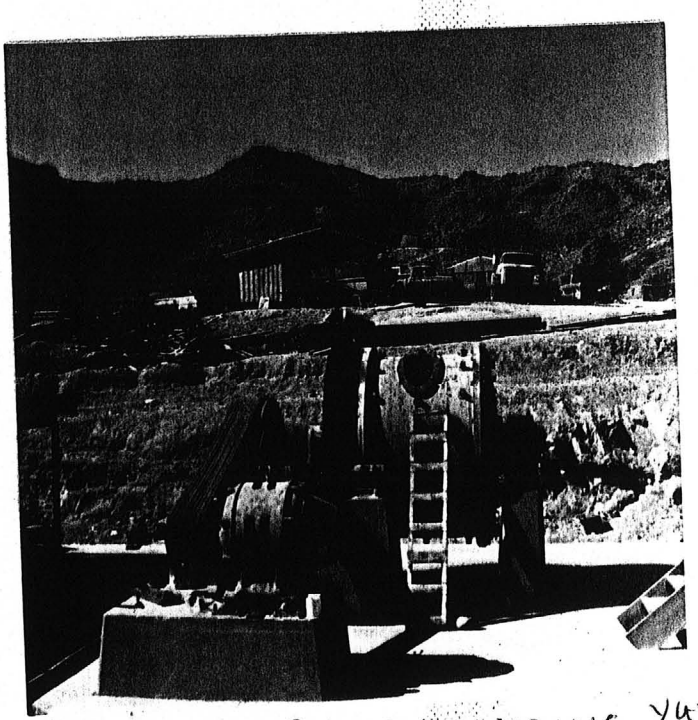
NW LS 5 29N

O-Ariz

MM 1362 Wulfenite
MM 5272 Wulfenite xtals
MM 7467 Wulfenite (thumbnail)
7468 Wulfenite (thumbnail)
7469 Wulfenite (thumbnail)
7470 Wulfenite (thumbnail)
7471 Wulfenite (thumbnail)
7472 Wulfenite (thumbnail)
7473 Wulfenite (thumbnail)
5834 Wulfenite
k093 Wulfenite
9912 Wulfenite
L212 Wulfenite (thumbnail)
L641 Wulfenite xtal
1642 Wulfenite xtals
L643 ~~Wulfenite~~ xtals
Vanadinite

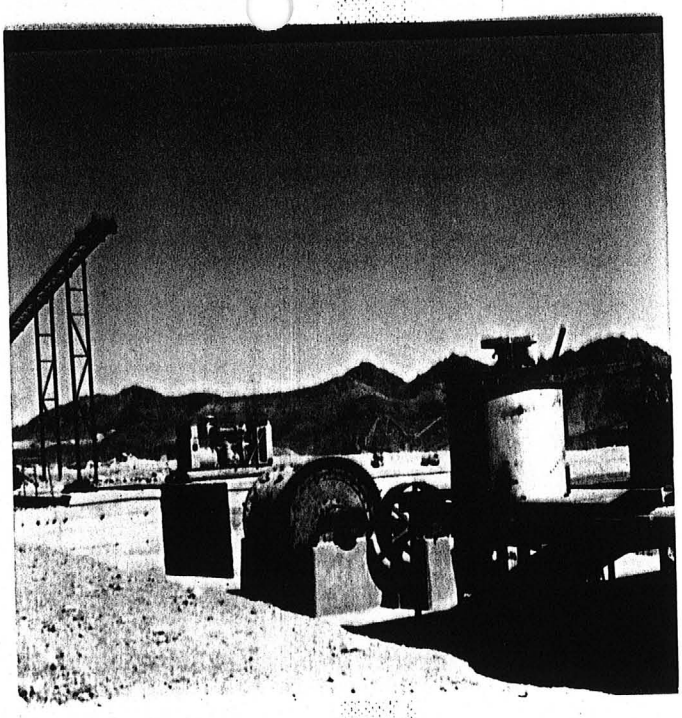


10/17/80 Red Cloud Mine Yuma Co.
"Hoist"

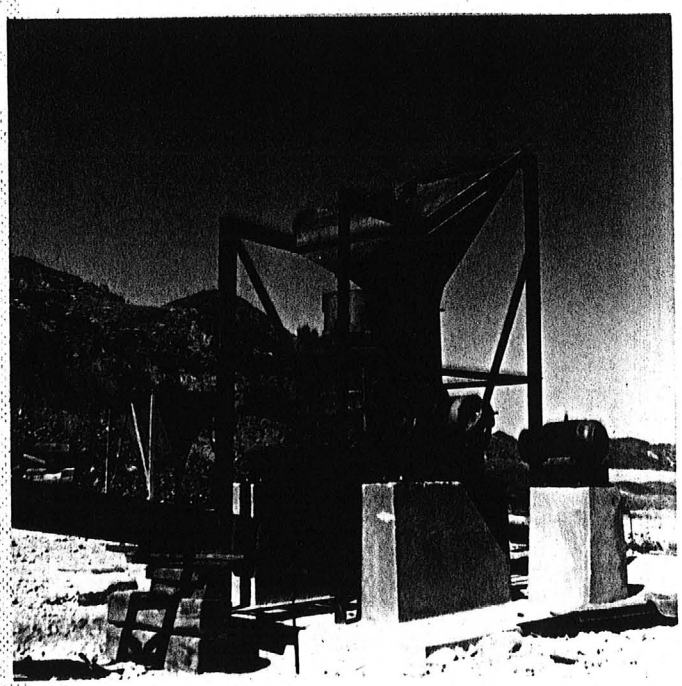


10/17/80 RED CLOUD MINE Yuma Co.
Ball Mill with Machine Shop, office & camp in background.

10/17/80 RED CLOUD MINE Yuma Co.
FLOTATION FLOOR



10/17/80 RED CLOUD MINE Yuma Co.
Power Plant & Fine Grind End of Mill.



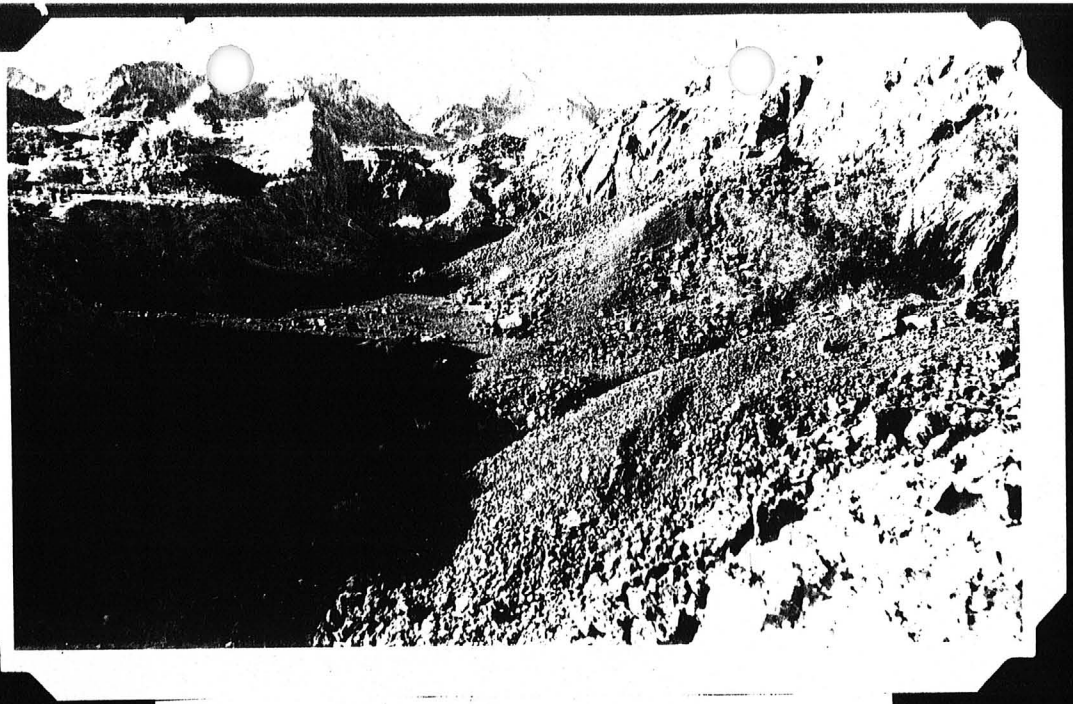
10/17/80 RED CLOUD MINE Yuma Co.
Secondary Crusher

10/17/80 RED CLOUD MINE Yuma Co.

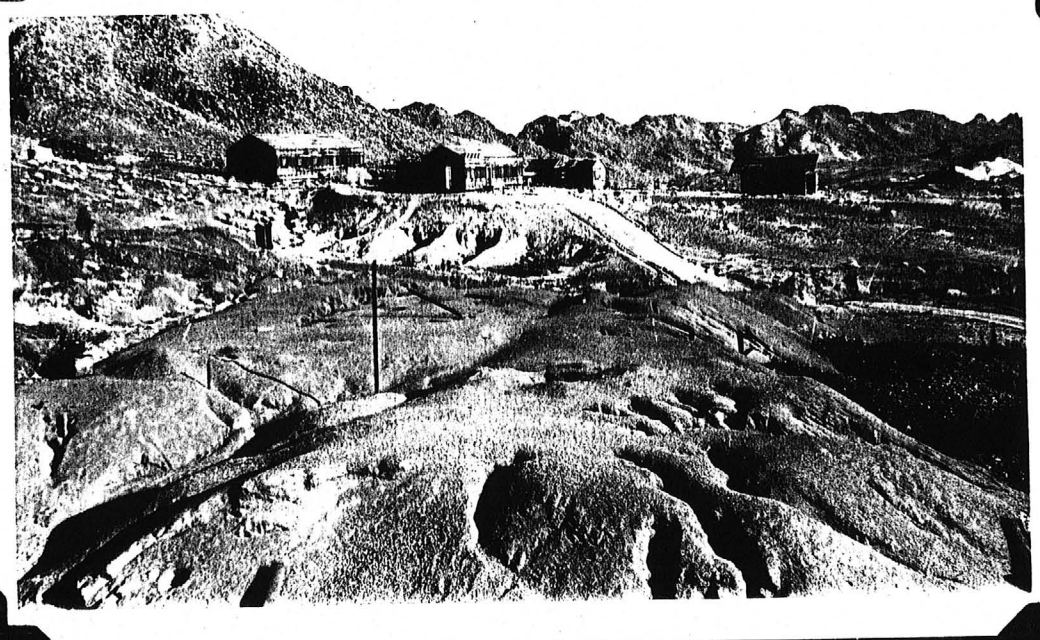
Flotation Cells.

