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Arizona Department of Mines and Mineral Resources Mining Collection

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03/20/90

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: BINGHAMPTON

ALTERNATE NAMES:
ARIZONA BINGHAMPTON
PAT. CLAIMS MS 1694, 3421
PAT. CLMS. MS 3517,3613,2543

YAVAPAI COUNTY MILS NUMBER: 1010C

LOCATION: TOWNSHIP 12 N RANGE 2 E SECTION 6 QUARTER NW
LATITUDE: N 34DEG 27MIN 22SEC LONGITUDE: W 112DEG 11MIN 36SEC
TOPO MAP NAME: MAYER - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
COPPER
SILVER
GOLD

BIBLIOGRAPHY:
USGS MAYER QUAD
ADMMR BINGHAMPTON MINE FILE
YAVAPAI MAGAZINE MAR. 1918 P 4-7 SCHARLOT
HALL MUSEUM PRESCOTT, AZ.
BLM MINING DISTRICT SHEET 45
AZ. MINING JOURNAL SEPT 1919 P 18
LINDGREN, W. USGS BULL 782 1926 P 146
ADMMR ARIZONA BINGHAMPTON COLVO FILE

BINGHAMPTON MINE

YAVAPAI COUNTY
AGUA FRIA DIST.

T12N R2E Sec. 6 NW

USGS Bull. 782 p. 146

Map in map cabinet

Production to 1930 $1,750,000 - major metal copper
J.W. Still figures (corres. file)

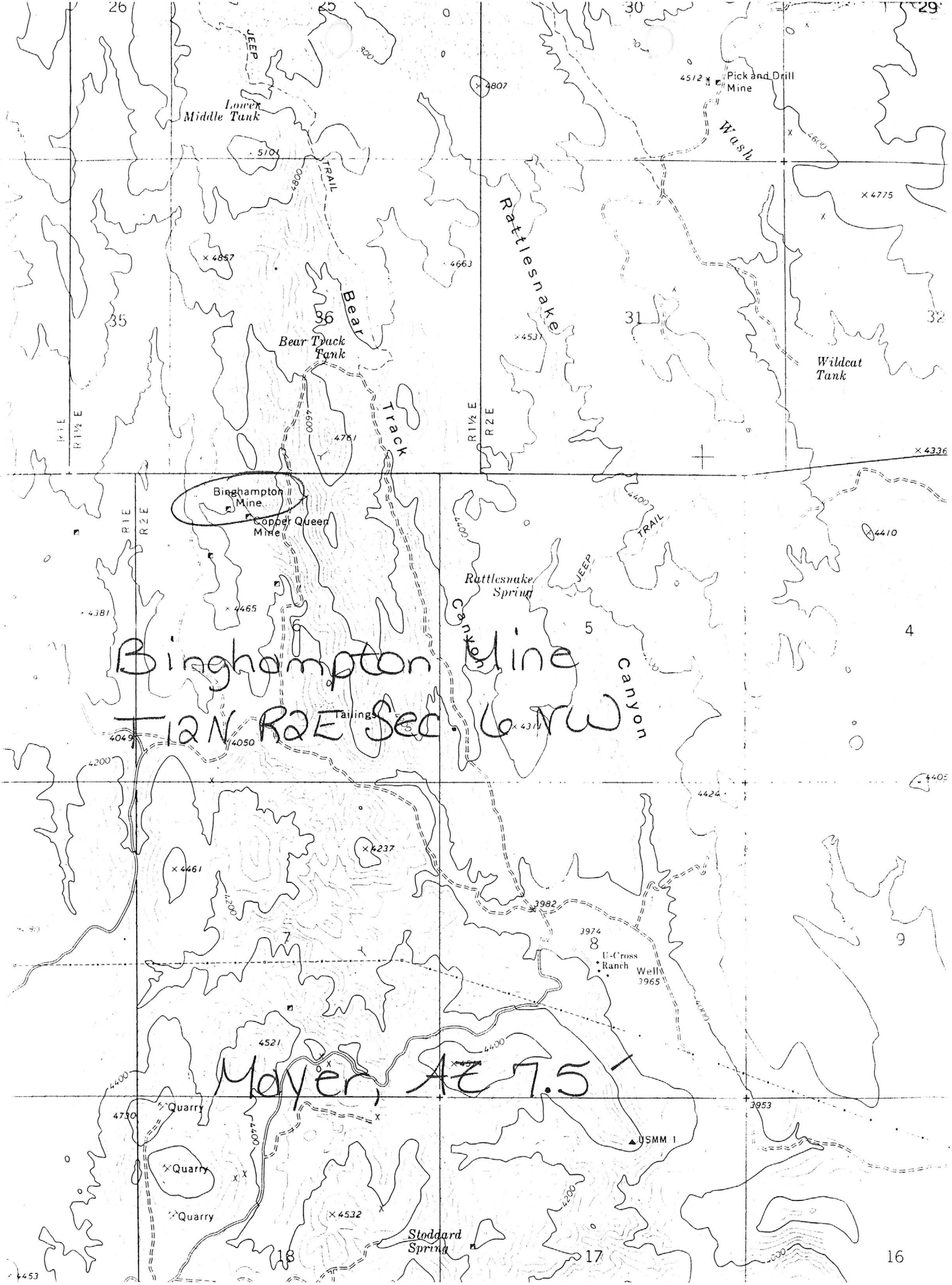
Arizona Mining Journal 6/1918, p. 44 & 8/1918, p. 20

Many maps and considerable further information available on this property at the Shattuck Denn Mining Corporation at Humboldt.

See: Copper Queen Mine (file) Yavapai, Agua Fria District

BLM Mining District Sheet 45

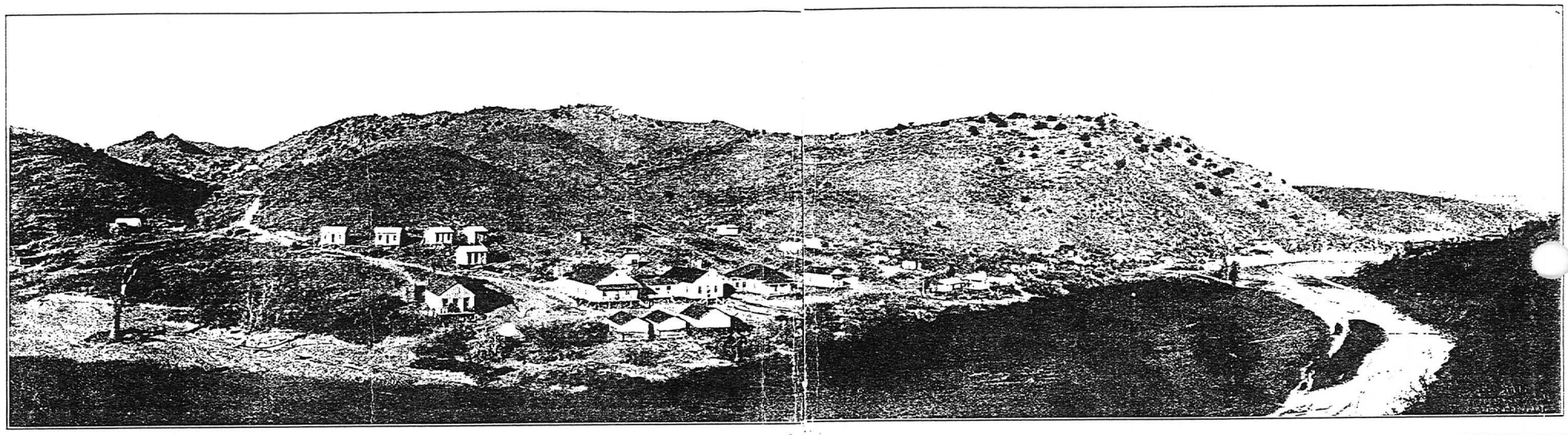
Mayer, AZ 7.5' Topo (included in file)

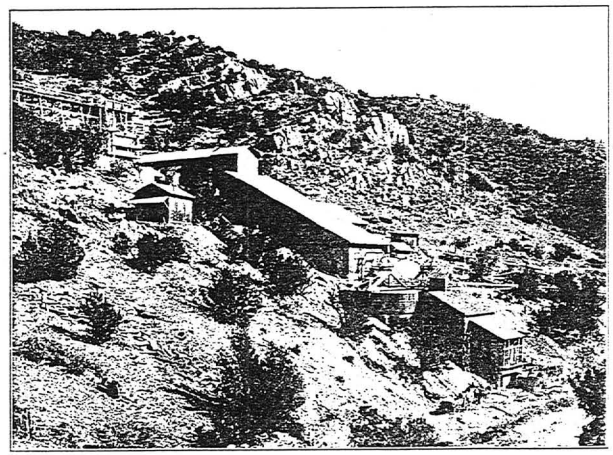

Binghampton Mine
T12N R2E Sec. 6 NW
Mayer, AZ 7.5
Lower Middle Tank
JEEP TRAIL
Pick and Drill Mine
Wash
Rattlesnake
Bear Track Tank
Bear Track
Wildcat Tank
Binghampton Mine
Copper Queen Mine
Rattlesnake Spring
Canyon
Tailings
U-Cross Ranch
Well
Quarry
USMM 1
Stoddard Spring
R1E
R1½E
R2E

Mr. Ricks is unwatering the Binghampton. FTJ WR 9-22-67

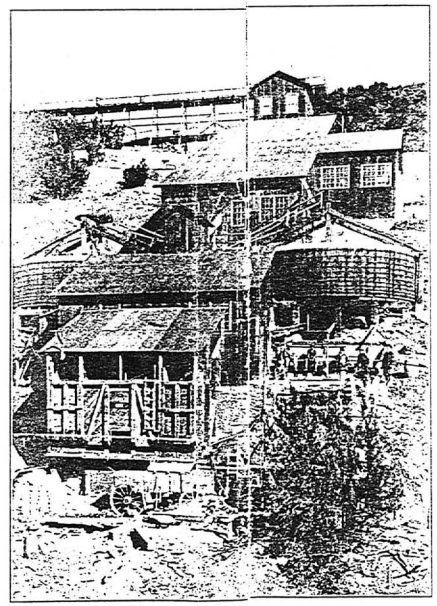
Mr. John Norris Steverson says he has the Binghampton mine. FTJ WR 2-13-70

Camp of Arizona Binghamton Copper Company—Binghamton, Stoddard, Arizona

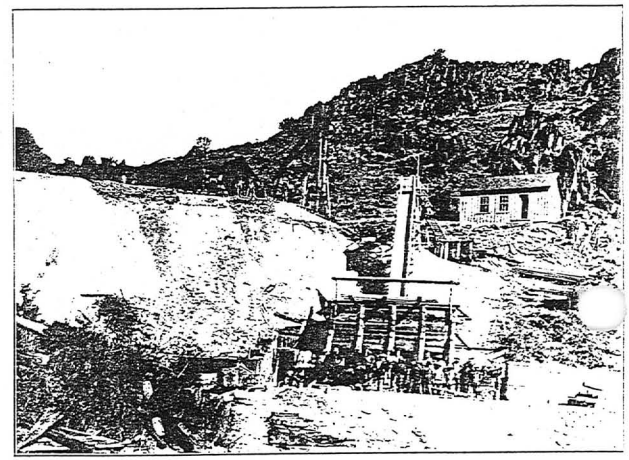




Arizona Binghamton Mill — Side View



Arizona Binghamton Mill — Front View



Arizona Binghamton Mine Shaft

COPPER

G. Mock
Mayer, Arizona

BINGHAMPTON
Yavapai County

9-44

Eng. report by A.C. Nebeker
$5,000 loan from RFC

10-22-42

NAME OF MINE: BINGHAMPTON
OWNER: Ralph Pfeffer, Box 362, Prescott

COUNTY: YAVAPAI
DISTRICT: Agua Fria
METALS: CU

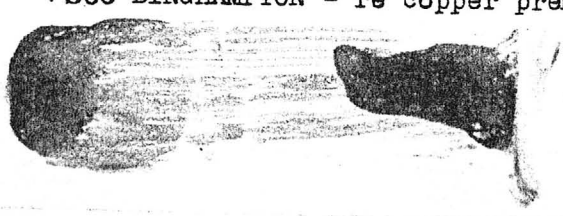
OPERATOR AND ADDRESS: DATE:		MINE STATUS DATE:	
~~5/1/44~~ 7/44	Gilbert Mock, Mayer, Ariz. Ralph Pfeffer, Box 362, Prescott, pres. of Binghampton Mg. Co. Co. office in Valley Bank Bldg., Prescott	5/1/44	Shipping
11/44	Geo. L. Hanson, Box 2, Mayer	11/44	Shipping
		7/46	Idle
		8/46	Shipping

FRANCIS, Glenn S., Chairman
Yavapai Council, A.S.M.O.A.
220 East Goodwin St.
Prescott, Arizona

9-27-44

See COUNCIL-Yavapai - re council meetings.
See BINGHAMPTON - re copper premium

10-30-44



JAN 13 1945

DEPARTMENT OF MINERAL RESOURCES

News Items ✓

Date 8/9/40

Mine BINGHAMPTON

Location MAYER

Owner LEASE TO

Address ✓JOE CRANE & ✓BOB MADERS } MAYER

Operating Co.

