



CONTACT INFORMATION

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

The following file is part of the

Arizona Department of Mines and Mineral Resources Mining Collection

ACCESS STATEMENT

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

CONSTRAINTS STATEMENT

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

QUALITY STATEMENT

The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: JACKSON MINE

ALTERNATE NAMES:

IRON MASK
OLD BALDY COPPER MINE
OLD HICKORY

PIMA COUNTY MILS NUMBER: 194

LOCATION: TOWNSHIP 19 S RANGE 14 E SECTION 24 QUARTER SE
LATITUDE: N 31DEG 45MIN 24SEC LONGITUDE: W 110DEG 51MIN 31SEC
TOPO MAP NAME: SAHUARITA - 15 MIN

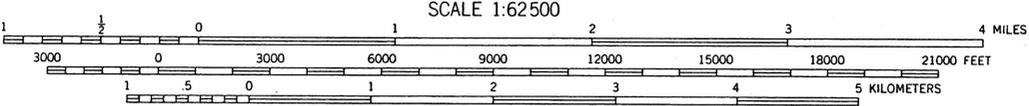
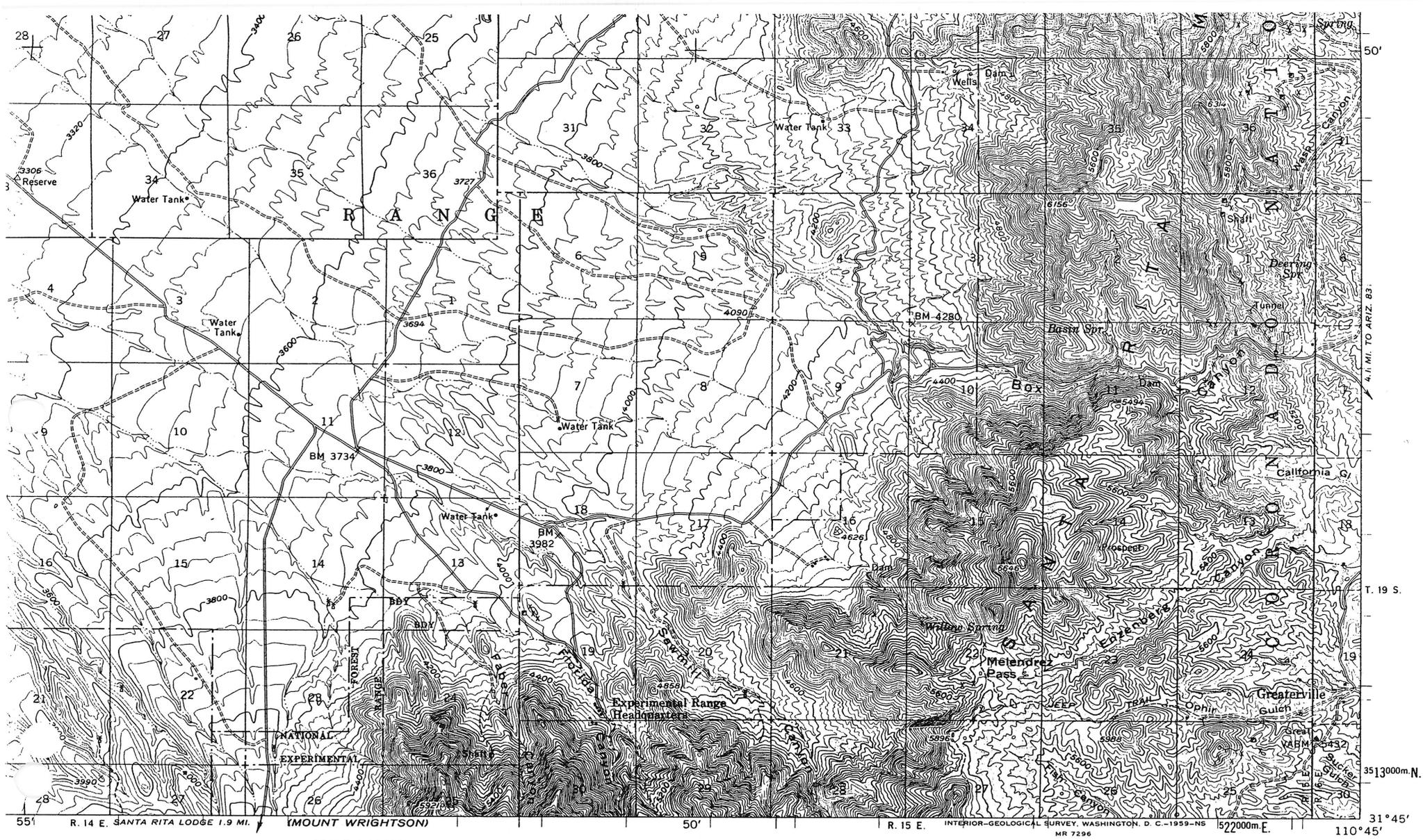
CURRENT STATUS: PAST PRODUCER

COMMODITY:

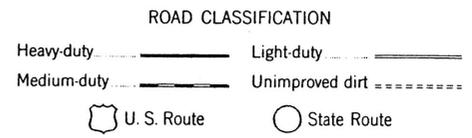
COPPER OXIDE
COPPER SULFIDE
SILVER
GOLD LODE
URANIUM

BIBLIOGRAPHY:

AZBM BULL. 189, P. 129, 1974
US AEC PRR PIMA COUNTY ARIZ. 1957, P. 653
ADMMR JACKSON MINE FILE
USGS BULL 582, P. 171
ADMMR "U" FILE CU 25



CONTOUR INTERVAL 40 FEET
DATUM IS MEAN SEA LEVEL



QUADRANGLE LOCATION

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER 25, COLORADO OR WASHINGTON 25, D. C.
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

SUAHARITA, ARIZ.
N3145-W11045/15

1958

PA

39

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Jackson Mine (also called Old Hickory) Date Oct. 10, 1955

District Old Baldy District --- Pima County. Engineer Axel L. Johnson

Subject: Additions to Supplemental Report of Sept. 27, 1955. NEW OWNERSHIP
Information from Lee F. Reid, Sec-Treas. & Mgr. Old Baldy Copper Co.

For a detailed description of the property, see my report of Aug. 30-31, 1954

For work done by Old Hickory Mining Co. from Aug. 31, 1954 to April, 1955 see report of 9/2

Location See my report of Aug. 30-31, 1955.

Number of Claims 44 claims. 33 of these claims lie in the location around the old Jackson shaft, and 11 additional claims about one mile to the East or SE. The 11 additional claims are composed of 7 in the Florida Group and 4 in the Big Silica Group.

Owners Old Baldy Copper Co. The owners of same are James V. Parber, 1222 N. 2nd Ave., Tucson; Charles E. Brown, 625 N. Belvedere Ave., Tucson; and Lee F. Reid, 116 E. Blackledge Drive, Tucson. The office of the company is Cusick, Watkins and Frey law offices, Valley National Bank Bldg., Tucson, Arizona. Company incorporated this summer and capitalized for \$ 2,000,000, being composed of 2,000,000 shares at \$1.00 par value per share.

Officers: James V. Parber, President, 1222 N. 2nd Ave., Tucson.
Charles E. Brown, Vice-Pres., 625 N. Belvedere Ave., Tucson.
Lee F. Reid, Sec.-Treas. and Manager, 116 E. Blackledge Drive, Tucson.
E. T. Cusick, Attorney, Valley National Bank Bldg., Tucson.

Operators According to Mr. Reid, the Old Baldy Copper Co. will operate the mine.

Principal Minerals See my report of Aug. 30-31, 1954

Number of Men Working None.

Production Rate None.

For Topography, Geology, Ore Values, Mine Workings, etc. see my report of Aug. 30-31, 1954.

Present Activity According to Mr. Reid, the property was acquired from the Old Hickory Copper Co. by the owners shown above in late April or May, 1955. The new company was initiated early in July, 1955, with a capitalization of \$ 2,000,000, as shown above. The corporation legal proceedings have not been completed as yet, but is expected to require another week or two.

Proposed Plans As soon as the legal work of incorporation is finished, the company expects to repair about 1 1/2 miles of the old road, and build 0.6 miles of new road. After the road work is completed, the company expects to start mining operations on some high silica low grade copper ore, which occurs in various spots on the claims. This will be done by open pit methods of operation. According to Mr. Reid, 6 carloads of this kind of ore has been blocked out in 3 ~~various~~ separate locations on the claims. The company also plans to do some exploration work, consisting mainly of diamond drilling.

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Page 1

Mine Jackson Mine (also called Old Hickory)

Date Aug. 30 & Aug. 31 1954

District Old Baldy District ---Pima X County

Engineer Axel L. Johnson

Subject: Field Engineers Report. Inf. from F. C. Ramsing & E. R. Metler, & Personal Visit.

Location Sec. 24 - T 19 S - R 14 E - Elev. 4700 ft. On NW slope of Santa Rita Mts. Drive SE from Continental on the Santa Rita Exploration Range road for a distance of 8.9 miles, (passing the Madera Canyon junction on the right at 7.2, and the Box Canyon junction on the left at 7.5) until you come to a sign marked "Parkers Ranch". At this ranch sign, take the right ~~side~~ fork of the side road to the right and travel over a rough, rocky, and winding mountain road to the mine camp for a speedometer distance of 1.5 miles. From the mine camp, there is a very steep mountain road leading to the mine, which can be climbed only by a jeep, or, possibly, with a 4 wheel drive truck. Distance from the camp to the mine is about one mile by road.

Number of Claims Reported to be 33 claims. This should be verified. The 33 claims mentioned may include the Iron Mask and the Grand Central prospects, lying from one to one and one-half miles south of the Jackson mine, at from 5200 to 7000 ft. elevation.

Owners Old Hickory Copper Co. ----now said to be owned and controlled by New York capital. (Mr. Ramsing referred me to Mr. R. A. Wright of Wright Associates, Phoenix, Ariz. for information regarding the name and address of the owners of the company.)

Lessees Wright Associates, 614 Heard Bldg., Phoenix, Ariz.----Tel. Alpine 2-8614
R. A. Wright, Secretary-Treasurer
F. C. Ramsing, Mining Engineer and Consulting Geologist.
This company, Wright Associates, has some kind of a contract or a lease with option to buy. (Mr. Ramsing referred me to R. A. Wright of Wright Associates, Phoenix, Ariz. for information regarding this contract or lease.)

Mine Contractors Mines Exploration and Development Co., 2000 S. Freeway, Tucson, Ariz. has a contract with Wright Associates for diamond drilling in the Jackson Mine. It is understood that it is a price per foot contract.

Leland C. Vought is the President of Mines Exploration and Development Co., and E. R. Metler is the foreman in charge of the drilling operations.

Principal Metals and Minerals. Copper and Molybdenum ores, mostly copper. Ores are chalcopyrite, bornite, and molybdenite (molybdenite in only small amounts). Some magnetite and ilmenite is found on the outcrops and near the surface, and some very small amounts of copper carbonates just below the surface. No oxidized copper ores have been found below a depth of 20 ft.

Number of Men Employed 4 (2 shifts of 2 men each). Progress averages 18 ft. per shift.

Production Rate No production.

Topography Steep and rugged mountain slopes, with a number of rather steep canyons, draining NW towards the Santa Cruz River. Property is on the NW slope of the Santa Rita Mts. Elevation of the foothills a mile below the mine is about 3900 ft, rising to an elevation of 4775 ft. at the mine shaft, and rising further to an elevation of over 7600 ft. in the next 1 1/2 miles to the south.

Geology (1) Following Geology description was obtained ^{from} F. C. Ramsing:
The ore deposit is found in a shear zone, about 6,000 ft. long and from 70 to 90 ft.

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Page 2

Mine Jackson Mine (also called Old Hickory)

Date Aug. 30 & Aug. 31 - 1954 ?

District Old Baldy District ----Pima Co.

Engineer Axel L. Johnson

Subject: Field Engineers Report. Inf. from F. C. Ramsing & E. R. Metler, & Personal Visit.

wide, striking about N 80 E, with a steep, nearly vertical dip. This shear zone cuts across diorite (or granodiorite) rock for a distance of about 2500 ft. near the middle, and through rhyolite flows on the east and west ends of the shear zone. The Jackson Mine is located near the middle, in the diorite (or granodiorite) rock formation.