10/17/80 RED CLOUD MINE Yuma Co.

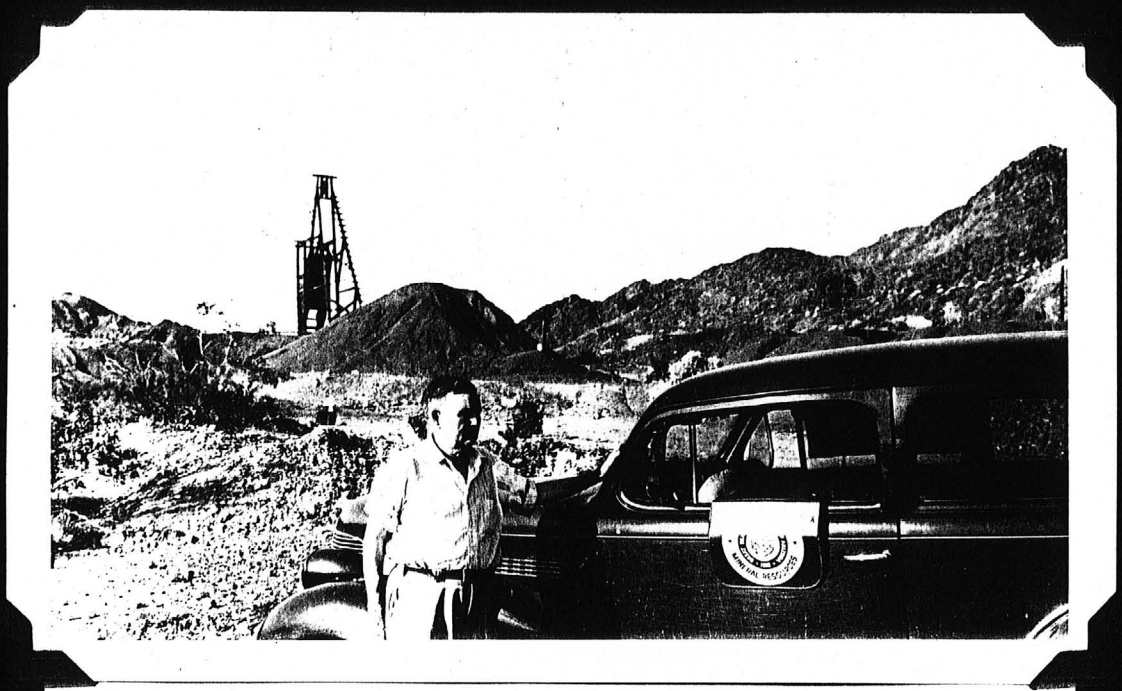
Vertical Shaft, Head Frame, Primary Crusher. Portable Crayne being used as Hoist.



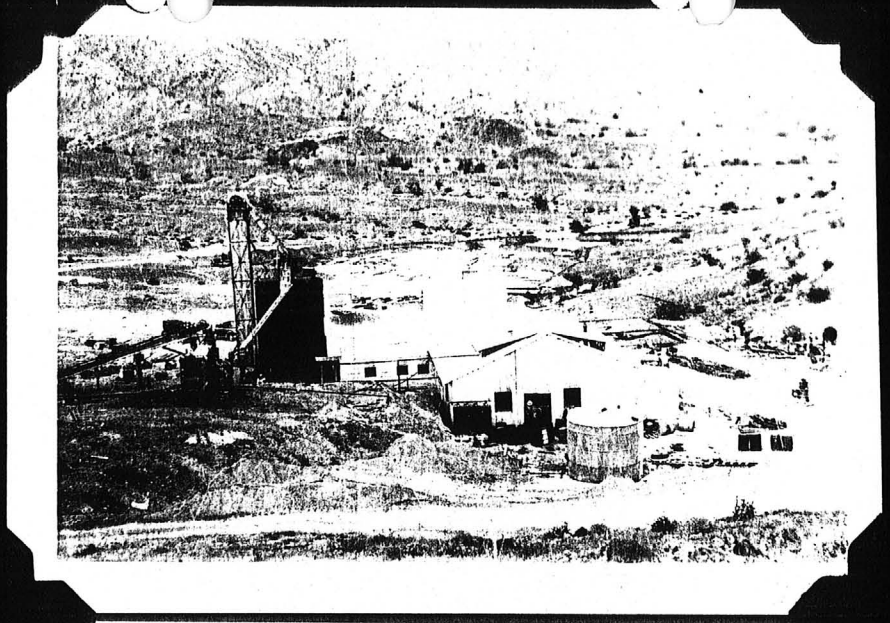
Surface workings on Red Cloud vein, looking southeast.

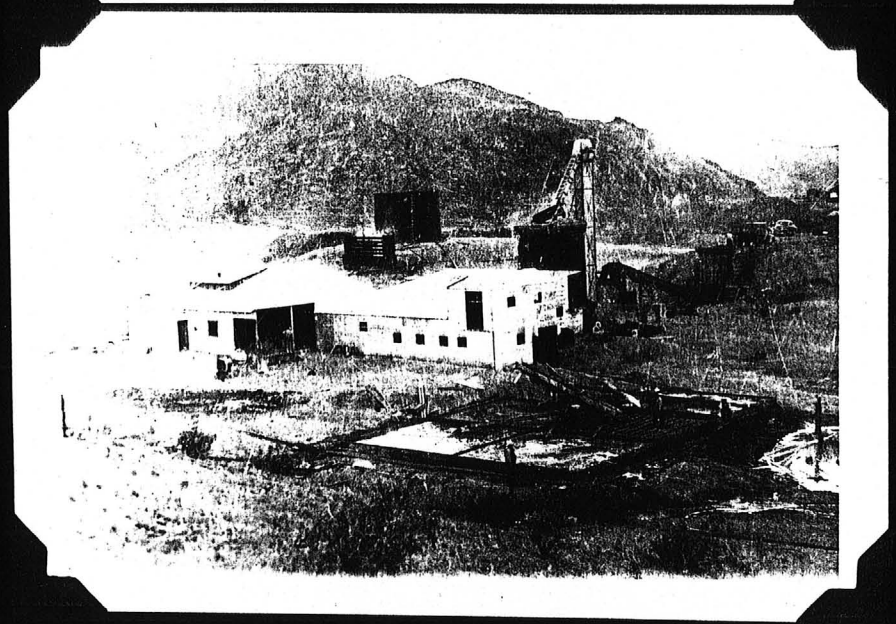


View of houses from Red Cloud tailings dump, from Stebbins dry concentrators - 1917.

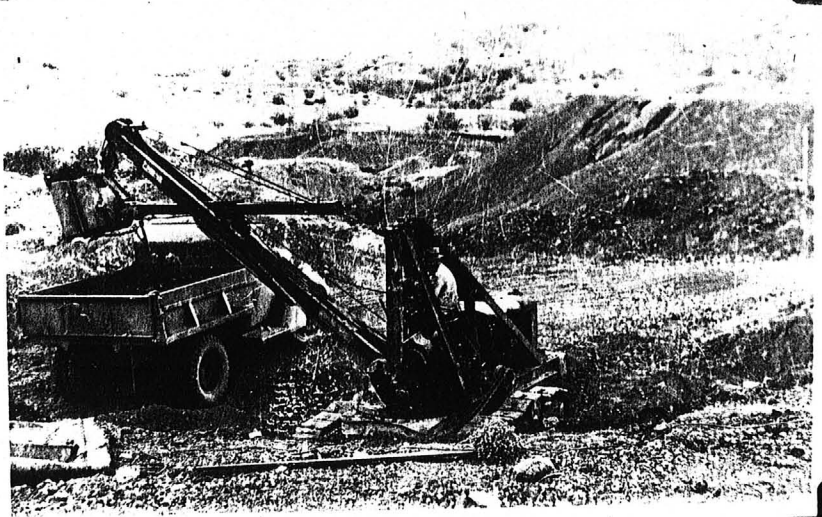


View of Red Cloud dump, taken in 1940, before mill was erected. This picture shows Elgin B. Holt in foreground. At that time Holt was employed by the Arizona State Department of Mineral Resources, as district engineer.