Address SHIPPING TO CLARKDALE

Pres. COPPER ORE

Genl. Mgr.

Mine Supt.

Mill Supt.

Principal Metals

Power, Amt. & Type

Signed JFC

ARIZONA BINGHAMTON COPPER CO.

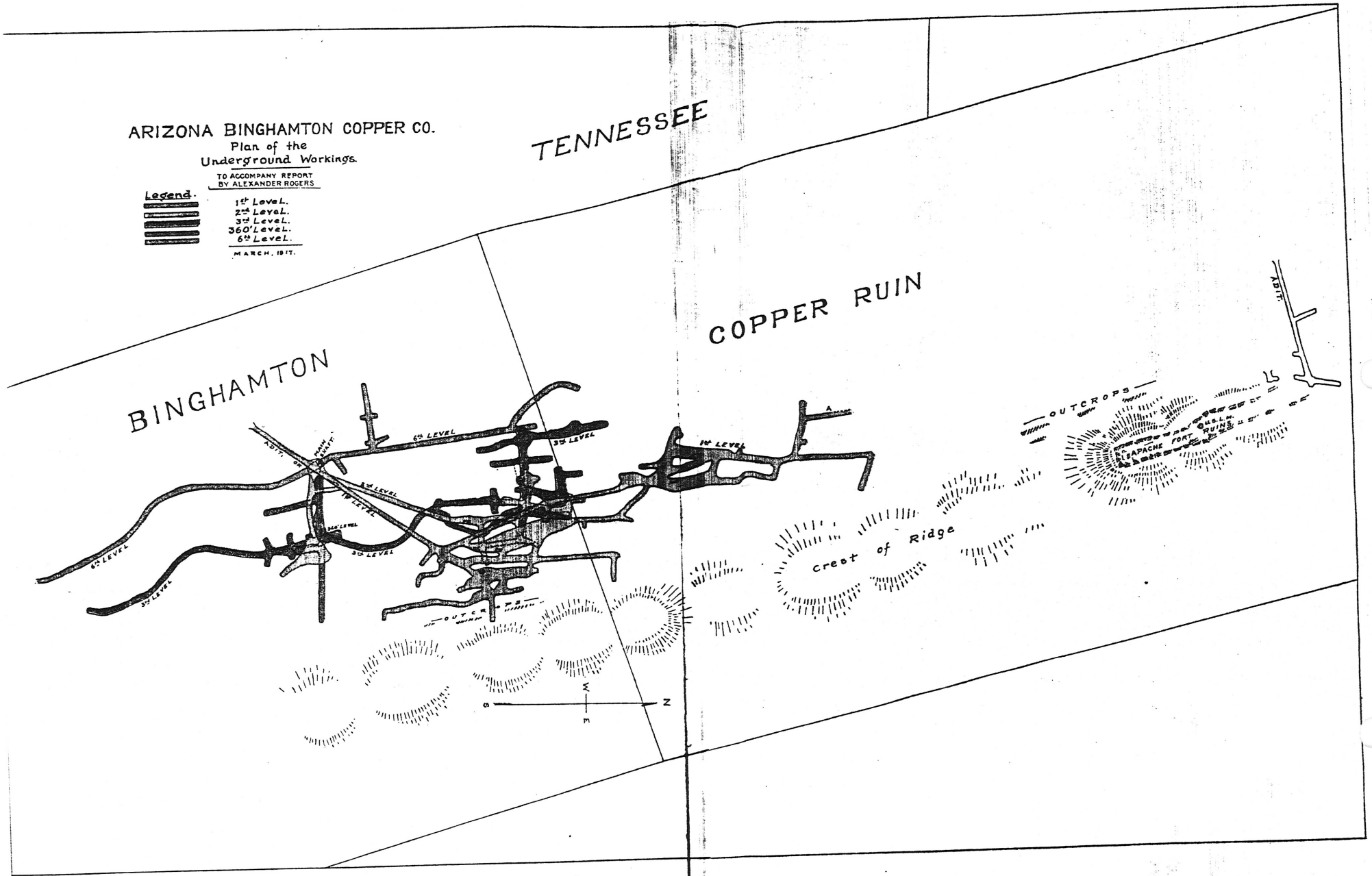
Plan of the Underground Workings.

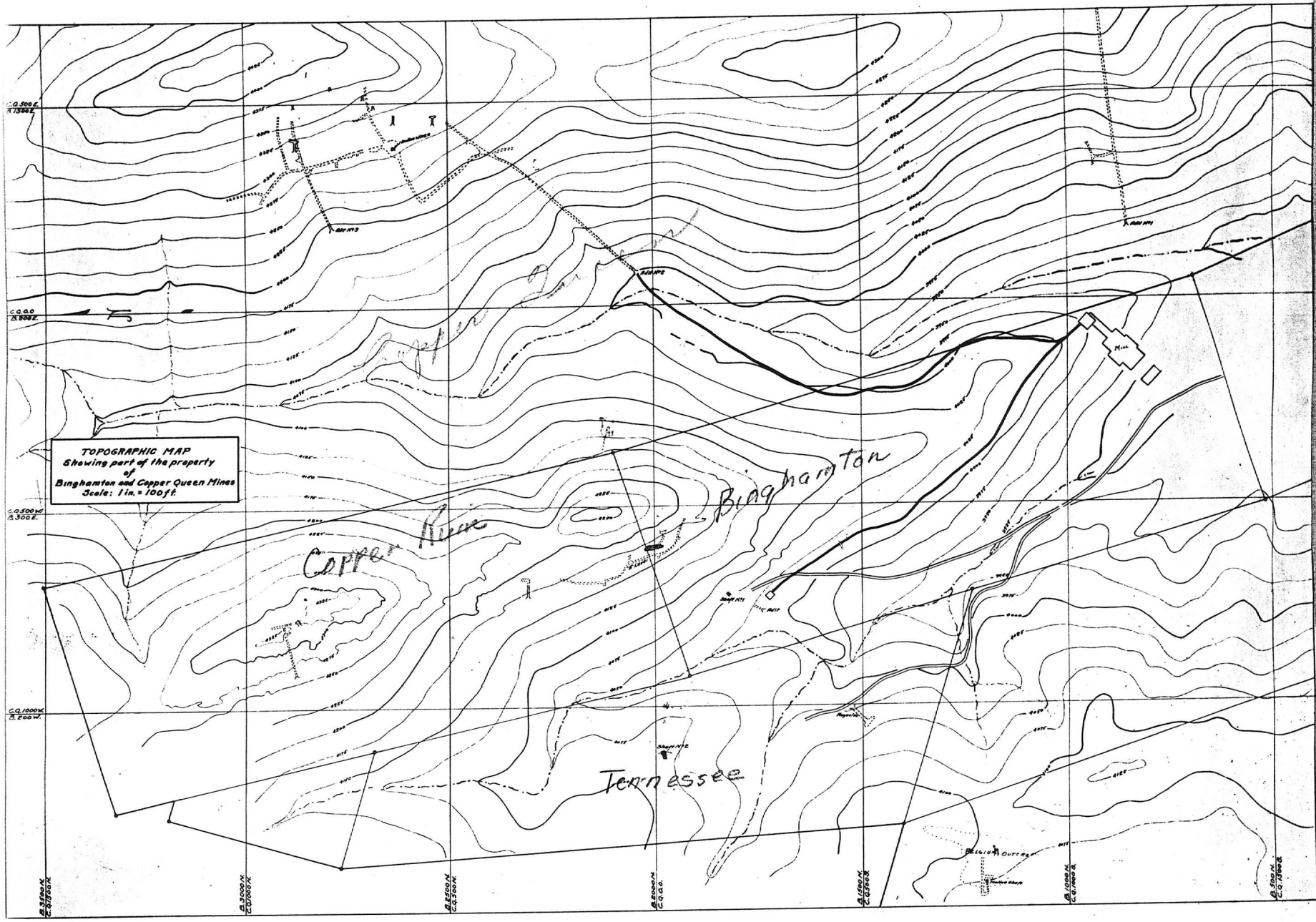
TO ACCOMPANY REPORT BY ALEXANDER ROGERS

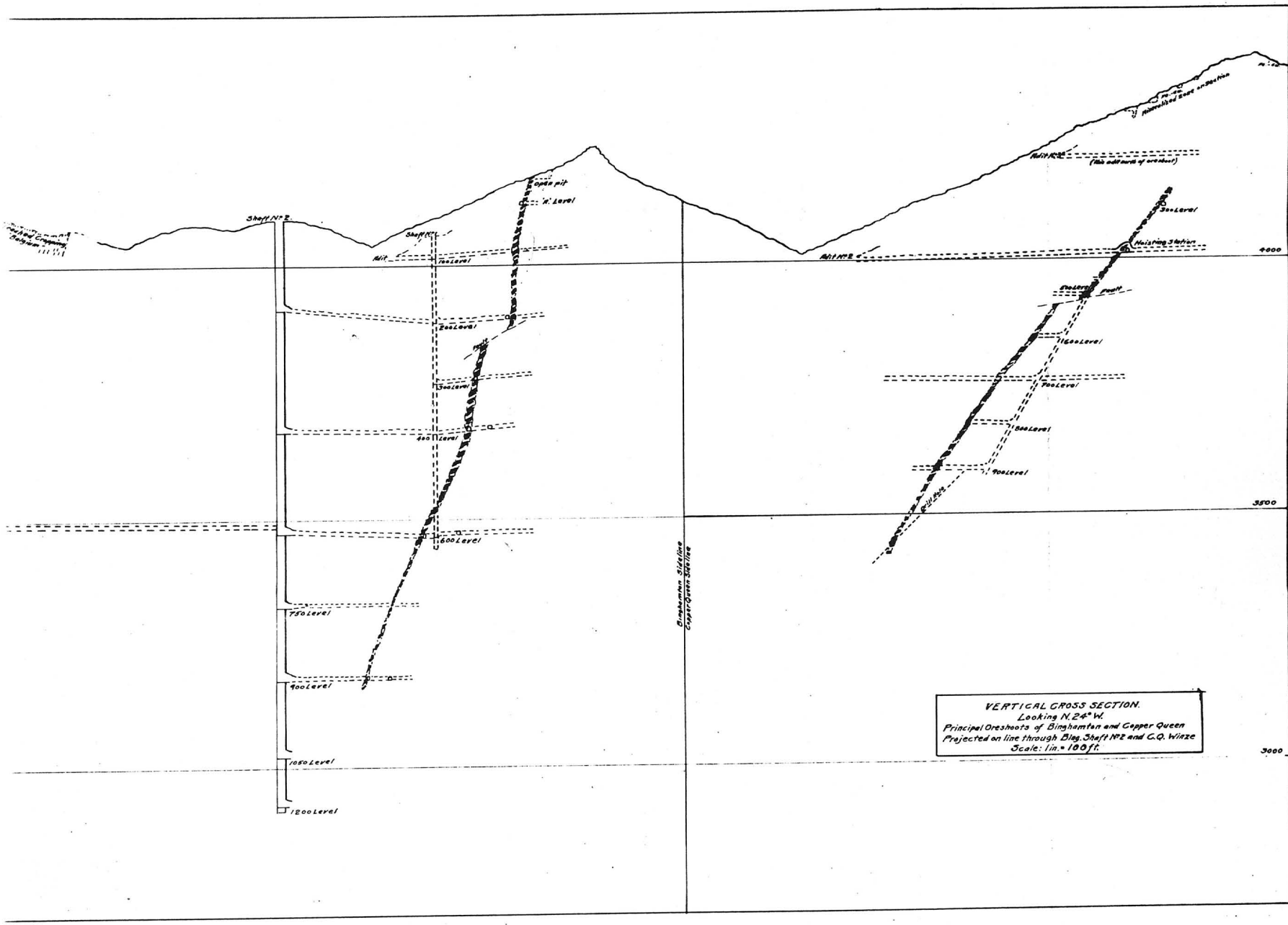
Legend.

