



CONTACT INFORMATION

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Arizona Department of Mines and Mineral Resources Mining Collection

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PRINTED: 01/13/2004

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: UNITED VERDE EXTENSION

ALTERNATE NAMES:

U.V.X. PROPERTY
EDITH AND AUDREY SHAFTS
LITTLE DAISY
VERDE EXPLORATION LTD PROP.
DAISY SHAFT
AUDREY SHAFT

YAVAPAI COUNTY MILS NUMBER: 552B

LOCATION: TOWNSHIP 16 N RANGE 2 E SECTION 23 QUARTER NW
LATITUDE: N 34DEG 45MIN 14SEC LONGITUDE: W 112DEG 06MIN 44SEC
TOPO MAP NAME: CLARKDALE - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

COPPER SULFIDE
COPPER OXIDE
GOLD
SILVER
ZINC SULFIDE

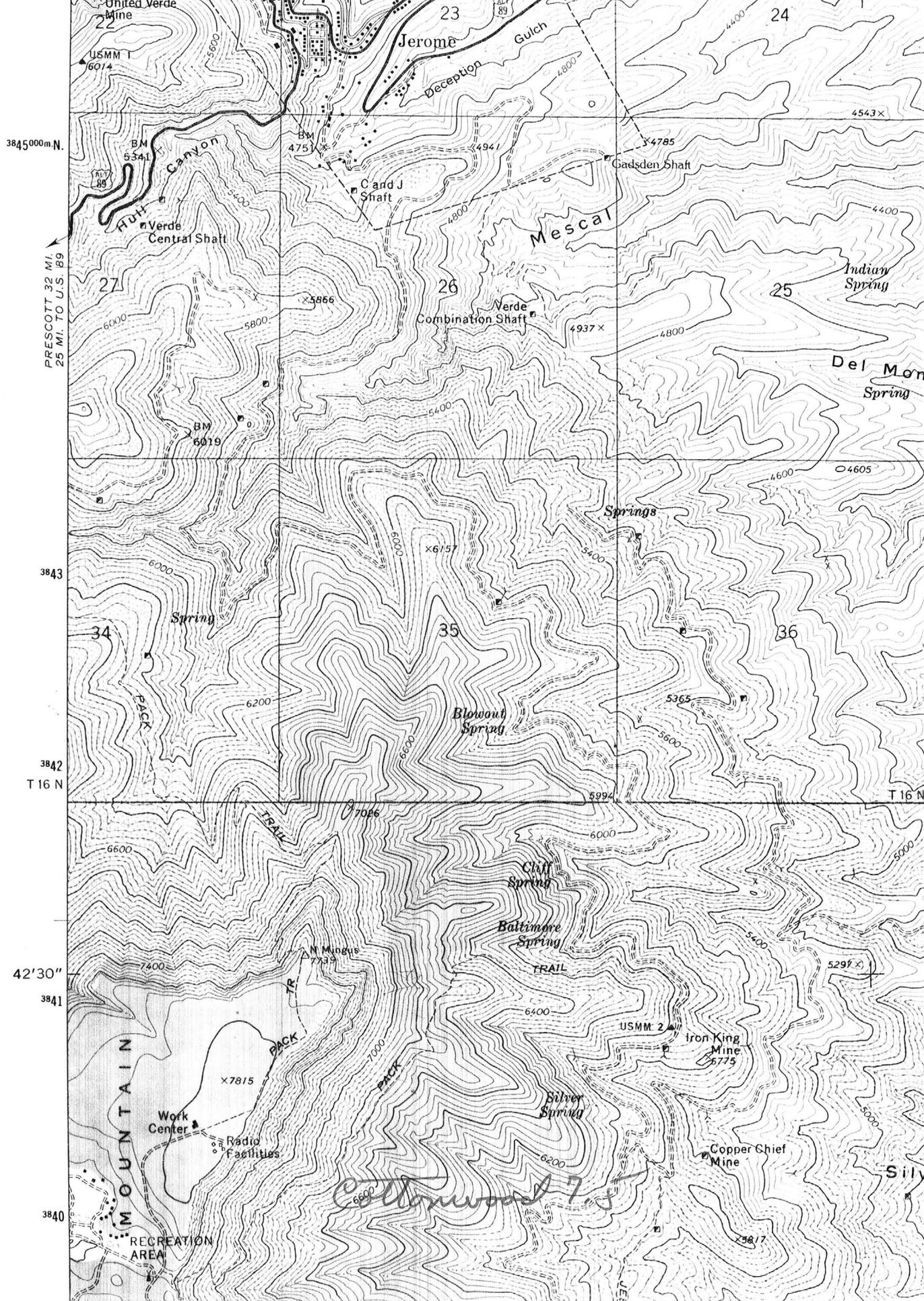
BIBLIOGRAPHY:

YAVAPAI MAGAZINE FEB 1918 P 4-6
ANDERSON, C.A. & S.C. CREESEY GEOL AND ORE DPT
OF JEROME AREA USGS PP 308 1958 P 135-145
LINDGREN, W. ORE DEPTS OF JEROME & BRADSHAW
MTN QUADS USGS BULL 782 1926 P 79-88
WEED, W.H. MINES HANDBK 1918 VOL 13 P 415-17
AGS DIGEST 16 P.330 AU DIST. AT UVX, WHITE, D
ADMMR UNITED VERDE EXTENSION FILE