Within the several independent fractures in the 70 to 90 ft. wide shear zone, there are found a number of diabase lenses, which have been intruded into the shear zone. These diabase lenses vary in size and shape, but may be said to average about 20 ft. each in length, 10 ft. each in width, and from 3 to 4 ft. in diameter, being elliptical in shape, and generally occurring one above the other in the independent fractures within the shear zone, and dipping towards the center of the fracture zone area. Mr. Ramsing mentions that one such ore lens is found on the 140 & the 160 ft. levels of the mine.



Only the upper and lower parts, or the a saddle of the lens, has been mineralized, containing the minerals chalcopyrite, bornite, and a small amount of molybdenite. The ore is believed to have been formed by hydro-thermal alteration, no oxidation occurring, as only the sulphide minerals are found.

Ore mined a number of years ago is said to have run about 16 % in copper values, with a small amount of molybdenum. Various estimates of one ore lens mined out vary from 15 to 50 tons of 16 % copper ore.

(2) Following Geology description is contained in Schrader's bulletin # 582 -p.171: (this gives a slightly different version of the ore occurrence)

Schrader mentions the diorite as being intruded into the granite on the west and into the rhyolite on the east; and the ore deposit, within the diorite, as a compound fissure vein or stockwork, being 25 ft. wide at the shaft. He also mentions a sample of the ore in one ore shoot as assaying 30.6 % copper according to reports; and refers to an additional lens found at greater depths in the shaft.

(3) From personal inspection:

I found one such ore lens in the back of the drift on the 40 ft. level, which was about 10 ft. long, and about 3 to 4 ft. wide, showing some very good chalcopyrite, bornite copper ore, with a small amount of molybdenite. I did not find any ore lenses on the 90 ft. level. The 140 and 160 ft. levels were not accessible, and could not be examined.

Ore in Sight and Probable

Ore in Sight on 40 and 90 ft. levels ----- about 10 tons.
 Lower levels not examined.
 Probable ore to depth of present shaft -----about 200 tons.

Milling and Marketing

No mill on the property. Ore is high grade and can be shipped directly to the smelter. Present road to the camp will have to be repaired for a distance of 1 1/2 miles. New road will have to be built from the camp to the mine---from 1 1/2 to 2 miles of rocky mountain road.

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Page 3.

Mine Jackson Mine (also called Old Hickory)

Date Aug. 30 & Aug. 31 - 1954 ?

District Old Baldy District ----Pima Co.

Engineer Axel L. Johnson

Subject: Field Engineers Report. Inf. from F. C. Ramsing & E. R. Metler, and Personal Visit.

Present Mine Workings

(1) Jackson shaft, original depth said to be 210 ft.---inclined to the north about 70 degrees to the 150 ft. level, and at 60 degrees the remaining distance. It was dewatered down to a depth of 180 ft. by the drilling contractors, at which point an obstruction was found. It is believed that the bottom 30 ft. may be caved in.

(2) The 140 ft. level has 160 ft. of drifting mostly to the east.

(3) The 90 ft. level has about 600 ft. of drifting ---350 ft. to the east and 250 ft. to the west, plus about 90 ft. of cross cuts, and a small stope on the west side.

(4) 140 ft. level ----50 ft. of drifting.

(5) 160 ft. level ----50 ft. of drifting.

(6) An adit, about 100 ft. below the shaft elevation is mentioned in the Schrader bulletin, the length of same not given. No mention of same was made by Mr. Ramsing, or the drilling contractors.

Past History Mine was operated a number of years ago by the Old Hickory Copper Co., Continental, Ariz. (Home Office Passaic, N. J.) Last operations, principally development, is said to have been done in about 1922. I was not able to find any authentic record of this operation.

Present Operation Diamond drilling is now being done from the 90 ft. level drift by Wright Associates, ~~2000 S. Freeway, Tucson, Ariz.~~ 614 Heard Bldg., Phoenix, Ariz., the work being done under contract by the Mines Exploration and Development Co., 2000 S. Freeway, Tucson, Ariz. A C. P. 55 diamond drill is used, making an EX core. Drilling operations are on the 90 ft. level, and about 300 ft. east of the shaft. Holes drilled are as follows:

(1) 1 horizontal hole 27 ft. long to the north.

(2) 1 horizontal hole 145 ft. long to the south.

(3) 1 hole inclined 78 degrees to the south is now being put down, and is, at present down to a depth of 420 ft., with a 500 ft. objective. This hole was located so as to cut across the shear zone at an angle to intersect any ore lenses in the area. Results of the drilling not published, but judging from some remarks passed is not optimistic.

Proposed Plans Another 500 ft. hole is being planned, to be drilled from one of the lower levels of the mine (140 or 160), Mr. Ramsing pointed out that this hole will be drilled to satisfy some of the owners or stockholders of the company, who believe that a large deposit of rich ore will be found with additional depth. Mr. Ramsing did not seem to be very optimistic in regard to favorable results.

General Remarks From the description of the Geology and the ore occurrences, it would seem that the tonnage that has been found to date, and has been indicated by the nature of the deposit, is not of sufficient quantity to warrant any resumption of mining operations on the property. The scattered ore lenses found are small of a few tons each, and, even though they are high grade, they are too few and too far distance apart.

It is possible, but not probable, that more and larger ore lenses may be found, by additional diamond drilling, to occur at lower levels.

Post Script Chas. F. Willis is said to have made an examination and a report of this property a number of years ago.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Jackson Mine (also called Old Hickory) Date Sept. 27, 1955.

District Old Baldy District -- Pima County Engineer Axel L. Johnson

Subject: Supplemental Report. Information from reliable sources. No visit at this time.

For a detailed description of the property, see my report of Aug. 30-31, 1954.

Additional work done at the property, since my report of Aug. 30-31.

(1) Diamond drilling.

One additional drill hole (diamond drill hole) 658 ft. deep, drilled from the surface. Results understood to be confidential. Diamond drilling was suspended indefinitely on Oct. 2, 1954----32 days after my visit to the property.

(2) Other work.

A bulkhead in the 210 ft. inclined shaft at the 180 ft. level was removed and the shaft was dewatered to the full depth of 210 ft. This work was done some time last spring (spring of 1955) and the shaft was examined for ore showings at the request of some stockholder who wanted this information. The shaft has since then filled up with water above the 180 ft. elevation.

Present Operations As far as can be learned from persons acquainted with the operations of the enterprise, there is no one working at the property at the present time, and no work has been done since the dewatering operations conducted last spring.

Future Plans It is understood that the operators have abandoned mining operations on the property. No information, whether this is temporary or permanent.

Remarks On account of the nature of this ore deposit, being composed of small scattered ore lenses, with only the upper and lower parts of the lenses mineralized, it would seem that diamond drilling would be a very uncertain method of exploratory work ~~on same~~. The diamond drillsholes put down could very well have missed all the ore lenses. On the other hand, if a diamond drill hole cut one of the ore lenses, an exaggerated estimate of the potential ore reserves might ^{have} resulted. For a description of the ore body and the value of same please see Geology and General Remarks in my report of Aug. 30-31, 1954.

WRIGHT ASSOCIATES (LESSEES)
614 Heard Bldg.,
Phoenix, Ariz.

8-30-54

R.A. Wright, Secretary-Treas.
F.O. Ramsing, Mining Engineer and Consulting Geologist.

MINE: JACKSON MINE (Also called Old Hickory), Old Baldy District,
Pima County.

OWNER: Old Hickory Copper Co. - -

OLD HICKORY COPPER CO. (OWNER)

8/31/54

N. Y. ??

MINE: JACKSON MINE (Also called Old Hickory) Old Baldy District,
Pima County
Sec. 24-T 19 S - R 14 E - Elev. 4700 ft.
On NW slope of Santa Rita Mts.

LESSEES: Wright Associates, 614 Heard Bldg., Phoenix, Ariz.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine PARKER GROUP

Date July 7, 1944

District OLD BALDY

Engineer George A. Ballam

Subject: MINE REPORT

This property is situated about one mile south of the Old McCleary camp just south of the Box Canyon road and about 4 miles east of the Madera Canyon road junction. It is now owned by James V. and John Parber, 1222 No. Second Street, Tucson, who were associated with the former operating company, the Old Hickory Copper Co., having obtained the property on claims against the company following its dissolution.

*Section
Old Hickory*

No work has been done on the property for a number of years and it is under water and inaccessible. The present owners applied for an accessibility loan in the summer of 1943, and owing to insufficient data the application was declined. I advised the Parber Bros. to try to get additional information in the way of reports, statements of men who had worked in the mine, or old company records with a view to gaining reconsideration of the case.

In addition, the following supplementary information was derived from Bulletin 582, U.S. Geol. Survey, F. C. Schrader, pp 171-172:

"The Jackson mine is located in the northern part of the district a mile south of the McCleary camp, on Jackson Canyon, at an elevation of about 4,700 feet, the tunnel and shaft, which are the principal openings, being respectively at 4,570 and 4,775 feet. It is owned by W. B. McCleary, and since 1910 has been developed by the Old Hickory Copper Co.

The deposits are contained in a lens of dark diorite, which is intrusive into the gray granite that is exposed near by on the west. The diorite seems also to be intrusive into the rhyolite on the east. The mine is approximately on or in alignment with the Old Baldy fault scarp which delimits the rhyolite on the west, and the intrusion of the diorite probably accompanied the uplift that formed the scarp. The diorite is a dark medium-grained, moderately porphyritic rock composed chiefly of oligoclase-andesine and dark-green hornblende, and it contains considerable magnetite.

The deposit is a compound fissure vein or stockwork which has a reported extent of nearly a mile. At the shaft it is about 25 feet wide, and in the upper part of the shaft it dips 72° NNW. The gangue is largely magnetite with some quartz, and the ore is principally copper ore carrying small quantities of gold and silver. The crop-pings, which are not prominent, consist mainly of iron cap with weathered bands, bodies, stringers, and veins of limonite and stained magnetite, which are best developed on the hanging-wall side. They give no indications of copper, which, however, shows more and more in depth.

In the shaft, which is 100 feet deep and is one-third filled with water, some carbonate of copper occurs just below the surface. At a depth of about 20 feet a body of chalcopyrite and pyrite with a little quartz appears, and at 60 feet it enlarges to a 3 1/2 foot lens of ore shoot of good-grade chalcopyrite ore which pitches 45° ENE. A sample collected across the shoot at this place is reported to have assayed 30.6 per cent of copper and 9 ounces of silver and a trace of gold to the ton. Run-of-mine samples averaged high in copper and assayed as high as \$5 in gold to the ton.

The dip of the "vein" flattens at this place to about 45°. An additional lens of similar ore was recently struck at greater depth in the shaft, where also considerable water was encountered. The ore or chalcopyrite usually contains a little magnetite, but the chalcopyrite seems to be the later.

The tunnel, located downstream (to the north) from the shaft and 100 feet lower is driven N.80° E. on an 8-inch vein of magnetite contained in the diorite. In the adjoining bed of the canyon at about 20 feet above the tunnel is a 10-inch vein of magnetite which strikes N.80° W."

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

declined

*(Old Hickory)
See Jackson Mine file*

Mine PARBER GROUP Cu.
Formerly McLeary —
District Old Baldy

Date May 29, 1943
Engineer Earl F. Hastings

Subject: Reconstruction Finance Corporation
Mining Loan

Docket No. Phoenix C-203
Date Application Received May 27, 1943
Date of Report May 29, 1943

1. Name and address of applicant (correspondent):
James V. Parber and John Parber, 1222 North Second Avenue, Tucson, Arizona.
2. Character of project and estimated cost thereof:
Cu. Sink Big Jim shaft from 27 foot level to an undetermined depth. \$5000.00.
3. Location of property:
Old Baldy Mining District, Pima County, Arizona.
4. Applicant's interest in or ownership of property:
Applicants are owners by location.
5. Loan requested:
\$5000.00.
6. Loan recommended:
None.
7. Comments:
(A) The Fred Swinney report is undated but can be assumed to be later than the C. F. Tolman report of December 29, 1906 although the latter refers to a similar development program as outlined by the former. In any event neither of the reporting engineers examined the Jackson shaft between the 80 foot level and the bottom which is now at the 210 foot level.