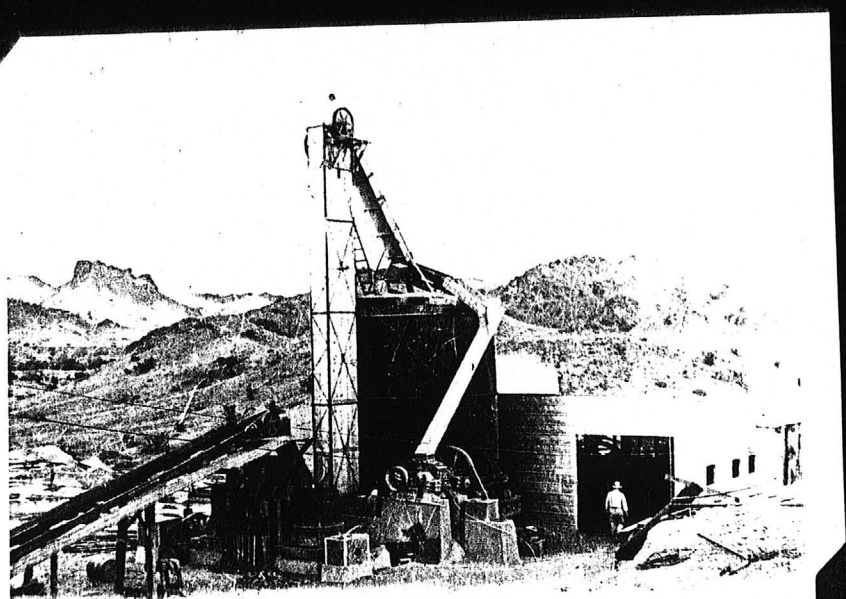




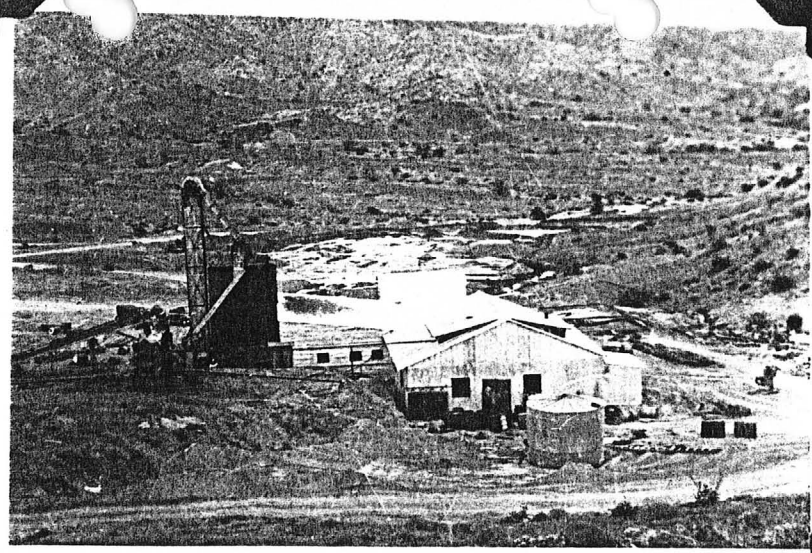
Two views of 200-ton Diesel-powered flotation mill, erected by Penn Metals, Inc., at Red Cloud - 1941. It will be noted that this mill is built on flat ground, not allowing sufficient elevation for tailings disposal.

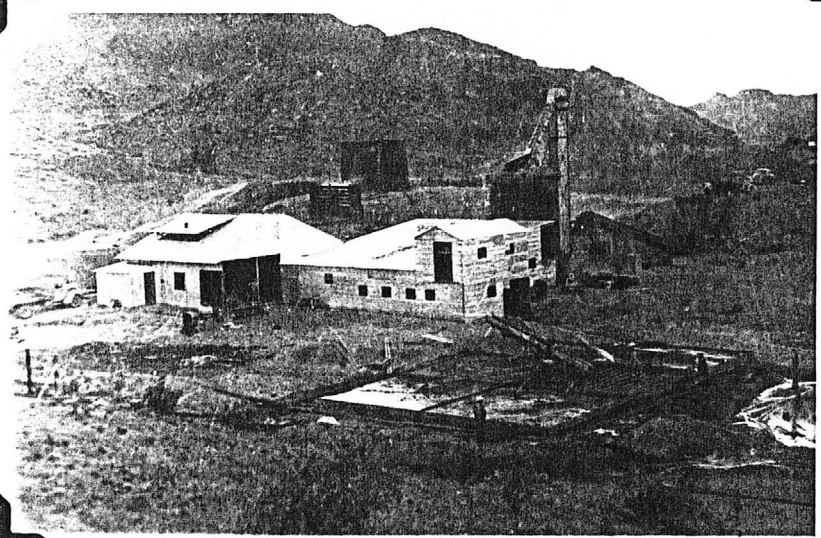


Power shovel loading Red Cloud dump ore in truck. This ore was hauled less than 400 feet to Red Cloud mill - 1941.



Another view of mill, showing 300-ton iron ore bin, the two gyratory crushers, and elevator.





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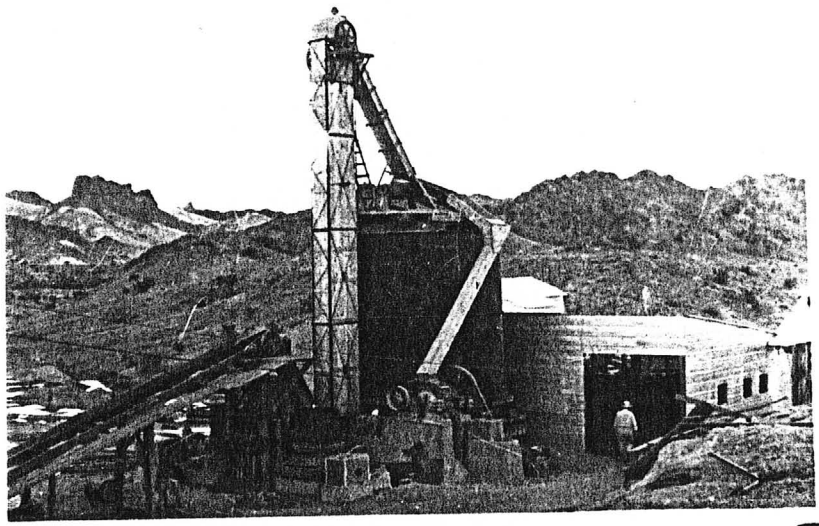

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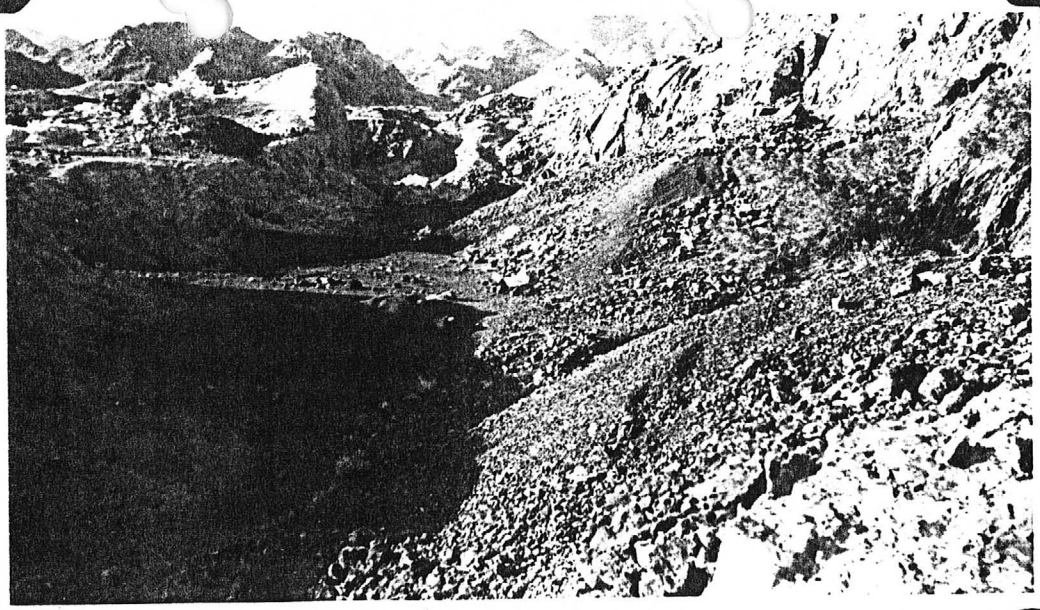
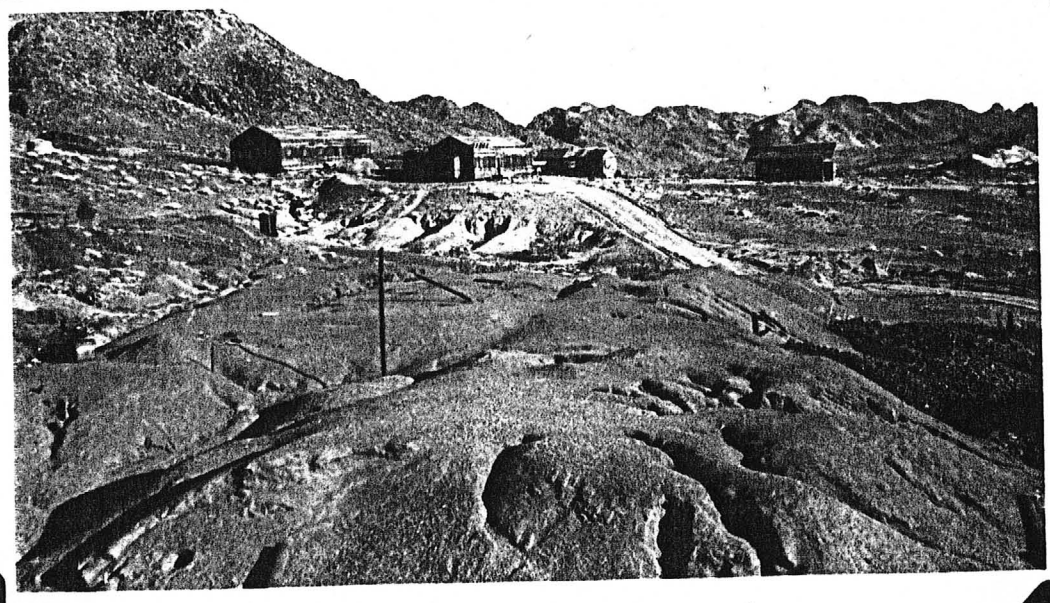


Surface workings on Red Cloud vein, looking southeast.