1 SW 1/4
US DRAW

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

112°07'30" 34°45' 398000m E. 399 400 51 R 2

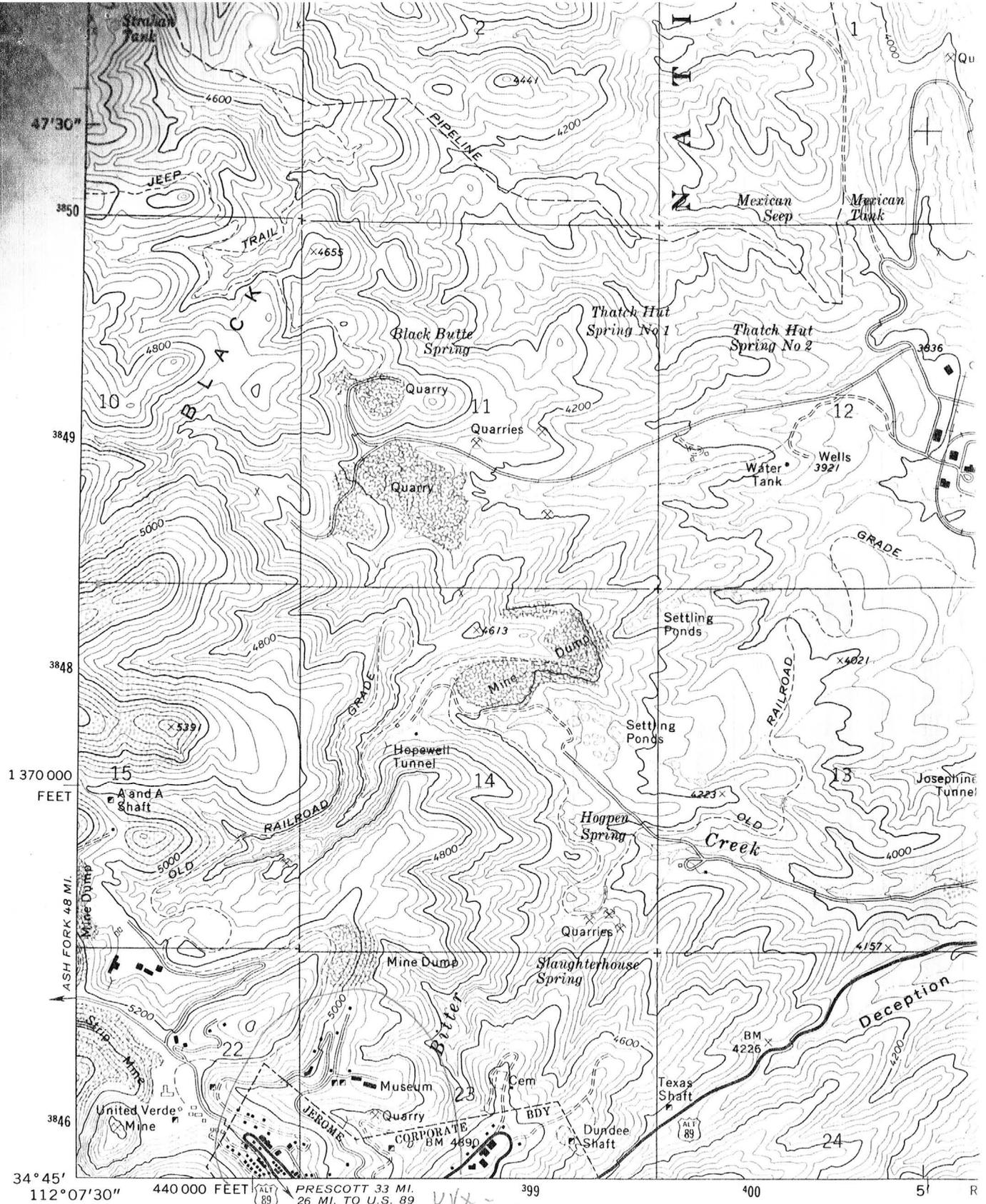


3845000m N.
PRESCOTT 32 MI
25 MI. TO U.S. 89

3843
3842
T 16 N

42'30"
3841
3840

Sily



(HICKEY MTN.)
3553 II NW

Mapped, edited, and published by the Geological Survey

Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial photographs taken 1972. Field checked 1973

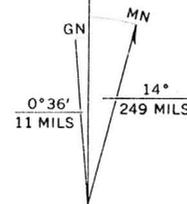
Projection and 10,000-foot grid ticks: Arizona coordinate system, central zone (transverse Mercator)
1000-metre Universal Transverse Mercator grid ticks, zone 12, shown in blue. 1927 North American datum

National Forest shown by proclamation boundary
Private ownership not shown within National Forest

Fine red dashed lines indicate selected fence lines

Where omitted, land lines have not been established

Darkdale 7.5



UTM GRID AND 1973 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

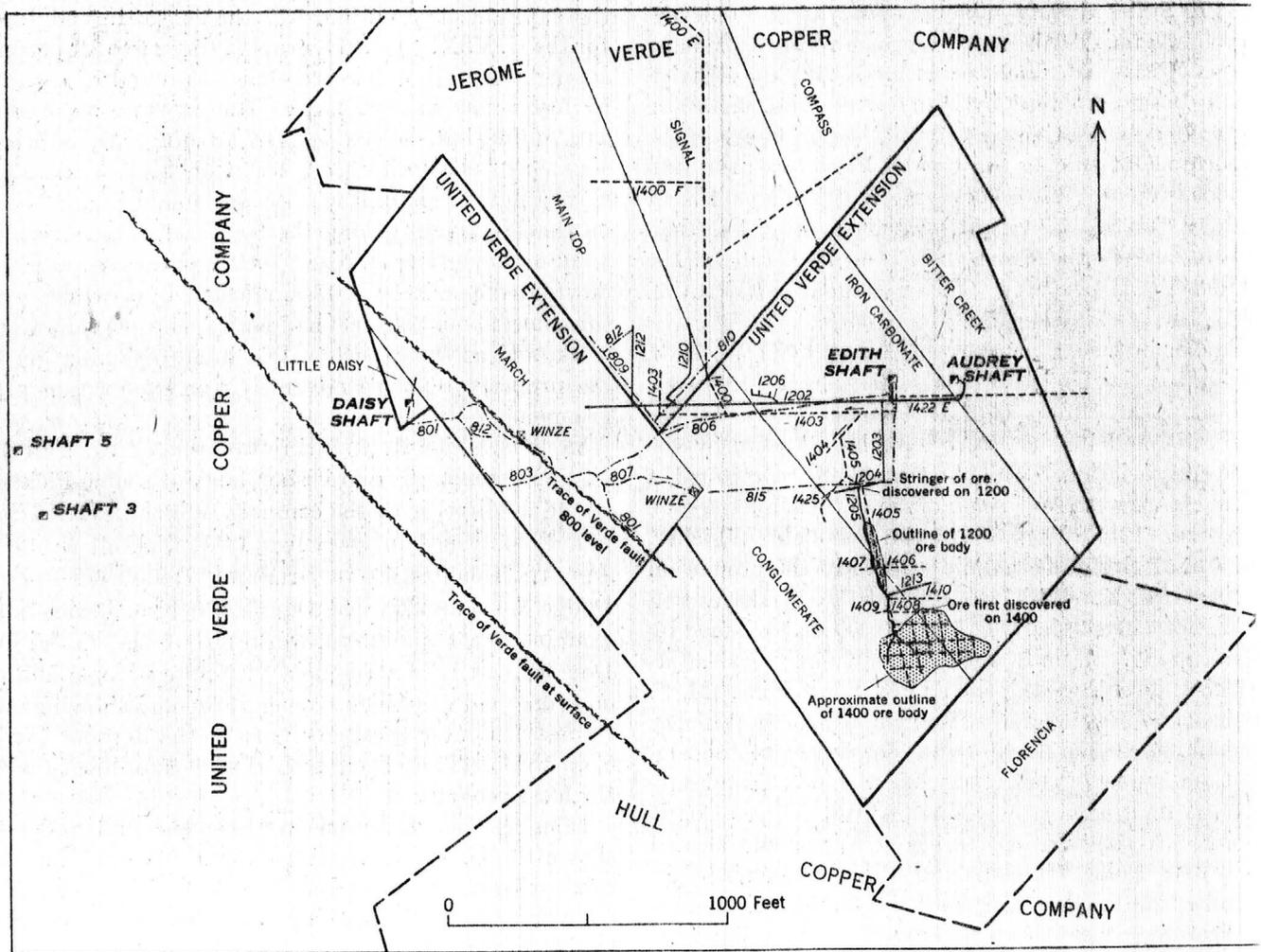


FIGURE 7.—Sketch map showing United Verde Extension property. Map of initial workings of the mine of the United Verde Extension Co. Numbers indicate the order in which the work was done. Modified from T. A. Rickard (1918, p. 15).

usgs PP 308

MAINE CLAIM

YAVAPAI COUNTY
VERDE DISTRICT

mils 552 B

see U.S.G.S. Bull. #782, p. 80 (map)

SEE: United Verde Extension

CONGLOMERATE CLAIM

YAVAPAI COUNTY
VERDE DISTRICT

mils 552 B

see U.S.G.S. BULL. #782 p. 80 (map)

SEE: United Verde Extension

IRON CARBONATE CLAIM

YAVAPAI COUNTY
VERDE DISTRICT

mils 552 B

see U.S.G.S. BULL. #782, p. 80 (MAP)

SEE: United Verde Extension

BITTER CREEK (map)

YAVAPAI COUNTY
VERDE DISTRICT

mils 552 B

see U.S.G.S. BULL. #782 p. 80

SEE: United Verde Extension

*United Verde Extension File
Yav.*

ABSTRACTED FROM ADMMR ACTIVE MINES DIRECTORY, 1992

A. F. BUDGE (MINING) LTD.

UVX T16N R2E Sec. 23

P.O. Box 938, Jerome, AZ 86331 - Phone 634-9034 - Employees: 13 - Located at Jerome - Underground mine producing gold and silver bearing flux for copper smelter.