(B) Development apparently followed the Tolman plan, that of sinking the Jackson shaft, and for some reason the project was abandoned short of the 500 foot level. It is difficult to conceive of any reason for abandoning this shaft if the ore shoot reported by Tolman on the 50 foot level had any continuity either vertically or laterally or even approached the sample value described in actual mining production. Apparently this shoot was limited, only 200 tons having been produced from it.

(C) The Jackson shaft was sunk at the most favorable location on the premises from a geological standpoint. It can be presumed to have been, from the limited docketed evidence, a failure as far as commercial production is concerned. The applicant proposes to explore another area which is currently developed to the 27 foot level, one of secondary importance. Tolman states, "The Jackson shaft therefore is one of the critical points and should be the first place at which development work ought to be pushed in order to determine the size and richness of this ore shoot as well as to decide whether or not the shoots will be of sufficient size and frequency to make the venture a commercial success."

Since no more recent data is available as to exposures in the Jackson shaft and lateral workings, and since the Tolman report is the most thorough and conclusive presented, it appears that exploration of less favorable areas as proposed by the applicant is not warranted.

One sample of selected ore is presented as evidence of mineralization in the area to be explored. This is insufficient as a basis for such work.

(D) The possibilities of this property appear to be extensive, but at the present stage of development, and due to the lack of information on such development as has been accomplished, any work to be performed can be classified as prospecting or exploring.

Arizona Department of Mineral Resources

Earl F. Hastings, Projects Engineer

Invest. Co. No. 148

April 25, 1914.

W. B. McCleary,
Gen. Mgr. Old Hickory Copper Co.,
Helvetia, Arizona.

Dear Sir:

I hand you herewith my report upon the property of the Old Hickory Copper Co., situated 8 miles east of the Morales station of the Southern Pacific of Mexico, in the Old Baldy Mining District, Pima County, Arizona. This report is the result of my examination made on April 4th and 5th, 1914. The examination made was brief, as it was only intended to make plans for the proper development of the property and to state whether or not it was worthy of development.

The formations in which the ore deposits lie are in diorites and rhyolites. The details of geology will shortly be published by Schrader and Hill in the United States Geological Survey publication, making it unnecessary to go into details in repetition.

On the Jackson claim I was agreeable surprised at the showing and the prospects. The Jackson vein is a prominent fissure, outcropping on the surface in an immense iron cap for a very considerable distance. The vein filling is similar to that of all the other veins and is a magnetite and quartz. It has a width of 20^{FEET} on the surface and, although no chalcopyrites or pyrite is shown on the outcrop, it comes in at a depth of about 80 feet, and at that depth seems to be considerably scattered throughout the whole of the exposure.

The Iron Mask which was also closely examined, is very similar, although chalcopyrites comes in closer to the surface, and

more generally persistent, but not as concentrated as in the Jackson.

The Grand Central vein was also examined, and while it proved to be quite similar in outcrop to the other veins, it did not promise of such quick returns as the veins lower down on the hill. The Grand Central is a development proposition for the future, for several reasons; first that the best prospects are lower down the hill; second, it is the least accessible; and third that its mineralization seems to evident that, should ore be found, it will develop into a proposition that will require immense milling facilities to be profitable.

The whole proposition ^{was} viewed with the idea of methods of development and operation, and little examination was made of places where no development had been started. It is certainly a proposition worthy of development, and on which I believe, early results will be obtained. The plan of development which I shall outline is with the idea of using as little money as possible, of working safe, and of sacrificing time in preference to money.

DEVELOPMENT.

I would first recommend the installation of either a tops or gasoline hoist at the Jackson shaft. Although wood is cheap, the original cost of installation of tops will be less, and if any camps made there, as it is expected for the future, there will be only sufficient wood for domestic purposes. The cost of operation of the hoist with gasoline would be very little different than that using wood. I would also suggest the installation of a compressor, and drills to facilitate further development work. Machine drilling does not lower the cost of sinking or drifting, but greatly increases the

... practically the same as to cost.

But there is an increasing difficulty in obtaining good hand drillers, and a decreasing difficulty in obtaining satisfactory machine men. The total cost of such installation should not exceed \$3500, for a 15 H.P. hoist, capable of sinking 600 feet, and a compressor of sufficient size to operate four lightweight drills.

Sinking should then be commenced on the Jackson with drifting at 100 foot intervals, to a depth of at least 600 feet, at which depth a crosscut could be made connecting the Iron Mask and the development of the Iron Mask continued from that point. The cost of the sinking to the 600 foot level should not exceed \$7500, and there should be to prove the permanency of the deposit on the Jackson, at least 1000 feet of drifts, costing \$10000.

Should the above outline work on the Jackson prove sufficiently satisfactory and promising the work on the Iron Mask should start. There is sufficient similarity in the entire series of the east-veins in their manner of deposition, method of deposition, and period of deposition, to expect that which is encountered in one may be encountered in the others, and the development completely of one vein, with satisfactory results, would mean that further development could take place with a minimum of risk.

I would therefore suggest that plans be made for the raising and expenditure of \$25000 for the development of the Jackson and the Iron Mask, the first to prove the permanency of the ore bodies, and the second to prove the similarity of the deposits. With this developed, the property should be in condition to maintain its own further development, which further development would be the further work on the Jackson and Iron Mask, some exploitation of the Grand Central, and the other veins in the series.

The advisability of the lower adit at the base of the hill depends entirely upon the development of the claims above, not so much as to the quantity of the ore, but as to the character of the ore. Should the work above prove the ore bodies to be direct shipping or smelting ore, the adit would be of doubtful value, as the saving in the cost of transportation and drainage would not be sufficient to pay the interest on the necessary investment unless the daily capacity were over 500 tons.

However, should the proposition develop into a milling proposition, it would be doubtful if it could be profitably operated without the lower adit. This adit would be an expensive piece of development, and should not be undertaken until a satisfactory exploration of the upper vein has been concluded. Prospecting of the other veins of the series could be satisfactorily accomplished by systematic horizontal diamond drilling from the lower levels of the Jackson after development of the same. Such diamond drilling would be the better way of proving the other veins in case of milling deposits, but should it prove to be a shipping or smelting proposition, the development should be by crosscut tunnels.

I do not anticipate any great trouble with water, there being insufficient country to drain to make any large flow. Mr. McCleary seems to have the situation well in hand, and, I believe, understands what is needed and is capable of carrying out that work.

In conclusion, I wish to say that I believe the deposits to be a very promising prospect, and that the development of the Jackson and Iron Mask will prove the existence of large ore bodies. It would be a fallacy to plunge, however, for the vital importance of the depo-

sit and its method of development lies in the distinction between milling and smelting ore, and I would not recommend any further plans to be made at the present time beyond the development of the Jackson and Iron Mask. Concentrated efforts in one place is the only way to satisfactorily develop a large proposition with little capital.

Respectfully submitted,

April 25, 1914.

Signed, Chas. F. Willis.

R E P O R T

on the

McCLEARY GROUP OF MINES.

Situate in Old Baldy District, Santa Rita Mountains,
County, Arizona

SITUATION:-

The Jackson Group of Mines are situated 33 miles southeast from Tucson and about five miles north of Mount Brighton, the highest peak of the Santa Rita Mountains. It is all located in the deep indent, facing northwest on the Western Slope of the main range, and about seven miles southwest from Helvetia. This camp lies well within the side lines of the well known copper zone, which runs N. W. and S. E. from Jerome, Arizona to Cananea, Mexico. Within this zone there are located the following well known and proven camps, viz:- Jerome, Camp Verde, Crown King, Globe, Florence, Silverbell, Twin Buttes, Helvetia, Hoboken, Tombstone, Bisbee, Mowry and Cananea. (See Map) This is the mineral zone which Baron Von-Humboldt predicted "would prove to be the mineral store-house of the world". His prediction is almost verified, with every promise of being fully proven in the near future.

HOLDINGS:-

The Group consists of thirty claims 600 x 1500 feet

and covers over six hundred acres, running south by east from the camp for nine thousand feet, with ample ground for fine mill site and townsite.

DESCRIPTION:-

The camp is pleasantly situated amongst heavy timber on the banks of an arroya with running water about half the time. Two good wells furnish an ample supply of good water at all times. The store, stable, houses and general equipment for working the mines are here. The elevation above sea level is four thousand feet. The Santa Cruz Valley lies to the northwest and the mines southeast. The main claims run a little east of south up the slope of the spur and reach an elevation of eight thousand feet. The upper portions of these hills are covered with heavy pine timber. Frequent small springs give sufficient water for working purposes even in the driest seasons, and as all the workings show some water no doubt continued work will develop enough for milling and all other purposes.

TRANSPORTATION:-

The camp is connected by good wagon roads over the Santa Cruz Valley with Sahuarita Station on the Twin Buttes Railroad fifteen miles; Southern Pacific at Tucson, thirty-three miles; Southern Pacific at Valley twenty-five miles, with almost positive assurance that the Twin Buttes Railroad will be extended at once to Calabazas, passing within about seven or eight miles of the camp. An automobile has made the trip from Tucson to the camp in two hours.

FORMATION:-

Although experts differ as to the composition and technical names of the formation, it is admitted by all that the veins and deposits of mineral are in igneous rocks

and in my opinion the principle ones are rhyolite, diorite, andecite and dacite, while to the east of the Jackson Group Limestone, Slate, Schist, Conglomerate appear, the igneous rocks are regularly stratified and have a general strike north-east and southwest with a general dip to the northwest. This stratification is crossed by pronounced dykes of porphyry and rhyolite which can be traced for several miles. To the south and west the formation is more granite. The quartz fissure veins upon this property with few exceptions cross the strike of the formation or country rock and are capped with a strong showing of magnetite, hematite and goethite, on the Jackson claim the capping is magnetite which shows no sulphides until a depth of about thirty-five feet was reached and at fifty feet a body of solid high grade chalcopyrite was found.

DEVELOPMENT:

About two thousand feet of work has been done upon the group east of the camp some two thousand feet, a perpendicular shaft ninety feet all in well mineralized quartz with rich ore on both walls showing malachite, chalcopyrite and bornite. A little further east from this a thirty foot shaft five and six feet is almost all in azurite with some bornite. The country east is intersected by a strong quartz porphyry dyke and numerous quartz veins which look well but are undeveloped. South from the camp 5400 feet and up the slope of the hill and eighty foot shaft has been sunk upon the Jackson claim upon an outcrop of magnetite and quartz over twenty feet wide, no sulphides showed upon the surface, but at a depth of about thirty-five feet iron and copper sulphides showed all through the matrix and a solid body of high grade chalcopyrite $3\frac{1}{2}$ to 4 feet wide was found at a

depth of about fifty feet.

A sample carefully taken across the whole four feet assayed copper 31.6%, silver 9 oz., gold a trace. South from the above workings seventeen hundred feet on the "Iron Mask" claim a thirty foot shaft on another ledge showing similar outcrop and conditions to the Jackson and at the bottom of the shaft a fine showing of massive copper sulphide, chalcopyrite, bornite, tetrahedrite, etc. The elevation at these workings is 5283 feet. The steep gulch running between the above shafts is crossed by two or more other ledges showing copper sulphides on the surface and running with the country stratification, and the water worn country rock in bed of gulch shows chalcopyrite and cuprite along its course for a considerable distance. Above this and at many places up the hill sides up to 7800 feet elevation numerous veins of good size have been found and for the amount of development makes a fine surface mineral showing mostly chalcopyrite. The slope of the hill are very steep therefore the erosion has been rapid, exposing the sulphides upon most of the veins found at the higher altitudes. About seven hundred feet above the "Iron Mask" and between two dykes two claims (the Great Central and Great Western) show an immense vein or deposit of ore five hundred feet wide by fifteen hundred feet long. The matrix is iron and silica heavily mineralized with iron sulphides and chalcopyrite almost all over the surface, particularly in the water worn and washed gulches. Judging by the development on the "Jackson" and "Iron Mask" claims, as well as the splendid output on the Twin Buttes across the valley, all having the same iron capping and matrix and the fine showing made when work has been done upon the deposit, there can be no doubt

an immense body of copper ore will be found under the capping of this great vein up to this time the value exposed ore, chalcopyrite. Across the ridge and on the other slope a 75 foot tunnel has been driven on a strong ledge which can be traced for more than three thousand feet. Heavy stringers of chalcopyrite and bornite show already. The elevation of this tunnel is 5450 feet.