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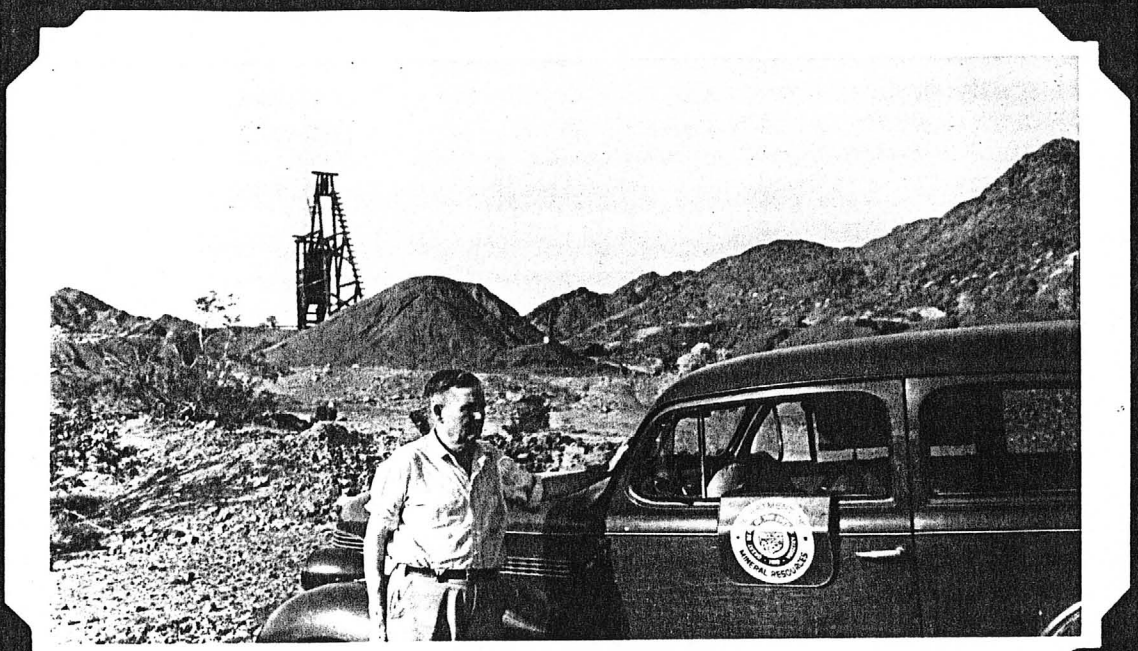

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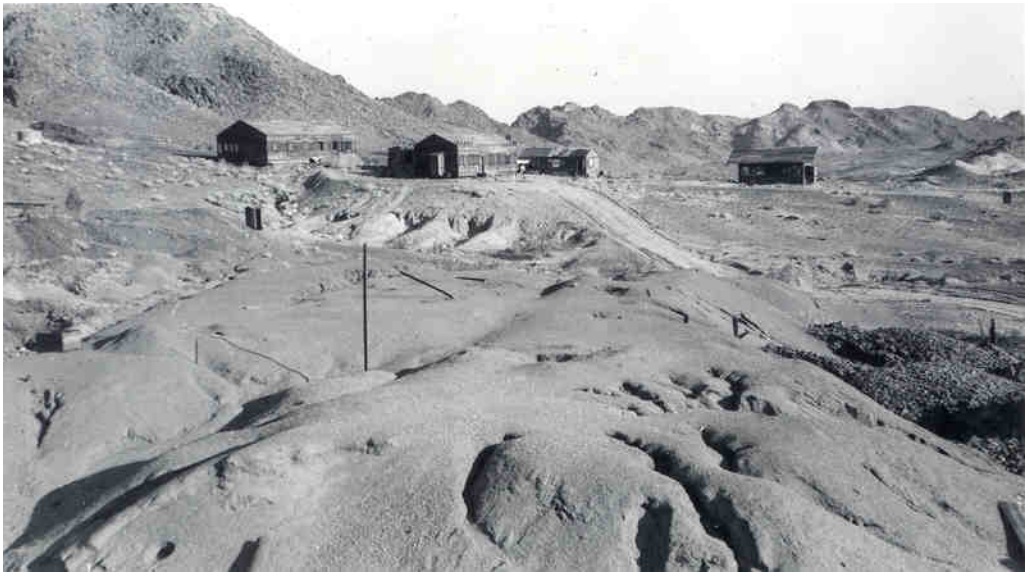
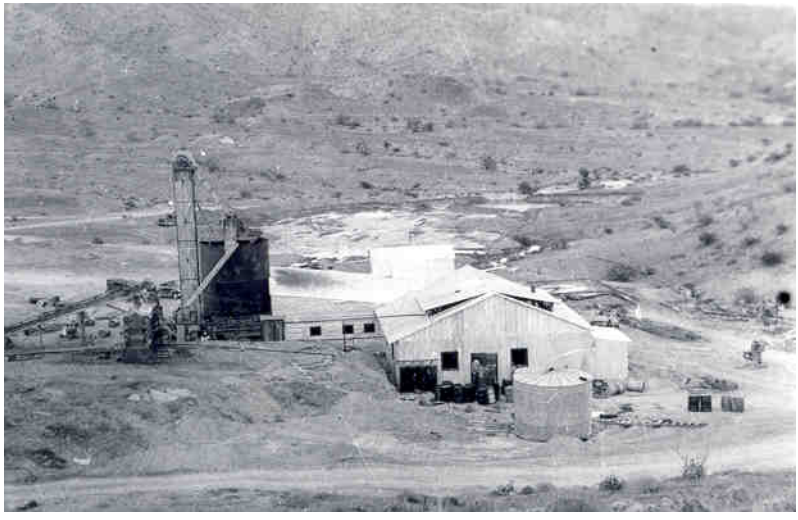
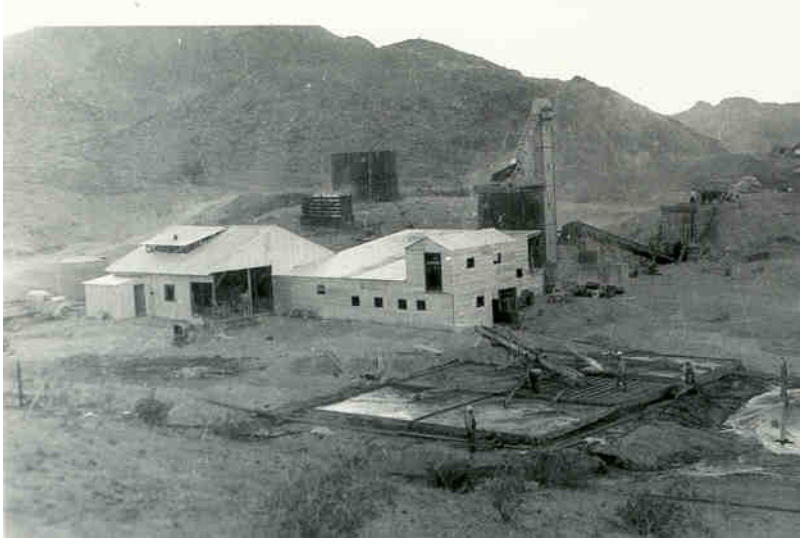
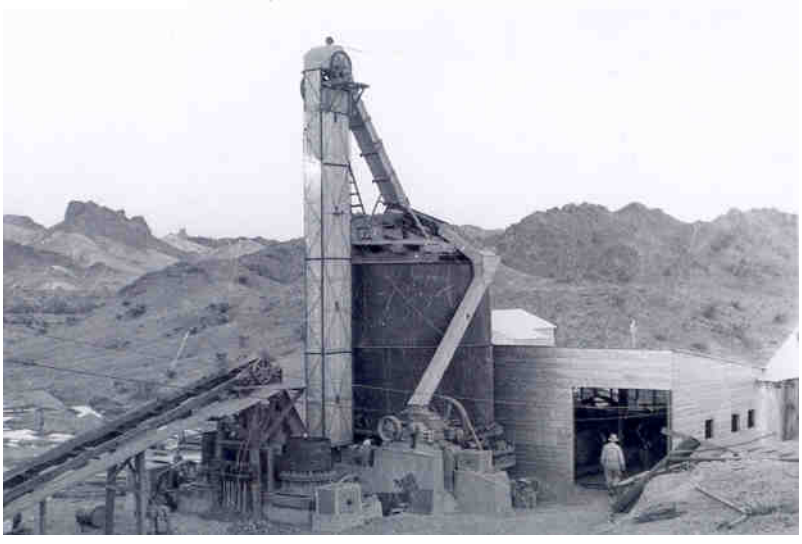








RED CLOUD MINE YUMA COUNTY

RRB WR 5/7/82: In the company of Ken Phillips visited the Red Cloud claims of Joe L. Hoyt, 24283 Kirby Street, Hemet, California.

MG WR 4/20/84: Mr. Wayne Winters visited the Red Cloud mine (La Paz Cpunty) earlier this month and reports that it is in operation with 4 -5 men working.

MG WR 4/27/84: Received report that Red Cloud mine and mill (La Paz County) is ceasing operations.