General Manager Ronald R. Short
Mine Superintendent Pete Flores
Mine Geologist John McKenny
Foreman Cundo Jauregui

ABSTRACTED FROM ADMMR ACTIVE MINES DIRECTORY, 1991

A. F. BUDGE (MINING) LTD.

UVX T16N R2E Sec. 23

P.O. Box 938, Jerome, AZ 86331 - Phone 634-9034 - Employees: 16 -
Located at Jerome - Underground mine producing gold and silver bearing
flux for copper smelter.

General Manager Ronald R.
Short
Mine Superintendent Pete
Flores
Mine Geologist John McKenny
Foreman.....Cundo
Jauregui

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Foreman.....	Cundo Jauregui

ABSTRACTED FROM ADMMR ACTIVE MINES DIRECTORY, 1989

A. F. BUDGE (MINING) LTD.

UVX

T16N R2E Sec. 23

P.O. Box 938, Jerome 86331 - Phone 634-9034 - Employees 16 - Located at Jerome - Underground mine producing gold and silver bearing flux for copper smelter.

General Manager Ronald R. Short
Mine Superintendent Pete Flores
Mine Geologist John McKenny

Vulture

T6N R6W Sec. 36

P.O. Box 20878, Wickenburg 85358 - Phone 376-9894 - Employees 5 - Located 12 miles south of Wickenburg - Processing of gold tailings by agglomeration, cyanide heap leaching - Merrill Crowe recovery.

Production Manager Dale H. Allen

ABSTRACTED FROM ADMMR ACTIVE MINES DIRECTORY, 1988

A. F. BUDGE (MINING) LTD.

UVX

T16N R2E Sec. 23

P.O. Box 938, Jerome 86331 - Phone 634-9034 - Employees 13 - Located at Jerome - Underground gold and silver mine under development.

General Manager Ronald R. Short
Mine Superintendent Pete Flores
Mine Geologist John McKenny

Vulture

T6N R6W Sec. 36

P.O. Box 20878, Wickenburg 85358 - Phone 376-9894 - Employees 6 - Located 12 miles south of Wickenburg - Processing of gold tailings by agglomeration, cyanide heap leaching - Merrill Crowe recovery - 1000 TPD recovery.

Production Manager Dale H. Allen

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA

MM-K 428 Azurite & malachite

Jerome

Yavapai County

Little Daisy Mine

MILS # 552 B

6 -AKA's

United Verde Ext. (pic)

~~MM-9833 Azurite~~

~~CALIFORNIA~~

~~pt. 381~~



UP 1750

AS EXEMPTED

74344183
Dave
#10150300

Office of State Mine Inspector

STATE MINE INSPECTOR

705 West Wing, Capitol Building
Phoenix, Arizona 85007
602-255-5971

SEP 28 1987

NOTICE TO ARIZONA STATE MINE INSPECTOR

In compliance with Arizona Revised Statute Section 27-303*, we are submitting this written notice to the Arizona State Mine Inspector (705 West Wing, Capitol Building, Phoenix, Arizona 85007) of our intent to start/stop (please circle one) a mining operation.

COMPANY NAME LONGYEAR COMPANY
S/W Zone
CHIEF OFFICER Allen Krause, Mgr. Contract Drilling Division
COMPANY ADDRESS 7773 W. Seldon Lane, Peoria, Arizona 85345
COMPANY TELEPHONE NUMBER (602) 486-1881

MINE OR PLANT NAME UVX Mine

MINE OR PLANT LOCATION (including county and nearest town, as well as directions for locating by vehicle)

Yapapaie County, Jerome, Arizona

TYPE OF OPERATION Core drilling PRINCIPAL PRODUCT Ore

STARTING DATE 9-21-87 CLOSING DATE Unknown

DURATION OF OPERATION Unknown

PERSON SENDING THIS NOTICE Allen Krause

TITLE OF PERSON SENDING THIS NOTICE Mgr. S/W. Zone, Contract Drilling Division

DATE NOTICE SENT TO STATE MINE INSPECTOR 9-24-87

*A.R.S. Section 27-303 NOTIFICATION TO INSPECTOR OF BEGINNING OR SUSPENDING OPERATIONS: When mining operations are commenced in any mine or when operations therein are permanently suspended, the operator shall give written notice to the inspector at his office prior to commencement or suspension of operations.

Arizona Department of Mines and Mineral Resources

1502 West Washington, Phoenix, AZ 85007 Phone (602) 255-3795

Toll Free in Arizona 1-800-446-4259 FAX (602) 255-3777

May 09, 1995

John McDonald
Jerome Town Hall
PO Box 335
JEROME, AZ 86331

Dear Mr. McDonald:

Thank you for an opportunity to review the Auburn Shaft Headframe of the Little Daisy Mine. It is a magnificent structure and worthy of preservation. This is my second visit to the site and I have reaffirmed some of my earlier conclusions and can add others. I now see preservation and restoration in two separate stages. For a ten year preservation attempt I would recommend at least the following:

1. Immediately, replumb the foreframe and brace it into place. Some of the vertical members are well over a foot out of plumb. If left undone this will rapidly cause a failure of this entire foreframe.
2. Immediately, replace, rebolt and regusset the horizontal and X-brace members of the north "A" frame that have fallen out. Although, the north back stay has had some dry rot, replacing these members will add years to the life of the structure. Retighten all bolts, replace those that do not tighten or have fallen out and insure that they are serving the function for which they were designed. It may be necessary to install new gussets in the some of the joints. The importance of these members to the integrity of the structure can be seen in the attached illustrations from Staley, W. W., Mine Plant Design, McGraw-Hill, New York, 1936, p. 102 & 103. These members carry horizontal windloads as well as vertical dead load stresses from the weight of the structure. I estimate the total dead load from the wooden structure alone to be in the range of 12 Tons. Wind and dead loads are the only ones that need to be considered as long as the frame is not used for hoisting ore or equipment. A more typical design for a steel frame from the same period is shown by Ketchem, Milo S., CE, The Design of Mine Structures, McGraw-Hill, New York, 1912, Fig. 90. This frame shows many of the same design criteria as the frame under consideration before the post 1914 modification.
3. Remove all of the old two inch members that attached stairs, metal decking, wind breaks etc. This light weight material prevents soaking by a wood preservative such as linseed oil, log oil or deck sealant. Once the structure has been exposed and tightened it should be given a heavy spray soaking of one or more of these preservatives. This work will require a bucket truck or an experienced pole climber.
4. In the interest of safety, fence all shaft openings with a 10 foot high heavy duty chain link fence. Top the fence with three barbed wire security strands. Cover all shaft openings with 4x6 wooden decking so that nothing can fall into the shaft. Anyone falling down the shaft will be dead before they hit the bottom. This is perceived as the greatest public liability for mining operations.

It may be necessary to provide an entrance for the rescue cage if the mine is ever worked. This may be a requirement of the owner or the result of negotiations with the operator.

To restore the structure to its original condition requires a definition of when it is considered original. The structure was originally designed for sinking a shaft. For this purpose it needed only a wooden fore frame and some way of dumping the sinking buckets. When it was pressed into service as a mine access shaft and production shaft it need to be redesigned to handle the automated skips and other large, heavy pieces of production equipment. The steel gallows frame was installed at that time.

In placing the gallows the X-bracing on the front and back frames were cut and steel members were inserted, horizontally, to fall above the gallows frame. Once these members were placed the bottom horizontal members were removed. The hitches for these members can still be seen in the back stays. I suspect that these members were cut mid-span when they were removed and that the steel, lattice - kickers were added to the foreframe at that time. They would provide lateral stability for the structure. The gallows frame was then placed inside and framed into the structure.