VALUES:-

No attempt has been made to ascertain the average value of the surface ores, but assays made from the 3 $\frac{1}{2}$ or 4 feet of ore on the Jackson gave 51.6% copper, 9 oz. silver and a trace of gold. A piece of rather poor looking tetrahydrate gave 14 $\frac{3}{4}$ % copper (not tested for silver and gold. Of course, the percentage of smelting and concentrating ore that will be found can only be determined by more and deeper development, but it is quite evident the smelting ore is very high grade and the concentrates should be correspondingly high as there are no refractory elements like zinc, barytes, silicates or carbonates to interfere with concentration and bring down their values. All the assays made show good silver values and from \$1.00 to \$6.00 in gold per ton of ore.

PROPOSED WORK:-

It is proposed to drive a tunnel from a point about 4400 feet elevation towards the highest peak on the property a distance of about seven thousand feet where it would have a vertical depth of thirty-five hundred feet less allowance for grade of tunnel. This tunnel would cross the immense deposit of ore at depth on the Great Central and Great Western claims and unquestionably tap a large number of known veins and some unknown ones in its course and expeditiously open up an immense reserve of ore besides making

a complete drainage and extraction adit for all subsequent upper workings.

REMARKS:-

The geological and surface conditions with the development work now done point conclusively to an immense mineralization which can be easily and inexpensively proven beyond all doubt.

The manifest upheaval of these eruptive rocks, the net work of true fissure veins carrying high values and some of them can be traced on the surface for five thousand feet indicating the ore bodies will be continuous to great depths. The very high grade of the chalcopyrite which promises to be the principle mineral.

The strong intrusive dykes which cross the formation, the immense deposit of ore on the Great Central and Great Western claims are all convincing evidence that the mines are very valuable and that with a few power drills and systematic development, the property would soon demonstrate its ability to produce an immense tonnage of ore and place it upon a profitable basis and amongst the producing mines of the very first class. I know of no area that could be more speedily or effectively put into working order, judging from other workings in the district it is not probable the mines will require much heavy timbering. An abundance of lime and iron near by, a beautifully situated and healthful townsite and every facility on the ground. In conclusion

I will say that it would be difficult to find a group of mines more favorably situated or that would equal its practical certainty of developing immense ore bodies and great promise of becoming one of the great producing mines of Arizona.

Believing the foregoing report to be correct in every substantial particular,

Respectfully submitted, *Wm Robinson*

July 25, 1909.

Helena Ariz.

JACKSON MINE

~~Do Not Reproduce~~ PIMA

Tom Sargent and Elmer Lyons, lessees of claims owned by old Baldy Copper Corp., stopped at office to research old records and maps. VBD WR 4/28/75

USGS Bull. 582, p. 171

T1950 RY4 E
SEC 24

Must Abstract

RECEIVED
APR 5 1979
DEPT. MINERAL RESOURCES
PHOENIX, ARIZONA

REPORT ON THE McCLEARY GROUP OF CLAIMS
NOW OWNED BY THE PARSON BROTHERS.

I hand you herewith my report upon the property of the Old Hickory Company, situated eight miles east of Morales Station of the Southern Pacific Company, in Old Baldy Mining District, Pima County, Arizona. This report is the result of an examination made on April 4th and 5th, 1914. The examination made was brief, as it was only intended to make plans for the proper development of the property, and to state whether or not it was worthy of development.

The formations in which the ore deposits lie are in diorites and rhyolites. The details of geology will shortly be published by Schrader & Hill in the United States Geological Survey publication, making it unnecessary to go into these details in repetition.

ON THE JACKSON CLAIM I WAS AGREEABLY SURPRISED AT THE PROSPECTS. The Jackson Vein is a prominent fissure, outcropping on the surface in an immense ironcap for a very considerable distance. The vein filling is similar to that of all the other veins and is a magnetite and quartz. It has a width of 20 feet on the surface and, although no chalcopryite or pyrite is shown on the outcrop, it comes in at a depth of about 80 feet, and at that depth seems to be considerably scattered throughout the whole of the exposure.

The Iron Mask which was also closely examined, is very similar, although chalcopryite comes in closer to the surface and generally persistent, but not as concentrated as in the Jackson. The Grand Central Vein was also examined, and while it proved to be quite similar in outcrop to the other veins, it did not promise of such quick returns as the veins lower down on the hill. The Grand Central is a development proposition for the future, for several reasons; first, that the best prospects are lower down on the hill; second, it is the least accessible; third, that its mineralization seems to evident that, should ore be found it will develop into a proposition that will require immense milling facilities to be profitable.

The whole proposition was viewed with the idea of methods of development and operation, and little examination was made of places where no development had been started. It is certainly a proposition worthy of development and on which I believe early results will be obtained. The plan of development which I shall outline will be with the idea of using as little money as possible, of working safe, and of sacrificing time in preference to money.

DEVELOPMENT: I would first recommend the installation of either a Trops or gasoline hoist at the Jackson shaft. Although wood is cheap the original cost of installation of trops will be less and if any camp is made there, as is expected for the future, there will be only sufficient wood for domestic purposes. The cost of operation of the hoist with gasoline would be very little different from that using wood. I would also suggest the installation of a compressor and drills to facilitate further development work. Machine drilling does not lower the cost of sinking or drifting, but greatly increases the speed. But there is an increasing difficulty in obtaining good hand drillers, and a decreasing difficulty in obtaining satisfactory machine men. The total cost of such installation should not exceed \$3500. for a 15 HP hoist capable of sinking 600 feet, and a compressor of sufficient size to operate four lightweight drills.

Sinking should then be commenced on the Jackson with drifting at 100 foot intervals, to a depth of at least 600 feet, at which depth a cross cut could be made connecting the Iron Mask and the development of the Iron Mask continued from that point. The cost of the sinking to the 600 foot level should not exceed \$7,500.00, and there should be - to prove the permanency of the deposit on the Jackson, at least 1,000 feet of drifts, costing \$10,000.00.

Should the above outlined work on the Jackson prove sufficient, satisfactory and promising, the work on the Iron Mask should start. There is sufficient similarity in the entire series of the east veins in their manner of deposition, method of deposition, and period of deposition, to expect that what is encountered one may be encountered in the others, and the development completely of one vein, with satisfactory results, would mean that further development could take place with a minimum of risk.

I would therefore suggest that plans be made for the raising and expenditure of \$25,000 for the development of the Jackson and the Iron Mask, the first to prove the permanency of the ore bodies, and the second to prove the similarity of the deposits; with this development the property should be in a condition to maintain its own further development, which further development would be the further work on the Jackson and Iron Mask; some exploitation on the Grand Central, and the other veins in the series.

The advisability of the lower adit at the base of the hill depends entirely upon the development of the claims above, not so much as to the quantity of the ore but as to the character of the ore. Should the work above prove the ore bodies to be direct shipping or smelting ore, the adit would be of doubtful value as the saving in the cost of transportation and drainage would not be sufficient to pay the interest on the necessary investment unless the daily capacity were over 500 tons.

However, should the proposition develop into a milling proposition, it would be doubtful if it could be profitably operated without the lower adit. This adit would be an expensive piece of development, and should not be undertaken until a satisfactory exploration of the upper vein has been concluded. Prospecting of the other veins of the series could be satisfactorily accomplished by systematic horizontal diamond drilling from the lower levels of the Jackson after development of the same. Such diamond drilling could be the better way of proving the other veins in case of milling deposits, but should it prove to be a smelting or shipping proposition, the development should be by crosscut tunnels. I do not anticipate any great trouble with water, there being sufficient country to drain to make any large flow. Mr. McCleary seems to have the situation well in hand, and I believe, understands what is needed and is capable of carrying out the work.

IN CONCLUSION I wish to say that I believe the deposits to be very promising prospects and that the development of the Jackson and Iron Mask will prove the existence of large ore bodies. It would be fallacy to plunge however, for the vital importance of the deposit and its methods of development lies in the distinction between milling and smelting or, and I would not recommend that any further plans be made at the present time beyond the development of the Jackson and Iron Mask. Concentrated efforts in one place is the only way to satisfactorily develop a large proposition with little capital.

Respectfully submitted

(SIGNED)

CHAS F. ILLIS
Mining Engineer & Geologist Director
Bureau of Mines, University of Arizona
TUCSON, ARIZONA

STATEMENT OF ASSAYS

Assays of Sample and Mill Runs of Ore taken from the upper workings
of the Florida group of Claims, between the Surface outcrop and
thirty feet in depth.

ASSAYER	\$	GOLD	SILVER oz	COPPER %
O. J. Frost, Denver Colo.		2.00	56.60	17.74
" " " "		tr.	26.00	12.08
" " " "		"	36.60	18.20
" " " "		1.50	32.00	12.50
" " " "		tr.	53.53	12.50
Omaha & Grant Smelting & Refining Co.		15.00	59.00	26.00
E. Williamson, F. G. S.		1.00	51.27	12.00
"		2.20	18.70	12.50
"		tr.	31.60	13.00
"		tr.	21.00	8.00
"		1.75	32.25	12.00
J. S. Snedaker, M.E., Denver, Colo.		4.00	57.44	14.45
O. J. Frost, M.E.		tr.	17.70	13.14
" " " "		"	24.50	9.32
" " " "		1.25	36.70	11.60
" " " "		tr.	21.60	8.62
Selby Smelting & Refining Co., San Francisco, Calif.		no report	22.32	9.70
El Paso Smelting & Refining Co., El Paso, Texas (American Mining & Smelting Co.)		" "	22.40	10.50
Helvetia Smelting & Refining Co., Helvetia, Arizona (2500 lbs.)		" "	21.00	10.00
* Prof. Richard, of U.S. Geological Survey, Geologist & Assayer, Ariz.		" "	118.00	36.00
(This sample was taken at a point 500 ft. from the other samples. They are grab samples)				
AVERAGE YIELD PER TON		1.43	40.54	14.00
MINES IN PIMA COUNTY, ARIZONA.				
7 CLAIMS IN THIS GROUP.				

REPORT ON THE MC CLEARY GROUP OF CLAIMS

OLD HICKORY

SITUATION. These claims (30) are located upon the western slope of the Santa Rita Mountains, Pima County, Arizona, and somewhat east of south of the city of Tucson. The distance from Tucson is thirty-six miles.

ROADS, ETC. The road from Tucson is excellent and an automobile can be driven at an ordinary rate of travel, the entire distance. Tucson is the best available railroad point at present, although the R.R. depot at Vail is some ten miles nearer. The extension of the El Paso and Southwestern R.R. has, however, been surveyed to pass within eight miles of the property, passing from Fairbanks through the Box Canon of the Santa Ritas and thence to the Pacific Coast.

DESCRIPTION. The camp is situated in the northwest foothills of the section of the range and has an elevation of 4,000 feet above sea level. It is pleasantly placed among heavy timber on the banks of an arroyo, and a well furnishes ample and excellent water. Here are the houses, stables, stores, etc., and the general equipment for the work as at present prosecuted. From here the main claims run a little east of south up the slope of the spur and reach an elevation of 8,000 feet at the highest peak shown by the accompanying photograph. The upper portions of these hills are covered with heavy pine timber and frequent small springs, even at this dry season, give sufficient water. All the workings are wet and continued work will develop water everywhere.

HOLDINGS. The 30 claims are grouped and cover over 600 acres running south by east, from the camp, for 9,000 feet to and past the high peak; the last being in the south-east section of the block. The claims run over the saddle and cover workings on the other side of the ridge.