1st Level.
2nd Level.
3rd Level.
360' Level.
6th Level.

MARCH, 1917.




TOPOGRAPHIC MAP
Showing part of the property
of
Binghamton and Copper Queen Mines
Scale: 1 in. = 100 ft.
Copper Queen
Binghamton
Tennessee
Mill
Shaft No. 1
Shaft No. 2
Shaft No. 3
Shaft No. 4
Belgian Outcrop
C.Q. 500 E.
B. 1500 E.
C.Q. 0.0
B. 500 E.
C.Q. 500 W.
B. 300 E.
C.Q. 1000 W.
B. 200 W.
B. 3500 N.
C.Q. 1500 N.
B. 3000 N.
C.Q. 1000 N.
B. 2500 N.
C.Q. 500 N.
B. 2000 N.
C.Q. 0.0.
B. 1500 N.
C.Q. 500 W.
B. 1000 N.
C.Q. 1000 W.
B. 500 N.
C.Q. 1500 W.



VERTICAL CROSS SECTION.
Looking N. 24° W.
Principal Oreshoots of Binghamton and Copper Queen
Projected on line through Bleg. Shaft No 2 and C.Q. Winze
Scale: 1 in. = 100 ft.

ALTONA SMELTING COPPER CO.
N
E
W
S

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

WESTERN UNION

A. N. WILLIAMS
PRESIDENT

1201

SYMBOLS

DL = Day Letter
NL = Night Letter
LC = Deferred Cable
NLT = Cable Night Letter
Ship Radiogram

The filing ti AB68 egrams and day letters is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

1944 OCT 30 PM 9 06

A•FNA220 NL PD=PRESCOTT ARIZ 30

W C BROADGATE=

APT 204 705 FOURTH ST NW WASHDC=

AM PREPARING REQUEST TO MRC FOR INCREASE IN PRICE PAID US FOR COPPER PRODUCTION AT BINGHAMPTON MINE AND HOPE TO HAVE ANY INCREASE GRANTED MADE RETROACTIVE ON ALL PAST PRODUCTION• HAVE YOU ANY SUGGESTIONS STOP RUMORED HERE BAGDAD RECENTLY RECEIVED INCREASE WHICH IS ALSO APPLICABL TO ALL PAST PRODUCTION STOP SOUND INTERESTING REGARDS=

GLENN S FRANCIS•

MRC••

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

I thought I had eliminated for all time any misapprehension about the working of the premium price plan when I wrote that report, but I guess no one read it.

Bill Broadgate

DEPT. MINERAL RESOURCES
RECEIVED
NOV 2 1944
PHOENIX

Arizona Mining Activities

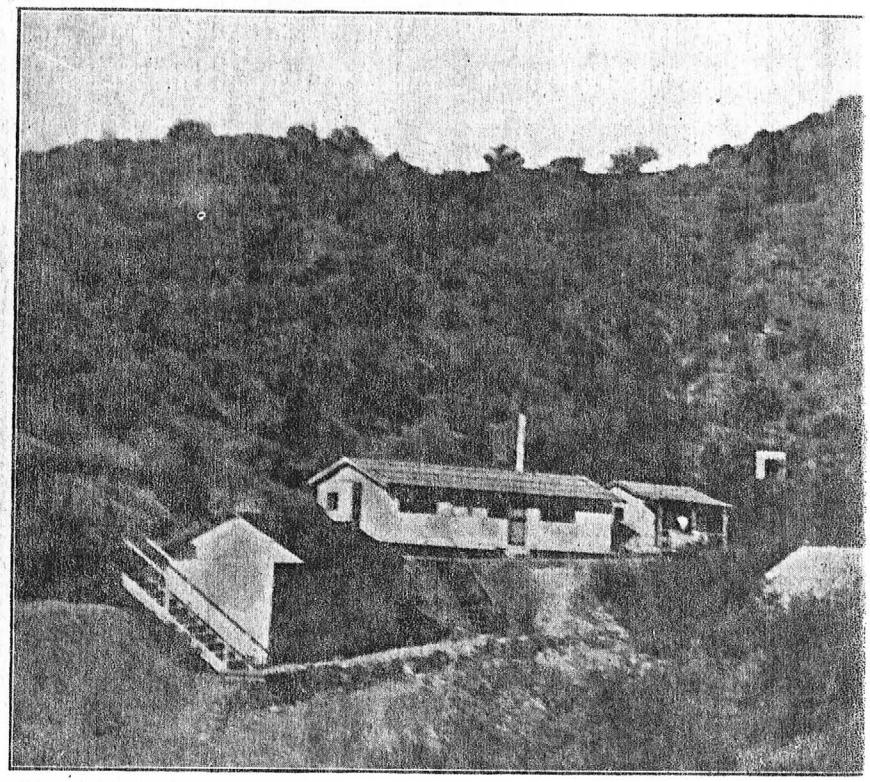
ARIZONA BINGHAMPTON COPPER COMPANY

The annual report of the Arizona Binghampton Copper company shows it to be a coming mine in Yavapai county. The report shows:

Tons of ore milled, 36,605; cost per ton, $4.61; pounds of copper produced, 1,873,358; cost per pound, $.0901. There was a profit on actual mine operation of $21,217.48. The over-head expenses of $27,522.98 make a loss for theyear of $6,305.50. This loss, however, is due to the fact that at the termination of the war, the company had about 1,000,000 pounds of copper on which final settlement had not been made by the smelters and on which they had advanced war-time prices.

During the year $21,968.28 was spent on exploration and $16,658.00 was spent on development work. The total assets of the company amounts to $2,079,933.00.

The prediction of Geologist Horace V. Winchell in the development work, has been amply fulfilled as far as the sinking of the new shaft has gone. The shaft is now down to the 900 level and contracts have been made for new over-head plant of machinery amounting to $40,000. It is expected that a three-compartment shaft will be sunk to the 1200 level within a short time and then Wm. H. Reynolds, president of the company, believes they can mill a tonnage sufficiently large to be able to distribute a handsome dividend to the shareholders, just as they did in 1918.



Mine Quarters of the Abe Lincoln

ABE LINCOLN STRIKES RICH ORE

The town of Wickenburg felt the thrill of years ago last month when the Abe Lincoln mine reported a rich body of ore had been struck.

Workmen in a crosscut on the 650-foot level, about 275 feet from the main shaft, intersected a rich parallel vein to the main fissure. The vein has a general width of 18 inches to four feet, and with an average of about two and a half feet of high grade copper sulphide ore that goes twenty per cent at the point of discovery, and is growing better every shift.

Assay values taken at point of intersection gave 20.9 per cent copper; 2½ ounces silver and $1 in gold.

Extraction of the ore has begun, with enough ore already in reserve to keep the teams hauling twenty tons or a carload of thirty tons, every other day. This output will be increased to 100 and 200 tons per day as fast as machinery of proper power and capacity can be added to the present equipment.

Other veins have been cut in this property during the last year that give the mine a vast low grade ore reserve, which, with copper at 24 cents a pound, can be worked at a profit.

The development work in this mine since December, 1917, when Manager Nathorst took charge, includes besides installation of new equipment and machinery, over 2,000 feet of drifting and tunnelling. The main shaft is down nearly 700 feet, the rest being tunnel work, drifting and crosscutting, besides two wells necessary to keep the mine in working condition.

The Abe Lincoln is in the same belt as the Gold Bar, Monte Cristo, Silver Bar, Inspiration and a dozen other properties that are now passively dormant. Between it and the Monte Cristo, is the Eagle property, heavily mineralized and owned by the Inspiration Consolidated of Miami, which will now direct more attention to its development and endeavor to make a producer of it.

The Monte Cristo still employs a dozen or more men, but while enjoying the reputation of being a rich mine, in point of production, it is generally designated as inactive. Even during the war, when Uncle Sam melted Mexican silver dollars and tried to encourage its production, when silver's purchasing power was increased nearly one-half, not a pound of the white metal was marketed from the mine supposed to contain native silver in streaks as thick as a man's wrist.

GLOBE-MIAMI DISTRICT

GLOBE—

(From Arizona Record)

This country must get back to a pre-war basis before we can expect to reap our full share of the prosperity which is waiting at our doors, says Senator Charles S. Smith of Massachusetts, who was in Globe for a few days looking over the mining properties in which he is interested.

Mr. Smith is president of the Ol minion company and the Arizona mercial company in this district, and vitally interested in the property o district, as well as his home town, B Massachusetts.

Mr. Smith says the copper outlo exceedingly bright and he predicts copper will be in great demand and s a good profit before many months passed. The condition of the di mines in which he is interested, look good according to Mr. Smith, aft thorough investigation of the proper Mr. Smith says the outlook at the Ar Commercial is exceptionally bright ar looks for a big year at the Copper property.

Regarding the mineral deposits a Old Dominion and Arizona Com Mr. Smith says: "We are right at surface of the large ore bodies. The mi resources of this state have not scratched; the wealth of this district in the untouched ore bodies and not i mineral wealth that has been extr from the mines of the district.

"We do not anticipate a large inc in production for some time as we outlining a comprehensive plan of velopment work. The labor situatio this district looks more favorable tha many of the eastern industrial centers

"It has always been my policy to st for better working conditions and o living conditions for our employes and have adopted a safety policy for the ination of accidents to the greatest sible extent. The accident preve

Arizona City which is located about [illegible] miles north of Mayer. This smelter has since been abandoned and entirely removed. The principal mines of the Boggs and Hackberry are gold and copper. Recently the Phelps-Dodge people have shown some interest in reviving these properties. The Boggs lies about a mile southeast of Poland Junction and the Hackberry about two miles southwest of Poland Junction.

Iron Queen—This property was developed about the same time as the Boggs and Hackberry. It also furnished ore for the old smelter at Arizona City. It is now closed down and has been for a number of years. About eight years ago, however, both the Iron Queen and the Boggs were temporarily revived and some ore was shipped to the Treadwell Mining Company's smelter at Mayer.

Arizona Copper—On this property development work is being prosecuted energetically. The property consists of eight claims lying about three miles northwest of Mayer. The shaft is down about 400 feet and good showings of chalcopyrite ore are being encountered. Three shifts are now working and 20 men are employed. As soon as the property gets on a producing basis, an aerial tramway will be built from the mine to the railroad which is about three-fourths of a mile distant.