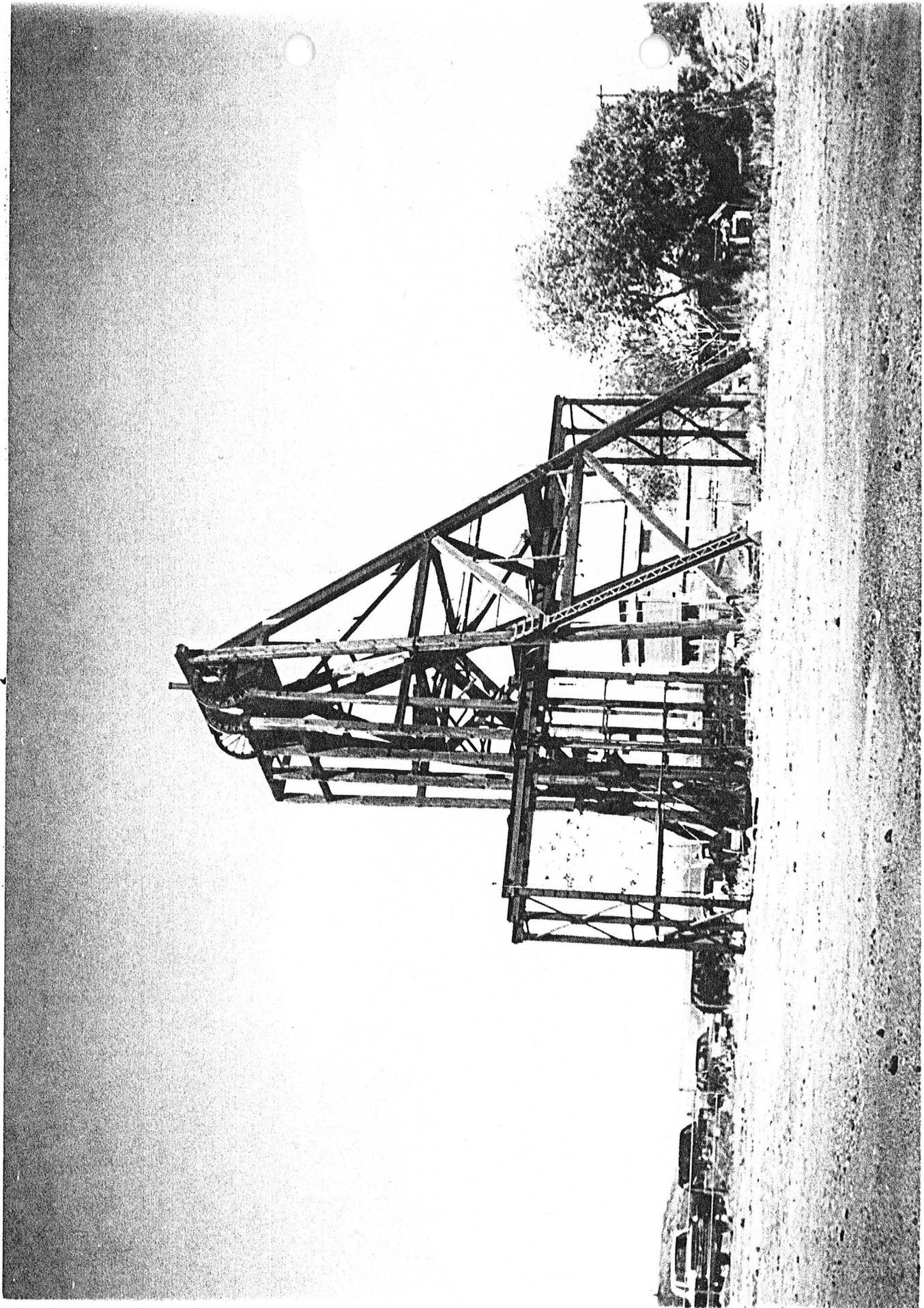
The question is should this steel frame be removed to bring the structure to its original design or should it be left in to show how the structure was later adapted for production? If the metal structure is removed it could be used to reinforce the structure by adding these steel sections to the back stays and foreframe members.

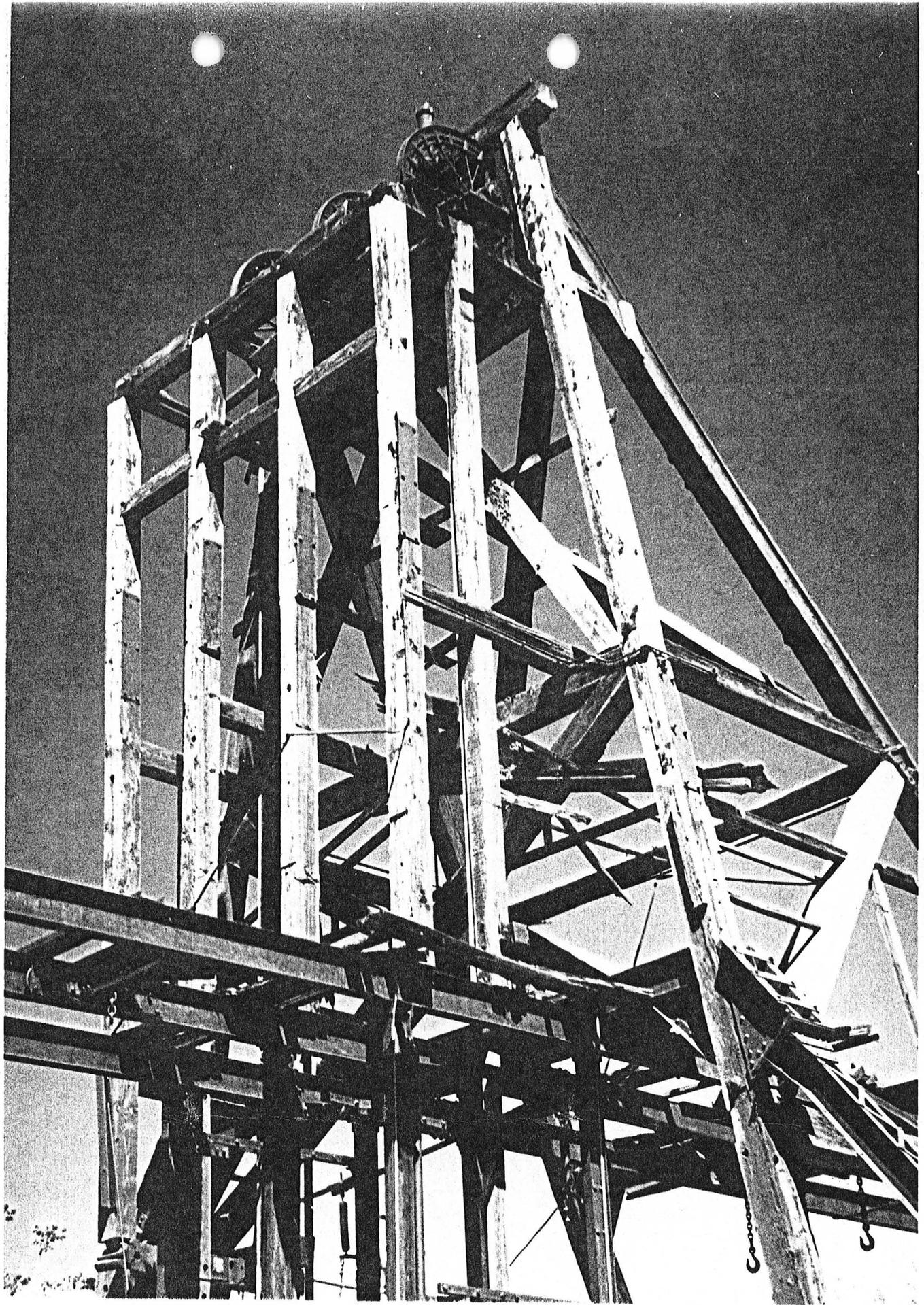
Headframe design is a highly technical development that evolved over centuries of practical mining. Every member of the structure has undergone extensive analysis and the expected stresses and strains identified and provided for. The frame, the beam and the bridge survive from the earliest cultures.