FORMATION: The country is a regularly stratified quartzite and quartzose formation which has been, apparently, lifted from the southeast. The strike of same is northeast and

and southwest, with a general dip of 4% to the northwest. This stratification is crossed by pronounced dykes of porphyry and rhyolite, whilst numerous quartz fissure veins from the ore bodies and have a heavy mineral showing. They run either with, or cut the stratified rock. To the south and west the country is more granitic, and north and east show lime and metamorphosed rock. The quartz reefs are capped with a strong gossan and a considerable amount of demonstrative work has been done upon them. Wherever the reefs have been uncovered good copper values have been disclosed. The slope of the hill is very steep and erosion has been correspondingly rapid. There is comparatively little carbonate therefore, the sulphides coming to the actual surface. As stated moreover, the ground is practically permanently damp. The higher the elevation, the nearer to the surface the sulphide show, and any reef rock broken exhibits at once iron and copper sulphides. Prospecting has been carried on up to 7,800 feet of elevation revealing an unaltered condition with respect to mineralization.

DEVELOPMENT. East of the camp, and about 2,000 feet distant, an 80 foot perpendicular shaft, in quartz, between porphyrite and slate, follows two rich stringers of ore 6 and 12 inches wide, whilst the whole shaft is in good ore. A little further east a 30 foot shaft (5 ft. by 6 ft.) is all in strong auriferous. Again east from this the country is intersected by quartz and porphyry dykes.

South from the camp, 5,400 feet, and up the slope of the hill, an 80 ft. shaft has been sunk upon rich ore of a reef which contains even heavier stringers and pockets of metal. This is at an elevation of 4,824 ft. From here, south 1,700 ft. and at 3,282 elevation, a 30 ft. shaft, on another ledge, discloses the same condition, viz. solid copper sulphide, cuprite, bornite, tetrahedrite, etc. The steep creek running between these two shafts is crossed by other two ledges showing copper sulphide at surface and running with the country stratification, whilst in crevices of hard and worn quartzite beds of the creek itself, chalcocopyrite, cuprite and garnet show along its courses for a considerable distance. Above this at many points upon the hillside, up to 7,800 feet of elevation, numerous veins, striking in different directions have been tested and make the same showing. At the highest point there is copper sulphide at the surface.

J A
X MYNE

Between the two dykes shown on blue print, there is a cropping over 400 ft. in width of heavily armed quartzite with copper sulphide throughout. It is evidently the capping of an immense copper deposition and is proved by a large number of surface cuts. Across the saddle, and on the other slope of the spur, a granite country is approached and here a 75 ft. tunnel has been driven to reach a strong ledge which is traceable for more than a thousand feet and upon which surface breakings give copper and iron sulphides. Stringers of heavy sulphide and bornite show already in the tunnel. The general trend of this ledge is toward the apex of the hill. The elevation of the tunnel is 5,450 feet.

The geological and surface conditions point conclusively to an immense mineralization which can be easily and inexpensively proved beyond all doubt. The manifest upheaval, the net work of fissure veins (indicative of depth) carrying high values, the strong intrusive dykes, etc., are convincing in this respect.

VALUES. No attempt has been made to estimate the values of the ores at present. Those recovered so far (outside of mere surface cuts) are altogether too high to be the basis of computation; the lowest return, after carefully eliminating the yellow sulphide from the crushed ore, being 14 3/4% copper and to all appearances low grade of tetrahedrite. So far the ores carry from \$1.00 to \$6.00 in gold.

PROPOSED WORK. It is proposed to drive a tunnel from a point about 4,400 ft. elevation and marked with a cross on the photograph toward the highest peak. To reach the perpendicular of this peak the tunnel would be somewhere about 7,000 ft. in length and, at the terminal point, have a vertical depth of 3,500 feet, less the allowance the grade of the tunnel. This tunnel would, unquestionable, tap a large number of veins in its course and expeditiously open up an immense reserve of ore, "making ground" at the rate of nearly a foot for each of two feet driven, besides providing a complete drainage for all subsequent workings.

In a somewhat lesser driving distance a similar tunnel could be continued from the drift on the south side of the spur (the 75 ft. drift) of setting a junction, by a winze, with a longer tunnel from the northwest. I know of no area that could be more speedily and effectively put into working shape.

The entrance to either tunnel is well above the valley and there is dumping ground

for all time, splendid smelter and work sites and a beautifully situated and healthful town site. With every facility on the spot, the installation of a few electric drills now and a careful and systematic development hereafter, would speedily demonstrate the great value of the property and put it, early, upon a productive basis.

There is sufficient iron for smelter purposes and two claims, to the north of the camp, have been reserved for the lime thereon. There are also two or three claims reserved on the summit of the hills (all outside of the 30 claims, for the sake of timber. These lime and timber claims are included in the purchase. It is extremely unlikely that the mine will call for much heavy timbering.

In conclusion I may say that the holdings, taken together, cover quite a considerable area of mineral ground and that it would be difficult to find a group more favorably situated with a view to location and facilities for development and operation; or one that would equal its practical certainty of immense value in the near future. Apart from the developed and producing mines, it is the most favorable copper proposal that I have seen in the southwest.

(Signed) Fred Swinney M. E.

P.O. Since this report was made there has been considerable development on the property, including a 210 ft. shaft sunk on the Jackson View from which about 200 tons of high grade sulphide ore was taken. There is now a very good road 9 miles from the railroad to the mines.

Jackson

JA

X MINE

CLAIMS

Florida Group

<u>Name</u>	<u>Book</u>	<u>Page</u>
King	KKK	109
Saw Mill	KKK	98
Tucson	KKK	108
Robinson	KKK	107
Yellow Jacket	LLL	12
Florida	KKK	104
Ring	KKK	99

Big Silicia Group

<u>Name</u>	<u>Book</u>	<u>Page</u>
Big Silicia #1	KKK	100
Big Silicia #2	KKK	101
Big Silicia #3	KKK	102
Big Silicia #4	KKK	103

Old Baldy Group

<u>Name</u>	<u>Book</u>	<u>Page</u>
December	GGG	436
Great Central	GGG	437
Iron Mask	GGG	438
Jackson	GGG	439
Evelyn	KKK	97
Catherine	KKK	105
Jack	KKK	118
Big Jim	KKK	119
Azurite	KKK	121
Big Strike	KKK	94
Coolidge	KKK	114
Cody	KKK	115
Charlotte	KKK	92
Daniel Boone	KKK	116
Irish Mag	KKK	111
Grand View	KKK	90
Highest	KKK	93
Lucia	KKK	122
Little Louise	KKK	112
Little New Jersey	KKK	106
Jefferson	KKK	89
Big Buck	KKK	113
Washington	KKK	110
Mary	KKK	117
Nicholes	KKK	123
Old Pap	KKK	120
Perry	KKK	91
Tunney	KKK	95
Tessil	KKK	124
Victor	KKK	96
Martin	KKK	88
Bonzo	75	480
Little Pete	409	213

3

JA

X MYNE

OPY

J A

INTRODUCTION: The following report and maps are the result of observations made during two trips to these claims. The first was a pleasure trip the purpose of which was to make myself acquainted with the geology and ore deposits on the west slope of the Santa Ritas, so that no detailed examinations were made at that time. A second trip was made December 27 - 29, 1906, and unfortunately rain and a snow storm prevented careful examination of the claims high up in the mountains.

These claims are located on the accompanying map from description of Mr. McCleary as we went over the ground. The topograph contours are drawn from an enlargement of the small scale government map of the district, and are only approximately correct.

In the short time and on account of the unfavorable weather accurate geological mapping was out of the question; therefore the accompanying sketch map represents the main features of the geology in an approximate manner. I shall adhere to my custom of only mentioning those facts in regard to the geology that bear directly upon the value of the mineral deposits, referring those who may have a further interest in the subject to the map, which is of course a far more accurate compilation of geological facts than any description can be. The gist of the report is summed up in the following paragraph for the benefit of those who may not be interested in the details which follow.

SUMMARY OF IMPORTANT POINTS AND CONCLUSIONS: The McCleary claims cover a number of fissure veins in an intrusive dioritic rock. The vein filling is magnetite and quartz. Some of these veins have been traced for distances exceeding 3000 feet, the Jackson in particular, approximately 5000 feet, and this latter extent allows the inference of continuity with depth. The extension development of the magnetite not only filling the fissure but extensively impregnating and replacing the country rock of the mineralized area, indicated the intensity of the action of the mineralizing solutions. The fact that in almost every cut this magnetite is more or less disseminated with chalcopyrite shows that the ore solution were copper, as well as iron bearing. The fact that the deepest working develops a high grade ore shoot gives a perspective value to all the similar magnetite veins. These facts then suggest a mine of the first order of magnitude below the great deposit of magnetite on the Great Central and Western claims. A thorough development of the Jackson claim is advised before attempting the upper group of veins or the more formidable task at the Great Central.

GENERAL INFORMATION

SITUATION: As shown on the Tucson and Patagonia sheets of the U.S.G.S. topographical map, these properties are 33 miles southeast of Tucson, and about 38 miles by the wagon road. They are seven miles southeast of the mining town of Helvetia, and 12 miles east of the Twin Buttes mine. The Twin Buttes Railroad is 11 miles distant, the nearest shipping point being Brown's Ranch.

ROADS AND FREIGHT: There is a first class road to Tucson, and freighters haul goods and machinery to the camp for \$8.00 per ton, and return freight on ore should be about \$5.00. With any considerable amount of business these charges should be cut in two by shipping from the Twin Buttes Railroad.

ELEVATION AND CLIMATE: A glance at the contour lines on the accompanying map shows that the camp is situated at an elevation of 4000 feet, and the Alta (the southernmost claim) reaches an altitude of 8000 feet. At such heights the heat is never oppressive, and the efficiency of both American and Mexican labor is at a maximum. The slope of the mountains makes it possible to work the deposits to great depth by tunneling, as will appear later.

X MINE

J A

X MINE

WATER: Water runs in the main gulleys during most of the wet season, and water for domestic purposes can be developed by wells in the arroyo bottoms. Water has been struck in the main shaft in the Jackson; the flow, however, was not great, as it could be handled with difficulty with the windlass. As these claims have the whole northern slope of the Santa Rita Mountains from Mount Baldy down for a collecting area, it is evident that water will be struck in sufficient quantity for all possible mining requirements during the contemplated development work, and further the formations do not lie in troughs or structural basins, and the rock does not consist of soluble or permeable sedimentary strata, but of slightly porous igneous rocks; therefore the flow will probably be steady and moderate in amount.

TIMBER: The pine forests of the Santa Ritas immediately at hand and extending over the upper claims form a source of supply of fuel and timber unexcelled in this part of Arizona. Time was not available to permit any accurate estimation of the amount of timber at hand. It is safe to say, however, that it is sufficient for all the needs of these mines for a number of years to come. This timber is within the Santa Rita Forest Reserve, but permission can be obtained from the government to cut what is necessary for mining uses. A small saw mill located at the upper end of the claim will furnish timber for the cost of saving and cutting alone.

LABOR: The labor situation is in no wise different from that confronted by the rest of southern Arizona. The supply is not equal to the demand. American miners get from \$3.00 to \$4.00 per day, and Mexicans from \$2.00 to \$2.50. When properly handled and if the contract system is adopted, the Mexican labor compares favorably and often exceeds the higher priced American article. With Mexican labor the company store is a necessity and properly managed will reduce the labor bill twenty-five to thirty per cent. The best results have been obtained either by using American labor alone, or Mexican labor with a few American bosses. These two classes have seldom been worked side by side with success.

GEOLOGY AND ORE DEPOSITS: Reference to the maps and sections will show that the rock in the center of the map is an intrusive mass belonging to the diorit-andesite family. The center of this mass approaches a completely crystalline diorite, while the margins show andesitic characteristic. The country rock to the north of the diorite was not examined carefully. It is apparently an andesitic rock in the main, but whether it is the margin of the dioritic intrusive mass, or belongs to another series into which the diorite has been intruded, I did not determine. In the southern group of claims the veins branch out from and are related to a basic porphyry dike, as shown on the map.