NJN WR 10/5/84: It was reported that Centennial Metals Inc., 4201 N. 16th Street, Suite 140, Phoenix, Arizona 85016, phone 263-5166 represented by Robert C. Furseth is currently involved at the Red Cloud Mine, La Paz County.

NJN WR 5/3/85: A reliable source reports that many fine flats of wulfenite crystals are being collected underground at the Red Cloud Mine (f) Yuma Co by various mineral collectors. Also reported was some of the surface equipment at the mine was vandalized or stolen by the miners who were last working there in an attempt to recover unpaid wages.

KAP WR 12/20/85: The Red Cloud Mine (file), La Paz County is listed as the 23rd largest lead producer in 1984 in Table 6, of the 1984 chapter entitled "Lead" in the U.S. Bureau of Mines Minerals Yearbook for that year. The operator is listed as Red Cloud Mining Ltd. The source of the lead is listed as silver ore.

Do Not Copy

RED CLOUD MINE YUMA COUNTY

CJH WR 6/5/1981 Visitor: George H. Roseveare, 2526 E. Blacklidge Dr., Tucson Az. 85716. He reported that the Red Cloud mill, Yuma County is working old dumps. Mr. Roseveare was not impressed with the mill set-up.

KAP WR 6/12/81: A report was received that work is continuing on the Red Cloud Mine, Silver District, Yuma County.

NJN WR 11/6/81: Mr. Bob Downing, an investor in Red Cloud Mills LMTD. called. Red Cloud Mills LMTD. is a limited partnership with Red Cloud Mill and Mining Company being the general partner. Mr. Downing was told the Red Cloud mine would be in production by the summer of 1980 when he made his initial investment in early 1980. When he checked to see who they weren't in production that summer he was told they had problems delivering concrete (the heat was drying it too fast) for the mill foundation. This forced the developers to set up their own concrete batch plant so they could pour their own concrete. This summer when he tryed to find out what was holding things up, communication ceased. Now it appears the developers have asked him for more money.

NJN WR 1/1/82: Office interview with Bob McCoy, employee at the Red Cloud Mine, Yuma County.

NJN WR 1/8/82: Don McDaniel called from Tulsa, Oklahoma to check the rumor of some negative reports being in our Red Cloud Mine file Yuma County. He reported that January 11 the mine will be going to two shifts a day and a new metallurgist from India named Ascock has been hired. He also reported the selective flotation mill in an air conditioned building is recovering an estimated 75% of the silver and 94% of the lead from heads running 10-15 oz/ton silver and 6-7% lead producing a concentrate containing 100 oz/ton silver and 81% lead.

KAP WR 5/7/82: Red Cloud Mine - Silver District, Yuma County. Here we talked with Allan Zeit, mill superintendent. Currently 4 men are employed. They have been doing some underground clean-up work. The 150 tpd flotation mill is run occasionally when any "good" ore is pulled from underground during the ongoing cleanup. The ball mill was down at the time of our visit. The operation is now Red Cloud Mills Ltd. with Don McDaniels still in charge. They have an office in Yuma headed by McDaniel's daughter-in=law. She is the general manager. The Yuma phone number is 344-4729.

The Red Cloud mine is famous for wulfenite crystals which the operation is trying to salvage and market.

[redacted]

RED CLOUD MINE DO NOT REPRODUCE THIS PAGE YUMA CO.

MG/WR 4/1/79 - Visited, no current activity 4/30/79 a.p.

KAP/WR 9/14/79 - Don McDaniels reported his is the principle and majority stockholder in Yuma Metals Inc. which owns the Red Cloud Mine. He reported the property includes the Red Cloud, Silver Chance and Mendeval patented claims and numerous unpatented claims. He said they plan to reopen the mine and erect a flotation mine to mine and process 50,000 tons of ore previously blocked out in the 1950's. They have purchased a flotation mill in Colorado capable of handling 60 - 100 tons and reported to have retained Jack & Dave Hamilton to disassemble the mill, move, re-erect and operate it at the Red Cloud.

KAP WR 7/11/80: Lance Vanverzyl, 2512 W. 22nd St, Yuma Arizona 85364, BLM Mining Engineer for the Yuma District, reported there is still activity at the Red Cloud Mine, Eureka District, Yuma County. Construction of the mill and reconditioning of the mine are reported to be continuing.

AWB WR 7-26-80: Wayne A. Thompson of Southwest Minerals Associates, 1723 E. Winter Drive, Phoenix, Arizona 85020, phone 944-6567, stopped in to talk to me. He reported he has been working the Red Cloud Mine for several months, removing accumulated waste. He estimates it will take at least 30 days more before they begin to remove any crystal specimens.

AWB WR 8/9/80: Work to set up a display of minerals from the Red Cloud Mine mentioned in June 80 issue of Mineralogical Record. The Museum's collection contains only two poor specimens.

KAP WR 10/3/80: John O. Rud, 1965 Athens Ave, Yuma, Arizona 85364, phone (bus) 726-1662, (home) 782-9976, reported activities are continuing at the Red Cloud Mine, where they are building a mill.

KAP WR 11/7/80: H. Mason Coggin, Mining Engineer, Coe & Van Loo Consulting Engineers, reported that he, in the company of Frank Montainati, visited the Red Cloud Mine, Eureka District, Yuma County. H. Mason Coggin stated that he "Laid it on the line" to the mine foreman at the property. In essence, a major portion of the work done thus far in developing the mine and erecting a mill, has been of little value and misdirected. Coggin's recommendations were that the owners of the property develop the lower workings of the mine so as to be ready for production and acquire competent help in erecting a mill.

No reply - filed 3-14-67

RED CLOUD AND BLACKBIRD MINES T 3 S, R 23 W YUMA COUNTY

Conference with Lyman Wall at the Linda Mine - Castle Dome

Wall reported that B. L. McDaniel of Tulsa, Oklahoma, now has optioned these mines and added some contiguous claims. McDaniel wants Wall to take over the supervision of the development and possibly the erection of a mill if enough reserves are shown. Wall said that the ore he has seen is partly oxidized and partly sulphides so that a mill might have to use both gravity and flotation. (The Red Cloud, according to some, reportedly has some mill-grade reserves but this would have to be verified by sampling). Wall said he would not make any move until money for the enterprise is "on the line" and he would have to get more than he now makes at the Linda.
Memo LAS 2-8-67

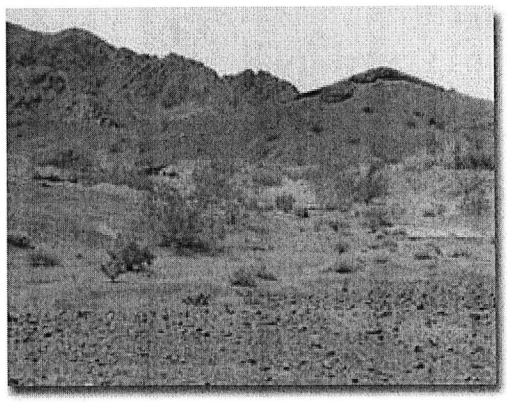
Albert Wynn and a friend (Doug) worked for the drilling contractor that drilled 8 holes on the Red Cloud property for New Jersey Zinc in the summer and fall of 1973. Wynn said that although he understood the NJZ geologist was pleased with the drilling results, especially with the silver showing, nothing was heard about the grade or NJZ's plans. NJZ also drilled three holes on Wall's property. KAP WR 3/28/74

New Jersey Zinc Company drilled 12-100 to 250 foot angle core holes into the vein structure of the old Red Cloud silver mine north of Martinez Lake, Yuma County. The results were at least somewhat favorable as they were casting about for a supply of water. GW AR 73-74

The Red Cloud is owned by the Yuma Metals Company whose contact is Floyd White in the San Francisco Bay Area, 916-666-1892. Contrary to my report of a previous conversation with Lyman Wall, NJZ has not done any drilling on the Red Cloud property, but has done some drilling on other properties in the Silver District. KAP WR 8/30/74

Red Cloud (f) La Paz Co.

Red Cloud Mine Tailings



Site Description: Several hundred tons of mine tailings have been deposited on public land from an adjacent Wulfenite Mine on private land. This was done without authorization from BLM. According to the mining engineer for the company that presently owns the Red Cloud Mine, the tailings could be high in lead oxides, a biologically mobile form of lead. The tailings piles have a distinct reddish color. The tailings are in a major wash, the Black Rock Wash, and it is evident that tailing sediment has washed downstream for hundreds of feet, due the reddish deposits in the wash. The Colorado River is 4 miles downstream. The Imperial National Wildlife Refuge is only 2.5 miles downstream. According to an employee of the previous Red Cloud Mine, the tailings were deposited on public land during the early 1980s. It is conceivable that high concentrations of lead could have reached the Imperial NWR and the Colorado River. Sampling and testing should be done to find out if there are any contaminants of concern, pathways, and targets. This segment of the Colorado River is habitat to at least 2 threatened or endangered plant and animal species.

Benefits: Remove a threat to a sensitive environment and maintain or improve habitat of threatened or endangered species; remove threat to human health and safety.

Engineering and Mining Journal—Vol.154,No.2

Feb 1953

[redacted]

RED CLOUD

Pb, Zn, Ag

Protected

Yuma 14 - 5 Sec 2 T 3 S, R 23 W 14-5

Mrs. Juma R. Remington, 924 - 16 Ave., Seattle 22, Wash. '42

Operator: W. D. Riley, Yuma, Ariz. '46

[redacted]

MIN JOUR 6/15/[redacted]

[redacted]

Engineering and Mining Journal—Vol.154,No.5

"RED CLOUD MINE"

ALSO KNOWN AS

"YUMA METALS, INC."