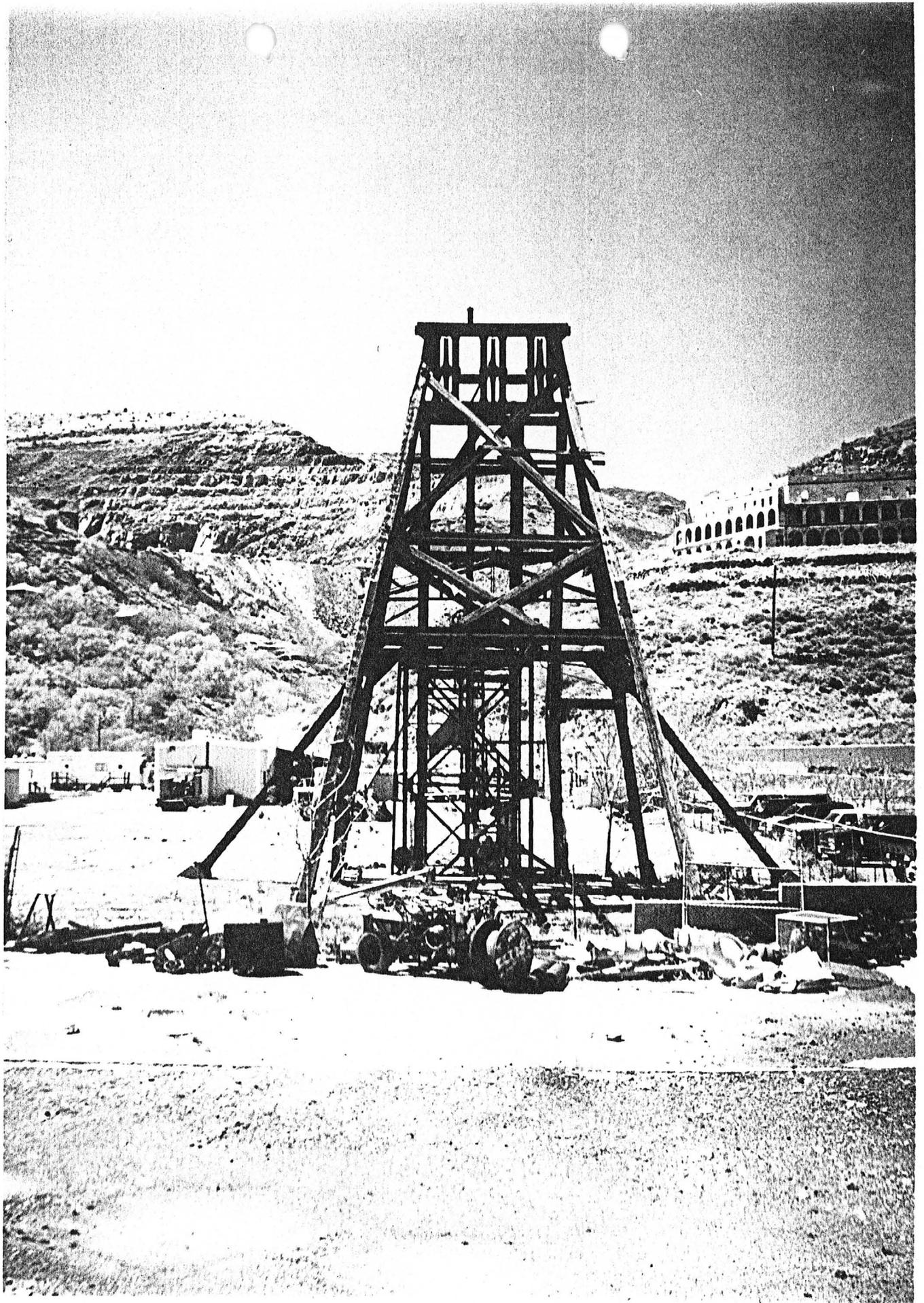
I hope that these suggestions will help you in preserving this important landmark of the greatness and importance of Jerome's contribution to the harnessing of electricity throughout the world. I am enclosing Xerox blow ups of the frame.

Sincerely,

H. Mason Coggin,
Director







ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

VERBAL INFORMATION SUMMARY

1. Mine file: UVX
2. Mine name if different from above:
3. County: Yavapai
4. Information from: Carol O'Brien
Company: A.F. Budge (Mining) Ltd.
Address: P.O. Box 938
Jerome, AZ 86331
Phone: 634-9034
5. Summary of information received, comments, etc.:

Underground development of the UVX continues with 13 people currently employed. General manager is Ron Short, mine superintendent is Pete Flores and mine geologist is John McKenny. Although plus ten thousand tons of plus $\frac{1}{2}$ oz Au ore has been brought to the surface and stockpiled, the actual method of recovery has yet to be determined. The 2 methods receiving most serious attention are shipping as silica flux to a copper smelter or agitation leaching at a custom facility such as the mill at the Gladstone McCabe Mine.

Date: October 21, 1988

Nyal J. Niemuth, Mining Engineer

CAROLE A. O'BRIEN

Arizona Resources, Inc.
4300 North Miller Road
Suite 121
Scottsdale, Arizona 85251

8113 East Palm Lane
Scottsdale, Arizona 85257

(602) 945-4630

(602) 949-5015

MINING AND FINANCIAL CO-ORDINATOR

- Comprehensive experience in all phases of mineral exploration from prospecting and reconnaissance investigations to target selection, evaluation and pre-development activities for base and precious metals.
- Broad knowledge of mining and processing techniques, including current leaching technology for precious metals and copper; mineral economics, including cash flow analyses; geostatistical applications; legal and environmental issues.
- Excellent skills in accounting, data compilation, editing and report writing.
- With the use of a Compaq 386/25E computer, have proficiently utilized Word Perfect for correspondence and report writing; Lotus 1-2-3 for mine planning, scheduling, production statistics and accounting. Have taken DOS Introduction and Intermediate courses to supplement knowledge of computer applications.

1987 to present

A.F. Budge (Mining) Limited
Arizona Resources, Inc.
Scottsdale, Arizona

As Mining and Financial Coordinator, coordinate the daily activities involved in the exploration, development and production of properties in the western United States.

UVX [Assisted in the operations of the company's underground gold mine in Jerome, Arizona. Production from 1989 through 1993 totalled approximately 78,000 tons of siliceous fluxing ores which were shipped to Phelps Dodge's Hidalgo Smelter at Playas, New Mexico. Total revenues in excess of \$8.8 million were realized from the production of 24,000 ounces of gold and 224,000 ounces of silver.]

As part of the management team, assisted in the ongoing evaluation, contract negotiations and acquisition of properties throughout the western United States, including a copper oxide property in Arizona and precious metal projects in Nevada, Colorado and Montana.

UNITED VERDE EXTENSION

YAVAPAI COUNTY

NJN WR 3/4/88: Don White (card) geologist with A. F. Budge Mining Ltd (card) reported that he continues to direct the drilling at the UVX (file) Yavapai County for A. F. Budge. He reports that Joe Fernandez is no longer with the company and that they are seeking a new mining engineer for their project, preferably a multitalented one, for their underground mine.