To the east of the diorite is a rhyolite flow with pronounced banded and flow structure. On the eastern margin of this flow the rhyolite shows some variation in composition, approaching a variety known technically as dacite. That the diorite is intrusive into the rhyolite is indicated by the development of a large amount of magnetite in the latter at the one place where the contact was examined. To the east lies a slate injected by the rhyolite, and further east again is a thoroughly fractured and faulted series of Palaeozoic sedimentaries of slate, quartzite, and limestone. These formations are all cut by a prominent rhyolite-porphry dike, and they all disappear towards the north under the debris washed down from the mountains.

The fragmentary and incomplete history which can be deciphered from these rocks and their relations to each other is as follows:

- (1) A period of quiet sedimentation during which the shales, (now slates), sand stones, (now quartzite), and limestones were deposited in an ancient sea.

J A

X MINE

- (2) At a far later period an injection and overflow of rhyolitic lava.
- (3) An injection of diorite, which tilted the rhyolite and surrounding rock, and was probably accompanied by faulting.
- (4) The development of mineral veins in the diorite, to a less extent in the marginal rhyolite.
- (5) An injection of the Rhyolite-porphry dike, which cuts both formations and veins and has no connection with the mineralization.

As just stated the mineralization is limited to the intrusive diorite and its margins, no ore deposits of value appearing in the sedimentary rocks towards the north. Within these limits the most striking feature is the development of immense amounts of magnetite. The vein filling is a solid mass of magnetite and quartz, and from the veins and extending hundreds of feet away the minerals of the diorite are replaced by magnetite. This development is the most extensive where the veins cross, for instance in the vicinity of the Jackson shaft, and reaches a maximum of the Great Central and Western claims, where the country for four or five hundred feet is replaced by massive magnetite and quartz.

The veins or fissures, even the smaller ones, are remarkably continuous, and some of them can be traced on the surface two or three thousand feet almost without a break.

There are three especially interesting groups of veins to which especial attention was given during the examinations: (1) the group centering near the Jackson Shaft, (2) the great magnetite deposits on the Great Central and Western Claims, (3) the upper group of veins in the vicinity of the basic porphyry dike on the Alta Vista, Old Ironsides, Constitution, and General Funston Claims.

(1) The most important veins of the Jackson group are the Jackson main vein, the Jackson parallel vein, the Decatur vein, and the X vein; besides these there is one cross vein shown on the map and several smaller veins to which no attention has yet been paid. The Jackson vein is an east-west fissure easily traceable on the surface, perhaps five thousand feet. The filling here as everywhere else on the property is magnetite and quartz, with no showing of pyrite or chalcopyrite at the surface. The mineralization is most extensive in the vicinity of the shaft, doubtless caused by the convergence of several fissures towards that point. Here the magnetite has a width of 20 feet on the outcrop. Forty-five feet down the shaft, which is 80 feet deep with 20 feet of water, a shoot of very high grade chalcopyrite (see assays) develops, which has a width of $3\frac{1}{2}$ to 4 feet. This shoot dips across and out of the shaft, but was caught in a cross cut from the bottom of the shaft and is reported to show 18 inches of solid metal. A cross cut is also driven from the bottom a distance of 50 feet towards the parallel vein to the south, but has not yet reached it. This parallel vein about 75 feet to the south shows a similar outcrop of magnetite and quartz, but is as yet without any development. The Decatur vein is well exposed in the Decatur cut about 2,000 feet to the northwest of the Jackson shaft. The massive magnetite and quartz vein stuff is four to five feet in width with disseminations and segregations of chalcopyrite showing at the surface. There is nothing deeper than an open cut on this vein. The X vein two and one half to five feet in width is opened only by a 10 feet shaft, but shows all the characteristics of the other vein.

The excessive amounts of magnetite deposited beyond question by hot water ascending along these prominent fissures may be taken as a measure of the great activity of the mineralizing solutions. The distance which these fissures have been traced along the surface allows the legitimate inference that they will prove to have depth. That chalcopyrite has been found disseminated in the magnetite right at the surface, and that at a depth of

50 feet a high grade shoot of chalcopyrite has been encountered gives a perspective value to every one of the magnetite veins in the diorite. The Jackson shaft therefore is one of the critical points and should be the first place at which development work ought to be pushed in order to determine the size and richness of this ore shoot, as well as to decide whether or not the shoots will be of sufficient size and frequency to make the venture a commercial success.

(2) The magnetite deposit in the Great Central and Western:- This deposit for a width of almost 500 feet is largely a mass of magnetite and quartz. Unfortunately the show forbade making as careful an examination as the deposit deserves, and Mr. McOleary informs me that it extends further to the south than appears on the map. Disseminations of chalcopyrite appear wherever the magnetite has been cut. The Birthday vein can be traced directly into this deposit. The short tunnel started on the Birthday fissure is, according to the contour map, 800 to 1200 feet below the highest outcrop of the Great Central vein, and the distance necessary to drive under and through it is about 3000 feet. Such a tunnel has advantages over the one marked 2-b on the map to be described later.

The development on the Jackson shaft in similar vein stuff suggests possibilities of a mine of first magnitude, here. It would seem advisable, however, to develop the Jackson thoroughly before starting the more onerous task of opening up the Great Central. Diamond drilling has been suggested as a method of attack, but I estimate that five such holes would cost as much as one shaft and as cross cuts and drifts will certainly be necessary in a vein of this size, the proposition seems to be of doubtful value. A second plan has been suggested; namely, to run the tunnel a-b starting at a point 100 to 150 feet below the Jackson shaft and cross cut all the other veins on the way to the Great Central. This tunnel, according to the map, is approximately 5000 feet long, and will gain a depth of about 1800 feet. It is evident that this tunnel should not be attempted until the value of the Jackson and Great Central has thoroughly determined by workings from the surface.

(3) The upper group of veins; -- These consist of three main veins all of which run into the porphyry dike which is shown on the midst claim, and a vein further down the hill on the General Funston. These are strong veins, three to eight feet in width with the usual filling and with disseminations of pyrite and chalcopyrite showing almost at the surface. No work deeper than open cuts has been done on these veins; therefore the value is presumptive, as in the case of the deposits described in the preceding paragraph. The Jackson development makes then the most logical first development project.

In regard to the method of opening these deposits I suggest that tunnel c-d in the porphyry dike (which is very easy working ground) starting on the west of the slope somewhere between a 7200 and 7300 foot level. From here it is about 1000 feet to the apex of the hill, and the tunnel will gain a maximum depth of about 700 feet. Shafts might also be sunk in or near the porphyry dike at the intersection of these three veins to insure that they would not be overlooked in driving the tunnel and to develop the deposits from the surface down.

DEVELOPMENT, INSTALLATION, ETC.: The development should take place in the following order:

- (1) Development from the Jackson shaft to a depth of at least 500 feet. If this proves satisfactory, then
- (2) Development of the upper claims by a tunnel with surface development through two shafts:
- (3) Several shafts and tunnels along the Great Central Vein to a depth of two to three hundred feet wherever there seems to be the best chance of ore shoots as determined by a number of surface cuts:

- J A
- (4) Assuming that the developments have all proved the worth of the deposit, a 3000 foot tunnel along the Birthday vein, which will gain a maximum depth of 1200 feet.
- (5) Finally, if the mines have all proven of sufficient value, a cross cut tunnel starting below the Jackson shaft and gaining a depth of 1800 to 2200 feet, according to the location of the mouth of the tunnel at a length of 5500 to 7000 feet. (Only the shorter tunnel is shown on the map.)

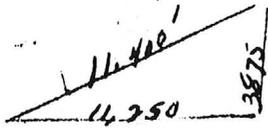
Details of cost and installations are hardly necessary here. In the rough, a 15 H.P. BOIST and a 30 H.P. vertical boiler will cost in place at the Jackson shaft about \$2500.00. This will be sufficient for a depth of 500 feet with necessary drifts. The water may possibly be handled with the bucket, obviating the necessity of a pump. The indication of a steady flow of a small volume of water obviates the necessity of large boiler capacity. When this plant has accomplished its work on the Jackson, it can be moved to the Great Central and used for the testing of that deposit. With this equipment the sinking should not cost \$15.00 a foot, and drifting \$10.00 a foot, as the ground stands excellently, and breaks well. \$25,000.00 should open the mine fairly well to the 500 foot level.

The tunnel on the upper claims should be run for \$10.00 a foot; the total cost of development as suggested should not reach \$20,000.00. Not less than \$50,000.00 should be spent prospecting the Great Central vein before the tunnel from the Birthday is driven. This tunnel will cost from \$30,000 to \$50,000, and should the ore deposit prove of sufficient value, the work will then have been carried on to the point necessary to open up a great mine. Estimates on the cross cut tunnels are hardly in place, as there is much to be done before that can be undertaken with propriety, and much more accurate figure will be on hand at that time.

ASSAYS: - One assay was taken by me across the ore shoot in the Jackson at a depth of about 50 feet. It shows the following values: gold trace; silver 9.0 oz.; copper 30.6%.

I am informed that other assays taken by Mr. McGleary show a similar grade copper carrying in addition \$2.00 to \$5.00 in gold. This shows that the ore when it occurs has a gratifying value. The amount can only be determined by development.

G. F. Tolman,
Dean of College of Mines,
U of A.

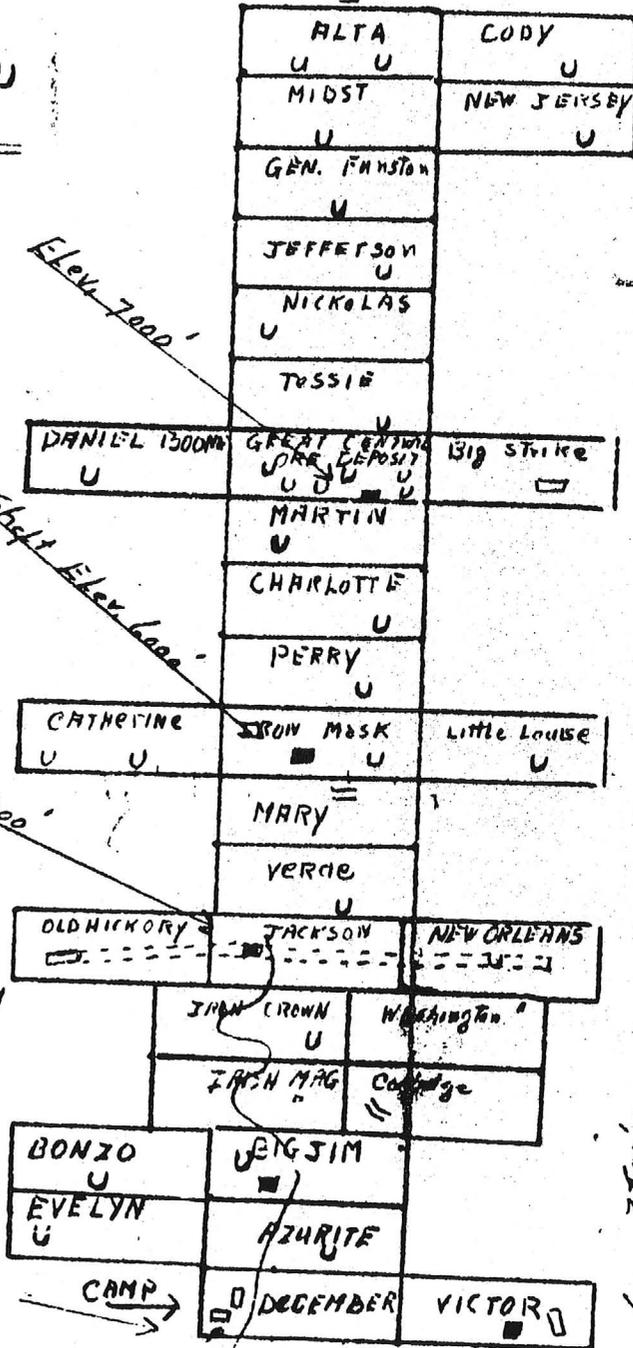


From Maps by U.S. Geo. Survey
 R.F. Mackenzie E.M.
 13y
 R. Smith Bassett

SCALE $\frac{1/2''}{800'}$

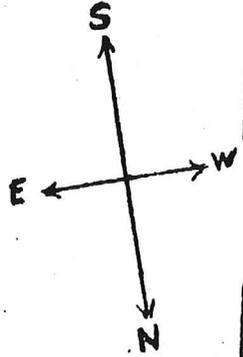
Open Cut U
 Tunnel =
 Shaft ■

Elev. 10,750'
 SOUTH



JAC

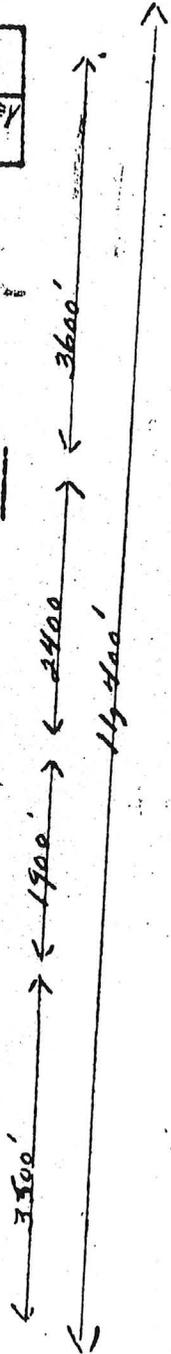
X MINE



Elev. 4200'

10 MILES TO R^Y

BARD



ESTIMATE OF ORE POTENTIAL

JACKSON SHAFT

OLD HICKORY MINE CO.