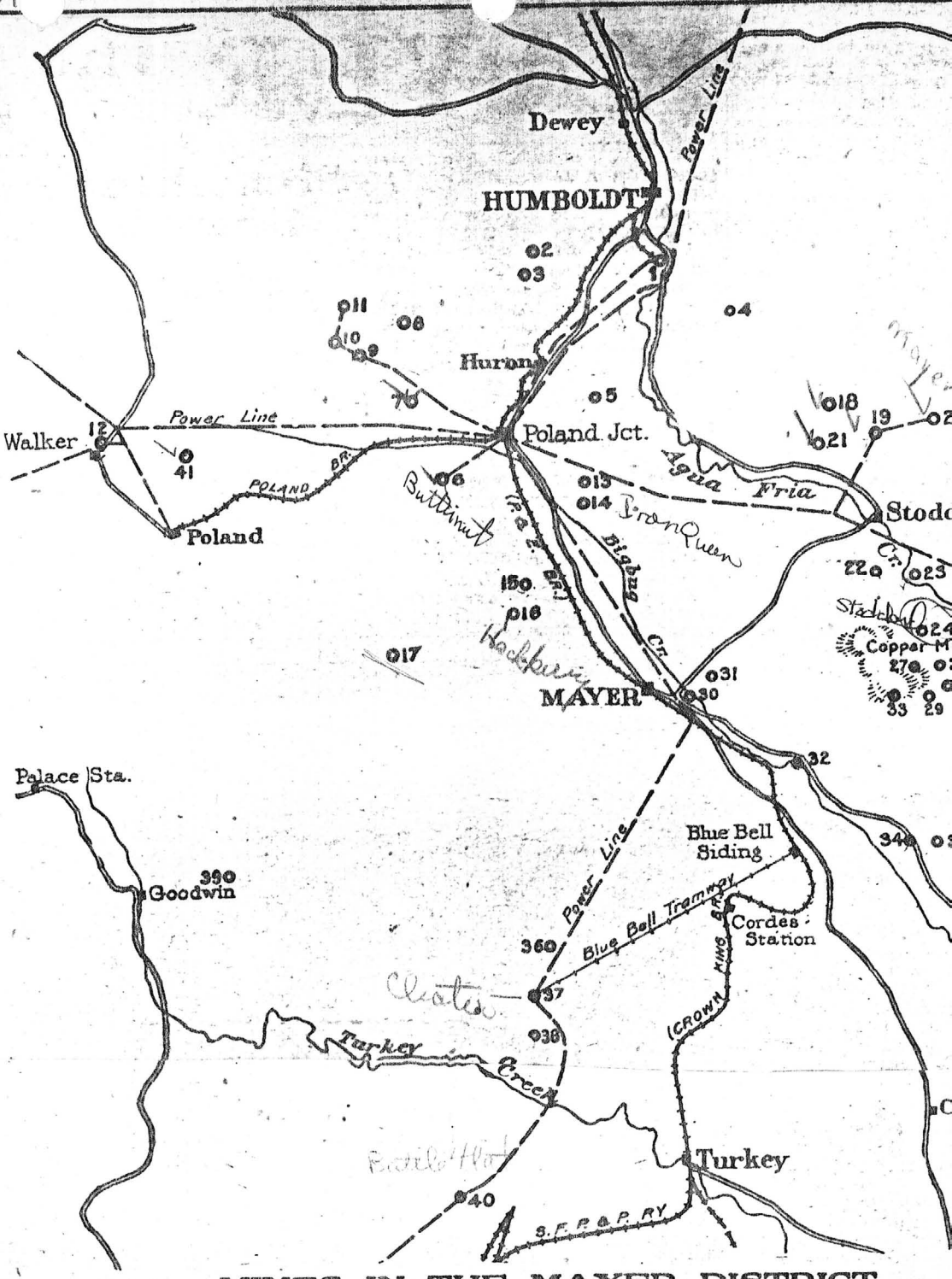
Moscow—This property is southeast of the Arizona-Binghamton and adjoins it. Though the property is inactive at present, it has produced some high grade copper. Development work consists of a shaft down [illegible] feet, a tunnel and a number of small cuts.

Binghamton—This property is located at Stoddard five miles east of Mayer district. The shaft is down [illegible] feet. About 700 feet of development work are being done every month. The property is equipped with machinery to carry on development work indefinitely and the camp at Stoddard is fast assuming the proportions of a thriving town. All ore mined at the mine is at present being treated at the company's flotation mill. About 200 tons are now being mined daily. Approximately 30 tons of concentrates averaging 23½ per cent copper are being shipped daily to the smelter at Humboldt.

Copper Queen which adjoins the Binghamton is one of the producing mines in the Mayer district. A total of [illegible]9 feet of development work has been done on the property during the year 1917—development work consisting of sinking, drifting, raising and crosscutting. The shaft is down [illegible] feet. At the beginning of the year reserves totaled 20,000 tons. During 1917, 18,239 tons were developed and 4,627 tons were delivered to the mill, leaving 33,612 tons in reserve on January 1st, 1918.

Arizona Tonto—This property adjoins the Copper Queen on the south. Little development work has been done on the property outside of a shaft down [illegible] feet. There is no equipment on the property. The showings encountered from limited workings are good and the management expects to have one of the active properties in the district in the near future.

Copper Mountain Mines Co.—This property many years ago was opened by Isaac Stoddard, the pioneer of



MINES IN THE MAYER DISTRICT

1. Consolidated Arizona Smelting Co. Smelter
2. Silver Belt
3. Arizona National
4. Loma Verde
5. Swindler
6. Butternut
7. Henrietta
8. Gladstone-McCabe
9. Little Jessie
10. Lelan
11. Locey-Pabst (Union)
12. Mudhole
13. Boggs
15. Arizona Copper Mining Co.
16. Hackberry
17. Big Reef
18. Moscow
19. Arizona Binghamton
20. Copper Queen Gold Mining Co.
21. Arizona Copper Hill
22. Half Moon
23. Rio Tonto
24. Copper Mountain Mines Co.
25. Copper Age
26. Big Bug
27. Jerome Copper
28. Miner
29. Monte de Cobra (Barbara)
30. Great Western Smelter
31. Little Egypt
32. May Ore Purchasing Co. Smelter.
33. Easy Boss
34. Pocahontas
35. Iowa
36. May
37. Blue Bell
38. Cinderella
39. Circle Park
40. De Soto
41. Amulet
14. Iron Queen

to define walls and a drift is also being driven in under the shaft that has produced some high grade copper ore several years ago. The property will be completely equipped with machinery and a camp will be built.

Big Bug—This property is situated on Copper Mountain. At present two men are working in order to determine a suitable location for a shaft. There is an old shaft down 35 feet. In addition to this there are several other small cuts on the property. Two tunnels have also been started.

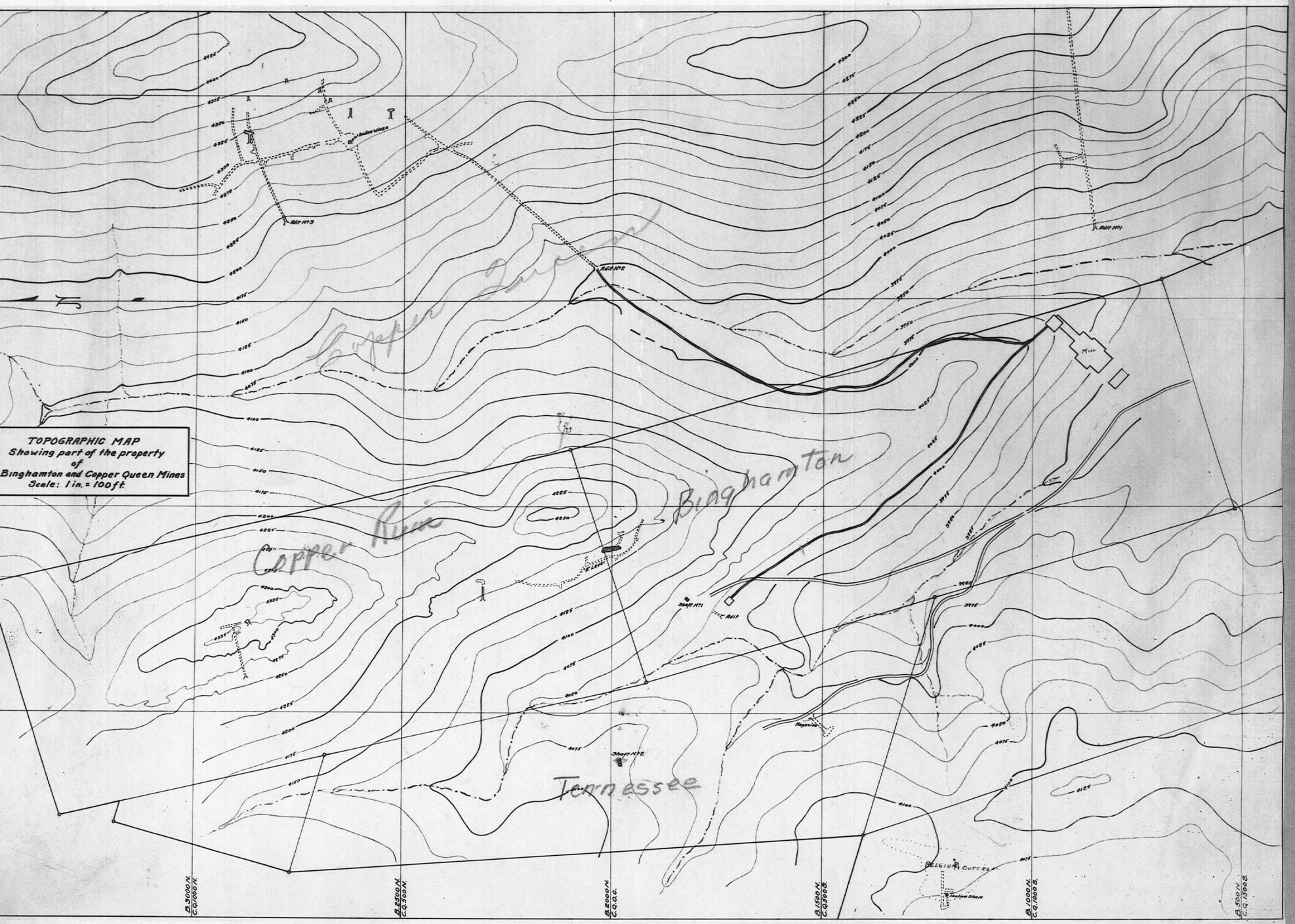
claims. The southern neighbor of the Big Bug is the Copper Mountain Mines Company.