KAP WR 4/22/88: Discussed silica flux use and requirements at copper smelters with Don White. He is gathering information in preparation to mining and shipping siliceous gold-silver ore from the United Verde Extension Mine (file) Yavapai County. They have what he refers to as "easily mineable" reserves of 100,000 tons of ore which averages 0.25 tr oz Au/ton and 3. oz Ag/ton. Their production rate would be limited by their hoist capacity of 100 tons per day.

NJN WR 5/27/88: Pat O'Hara (card) reported that A. F. Budge Mining Limited (card) has announced that development is about to begin at the United Verde Extension (file) Yavapai County.

NJN WR 7/8/88: Carol O'Brien (card) reported that she has hired a production manager, Ron Short, for the United Verde Extension (file) Yavapai County. Although no official or announced production decision has been made yet, they are currently driving some drifts while continuing to conduct long-hole drilling. Ms O'Brien estimates that they have spent in excess of \$400,000 with Longyear on underground drilling at the mine to date.

NJN WR 3/13/87: Don White (card) reports that they continue to do underground cleanup at the United Verde Extension (file) Yavapai County and have drilled around fault zones to facilitate an underground drilling program which has been producing encouraging results.

MG WR 4/20/87: Mr. Howard King, consulting engineer, reports that he will help acquire a skip for the Edith shaft at the United Verde Extension (file) Yavapai County. It would be used initially to haul waste out of the mine. He reports that DMEA (c) is still encouraged by its drilling results at the mine.

NJN WR 2/27/87: Carole O'Brien of DMEA Ltd, reported that phone numbers at the United Verde Extension (file) Yavapai County, for the hoist office is 634-9034 and the engineering office is 634-8842. Their exploration program there currently has 9 full time employees. If they identify sufficient reserve, the portion that is of flux quality will probably be sent to the smelters. To avoid noise and dust problems in the State park, they would probably establish a crushing plant underground. The plant would make 2 products, a -2" for the reverberatory furnace and a -10" for the converter furnace.

NJN WR 3/27/87

At the invitation of Don White, project geologist, I visited the United Verde Extension (file) Yavapai County gold exploration project. As an excellent discussion of the geology and present work being done is included in AGS Vol 16, I will not report all of the details here, but will mention some notes on their project and new data. Simplifying the geologic interpretations is recognition that rocks on the limbs of the chert formation mapped as Grape Vine Gulch Schist are actually altered diorite. This eliminates the need for some complicated gold geometry and also allowing description of some units as xenoliths. For anyone interested in seeing the texture indicating the depositional environment of a submarine exhalative system, the skeletonized core holes provide good insight. More recently, the drilling has encountered more favorable intercepts in both widths and grade and Mr. White appears confident that they will develop a mineable reserve.

NJN WR 8/7/87: Don White (card) reported that A. F. Budge has identified a second gold ore body at the UVX (file) Yavapai County which has rough dimensions of 300 X 60 X 40'. Budge currently has 2 drill stations under development and has put in a 100 ton ore pocket and skip on the Edith shaft.

UNITED VERDE EXTENSION

YAVAPAI COUNTY

NJN WR 6/27/86: It was reported that DMEA (c) is drifting underground at the United Verde Extension (f) Yavapai County. They have plans to do more underground drilling from the workings thus developed.

KAP WR 6/27/86: It has been reported that Don White is again doing exploration work for DMEA Ltd at the UVX (United Verde Extension - file) Yavapai county. Underground diamond drilling is reportedly planned.

NJN WR 7/11/86: Made a property file, United Verde Extension, from the former Verde Exploration Ltd file, Yavapai County. Created MILS listings for the Edith Shaft Audry Shaft and Little Daisy as AKA's for the new United Verde Extension.

NJN WR 12/12/86: Don White (c) visited and reported that DMEA (c) will be drilling at the United Verde Extension (file) Yavapai County starting in January 1987. DMEA is currently, with its own staff, driving a drift on the 850' level to establish a drill station. The drill target will be areas similar to the Gold Stope. Mr. White reported that he now recognizes 3 types of ore at the United Verde Extension. They are: a massive sulfide, a silica copper ore which contains less than 30% sulfides, and a silica gold ore. The drill target is the silica gold ore which sits stratigraphically on top of the silica copper ore.

NJN WR 1/16/87: Don White (c) reported during a program given to the Maricopa Section, AIME, that the actual leasor of the United Verde Extension (file) Yavapai County is A.J. Budge (Mining) Limited, 7340 E. Shoeman Lane, Suite 111 "B" (E), Scottsdale, Arizona 85251, 945-4630. A. F. Budge was DMEA Ltd.'s client. Mr. White also reported that Ben Dickerson's death will not affect the continuing exploration program. In discussing the results of exploration at the UVX, several interesting relationships were revealed. Among them was the repetition of the chert breccia units which thin in a younging direction. Also, the gold grade relates to thickness, with higher grades in thicker units. Targets identified so far are in the order of 50,000 ton ore bodies, grading from .25 oz/ton Au. Drilling to be conducted in some new areas will hopefully encounter thicker units with accompanying higher grades. It is not yet fully understood why the chert units are repeated in this fashion.

Verde Syndicate were reported to be drilling near the Verde fault south of Jerome.
FTJ Quarterly Report 1-13-71

The Verde Syndicate continued drilling south of Jerome. FTJ QR 4-5-71

MG WR 1/8/82: According to Rich Lundin, Phelps Dodge has leased 80 acres of the United Verde Extension property from Verde Exploration Ltd., Jerome, phone 634-8842. Apparently Phelps Dodge plans to rehabilitate the Edith shaft to the 1300 level, the same level the Josephone tunnel is on. One objective is to look at the "gold stope", an important producer of gold in the mine during its last year of operation. Lundin reports this stope average about 1 oz Au/ton and Phelps Dodge wants to see if similar occurrences are on its own property.

MG WR 1/8/82: Rich Lundin reports that Mr. Paul Handverger is Vice President (?) of Verde Exploration Ltd. Handverger's address is 13 Old Jerome Highway Jerome, AZ 86331, phone 634-8466.

NJN WR 9/27/85: Don White (c) reports DMEA Ltd. (c) is busy drilling underground at the United Verde Extension (Verde Exploration Ltd. (f) Yavapai Co. and invited the department's engineers to visit the property.

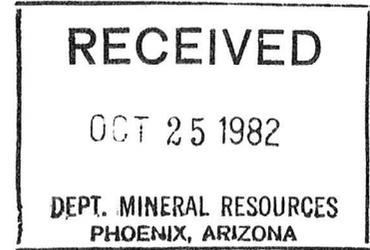
NJN WR 3/21/86: Paul Handverger (c) reported that to his knowledge only 80 exploration drill holes have been drilled in the Verde (Jerome) mining district. With detailed mapping recognizing more feeder vents the district is ripe for a new discovery. Verde Exploration (f) Yavapai Co currently has their property (or tries to have it) leased to 4 different exploration companies. This maximizes income as well as the possibility of a discovery. Some of the companies to be active there recently are Coco Mines Ltd. (c) and DMEA has continued underground exploration of the UVX's gold stope. Previous production from the gold stope exceeded 35,000 tons with a .5 oz Au/ton cut off grade.



United States Department of the Interior

GEOLOGICAL SURVEY
BOX 25046 M.S. 905
DENVER FEDERAL CENTER
DENVER, COLORADO 80225

IN REPLY REFER TO:



October 21, 1982

Janice Coggin
Department of Mineral Resources
Mineral Resource Building, Fairgrounds
Phoenix, Arizona 85007

Dear Janice,

I received the Selenium report by Storms on the United Verde and other properties. It looks like the data in it will be invaluable. The Bureau of Mines still can not locate the report and have no idea why it was done or why they can not find it. Oh, well.