This estimate is derived from an underground mapping of the mine as it is today.

The Jackson shaft is on a slight incline to a depth of 210 feet. At the eighty-five foot level a short crosscut has been made on a vein ten feet wide, showing chalcopryrite one foot wide with all vein matter millable ore.

At the one hundred-eighty foot level, at another crosscut, vein average is ten feet, showing high grade chalcopryrite two feet wide. All vein matter is millable ore.

At two hundred ten feet, bottom of the shaft, there are three high grade chalcopryrite stringers showing, one, two and five inches in width, in a vein structure of ten feet width. All vein matter is millable ore.

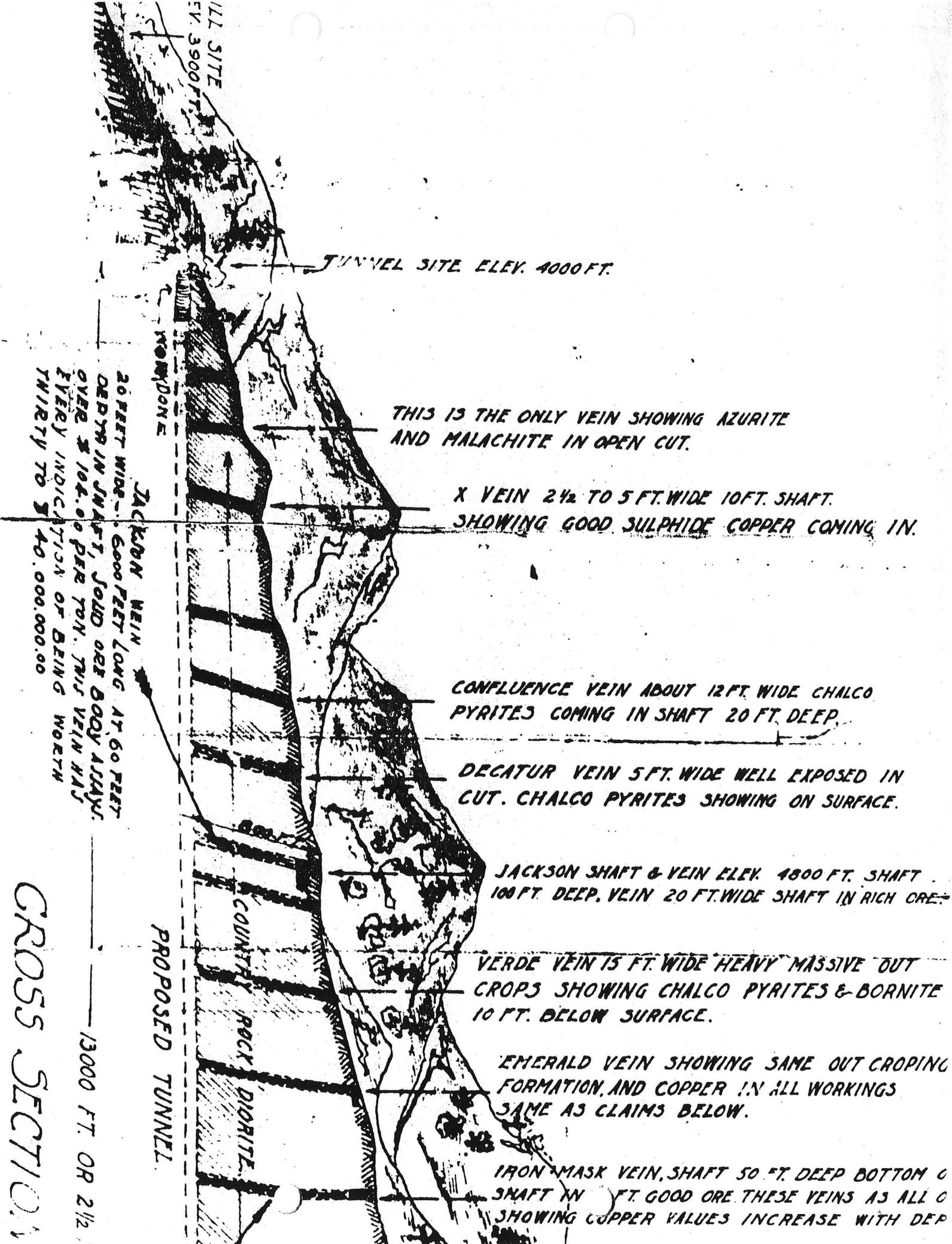
This map was drawn by a mining engineer, C.A. Pierce. This mine was not worked for molybdenum, which today is a prime metal. Molybdenum in this mine will average a minimal .015. Silver will average five to ten ounces per ton; copper at three percent, gold will be minimal. On the basis of an assay made from dump material, mining at the level of the shaft bottom could maintain a \$40 head.

As stated, this report is only an estimate, but it is based on a cumulative knowledge of some twenty-five years of mining by Mr. Mahan and Mr. Currin, plus the dump assay which was made by a reputable company. We have purposely maintained a minimal estimate.

We estimate some 15,300 tons of ore blocked out and ready for mining. We can produce as well as develop simultaneously.

J A

X MINE



JACKSON VEIN
 20 FEET WIDE -- 6000 FEET LONG AT 60 FEET
 DEPTH IN SHAFT, SOLD OFF BODY ASSAYS
 OVER \$104.00 PER TON. THIS VEIN HAS
 EVERY INDICATION OF BEING WORTH
 THIRTY TO \$40,000,000.00

PROPOSED TUNNEL

CROSS SECTION

13000 FT. OR 2 1/2

ALL SITE
 ELEV. 3900 FT.

TUNNEL SITE ELEV. 4000 FT.

THIS IS THE ONLY VEIN SHOWING AZURITE
 AND MALACHITE IN OPEN CUT.

X VEIN 2 1/2 TO 5 FT. WIDE 10 FT. SHAFT.
 SHOWING GOOD SULPHIDE COPPER COMING IN.

CONFLUENCE VEIN ABOUT 12 FT. WIDE CHALCO
 PYRITES COMING IN SHAFT 20 FT. DEEP.

DECATUR VEIN 5 FT. WIDE WELL EXPOSED IN
 CUT. CHALCO PYRITES SHOWING ON SURFACE.

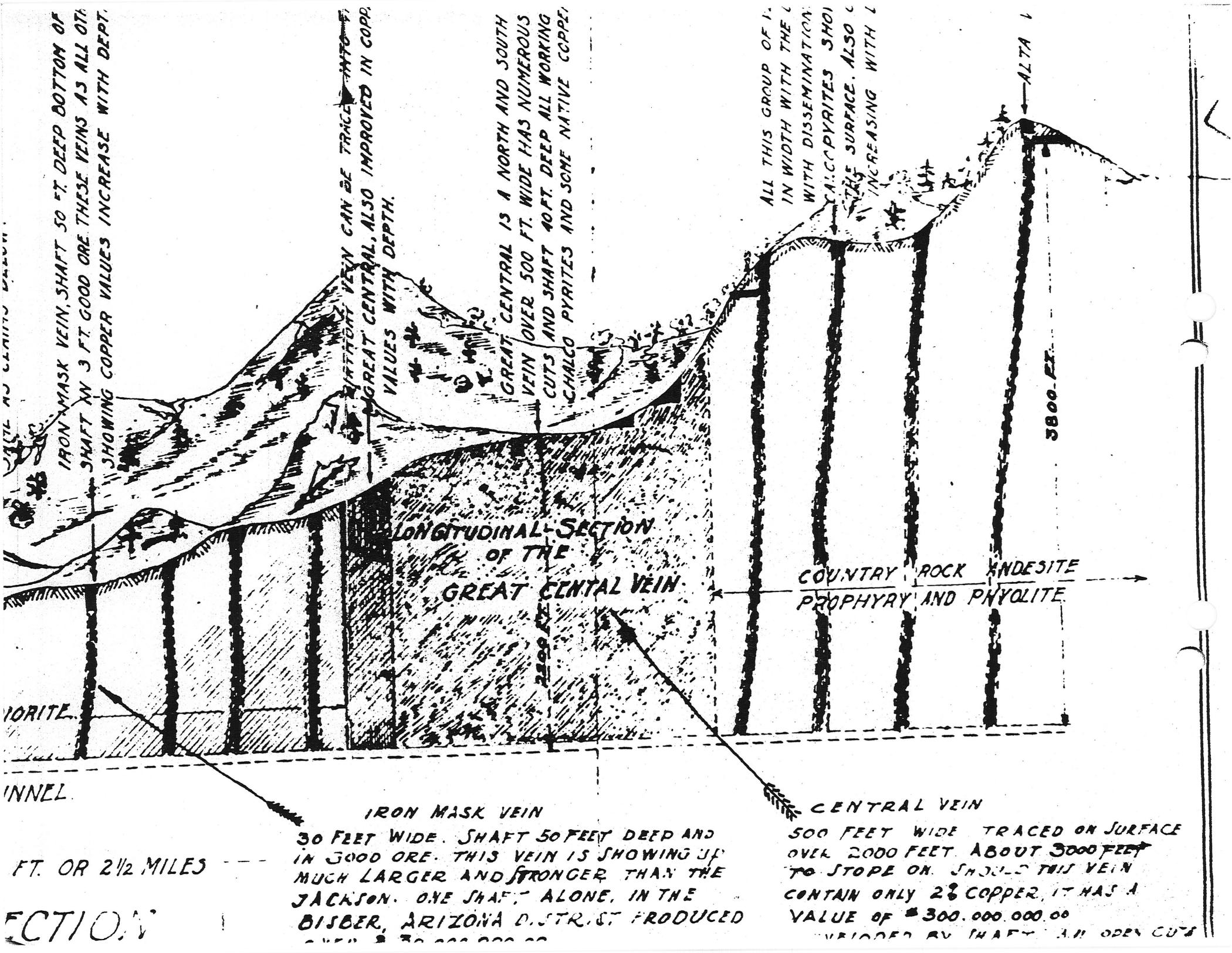
JACKSON SHAFT & VEIN ELEV. 4800 FT. SHAFT
 100 FT. DEEP. VEIN 20 FT. WIDE SHAFT IN RICH ORE.

VERDE VEIN 15 FT. WIDE HEAVY MASSIVE BUT
 CROPS SHOWING CHALCO PYRITES & BORNITE
 10 FT. BELOW SURFACE.

EMERALD VEIN SHOWING SAME OUT CROPPING
 FORMATION, AND COPPER IN ALL WORKINGS
 SAME AS CLAIMS BELOW.

IRON MASK VEIN, SHAFT 50 FT. DEEP BOTTOM OF
 SHAFT IN 10 FT. GOOD ORE. THESE VEINS AS ALL OF
 SHOWING COPPER VALUES INCREASE WITH DEP

COUNTRY ROCK
 DIORITE



IRON MASK VEIN, SHAFT 50 FT. DEEP BOTTOM OF
 SHAFT IN 3 FT. GOOD ORE THESE VEINS AS ALL OTHERS
 SHOWING COPPER VALUES INCREASE WITH DEPTH.