(Red Cloud Mine (file)

February 22, 1979

Mr. Roy W. Meadows, Esq.
Whitfield, Musgrave, Selvy, Kelly & Eddy
1400 Central National Bank Building
Des Moines, Iowa 50309

Dear Mr. Meadows:

As indicated in his letter of 20 February, 1979, Mr. Arundale has referred your request for information relating to the Red Cloud Mine, Yuma County, Arizona to the Arizona State Department of Mineral Resources.

A very brief summary of operations at the Red Cloud Mine is contained in the book "Rock to Riches" by Dunning and Peplow, Southwest Publishing Company, Inc., 1959, p. 376 (see enclosure). Additionally, we have in our department files a rather comprehensive folio containing engineer's reports, corporate reports of Yuma Metals, Inc., maps and correspondence regarding the Red Cloud Mine and the Silver Mining District of Yuma County, Arizona in which it is located. This file is open to public examination and we would welcome you or your representative to our office. A reading room is available. You may make arrangements with a bonded copying company if you wish a duplicate of all, or part of, the folio.

For an evaluation of this property may I suggest that you employ a firm of consulting mining engineers. We can be of some assistance in this area.

Thank you for your interest in Arizona mining and if we may be of future service do not hesitate to write or call.

Sincerely,

Clifford J. Hicks
Mineral Resource Specialist

CJH:em

cc: Joseph C. Arundale
Encl

Cliff
Please
answer
lets discuss
first

Room 1028
2721 N. Central Avenue
Phoenix, Arizona 85004
February 20, 1979

Mr. Roy W. Meadows
Whitfield, Musgrave, Selvy,
Kelly & Eddy
1400 Central National Bank Bldg.
Des Moines, Iowa 50309

Dear Mr. Meadows:

Thank you for your letter of February 14, 1979.

Your letter is being forwarded to the Department of Mineral Resources, Fairgrounds, Phoenix, Arizona 85007, with the request that they provide you with the information you are looking for.

Sincerely yours,

JOSEPH C. ARUNDALE
Liaison Officer - AZ

cc: John Jett

RECEIVED
FEB 21 1979
DEPT. MINERAL RESOURCES
PHOENIX

LAW OFFICES

WHITFIELD, MUSGRAVE, SELVY, KELLY & EDDY

1400 CENTRAL NATIONAL BANK BUILDING

DES MOINES, IOWA 50309

February 14, 1979

ALLEN WHITFIELD
EDGAR MUSGRAVE
WALTER M SELVY
EDWARD [illegible] KELLY
JOHN C EDDY
HARLEY A WHITFIELD
ROY W MEADOWS
A ROGER MITKE
DEAN DUTTON
GARY GATELY
TIMOTHY J WALKER
DAVID L PHIPPS
BENJAMIN B ULLEM
ROBERT M KREAMER
[illegible] J KELLY
ROBERT L FANTER
KERMIT S SUTTON
NED A STOCKDALE
ROBERT KOOP JOHNSON
ROBERT J EGGE
RICHARD B LYNCH
MARSHALL J HUNZELMAN
JAMES R MONROE
BERNARD L SPAETH, JR

TELEPHONE
288-6041
AREA CODE 515

REFER OUR FILE NUMBER

Joe Arundale
U.S. Bureau of Mines
Phoenix, Arizona

Re: United Funding Investment Corporation

Dear Sir:

I am the court appointed Trustee of United Funding Investment Corporation, a local company that went bankrupt. One of the assets of the company is capital stock in the Yuma Metals, Inc. which company supposedly has mining rights on a property known as "Red Cloud Mine" in Yuma, Arizona. According to a document in my possession, the mine supposedly has "blocked out or reserves of silver, lead, and zinc of approximately 35,000 tons and potential of an additional 300,000 tons."

My investigation reflects that an Edwin A. McDaniel, 1930 East Camelback Road, Phoenix, Arizona, is the process agent for the company in Arizona. The Secretary of State, Corporation Division, has revoked the Yuma Metals, Inc.'s right to transact business in the State.

Mr. Marvin Ross of the Iowa Bureau of Mines and Minerals suggested that you might be able to help me, and asked that I pass on his regards to you.

As you can appreciate, I am interested in knowing whether or not the mine made reference to as the Red Cloud Mine has any value. I would

appreciate it if you could advise me what public information the U.S. Bureau of Mines has concerning this mine, if you can identify it, and if said material is not public, if you know of any source I can obtain information concerning it.

Your courtesy is this regard will be appreciate.

Very truly yours,

Roy W. Meadows

RWM:jl

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Red Cloud, Black Hawk and others. Date Feb. 14, 1949

District Silver Engineer Ballam

Subject: Report on operations.

George Holmes and Walter Riley, 37 2nd St., Yuma, are currently building a mill to treat ores from a reject dump of the Red Cloud mine, located some 50 miles north of Yuma and seven miles east of the Colorado River. Following an air reconnaissance, these men were able to locate and build a road enabling them to haul dump ore from the mine to a mill site on the river. Operations were retarded by unfavorable weather, but at present construction is proceeding on the mill which will turn over in the next month or so.

Careful sampling of the dump consisting of some 4000 tons, shows assays of 11% lead and 15 ozs. silver. Preliminary tests indicate a mill recovery to produce a 40% lead concentrate and about 40 ozs. silver. Mill plans, now near completion, include crusher, three foot ball mill, two Diester tables and cone for slimes. Optimum recovery indicates 10-15 mesh grind (at present 10-mesh screen on mill) Closed circuit with vibrating screen and return of oversize to mill. Ore values reported in sand carbonates for lead with apparent colloidal silver silicate loss so that A g. recovery of 60% is anticipated.

No attempt will be made to develope the mine which is classed as an antigua. The Black Hawk group has been leased and several located claims of recent record are included in the group. Haul from dump to mill is about seven miles down grade. The operators report adequate financing.

George A Ballam
Field Engineer

E. Hart had Red Cloud once — Perhaps Report is available

MRS. A. D. REMINGTON
924 SIXTEENTH AVENUE
SEATTLE 22, WASHINGTON

Aug 12-46

Dept Mineral Resources
Phoenix Ariz -
Dear Sirs -
Sent papers to Mr W. H. Riley
Yuma Ariz - to be filled out on
the Red Cloud as, I dont have
the data -

Yours truly
Irene R. Remington

DEPT. MINERAL RESOURCES
RECEIVED
AUG 16 1946
PHOENIX, ARIZONA

304 xxx

March 21, 1944

Mr. Walter D. Riley
Box 952
Yuma, Arizona

Dear Walter:

Many thanks for your letter of the 16th regarding the Red Cloud mill and I will take this up and try to get a determination for you at a very early date.

With best wishes, I am

Yours very truly,

J. S. Coupal, Director

JSC:LP

Yuma, Arizona.

Mar. 16th, 1944.

ARIZONA BUREAU OF MINERAL RESOURCES
RECEIVED
MAR 18 1944
PHOENIX, ARIZONA

Mr. J.S. Coupal
Home Builders Bldg.
Phoenix, Arizona.

Dear Mr. Coupal:

I had a letter from Mr. Middleton saying that he would take the $20,000.00 for the machinery at the Red Cloud Mine and said to make the offer to Coupal, so if your people are still interested the deal can be consumated pretty quick, every think is just as is was, nothing has been moved.

Yours very truly

W.D. Riley

W.D. Riley

MEMORANDUM

January 15, 1944

TO: ELGIN B. HOLT

FROM: J. S. COUPAL

SUBJECT: Red Cloud Road

We have received your report on this subject and will see what I can do toward getting it taken care of. I will be away from the office the rest of this week but will be at it on February 21st.

J. S. Coupal
Director

JSC:JES

UNITED STATES

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION
ALL-AMERICAN CANAL

Yuma, Arizona
January 7, 1944

COPY

Board of Supervisors
Yuma County
Yuma, Arizona

Gentlemen:

Receipt is acknowledged of your letter of December 23, 1943, in which you state that the road to the Red Cloud Mine has become impassable due to backwater from the Imperial Dam.

You inquire also whether anything could be done to put the road back in a passable condition.

An examination of the records indicates that right of way for the road in question has not been dedicated for such use. The land on which the road is located is withdrawn under the Reclamation Act.

This Bureau, under the circumstances, is not responsible for keeping the road in a passable condition.

Very truly yours,

/s/ L. J. FOSTER
Construction Engineer

October 1, 1943

Mr. Walter D. Riley
Box 1486
Yuma, Arizona

Dear Walter:

I have just talked with one of the principals in the buying of the Red Cloud equipment of the Penn Metal and he stoped in for a few moments enroute from San Francisco to Tucson. At Tucson within the next day or so he will meet with two of his associates who are now enroute from New York and I believe the plans are to be in Yuma sometime between Tuesday and Thursday next week.

I am sorry for the delay but feel as though when they arrive and look over the equipment, it will be possible to make an immediate cash deal.

I hope your plans are to be in Yuma next week and if they are not, please advise me so that I may know where I can contact you.

Very truly yours,

J. S. Coupal, Director

JSC:LP

DEPT. MINERAL RESOURCES
RECEIVED
SEP 28 1943
PHOENIX, ARIZONA

Yuma, Arizona. Sept, 27th, 1943

Mr. J.S. Coupal
413 Home Builders Bldg
Phoenix,
Arizona.

Dear Mr. Coupal:

Received yours of the 24th this morning, yes I will be ready to go up to the mine any time you can come, I was up there yestarday and every thing is O.K. there. the road is better than it has been for quite a while, we had a rain and it helped considerable.

Please address my personal letters to Box 1486, as it might be a day or two late otherwise.

Yours very truly.