From your enclosed note I assume there are some level maps that you did not send. However, I have all the level maps that the report has data for. You sent me:

UV 700 level
1200 level
3000 level
4500 level
3000 level - HAYNES

No - 700 level
Is there really a UV 7000 level plan? I didn't think that the mine went that deep. Do you mean another 700 level plan? If the three level maps that I have questioned on the xerox are just duplicates of what you have sent me, don't bother with anything, as I have the entire report and data that I need now.

Again thank you very much for the information. I am talking to P.D. now in an attempt to release the production data, year by year, and get more of the drill core assays and gold-silver information.

Sincerely,

Ed DeWitt

have { United Verde 4500' level
 United Verde 3000' level
 Haynes Area
 are these
 duplicates of
 what
 you
 have
 sent
 me? { United Verde 7000' level
 United Verde 1200' level
 United Verde 4500' level

These^{above} are the drafts
 before the report
 was written.

If you feel you
 want more, please
 let me know. We are
 looking forward to receiving
 your report - James



Nothing is as easy
 as it looks.
 everything takes longer than you expect.
 And if anything can go wrong — it will,
 at the worst possible moment.

Date 10/15/82

Ed:
 I did not send
 to you from the
 Selenium report:

1. Letters
2. More information
 on Equator-Copper
 chief.

have { United Verde 700 level
 United Verde 1200 level
 United Verde 3000 level

CH/WR 4/23/79 - Paul Handverger, Registered Consulting Engineer, 13 Old Jerome Highway, Clarkdale, Az. 86324, Phone: 634-8466. He wants to sample the lower levels of the Daisy shaft of the Verde EX Ltd. property near Jerome. Needs some experienced shaft repairmen to work on the deeper portion of the shaft where some of the wallplates have failed. Suggested he contact Ed Jones, Foreman of the Ida shaft repair work on the Tom Reed Jr. mine near Oatman. This property shut down very recently for some exploratory diamond drilling. 5/3/79 a.p.

NJN 7/30/82: Chuck Bentzen of Reuter Equipment reported that Phelps Dodge's small mine division has halted work at the United Verde Extension, Yavapai County.

MHG WR 8/20/82: Phelps Dodge has reportedly ceased working in the Edith shaft on the United Extension property in Yavapai County.

MG WR 12/24/82: Have heard that Phelps Dodge is again working in the Edith Shaft on the United Verde Extension Mine, Yavapai County.

MG WR 8/9/85: For the record, the head frame at the C.F. & I. shaft at the Glove mine (Santa Cruz Co) was purchased by Phelps Dodge and installed at the Edith shaft on the United Verde Extension property (Yavapai Co.) for PD's exploration program in 1982.

NJN WR 3/21/86: It was reported that Phelps Dodge is going to start doing some new geophysical work to be followed by drilling on the north portion of their United Verde (f) property, Yavapai Co. It was also reported that there is 13 million tons of zinc ore grade material left in the United Verde massive sulfide deposit. This was not mined earlier and now would be difficult to mine due to bad ground.

CJH WR 5/30/86: Visitor: Howard G. King, Consultant, Mining and Civil Engineering and Management, 7200 N. Leonardo Da Vinci, Tucson, Arizona 85704, phone 297-2053. He is retained by DMEA (Ben Dickerson) to do a feasibility study on installing a skip and mancase in the Edith Shaft of the United Verde Mine at Jerome, Az. Supplied him with a copy of the Az Mining Code. They want to mine about 50 t/d.

VERDE EXPLORATION, LTD.

YAVAPAI COUNTY

Visited Verde Exploration drill rig about 6 miles due west of Cottonwood. Joy Co. is the drilling contractor.

FTJ WR 3/18/66

Paul Handverger, Geologist, Box 74, Clarkdale.

9/19/67

Verde Exploration is still drilling east of Cottonwood and two other drills are operating - (rumored to be Phelps Dodge).

FTJ WR 9/22/67

Told in Cottonwood that drilling along Verde Fault continued. Paul Handverger living in Cottonwood is in charge. Phone 634-5650.

FTJ WR 3/22/68

The Copper Range Company has announced it has an agreement with Verde Exploration, Ltd., permitting Copper Range to conduct a modest exploration program on the northern part of the properties of Verde in the Jerome Mining District.

Pay Dirt 11/68

According to a party in Cottonwood, Verde Syndicate still drilling along Verde Fault.

FTJ WR 11/22/68

See: Min. Cong. Journal Dec. 1968 p. 11

Mr. Paul Handverger in office and stated there has been no drilling at this property since 1967. They drilled 2 holes only.

2/27/69

#-22-69 Copper Range reported drilling L.P.

Talked with L. D. Jackson - Verde Syndicate drilling above Jerome near top of Mountain - no results available. FTJ WR 9/19/69

Drove to near Copper Chief mine to Verdi Syndicate old drill siet - examined cuttings, but nothing found. They are drilling south of Allen Springs according to Mr. Jackson. WR FTJ 9-18-70

Mr. Leonard Jackson said that Verde Exploration was drilling at various locations along Mingus Mountain. GW WR 11/20/70

CJH WR 6/17/83: Canudo Sena, Deputy State Mine Inspector reports that the Phelps Dodge crew working on the Edith Mine, Jerome District, is being transferred to the Gold Prince Mine, T14S R27E, Dos Cabezas District Cochise County where retimbering is in progress. The open workings will be sampled.

KAP WR 5/4/84: Paul Handverger, Clarkdale resident and manager of the UVX Corporation's holdings at Jerome reported that the Edith Shaft exploration project is on standby awaiting additional funding or interest. He went on to say that Phelps Dodge Small Mines Division drilled two "good intercepts" on the property.

EDITH & AUDREY SHAFTS

CARD 2

NJN WR 4/26/85: Don White (c) reports that DMEA Ltd (c) will be doing exploration at the Edith Shaft (c) Yavapai County. Apparently PD after setting up a headframe and the rehabilitating the Edith Shaft only stationed 2 drill holes from it. The two holes were only deviated by 6°.

Hamm



STATE MINE INSPECTOR

AUG 15 1985

Office of State Mine Inspector

705 West Wing, Capitol Building
Phoenix, Arizona 85007
602-255-5971

85 43 4800

NOTICE TO ARIZONA STATE MINE INSPECTOR

In compliance with Arizona Revised Statute Section 27-303*, we are submitting this written notice to the Arizona State Mine Inspector (705 West Wing, Capitol Building, Phoenix, Arizona 85007) of our intent to start/stop (please circle one) a mining operation.

COMPANY NAME Longyear Company

CHIEF OFFICER Russell Beddow

COMPANY ADDRESS 308 E. Pima St., Phoenix, Az. 85004

COMPANY TELEPHONE NUMBER (602) 258-6543

MINE OR PLANT NAME U.V.X. Mine, Jerome, Arizona (Underground)

MINE OR PLANT LOCATION (including county and nearest town, as well as directions for locating by vehicle)

TYPE OF OPERATION Exploration PRINCIPAL PRODUCT Unknown

STARTING DATE 8-12-85 CLOSING DATE Unknown

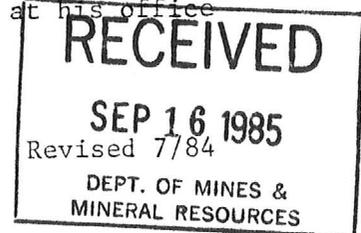
DURATION OF OPERATION Unknown

PERSON SENDING THIS NOTICE Russell Beddow

TITLE OF PERSON SENDING THIS NOTICE Manager, Southwestern Zone

DATE NOTICE SENT TO STATE MINE INSPECTOR 8-14-85

*A.R.S. Section 27-303 NOTIFICATION TO INSPECTOR OF BEGINNING OR SUSPENDING OPERATIONS: When mining operations are commenced in any mine or when operations therein are permanently suspended, the operator shall give written notice to the inspector at his office prior to commencement or suspension of operations.