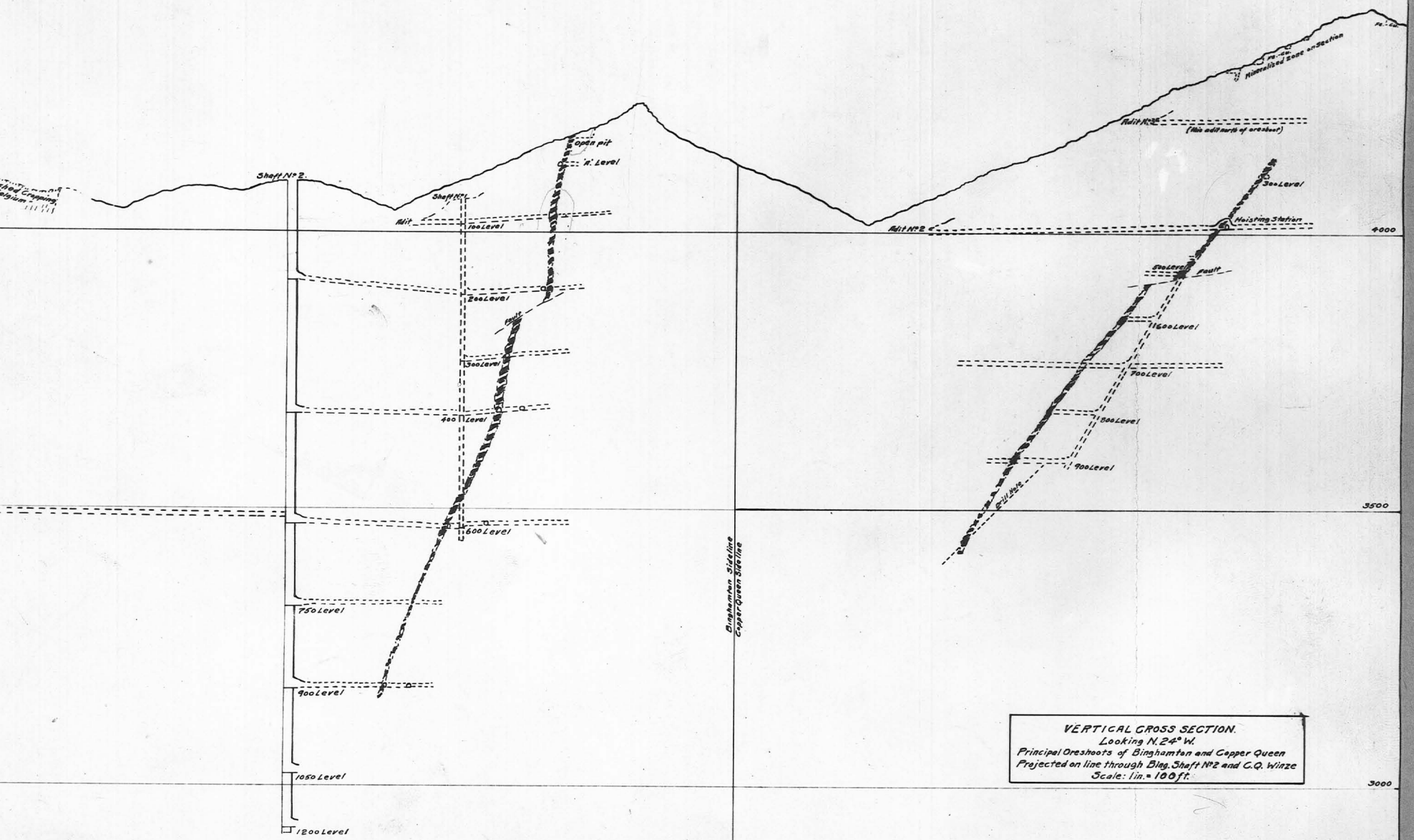
Jerome Copper—The holdings of the Jerome Copper Company are situated at Copper mountain. Little development work has been done on the property to date, but showings encountered on the surface are good enough in the company's estimation to warrant extensive development work. It is expected that work will begin in the near future.

Barbara—This property was re-

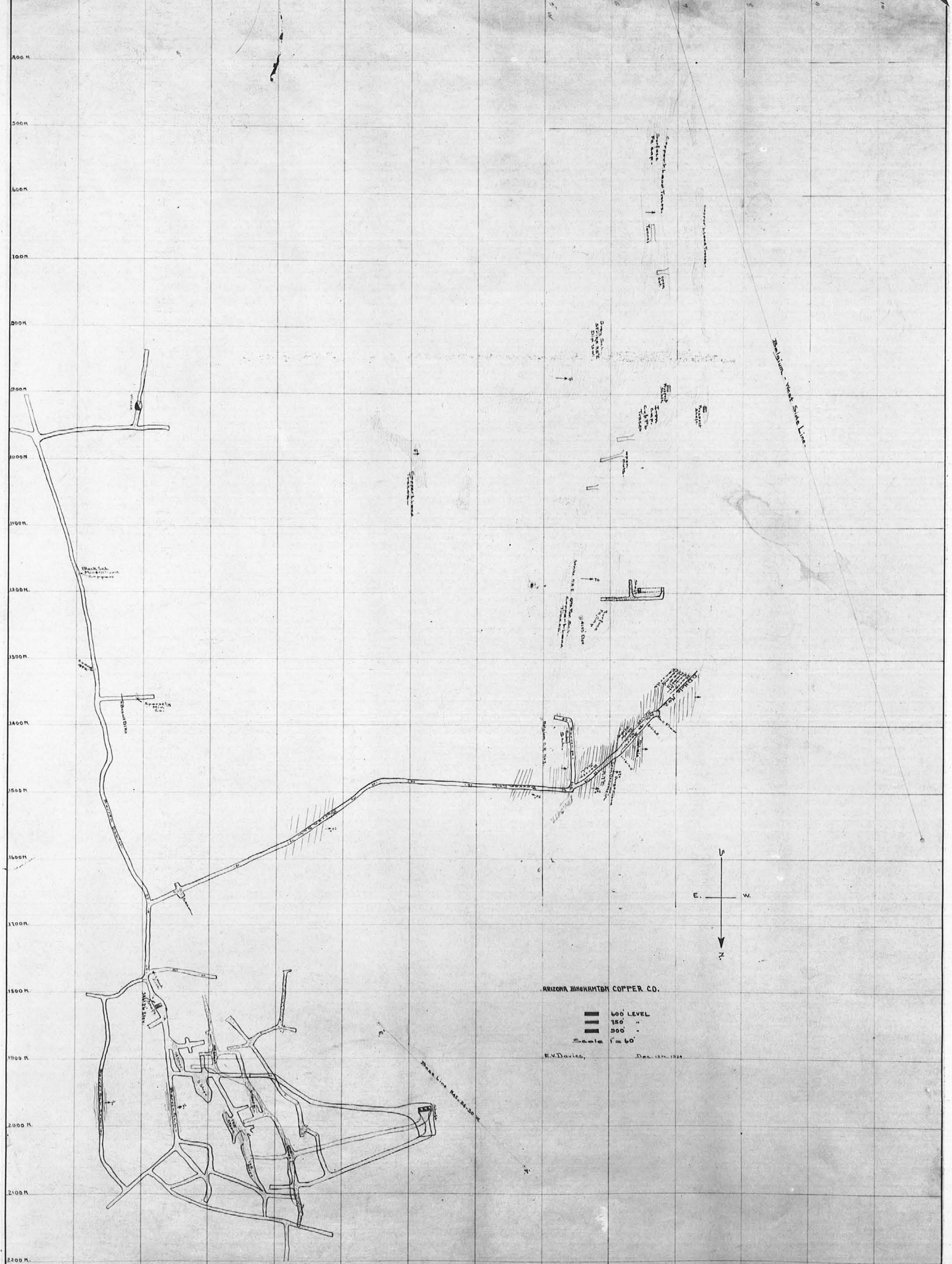
cludes a 340 foot tunn[illegible] the deepest being 70 f[illegible] ber of cuts. About [illegible] and three-eights copp[illegible] the tunnel. At prese[illegible] pended and funds ar[illegible] When the company is [illegible] shaft will be sunk 3[illegible] south end of the p[illegible] equipment will be pu[illegible] complete, up-to-date [illegible] built.

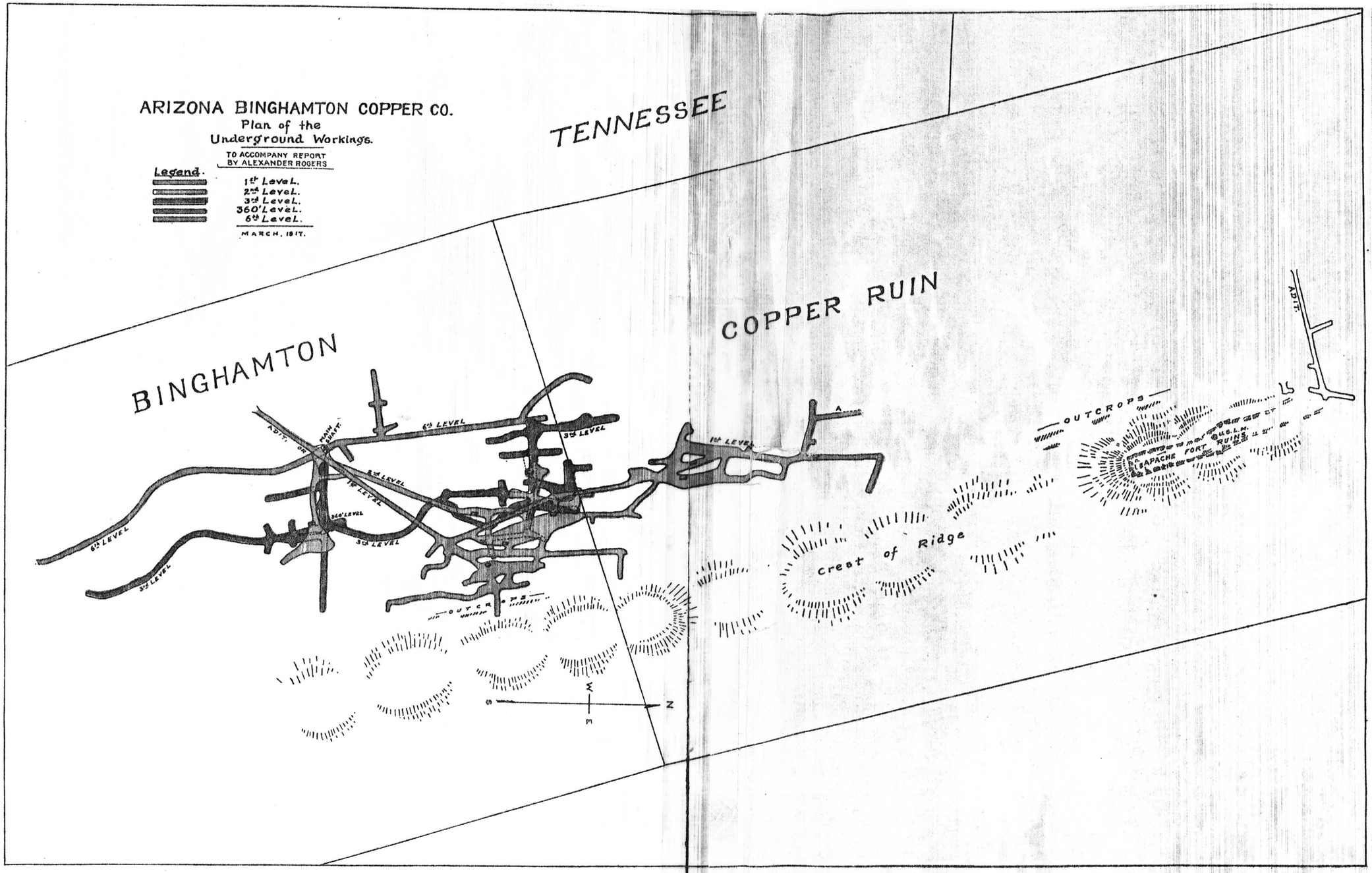
Great Western Smelt[illegible] er has been closed do[illegible]


TOPOGRAPHIC MAP
Showing part of the property
of
Binghamton and Copper Queen Mines
Scale: 1 in. = 100 ft.
Copper Queen
Copper River
Binghamton
Tennessee
Adit No 3
Adit No 2
Adit No 1
Shaft No 1
Shaft No 2
Mill
Magazine
Belgium Outcrop
B 3000 N.
C.Q. 1000 W.
B 2500 N.
C.Q. 500 W.
B 2000 N.
C.Q. 0.
B 1500 N.
C.Q. 500 E.
B 1000 N.
C.Q. 1000 E.
B 500 N.
C.Q. 1500 E.