W.D. Riley

January 8, 1943

Mr. Gustave W. Voelzel
Technical Advisor
Mining Equipment Branch
War Production Board
411 Caples Building
El Paso, Texas

Dear Mr. Voelzel:

We are herewith enclosing copies of our Field Engineer's report on the Black Rock and Red Cloud Mines of Yuma County, Arizona, as requested in your letter of January 6.

We would be very much interested in having for our files the results obtained on the proposed mill test, as such information might assist us in getting the property into production at some later date should the present plans collapse for any reason.

Very truly yours,

Earl F. Hastings
Assistant Director
and Projects Engineer

EFH:kk
Enclosures 2

WAR PRODUCTION BOARD

411 Caples Building
El Paso, Texas
January 6, 1943

18

IN REPLY REFER TO:

GWV:tt

DEPT. MINERAL RESOURCES
RECEIVED
JAN 8 1942
ARIZONA
PHOENIX

Mr. J. S. Coupal, Director
Arizona Department of Mineral Resources
413 Home Builders Building
Phoenix, Arizona

Dear Mr. Coupal:

I have a letter from Mr. H. Comer Wolf of Irvine, Kentucky who has done some experimental work for the Tin - Lead Branch of the War Production Board in Washington. He is now making some mill test on ore sent to him from the Red Cloud mine and the Black Rock mine, located in the Silver Mining District, Yuma County, Arizona.

Mr. Wolf would like to have some engineering data on the property as his milling tests seem to be encouraging.

If one of your Field engineers has visited this property I would like to have a copy of his report on the same.

Thanking you for any information that you may have available, I am

Yours very truly,

Gustave W. Voelzel

Gustave W. Voelzel
Technical Advisor
Mining Equipment Branch

FOR VICTORY
BUY UNITED STATES WAR BONDS AND STAMPS

PENN METALS INC.

NEVADA

D. G. CURTIS, President
WM. A. MIDDLETON. Treasurer
V. M. NIEMEYER, Secretary
E. LANSING JONES, General Manager

Box 952,
Yuma, Arizona

Penn Building
Erie, Pennsylvania

July, 8th, 1942.

DEPT. MINERAL RESOURCES
RECEIVED
JUL 9 1942
PHOENIX, ARIZONA

Mr. J.S.Coupal
413 Home Builders Bldg.
Phoenix,
Arizona.

Dear Mr.Coupal:

Received your letter this morning, I had a phone call from New Mexico last night and they wanted to buy the floatation cells but I am writing them today tell them that if I could sell all the plant at one time, that I would rather not sell it out in parcels, and that I had a deal on to sell the whole thing at once, and in case that I didn't sell all at one sale I would let them know.,

We haven't sold or contracted to sell any of the machinery as yet, and would be glad to have Mr.Hooton inspect this plant at any time.,

Yours very truly,

W.D.Riley

P.S. Would a large deposit of Magnesite be worth any thing now?.

W.D.R.

Curtis and Middleton:— Mate

This is my original report.

I have checked it carefully and think you will find typing and figures correct.

Holt.

Page

3 Bottom. 4 strategic metals

4 40,000 tons of Oxedized Ore now blocked out.
FOOT WALL VEIN large tonnage can be developed. Oxedized Ore carrying silver up to 400 ozs per ton. Sulphide Ore at water level of high value.

8 $773.00 per day in silver in tailings.

9 $200.00 per day can be recovered from Wulfenite and Vanadinite.

10 Large amount of Oxodized ore to be treated. 40,000 tons now blocked out in Red Cloud. Expect encounter much additional high grade

12 Long Life- Big earnings.

13 New Plant including Cyanide equipment, will recover 90% of silver and lead. Also, make Zinc concentrates amd recovery.

15 Cyanide will also reciver $70.00 per day in geld.and $200.00 per day in Wolfenite and Vanadinite, total $270.00 per day in addition to Silver, Lead and Zinc.

21 Use present plant pending expleritory work. Can make 90% recovery.

23 Lead recovery low? Profit net $4.66 pr ton of ore milled, or $932.00 a day; $23,300.00 per mo. operating 25 days.

3421 Larissa Dr.,
Los Angeles, Calif.,
Jan. 24, 1942.

Penn Metals, Inc.,
Penn Building,
Erie, Pa.

Re- typographical errors in report

Gentlemen:

After mailing you the report yesterday, the one bound in black pliable imitation leather, I discovered the following typographical errors, which kindly change, as soon as the said report is received by yourselves:

In the first paragraph of page 8, I stated in the original report: "Hence, silver recovery equalled 33.1%." Stenographer stated: "Hence, silver recovery equalled 53.1%."

As the steno had been recommended highly and stated that proof had been read carefully, and as I was in a hurry to get the said report in the mails, I failed to check until I went to my room. Then I did so and found a number of mistakes, as follows:

On page 9, 10,500 feet, is typed: "10,5000 feet".
On page 10, 1,200 feet, is typed: "1,2000 feet".
On page 11, Black Rock is blurred.
On page 13, "consisting" is blurred.
On page 15, "tested" - "explored" are blurred.
On page 19, 1,200-pound mine cars, is typed: "1,2000".
On page 23, 35 cents gold is written ~~xrungly~~ okay, but "cents" is blurred.

The above also applies to the copy of this report I mailed yesterday to Mr. Riley.

Kindly be advised that I am today mailing you the original draft of my report, bound in paper, which you can use in checking the first one sent you. As I have retained a copy of this original report, suggest you keep it and it would be well to have it bound in leather or imitation leather, the same as the one already mailed you. In which event, the stationers could remove the paper cover.

Very sincerely yours,

Elgin B. Holt.

cc - W. D. Riley.

HERSHEY & WHITE
Consulting Engineers
Crocker Building San Francisco, Cal.

REPORT ON

RED CLOUD MINE

BY OSCAR H. HERSHEY

San Francisco, California,
October 27th, 1938.

Mr. Ogden C. Chase,
Del Sol Hotel,
Yuma, Arizona.

Dear Sir:

My first visit to the Red Cloud mine in the Silver Mining District of Yuma County, Arizona was made in February, 1923. In May, 1925, I spent 3 1/2 days in the district and mapped the surface geology, on a scale of 200 feet to the inch, of the southern portion of the district in an area 6000 feet long and 1500 to 3500 feet wide. This was for the Primos Company who had an option on the Red Cloud group. My final visit was in February, 1926. I assume that practically no work has since been done in the mine and will write this report from my old observations. Also, I will try to keep it within reasonable limits.

FORMATIONS.

There are three series of rock formations as follows:

1st. Archean schists extensively intruded by irregular bodies of monsonite and more basic crystallines. These rocks may be referred to collectively as the Archean Complex or crystalline basement series. They extend to an indefinate depth so far as mining is concerned.

2nd. A series of older Tertiary lavas and tuffs of rhyolite and more basic composition. They are hard and form rugged outcrops. The veins are younger than this series and penetrate from it into the basement crystallines.

3rd. A younger series of Tertiary volcanic rocks, mostly andesitic and rhyolitic tuffs. They are relatively soft and have eroded into basin-like areas of rounded hills. It appears that in the vicinity of the Red Cloud mine, after the veins were formed, erosion largely cut away the earlier volcanic rocks and exposed the veins in the basement crystallines. Then the later volcanic rocks were deposited across the veins and buried them throughout the district. Subsequent erosion has moved the later tuffs and exposed the veins except in certain areas where faults so depressed the rocks that a portion of the tuffs has remained.

FAULTS.

There is a series of post-mineral faults of relatively small displacement that have east to southeast courses. Then followed

extensive faulting in a north to northeast system. There are three main fauts of this system, the Red Cloud, McNeal and King. From your standpoint the Red Cloud is the important fault. It is somewhat serpentine but has a general course about N. 15° W. It dips eastward 40° to 60°. In the Red Cloud mine, near the surface there is from 3 to 6 inches of red and green fault gouge that dips eastward 50° then 6 inches to a foot of somewhat reddened but not silicified material which in places may be seen to be broken monzonite. Then comes the barren and not silicified andesite tuff generally lavender in color though somewhat bleached white near the fault. At one place over the ore there is a 12-inch fault breccia with rounded fragments of vein quartz along with the monzonite fragments in it. A small red gouge spparates the breccia from the barren tuff. The post-mineral age of the fault is quite clear as will be shown later. It is a strike fault that has followed the general course of theorignal fissure and brought the Tertiary tuffs down over the Red Cloud vein. As a matter of fact the vein has largely been cut away and thrown down by the fault so that it remains buried under the tuffs for thousand of feet north and south from the mine. At the Red Cloud mine a downward curve in the vein and an upward curve in the fault permitted a lenticular body of vein to remain against the monzonite under the fault.

RED CLOUD VEIN.

The Red Cloud vein seems to have consisted orignally of three bands, a footwall calcite-quartz band, a central ore band and a hanging-Wall quartz-calcite band. The ore band has a strongly banded and crustified structure and considerable barite in irregular seams along with calcite and quartz. Locally there is some fluorspar. There are some chalcedony layers and the yellowish oily appearance of some of the quartz suggests the presence of adularia as in the veins at Oatman, Arizona. Thus the vein has the characteristics of Tertiary veins. The ore band is very prous, probably from the leaching of calcite and oxidation of sulphides that included galens and probably a little molybdenite. The visible lead minerals are chiefly the carbonate, cerussite and the molydate, wulenite. Kernals of galena remain sparingly near the bottom of the mine. It is in irregular seams 1/2 to 1 inch thick in small pockets scattered through the ore band. Iron oxide stain is widely distributed in the vein, but I do not know whether it came from the oxidation of pyrite or a carbonate. A characteristic of the ore band is the presence of considerable quantities of wulfenite crystals in holes and cracks. They are clearly secondary, occur only in the oxidized zone and the question is whether they mark an important secondary enrichment of the ore. Very little wulfenite can be seen outside of the original ore band, although the underlying porous quartz of the low-grade footwall band would seem to have been favorable for the depostion of the crystals. From this fact I deduce that there was comparatively little migration in the change from galena to wulfenite and probably not much secondary enrichment even in the ore band. this was considered very favorable to the future of the mine as what we wanted to find was a band of primary sulphide ore of good size and grade. I believe it could be found.