BASE-METAL AND PRECIOUS-METAL DISTRIBUTION
AT THE UNITED VERDE EXTENSION MINE,
JEROME, ARIZONA

Abstract of a talk to the AZ Conf. of AIME, Tucson, Dec. 8, 1986

Don White, Geologist, C.P.G.
521 East Willis St.
Prescott, AZ 86301
602-778-3140

The United Verde Extension mine operated from 1915 through 1938, principally as a high grade copper mine. Production totalled about 3.9 million tons grading 10.2% Cu, .04 oz/t Au, and 1.7 oz/t Ag. Some 80% of that was from one main supergene-enriched, volcanogenic, massive sulfide body which averaged 15% Cu and about .03 oz/t Au. That was the high-Cu, low Au, low SiO₂ "sulfide ore." Another ore type averaged about 5% Cu with intermediate gold (.06 oz/t) and silica (55%) values. This so-called "silica ore" occurred in a series of deposits above, flanking, and along strike from the main sulfide orebody. The final ore type has been called "gold-only" and contains less than 200 ppm of any base metals, but is an auriferous siliceous rock averaging 0.4 oz/t Au and 90% SiO₂. Thus there is a tri-modal distribution of ore types by silica percentage with a strong differentiation of Cu (with Fe, S) in the low-silica sulfide ore, both Cu and Au (plus the highest Ag and alumina grades) in an intermediate silica ore, and high gold (virtually no base metals) in the very siliceous gold-only ore. It is the latter that is the subject of ongoing underground exploration.

Gold-only ores are meta-chert-hosted. The chert bodies form wedges about 1,000 feet long off the north flank of the massive base metal sulfide body. The cherts display a great variety of hydrothermal fracturing, sedimentary brecciation, slumping, and oxidation. Slope geometries in one gold-only deposit clearly mimic small vent cone shapes. These cones were likely smaller, peripheral vents to the main sulfide vent, and were active after the bulk of the sulfide deposition. A clear grade zonation is also exhibited, with highest gold in the cores of the vents and near the stratigraphic footwall. The upper portions of the chert stratigraphy include thin, massive, hematite beds, and alternating, cyclic, chert breccias graded by clast size and topped by fine laminated, very fine grained, quartz-hematite-goethite. Double-graded bedding is evident, as is soft sediment deformation. Oxidation appears to be hypogene.

AIME
Don White
Page 2

A very high-energy oxidizing environment including submarine volcanism and turbidites is indicated.

Gold occurs in the native state and as electrum and is associated with hematite and quartz veinlets. Hematite and coarse grained quartz are seen in thin section to fill fractures and vugs both within clasts and within matrix of the chert breccias. Hematite has also replaced carbonate. Limonite overgrowths are common and supergene gold enrichment must be suspected but has not yet been ascertained. Gold is associated with a trace metal assemblage of Ag, As, Sb, Bi, Sn, Mo, V and base metals. All except silver trail off across stratigraphy just as fast or faster than the gold.

Hydrothermal alteration is dominantly feldspar destruction by argillization of the immediate hanging wall and footwall volcanic rocks. A more distant hanging wall carbonate impregnation and veining up to three hundred feet above the cherts indicates either ongoing hydrothermal activity while the capping sequence of intermediate flows and pyroclastics accumulated or else carbonate remobilization by the later, perhaps subvolcanic diorite. Either way, carbonate in hanging wall rocks is an exploration aid for auriferous zones in the underlying chert.

Present gold exploration has identified unmined auriferous chert breccias of the gold-only type. Deposit delineation by underground drilling will continue and may well add to our understanding of volcanogenic gold deposits.

C
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P
Y

VERDE EXPLORATION, LIMITED

55 Liberty Street

New York 5, N.Y.

March 4, 1960

Mr. M.O. Tracy
Mining World
500 Howard Street
San Francisco 5, Calif.

Dear Mr. Tracy:

I appreciate the opportunity you have sent me to comment upon your proposed study of the ground controlled by Verde Exploration, Limited in the Jerome Mining District, Yavapai County, Arizona.

The holdings of that company consist of 3400 acres of patented mining claims acquired by that company from the Clemenceau Mining Corporation and the Jerome Del Monte Copper Company. Clemenceau Mining Corporation had acquired all of its patented acreage from its predecessor, the United Verde Extension Mining Company which had been liquidated in 1939.

In addition, Verde Exploration, Limited controls some 2000 acres of unpatented claims contiguous to the patented ground, or a total of approximately 8 square miles.

Verde Exploration, Limited was organized in 1947. In the subsequent 4 years they spent some \$500,000 of their own money including the purchase of the physical assets of the Clemenceau Mining Corporation. Two other mining companies, who were associated with Verde Exploration, Limited, spent another \$300,000 under the direction of Verde Exploration, Limited, on geological and geophysical surveys of the properties and diamond drilling. No new orebodies were found.

Within the last year Verde Exploration, Limited has borrowed \$350,000 from two mining companies and five individuals to study the chloritization of the precambrian rocks enclosing the two massive sulphide orebodies in the Jerome district which have produced approximately 2 billion pounds of copper metal together with substantial amounts of gold and silver. Both properties are now closed down because they have exhausted all the ore that they had found after having paid \$225,000,000 in dividends from some 40 million tons of ore.

There is nothing new about studying alteration which usually accompanies the deposition of metallic sulphide orebodies as an aid in directing exploration. However, this approach has never been intensively applied excepting in very rare instances. We believe that the conditions in Jerome offer a particularly attractive field for the application of this approach. However, if the effort does not result in finding any orebodies in Jerome, we are hopeful that we may develop techniques which would have a wide application in many other mining districts. If, however, we get encouragement we will follow up the

Copy of original

Mr. M. C. Tracy
Mining World

page 2
March 4, 1960

effort with diamond drilling in the hope of finding new bodies of profitable ore.

To start with we shall study by microscopic and chemical methods the diamond drill cores and hand specimens of these older rocks to find diagnostic changes in the chloritization which should point to the much smaller targets of actual orebodies in directing our drilling operations. We have some promising clues to start with and believe we have a competent crew of specialists to conduct this research.

On reading this over, I am not sure how much of it you will care to make use of. I must however deny that the study of alteration is in any sense a new concept. In my lifetime the keener members of the United States Geological Survey have made three attempts to interest the mining industry in co-operative fundamental research into such alteration. The response each time was more than favorable but nothing ever came of them mainly because even their best trained personnel were overwhelmed by the tremendous amount of undigested information on alteration contained in diamond drill cores and hand specimens and nobody knew what the significant and diagnostic factors were or were given the time to try to determine them. The only complete job of the kind that has ever been done was Dr. Reno H. Sayles' classical study of the alteration of the wall rocks of the copper bearing veins in Butte, Montana for the Anaconda Copper Company.

Secondly, there is no dewatering job facing us in Jerome.

Thanking you again for this opportunity to correct your proposed publicity, I am

Sincerely yours,

President

AN/w

/s/ Arthur Notman

copy for original

STATE OF ARIZONA
DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
PHOENIX, ARIZONA



March 10, 1960

C
O
P
Y

Mr. Charles F. Willis
508 Title and Trust Bldg.
Phoenix, Arizona

Dear Charlie:

Thanks for your letter of March 9th with copy of letter from
George Argall. The information in it is indeed interesting and
I'm sure Travis will watch developments closely.

Sincerely,

Frank P. Knight
Director

FPK/H

Copy of original

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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J. Verde Ex.

Present Courier
Cudde Mining 2/10/60



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8/18/63
zond Property Explored



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