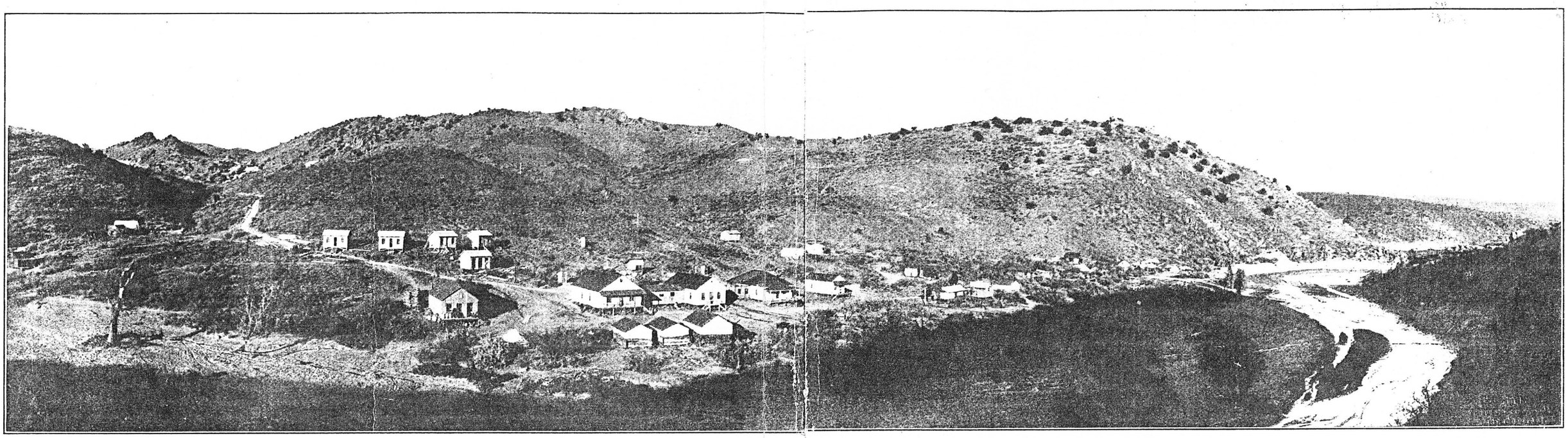


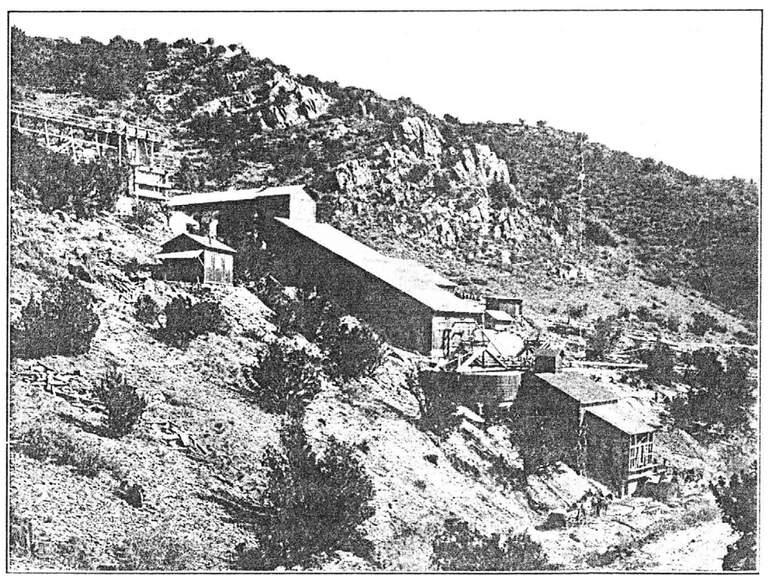
VERTICAL CROSS SECTION.
Looking N. 24° W.
Principal Oreshoots of Binghamton and Copper Queen
Projected on line through Bing. Shaft No 2 and C.Q. Winze
Scale: 1 in. = 100 ft.


ARIZONA BINGHAMTON COPPER CO.
600' LEVEL
750' "
900' "
Scale 1" = 60'
E.V.Davies, Dec. 12th. 1924
Base Line N 41° 30' W
Belgium - West Side Line.
Copper Land Tunnel
E.
W.
N.
S.

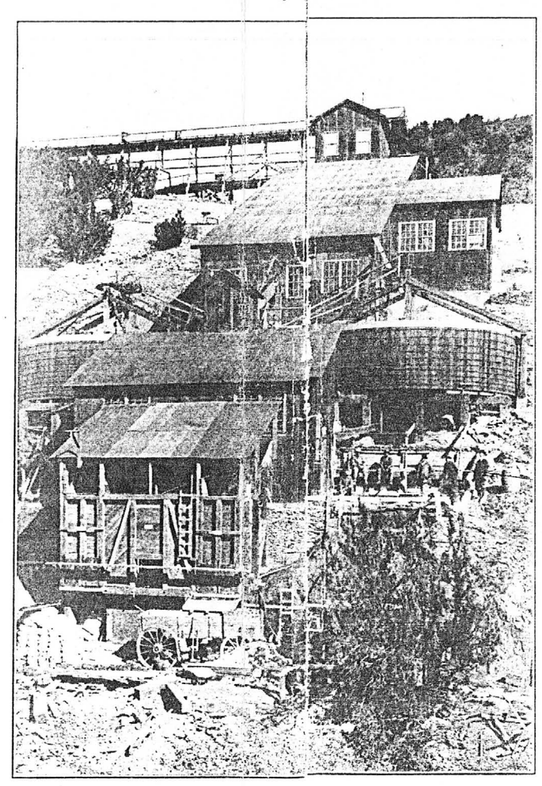

ARIZONA BINGHAMTON COPPER CO.
Plan of the
Underground Workings.
TO ACCOMPANY REPORT
BY ALEXANDER ROGERS
Legend.
1st Level.
2nd Level.
3rd Level.
360' Level.
6th Level.
MARCH, 1917.
TENNESSEE
BINGHAMTON
COPPER RUIN
ADIT
MAIN SHAFT
6th LEVEL
3rd LEVEL
1st LEVEL
2nd LEVEL
360' LEVEL
OUTCROPS
Crest of Ridge
APACHE FORT RUINS
S
N
W
E

Camp of Arizona Binghamton Copper Company—Binghamton, Stoddard, Arizona

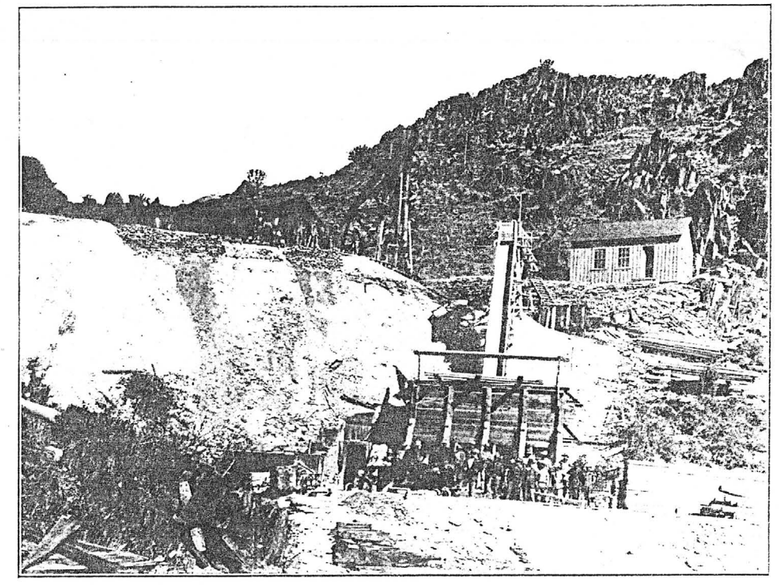




Arizona Binghamton Mill — Side View



Arizona Binghamton Mill — Front View



Arizona Binghamton Mine Shaft

BINGHAMPTON MINE

YAVAPAI COUNTY

MG/WR 9/7/79 - Mr. Sherwood B. Owens owner of the mine reports a major company will begin drilling deep holes in the DeSoto-Binghampton area in about one month.

BINGHAMPTON MINE

YAVAPAI COUNTY

Visited the Binghampton and Copper Queen Mines. 12 men working, building roads, stripping overburden, and repairing some buildings.

Canyon State Mining Co., operators, Capt. Delaney, Mgr., Jerry Russell, Project Engineer, Jack Patrick, Pit Foreman. They are going to start a heap leach operation.
EGW WR 3-25-64

Visited Copper Queen-Binghampton property - no activity. EGW WR 5-26-64

United Comstock Lode Mines, Ltd., Toronto, Ontario, Canada --
Has taken over and sampled Copper Queen and Binghampton Mines, Hassaympa District, Yavapai County. Came up with 1% Cu (0.8 to 1.5% range) 500 to 600 across schist belt.
See card for United Comstock Lode Mines, Ltd.
LAS 8-14-64

Copper Queen & Binghampton Mines.
Hassayampa Dist., Yavapai County
United Comstock Lode Mines Ltd. Toronto, Canada has taken over and sampled these mines. (Came up with 1% Cu - 0.8 to 1.5% range) 500 to 600 across schist belt. George Radisks, Consultant. Information by G. Carman Redland, 207 W. Clarendon Ave., Phoenix
8-14-64

Visited the Copper Queen and Binghampton mines near Mayer. 1 bulldozer cutting roads and McClintock Diamond Drill Co. has 1 drill operating. Work is being done by the United Comstock Lode Co. of Toronto, Canada. EGW WR 9-18-64

Interviewed Dave Hamilton, Supt. and Bernard Jessel, Pres. of United Comstock Lode Mining Co. who are exploring the Copper Queen, Binghampton properties. The McClintock Drilling Co. is still drilling on 2 shifts. The information obtained so far, is favorable, but more and deeper drilling is to be done, some holes to be 2000 to 3000 feet. Dr. Gerald Greene, New Mexico Institute of Mining and Technology Campus Station, Socorro, New Mexico, Consultant. EGW WR 1-22-65

Interviewed Mrs. Manly at Bumble Bee, learned the United Comstock Mining Co., had finished drilling and given up their lease on the Copper Queen and Binghampton properties and that Canyon State Mining Co. have again leased them. EGW WR 3-19-65

Visited Mrs. Manly in Bumble Bee. She has optioned her Copper Queen and Payoff groups to Robert Ford Enterprises, Flagstaff, who is also associated with McAlester Fuel Co. Ford is trying to come to an agreement with the Binghampton mine owners and proposed to drill both properties in the near future. FTJ WR 1-21-66

Interviewed Mrs. Manly at Bumble Bee who said Ford Enterprises had dropped the Binghampton and Copper Queen properties. FTJ WR 7-22-66

Mrs. Dora Hoffman, Phoenix, owns the Binghampton - 16 patented claims. Pfeffer Estate.
FPK Note Nov. 1966

Circulate: Then file - Binghampton Mine Yavapai Co.

PAULEY & McDONALD, INC., REALTORS® Better Homes and Gardens

Executive Offices: 843 Miller Valley Rd., Prescott, AZ 86301 TELEPHONE (602) 776-4670

May 14, 1991

Called: 5/22/91 Recommended to fax that he contact them on the chance they might want to take a look at the potential for one to feed the McCabe Mill. 2nd choice would be sell it as real estate!

Mr. Leroy Kissinger, Director
Arizona Department of Mines
& Mineral Resources
Minerals Building
State Fair Grounds
Phoenix, Arizona 85007

Dear Mr. Kissinger:

As per our phone conversation I am enclosing plat , legal and names of patented mines northeast of Mayer.

I would very much appreciate any data that might be useful in determining a value on them.

Warmest regards,

Les Consoer,
Broker, DBW/F, RLI

LC/ss

encls.

1124 E. Gurley St.
Prescott, AZ 86301
OFFICE: (602) 445-0470
TOLL FREE: (800) 447-2499
FAX: (602) 778-7301
RES: (602) 778-3414

LES CONSOER
Broker DBW/F, RLI

PAULEY & McDONALD, INC., REALTORS®
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Prescott Valley, AZ 86312
(602) 775-5555

X 1124 E. Gurley St.
Prescott, AZ 86301
(602) 445-0470

PARCEL NO. 1:

COPPER RUIN, BINGHAMPTON COPPER, CHENANGO SUSQUEHANNA OTSELIC AND GENEGANTS LETT Lod Mining Claims in Agua Fria Mining District, being shown on Mineral Survey No. 1694 on file in the Bureau of Land Management, as granted by Patent recorded in Book 69 of Deeds, page 17, record of Yavapai County, Arizona.

PARCEL NO. 2:

BINGHAMPTON FRACTION, ILLINOUS AND TENNESSEE Lode Mining Claims in Agua Fria Mining District, being shown on Mineral Survey No. 3421 on file in the Bureau of Land Management, as granted by Patent recorded in Book 119 of Deeds, page 426, records of Yavapai County, Arizona.