ORE.

At the top of the Red Cloud mine there is a large surface cut

in which the ore was mined 330 feet in length and to a maximum width of 35 feet. At the level of the floor of this cut the vein lens is 440 feet in length and 40 feet in maximum length. It consists of a low-grade footwall calcite-quartz band that was originally from 10 to 20 feet wide and usually not mined, a middle band of ore rather well supplied with wulfenite, originally 10 feet or more wide, and a hanging-wall calcite-quartz band, thickness not known. These three bands have been sliced off by the fault going north and south, pinching out in both directions. Towards the north the cut off was gradual and the footwall band extends 140 feet beyond where the middle band disappears. That is why the extension of the vein into the claim on the north (designated on maps in 1925 the Peterson claim) yielded very little ore. At the south end of the lens the cut off is very much more abrupt as the fault and footwall of the vein make an angle of 45°.

In the southerly 200 feet the cut was carried back practically to the footwall but underground the stopes rarely penetrate the footwall calcite-quartz band. The principal exception is that for some distance down in the mine the ground was stoped to the intersection between the fault and footwall, which intersection rakes southward 70°. The south end of the middle or wulfenite-bearing band rakes southward slightly steeper and keeps from 20 to 40 feet from the other intersection. In this short belt there was a narrow seam of galena, now largely altered to carbonate, but the assays are low in lead, not often going over 5%. I refer to the assys on the map by B. W. W. McDougall, dated April 10, 1913. In the border section of the middle band the lead assays are relatively high, 8% to 18% being common. In places one can see the footwall of this band diverging from the fault going north and the strongly banded material in the angle has considerable wulfenite. In fact, it is clear to me that the apparent ore-shoots in the mine were the belts along which the wulfenite-bearing middle band remained under the fault. They represent the original primary ore band and had it not been cut by the fault there might have been continuous ore hundreds of feet in length. As it is, we have a mere fragment left under the fault. At the floor of the surface cut this was 250 feet in length and the footwall had the form of two shallow pitching troughs. Near the axes of these troughs some of the hanging wall calcite band remains and as the stopes below keep pretty close to the fault I suspected that some ore remains in the footwall of the stopes and could be developed by some short footwall crosscuts.

At the surface the fault dips 45° to 50° and the footwall of the vein 55°. The latter, however, must flatten, for on the 200-foot level (so-called because it is at the bottom of the 220-foot vertical shaft) the footwall appears in the drift for the larger part of 280 feet, leaving the vein only from 3 to 8 feet wide. This pinching has caused the fault to so encroach on the middle band or ore band as to reduce the ore to three relatively short shoots.

The footwall calcite-quartz band has thinned, else there wouldwould have been little chance for any ore remaining. This is a very intsructive level. At the south end we have an assay of 4.41% lead, beyond the edge of the molybdate-bearing band. Near the line along which the wulfenite appears there are lead assays in pillars as high as 18%. The stoped section is 60 feet long. Thence for about 70 feet the drift is in a calcite-quartz band and assays run about 1.5 to 2.5% lead. Very little wulfenite can be seen. This may be over the middle band, in which case a footwall

crosscut might develop ore. Then there is ground that was more or less stoped for about 40 feet, probably the belt along which the ore band comes to the fault. But the footwall appears and for 70 feet only the low-grade footwall band remains under the fault. Thence for 50 feet there was a well-defined ore-shoot that was stoped up to 6 feet wide. It was due to the fact that a depression in the footwall permitted a lens of the ore band to remain under the fault. Butthe footwall came up and for 60 feet we have only the footwall calcite-quartz band and low lead assays. At the end of this section the vein was nearly pinched out under the Red Cloud fault, but then a small fault that dips northward 85°, threw the vein down the width of the drift and immediately an ore-shoot appeared. It is 45 feet long, shows lead assays up to 20% and silver up to 165 ozs. per ton. This little shoot has been stoped down about 40 feet below the level and there is probably 2 feet ore in the bottom. It has been stoped a very short distance above the level and may have considerable milling grade ore in that direction, presuming that it has not been stoped since 1925.

Then the footwall comes up, assays become low and finally near the north face of the drift the footwall meets the red gouge and the vein is pinched out. What I see on this level is that the stretches of low assays are due to the fact that the fault so encroached on the vein that there was much less chance for the ore band to remain than there was near the surface. There is no evidence of the metal contents in the ore band decreasing with depth.

From the 200-foot level the main shaft is an incline that lies immediately under a red fault gouge. The little shoot of ore that it started on is soon pinched out. Thence the shaft is largely in the calcite footwall band with the molybdate band largely destroyed and fragmentary, and assays are in consequence low. The dip abruptly steepens and then settles down about 55°. There is a little stope on a narrow lens of the molybdate-bearing band, but little of it remains.

On the so-called 375 foot level the south drift was closed. Toward the north there is mainly the footwall calcite-quartz band and consequently low assays. There is a small remnant of the molybdate-bearing lens under the red gouge and breccia 20 to 40 feet north of the shaft. The drift finally becomes a raise. Caving has exposed the fact that above the red fault gouge there is white tuff and over it the main fault gouge. Over this there is monzonite, The suggestion is very strong that this is below the Tertiary tuffs. The presence of barren monzonite suggests to me that the vein is out in the hanging.

The remainder of the shaft to the water level is in the low-grade calcite footwall band which accounts for the low assays, only oneonly one going over 2% lead. My partner, Mr. Burch, said that the company that sank the last 10 feet of the shaft appealed by circular for more funds and stated that they had 5 feet of $60.00 ore in the bottom of the shaft. I was skeptical until I discovered two facts. A small hole through the red gouge in the pump station showed porous vein material that might have been ore. At about the water level the shaft was cut back several feet into the hanging-wall over the red gouge and may have exposed ore between it and the main gouge. So I was prepared to be not surprised if ore was found at the bottom of the shaft.

On my 1926 visit I found that the 500-foot level had been driven about 280 feet along the vein and four crosscuts driven to near the footwall. The latter showed the low-grade footwall band 5 to 30 feet wide. In the 502 drift going north there was an apparent ore shoot about 85 feet long, probably corresponding to the central shoot in the upper workings. South from the shaft there is a more or less continuous streak of what has the appearance of ore 130 feet to the face. A sample across 18 inches at the mouth of crosscut 503 assayed 21.50 ozs. silver and 4.08% lead. A sample across 5 feet at the mouth of crosscut 507 assayed 8.10 ozs. silver and 1.18% lead. In the last 20 feet there are narrow seams of practically pure lead carbonate and a few kernals of galena.

The rock over the Red Cloud fault on the 500-foot level is course barren monzonite to a point 115 feet north from the shaft. Thence to the north face the material has the appearance of vein matter, suggesting that the vein is coming in above the fault. The long hanging-wall crosscut 503, is in coarse monzonite, with a dike of dark green basic rock, to near the face where light-colored rather fine-grained rhyolite tuff comes in over it. At the contact there is a red fault gouge which dips north-northeast 25°. The beds of the tuff dip northeast 40°. It simply means a little slipping at the base of the tuff series.

It was considered desirable to sink the shaft into the sulphide zone if possible and then drive a long level along the vein and fault. Water had been standing in the last 5 feet of the shaft for years and might be considered to represent the so-called "permanent" water level in this locality. Pumping equipment was secured but as soon as work was started and one round blasted it was shown to be inadequate. The water came along the vein in strong streams. The pumping capacity was doubled and perhaps another 10 feet of sinking accomplished. Since selling out its extensive vanadium, tungsten and moybdenum mines at the end of the War under an agreement not to reenter the rare metal business for a number of years, the company had been looking for lead, silver and gold mines at considerable expense and little success and it was disinclined to install the plant necessary to cope with the strong flow of water in the Red Cloud shaft without some assurance that the shaft would develope ore. Accordingly a diamond-drill hole was bored from the hanging-wall quartz seam and thus did not reach the main vein. It was the "last straw" and the company quit.

From a study of the formations at the surface I made the guess that the throw on the Red Cloud fault has been about 500 feet. The portion of the vein east of the fault immediately under the tuffs represents a higher portion than that in the mine workings. The predominant strike on the Red Cloud fault gouge rake northward 65°. For this reason plenty of ground should be secured in a northward direction. Also in a southward direction for the vein may extend much beyond the present workings on it.

Now, as I have analyzed the showing on the Red Cloud claim, it ought to be clear that what is in sight may be a very small part of the ore that the mine under further development may be made to produce. Certainly a lot of good ore has been cut off and dragged down by the Red Cloud fault. It is not beyond reach. It probably largely remains below the zone of oxidation and should be easily concentrated lead-silver ore. It should make high-grade concentrate.

I took a specimen of galena for assay. It ran 75.4% lead and 237.3 ozs. silver per ton.

The vein is so strong where much of its width remains under the fault that it is likely that it runs a long distance under the Tertiary tuffs and may have many more shoots of ore than those in sight in the mine or may have continuous ore for hundreds of feet. Perhaps I am drawing too strongly on my imagination, but I can see a chance of developing one of the important lead-silver mines of the United States.

Respectfully submitted,

OHH:HRL

Signed Oscar H. Hershey