IRON MASK VEIN CAN BE TRACED INTO THE
 GREAT CENTRAL, ALSO IMPROVED IN COPPER
 VALUES WITH DEPTH.

GREAT CENTRAL IS A NORTH AND SOUTH
 VEIN OVER 500 FT. WIDE HAS NUMEROUS
 CUTS AND SHAFT 40 FT. DEEP ALL WORKING
 CHALCO PYRITES AND SOME NATIVE COPPER

ALL THIS GROUP OF VEINS
 IN WIDTH WITH THE
 WITH DISSEMINATION
 CALCOPYRITES SHOW
 THE SURFACE. ALSO
 INCREASING WITH DEPTH

LONGITUDINAL SECTION
 OF THE
 GREAT CENTRAL VEIN

COUNTRY ROCK ANDESITE
 PROPHYRY AND PHYOLITE

3800 FT.

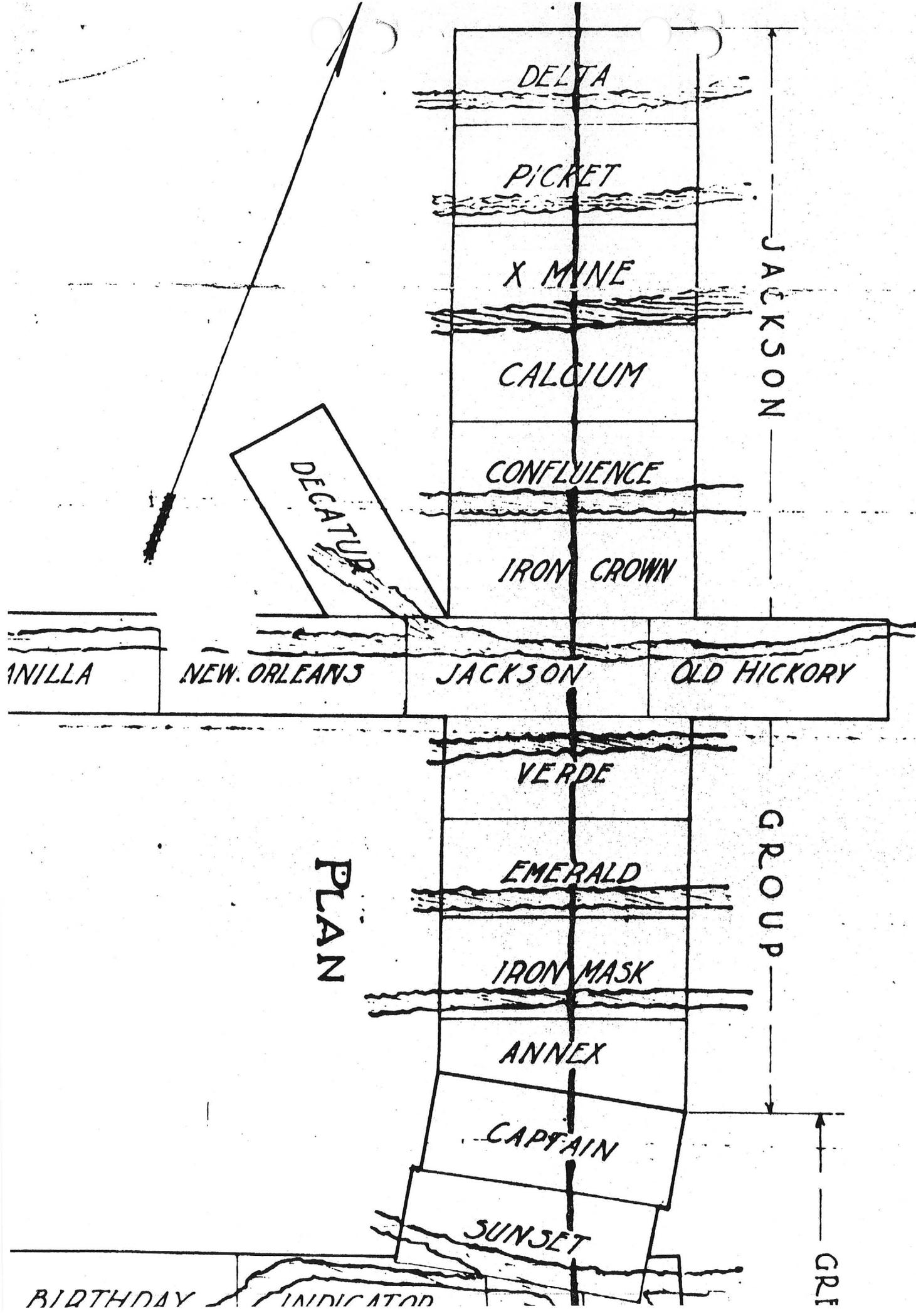
ALTA

IRON MASK VEIN
 30 FEET WIDE. SHAFT 50 FEET DEEP AND
 IN GOOD ORE. THIS VEIN IS SHOWING UP
 MUCH LARGER AND STRONGER THAN THE
 JACKSON. ONE SHAFT ALONE, IN THE
 BISBER, ARIZONA DISTRICT PRODUCED
 OVER \$30,000,000.00

CENTRAL VEIN
 500 FEET WIDE TRACED ON SURFACE
 OVER 2000 FEET. ABOUT 3000 FEET
 TO SLOPE ON. SHOULD THIS VEIN
 CONTAIN ONLY 2% COPPER, IT HAS A
 VALUE OF \$300,000,000.00
 REPRODUCED BY SHAFT AND OPEN CUTS

FT. OR 2 1/2 MILES

SECTION



DELTA

PICKET

X MYNE

CALCIUM

CONFLUENCE

IRON CROWN

DECATUR

VANILLA

NEW ORLEANS

JACKSON

OLD HICKORY

JACKSON

GROUP

PLAN

VERDE

EMERALD

IRON MASK

ANNEX

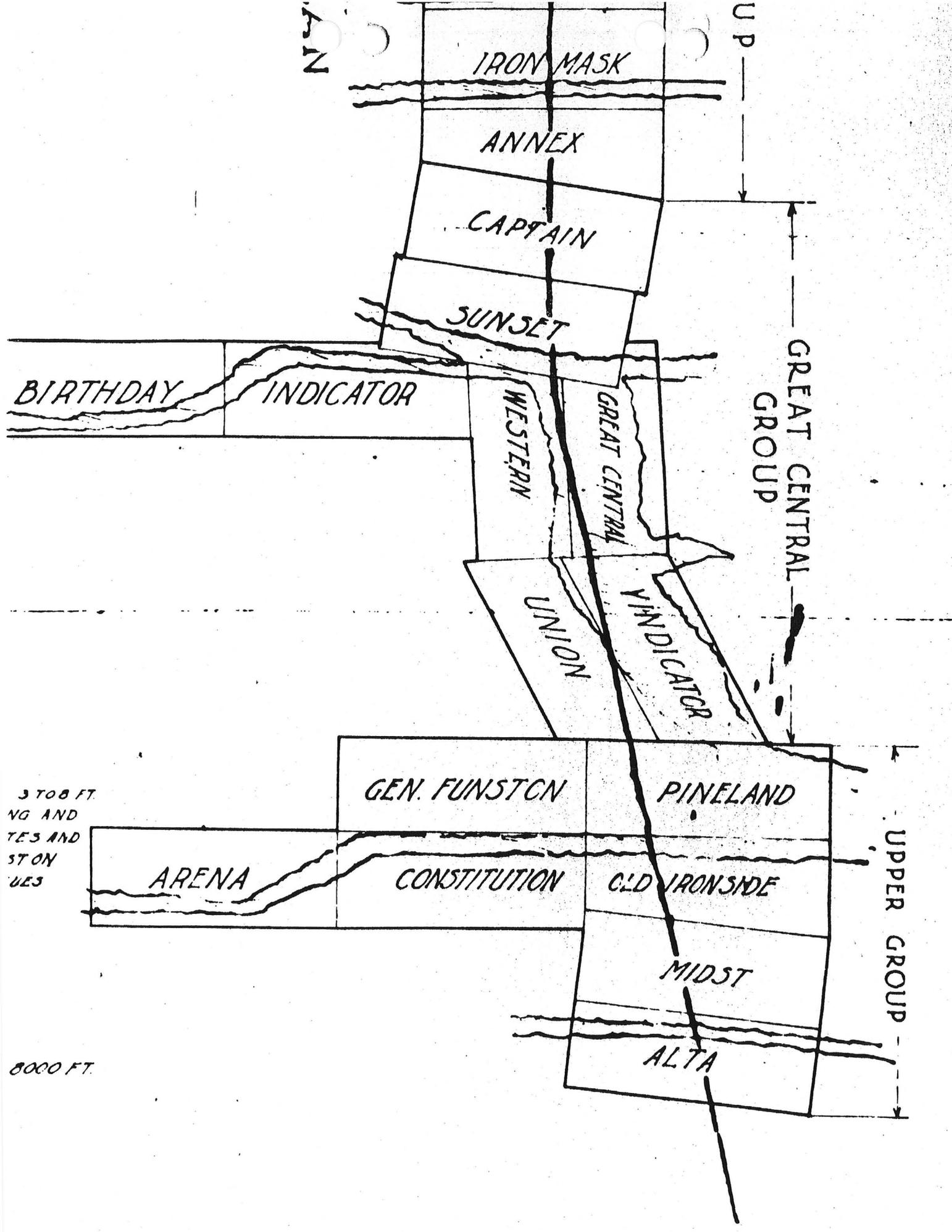
CAPTAIN

SUNSET

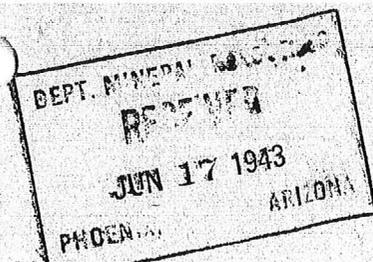
GRI

BIRTHDAY

INDICATOR



June 15, 1943



MEMORANDUM

To: Director, Dept. Mineral Resources
From: George A. Ballam

I do not believe there is a chance to do much with this property at present, that is, under the prevailing restrictions for assistance in developing. It looks like a good property to develop - a strong seven-foot fissure vein carrying at 22 feet slightly over 2% Cu. However, there is no readily recoverable ore and some 75 to 100 ft. of sinking must be done to begin with.

By coincidence, James Parber just dropped in, since I started this memo. He has received official notice of RFC disapproval of the loan. Glad I prepared him for it last week, by explaining the attitude toward developing prospects. So that's that.

George A. Ballam

May 29, 1943

MEMORANDUM

TO: George A. Ballam

FROM: Earl F. Hastings

Will you contact Mr. John Parber, 1222 North Second Avenue, Tucson and arrange to visit his claims in the Old Baldy District. Mr. Parber has filed application for an RFC development loan and does not appear to have sufficient data to warrant this loan.

Old reports, prior to sinking the Jackson shaft to its present depth are very optimistic--particularly a 1906 report by C. F. Tolman formerly Dean of the College of Mines, University of Arizona.

Parber shows only one assay of selected ore as a basis for his proposed work.

Do this examination at your convenience. Confidentially I am not recommending this loan--but will ask for a reconsideration if your examination reveals interesting additional data. I like nothing better than to change a "no" into a "yes". Thanks.

May 29, 1943

Mr. John Parber
1222 North Second Avenue
Tucson, Arizona

Dear Mr. Parber:

We are reviewing your loan application on behalf of the RFC and note in your experience record that you were in charge of the Tip-Top Mines for Albert Forbes. We would appreciate very much having a description of the workings and ore exposures in the Tip-Top property as you found them in 1927-1928. Such information would be very useful if received in the immediate future.

Be assured that your loan application is receiving every consideration and that it is our earnest desire that every worthwhile prospective producer of strategic metal become an active producer.

Very truly yours,

Earl F. Hastings
Projects Engineer

EFH:kk

May 29, 1943

MEMORANDUM

TO: W. B. Gohring
FROM: Earl F. Hastings

We are asking Ballam to further investigate the Parber Group of claims--should additional and interesting data be obtained, which is unlikely, we will ask to reopen the case.