PARCEL NO. 3:

COPPER RUIN FRACTION Lode Mining Claim in Agua Fria Mining District, being shown on Mineral Survey No. 3518 on file in the Bureau of Land Management, as granted by Patent recorded in Book 125 of Deeds, page 241, records of Yavapai County, Arizona;

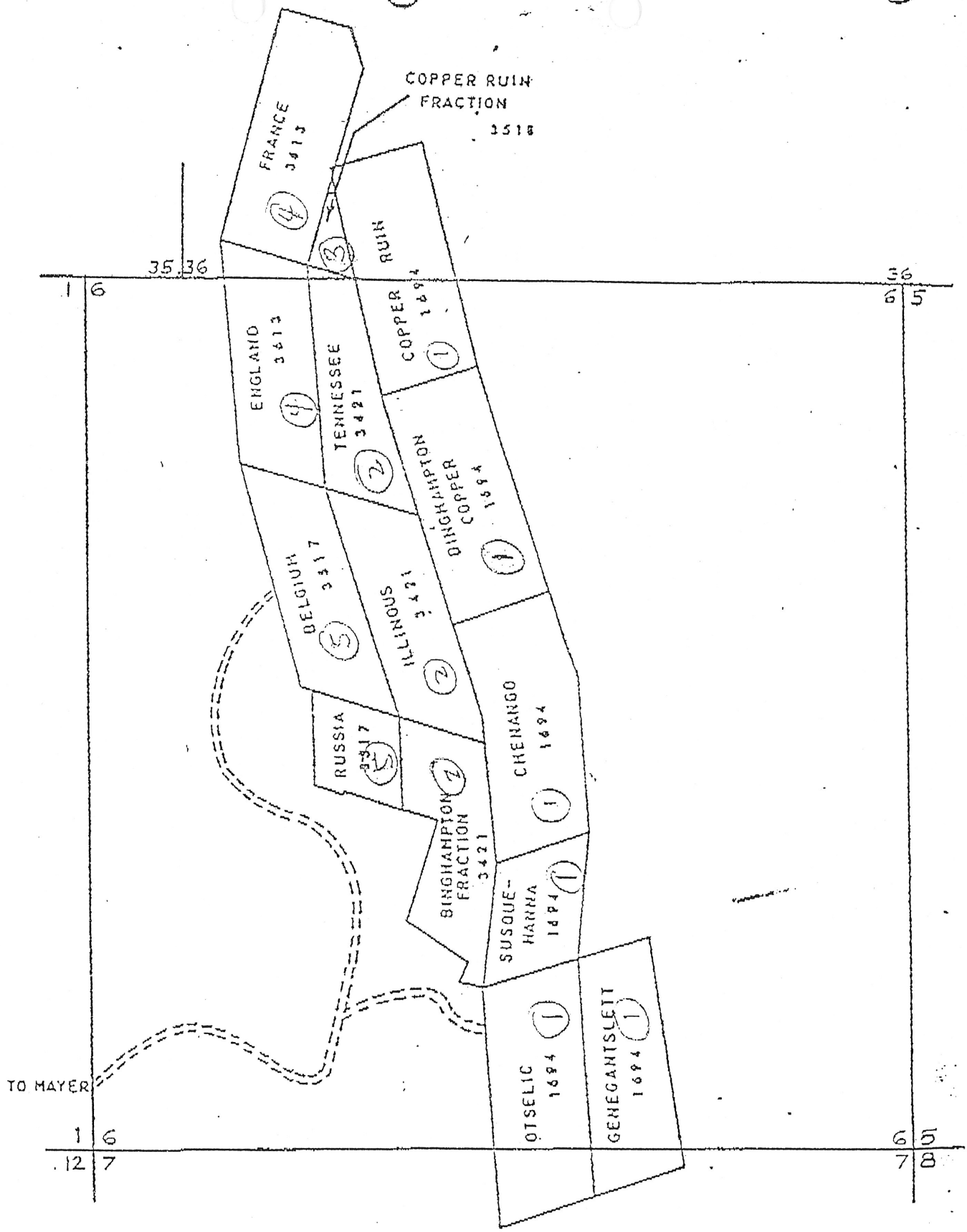
EXCEPT all that portion within the boundaries of Survey No. 1694, and all veins, lodes and ledges, throughout their entire depth, the tops or apexes of which be inside of said excluded portion, as set forth in said Patent.

PARCEL NO. 4:

ENGLAND AND FRANCE Lode Mining Claims in Agua Fria Mining District, beind shown on Mineral Survey No. 3613 on file in the Bureau of Land Management, as granted by Patent recorded in Book 133 of Deeds, page 252, records of Yavapai County, Arizona;

EXCEPT all that portion within the boundaries of Survey Nos. 1694 and No. 2958, and all veins, lodes and ledges, throughout their entire depth, the tops or apexes of which be inside of said excluded portion, as set forth in said Patent.

(CONTINUED)



BINGHAMPTON PROPERTY

T13N R1½E SECTION 36
T12N, R2E, SECTION 6, 7

YAVAPAI COUNTY, ARIZONA

Intra-Company Correspondence

SHATTUCK DENN MINING CORPORATION

and

SUBSIDIARIES

Humboldt Office

Date June 27, 1966

TO: C. R. Sundeen

FROM: J. Olaf Sund

SUBJECT: BINGHAMPTON-COPPER QUEEN MINES
% Dora Hoffman
2938 North 16th St.
Phoenix, Arizona
274-2951

TYPE: Copper

TERMS REQUESTED: Open for an offer.

LOCATION:
These two old mines are located some 4 miles northeast of Mayer. Specifically they are located in the northern part of Section 6, Township 12 North and Range 2 East.

HISTORY:
The Binghampton Mine was worked apparently at intervals from 1916 to 1937. The last operator was Mark Gemmil from Prescott. The Copper Queen Mine was developed in the early 1920's but production was apparently of limited extent. During the latter part of 1964 an approach was made to Shattuck Denn to participate in drilling these properties. (Details of communications between Paul Gilmour and others is presently misplaced in our files). During November of 1964 Gilmour rejected exploration on the Binghampton outright and during December negotiations toward arranging a joint venture on the Copper Queen were terminated following difficulty in reaching an agreement. Mrs. Hoffman has inherited these properties as part of an estate settlement and again Shattuck Denn was approached during March of this year.

GEOLOGY:
The Binghampton and Copper Queen Mines are on two contiguous properties but are associated with distinctly separate but similar and parallel geological structures.

The area is underlain by grey-green schistose rocks that strike approximately north and south and dip 70 degrees west. The schists include interbands of crystalline limestone, slates and quartz porphyrys with interbeds of volcanic fragmentals and tuffs.

ORE ZONES:
The ore zones at both mines occur as lenses or shoots that are classed as quartz replacement of the schists. Associated with the quartz are a variety of sulphides but by far the most abundant is chalcopyrite.

The experience and suggestions from Fred Gibbs and Art Still as based on the knowledge of Mark Gemmel etc. has swayed the writer to conclude that the ore lenses at the Copper Queen are probably "spotty" or erratic.

Therefore, nothing should be done with this property directly at this time. However, the occurence will be incorporated into any general type studies that should be initiated in this region.

JOS/db

Humboldt

December 17, 1964

Mr. W. J. La Morte
New York

BINGHAMPTON-COPPER QUEEN

GENERAL

I regret the continuing ineffectiveness of our contacts with Dr. Greene.

Mr. Sundeen and I both went over to the Binghampton-Copper Queen yesterday, the 16th, and entered the main adit level on the Copper Queen with Greene.

Greene spoke more enthusiastically of the possibilities there than before, but still seems incapable of considering what we consider a sensible exploration program. In particular, he refuses to discuss any exploration program costing less than about half a million dollars.

The positive merits of the Copper Queen are as follows:

1. A small ore shoot was discovered and was only partially exploited. It appears to be open in depth.

2. The known ore shoot resembles in shape and size any one of the ten or twelve shoots which were mined at, say, both the Blue Bell and DeSoto properties.

3. Showings of weak copper mineralization are visible on surface along strike of the known ore shoot for a length of upwards of half a mile.

Thus there appears to be reasonable chances of finding extensions and/or repetitions of the existing mineralization. It is suggested that these possibilities be tested by:

1. Drilling a series of three holes, each about 600 feet long, into the area of the old workings in order to check that the ore shoot exists below the 400 Foot or Main Adit Level and to determine whether or not it is of minable width and grade.

2. Assuming that the presence of sulphides can be demonstrated, some experiments with geophysics along the line of section represented by the drill holes would be advisable. E. M. - possibly Turam - and I. P. should be used - the latter in case economic mineralization

made up of stringers of chalcopyrite should not provide a conductor sufficiently good for detection by E. M. equipment.

3. If favourable results are obtained from the geophysical test work, it should be repeated on close-spaced lines to the north and south of the Copper Queen workings and any targets which might emerge tested by further drilling.

4. If the geophysical test work over the known zone should fail for some reason to give a recognizable response, drilling to the north and south of the first drill section would be in order. Two holes on each side of the original three might be considered with further drilling depending on the outcome of this work.

ESTIMATE OF COSTS

The three diamond drill holes which are basic to this program would involve 1800 feet of diamond drilling, or $10,800 at $6.00 per foot, including supervision and assaying.

The initial geophysical test work should be quite inexpensive, costing no more than $1000.00. The cost of follow-up work would depend on the type of geophysics, if any, which proved suitable, but should not exceed $1500.00 for E. M. and $3,000.00 for I. P.

Follow-up work, or the alternative four 600 foot holes proposed in the event that geophysics fails to get a response over the established zone, would cost approximately $14,400.00.

A minimum program of drilling to establish the existence of some reserves and geophysical test work would therefor cost about $11,800.00. Minimum follow-up work to seek extensions or repetitions of mineralization would approximate $15,900 to $17,400.00.

Expenditures over and above the $27,200 to $29,200 envisaged would depend on further results.

In round figures, then, and allowing for contingencies, an expenditure of $30,000 should permit the Copper Queen to be tested to the point where it could be decided whether or not to embark on a major exploration program.

DISCUSSION

These recommendations represent a very modest program, both in cost and objectives, compared to that envisaged by Dr. Greene. However, they seem to me to stand a much better chance of success, if only because they propose to start from a known body of mineralization.

It seems to me that if this program were successful there would then be more time and money available to explore the large Binghampton-Copper Queen properties. If it were unsuccessful, the long shot would still exist. The cost of this program is insignificant compared to that proposed by Dr. Greene, so that the overall cost of exploration would not be significantly affected by doing the work proposed here first.

I do not seek to pit my opinion against that of Dr. Greene with whom we are on good terms; I only submit these notes in response to direct requests from yourself and Mr. Jessel.

P. G.

PG:b

PAUL GILMOUR

cc: C. R. Sundeen
J. Pierce
File

P. S. Dr. Greene made the statement that, if anything were ever found on either the Binghampton or Copper Queen properties, litigation would almost certainly result, as the title to parts at least of the properties appears to him to be clouded.

I have [illegible] duplicate of this section which [illegible] out with the original of this report.

Humboldt

December 11, 1964

Mr. W. J. La Morte
New York

BINGHAMPTON - COPPER QUEEN
PROPERTIES

Dr. Greene visited the Iron King this morning so we had an opportunity to discuss the Binghampton and Copper Queen properties.

Dr. Greene was firm in his desire to test the possibility of finding at depth a large, low grade orebody on the Binghampton property, although he could not or would not give any tangible reasons for believing that such an orebody might exist.

He was not interested in pursuing the mineralization on the Copper Queen. When I indicated that I thought it our job to try to work out an acceptable program for exploring the Copper Queen he told me he had no such instructions; did not know that United Comstock is seeking a partner. He took his leave shortly thereafter.

According to estimates based on a longitudinal section of the Copper Queen, there are approximately 5000 tons per horizontal foot, down to the 900 foot level. That is to say, there are nearly 5000 tons per each foot of width. The average width is probably less than 10 feet, so that there are probably less than 50,000 tons developed down to 900 feet. The grade is unknown, but probably averages around 3% Cu, with some Au, Ag, and Zn. This mineralization cannot be considered an orebody, but represents a fairly good prospect, with chances of finding extensions and/or repetitions.

Perhaps we shouldn't fight United Comstock any longer. Perhaps we should simply wait until they pull out and then try to acquire the Copper Queen.

I received the copies which you sent of the correspondence with New Jersey Zinc over the regional map which they prepared.

I also noted with interest that shaft sinking is planned or underway at Transterre. Here's hoping!

PAUL GILMOUR

Most of the rock is a achist the color in places is greenish and in other places a brown iron staine d schist.
One sees some quartzites and porphyry and the whole countryis of shistose structure. The schists striked North 10 to 15 west and has a steep dip of 72 degree west. There is considerable iron shows through out wide zones in the schist, and the formation really talks to one and copper can be seen in many places.

At looks as if all exposed ores have been worked out. There is a large worked out stope one can see back in the tunnel level, the ore was over 100 feet long and 30 or more feet thick. There is a face or two in the tunnel which could produce some ore. The Tailings of thousands of tons is worth testing out, it is possible that that improved milling will make a profit.)

The mill and all equipment once on the property has been sold and moved off.

The road is good from Mayer to the river at which point one turns to the right and go down the river about a mile to a ranch which is on the left side of river, leave your car here and walk about ¾ mile up the wash to the mine.

Very little money, say, $300 would make a good road up the wash to the mine.

I have not heard of any water in the mine, but plenty water can be had from the river, where a small stream is flowing at all times.

This property has been an old producer and has produced millions of pounds of copper and thousands of ounces of silver from ores averaging around 3 per cent copper. The workings that are now accessable show large stopes and evidence of large production. It appears that from the tunnel level to the surface there is still possibilities of ore being developed, and what there is below the tunnel level will depend a great deal on the type and amount of work done down there.

I saw some surface croppings, which has not been prospected and which have markings of an ore body, and if this developed into a ore chute and it very reasonably could, there is still a big mine here. It is hard to tell with out maps of the mine how far the workings extend on the lower levels, but from what I can learn, there is possibilities of parallel ore bodies being found.

It will take a good size piece of money to equip and get into production from the old mine workings.

The tailings pounds are worth sampling and testing and may return quick and copper.

The county has been trying to sell this property for taxes.

BINGHAMPTON MINE

5.5 miles northeast of Mayer, Arizona.
Owner; Binghampton Mining Co; R.H.Pfeffer, Lovelock, Nevada.

Production; Sept.1944-June 1947:- 1,034,275 lbs Copper.

Mine closed July 1,1947 following expiration of copper premiums, but still has ore ready to mine, similar to past grade.

The mine had a special copper premium amounting to 27 cts per pound. Under present conditions at least 35¢ copper would be necessary to bring out a production of around 250,000 lbs for the first year.

It is not likely that much if any government financial aid would be necessary to get started, if operator is assured of a reasonable profit.

Man power requirements would probably not exceed 4 or 5 miners for above estimated production.

October 29,1950

L.L.Farnham

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

DATE: October 22, 1942

MINE: Binghampton

ENGINEER: A. C. Nebeker

DISTRICT: Agua Fria

LOCATION: 6 miles East of Mayer, Arizona

FORMER NAME: The Arizona-Binghampton Mining Company

OWNER: Yavapai County (for Taxes)

OPERATOR: None

PRINCIPAL METALS: Copper

MEN EMPLOYED: None

PRODUCTION RATE: Idle

POWER--AMOUNT & TYPE: None

OPERATIONS--PRESENT: Idle by reason that the County Supervisors will not accept the bid which have been offered.

NUMBER CLAIMS, TITLE, ETC.: 10 or more titles as above stated.

DESCRIPTION--TOPOGRAPHY & GEOGRAPHY: The country is cut up by several canyons, some with rather steep sides while others are of a gentle slope. The property is just east of the Agua Fria River at an elevation of approximately 4500 feet above sea.

MINE WORKINGS--AMOUNT & CONDITION: The mine workings consist of several thousand feet of drifting, crosscutting and shafts. I saw two shafts, both seem to be in fair condition, and I was in a long tunnel of several hundred feet and this was in fair condition. There is no caved ground in this tunnel but there are several places where muck has been shoveled to the side of the tunnel, and where ore shutes appear, there is a pile of muck.

GEOLOGY & MINERALIZATION: Most of the rock is a schist; the color, in places, is greenish, and in other places, a brown iron stained schist. One sees some quartzites and porphyry and the whole country is of shistose structure. The schists strike North 10 to 15 west and have a steep dip of 72 degrees west. There is considerable iron shown throughout wide zones in the schist, and the formation really talks to one and copper can be seen in many places.

ORE--POSITIVE & PROBABLE, ORE DUMPS, TAILINGS: It looks as if all exposed ores have been worked out. There is a large worked out stope one can see back in the tunnel level, the ore was over 100 feet long and 30 or more feet thick. There is a face or two in the tunnel which could produce some ore. The tailings of thousands of tons is worth testing out, it is possible that improved milling will make a profit.

MINE, MILL EQUIPMENT & FLOW SHEET: The mill and all equipment once on the property has been sold and moved off.

Bingham

ROAD CONDITIONS, ROUTE: The road is good from Mayer to the river, at which point one turns to the right and goes down the river about a mile to a ranch which is on the left side of river, leave your car here and walk about three-fourths a mile up the wash to the mine. Very little money, say, $300 would make a good road up the wash to the mine.

WATER SUPPLY: I have not heard of any water in the mine, but plenty water can be had from the river, where a small stream is flowing at all times.

BRIEF HISTORY: This property has been an old producer and has produced millions of pounds of copper and thousands of ounces of silver from ores averaging around 3 per cent copper. The workings that are now accessible show large stopes and evidence of large production. It appears that from the tunnel level to the surface there is still possibilities of ore being developed, and what there is below the tunnel level will depend a great deal on the type and amount of work done down there.

SPECIAL PROBLEMS, REPORTS FILED: I saw some surface croppings, which have not been prospected and which have markings of an ore body, and if this developed into an ore chute, and it very reasonably could, there is still a big mine here. It is hard to tell without maps of the mine how far the workings extend on the lower levels, but from what I can learn, there are possibilities of parallel ore bodies being found.

REMARKS: It will take a good sized piece of money to equip and get into production from the old mine workings. The tailings pounds are worth sampling and testing and may return quick copper.

IF PROPERTY FOR SALE--PRICE, TERMS AND ADDRESS TO NEGOTIATE: The county has been trying to sell this property for taxes.

SIGNED A. C. NEBEKER

BINGHAMPTON, Mark Gimmell, operator, 817 Crest Avenue, Prescott, Arizona.

Development has reached the 1200 foot level of this mine and most of the commercial sulphide ores have been removed. There are some blocks, below water level, which can be made accessible for mining.

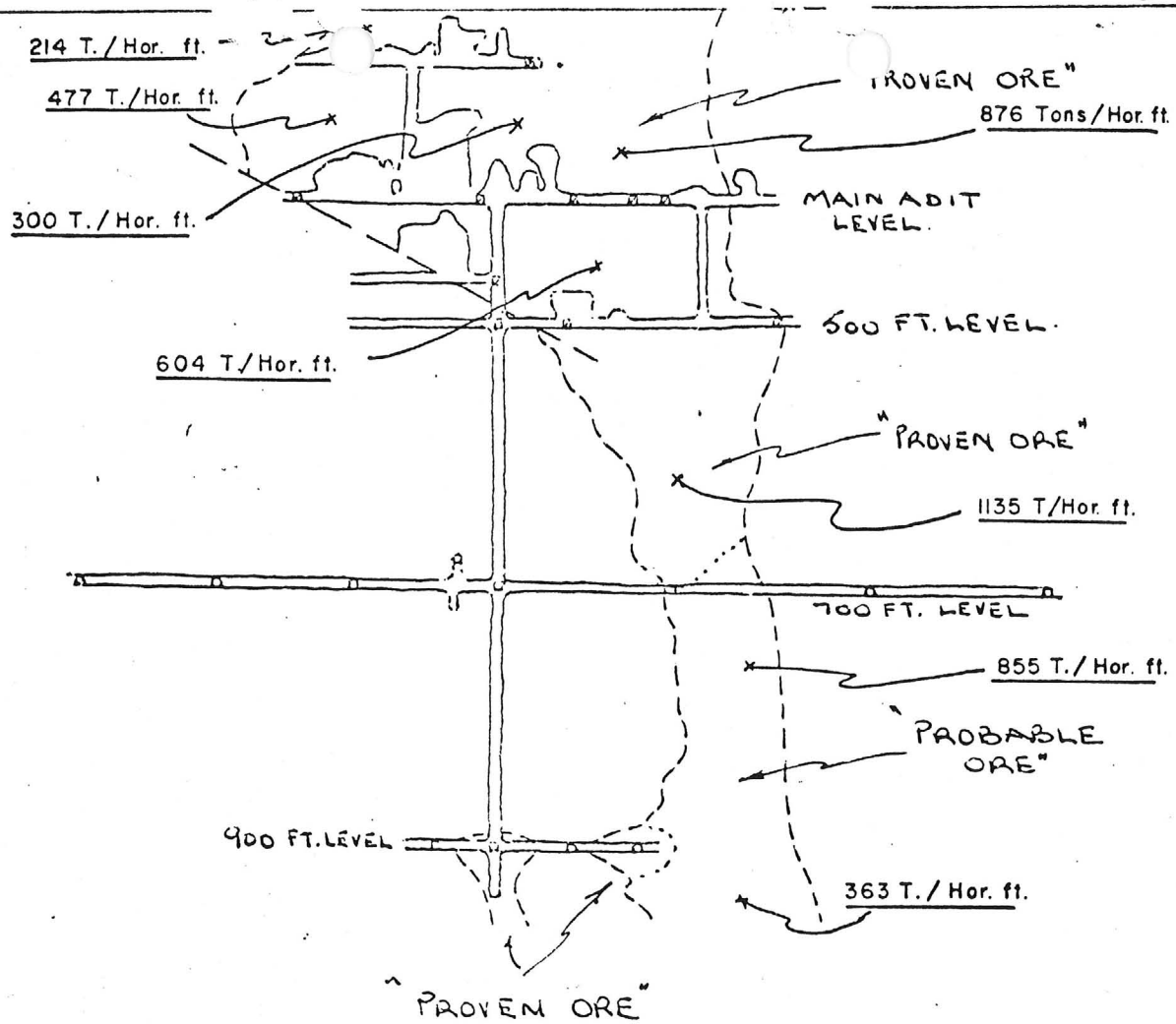
There are, however, some 17,500 tons of 3½% carbonate ore which has a net value of $5.22 including premium payment at the R. R. shipping point. From this must be deducted hauling and mining costs, making the enterprise of marginal nature.

The ore is 20 feet wide and the tonnage above referred to can be removed either from the surface or an adit level thereby eliminating hoisting.

Equipment requirement is in a favorable ratio to the million pounds of copper available by direct smelter shipment.

Application has been made for an Reconstruction Finance Corporation Preliminary Development Loan for repairing levels, sub-levels, and raises above the adit preparatory to production. This loan has been reviewed and highly recommended by the Department of Mineral Resources.

from COPPER REPORT NO. 2, DECEMBER 23, 1942, by Earl F. Hastings, for COPPER BRANCH, WAR PRODUCTION BOARD.



VERTICAL LONGITUDINAL SECTION
COPPER QUEEN

Scale: 1 in to 100 ft.

TOTAL = 48,240 TONS +/- 10. HOR. FT.

DATA FROM P. GILMOUR

SUBMITTED BY: J. O. S.

Humboldt

December 4, 1964

Mr. W. J. La Morte
New York

BINGHAMPTON PROPERTY,
Yavapai County, Arizona

I spoke to Dr. Greene yesterday about the Binghampton Property. According to him, the inclined hole which I mentioned in my letter as drilling to the north of the old workings and previous drill section is testing a copper showing on surface. The vertical hole being drilled near the old #2 shaft is intended to intersect mineralization said to have been found at a depth of around 1200 feet in the shaft itself.

I cannot comment on the first of these two holes, but Mark Gemmill, a friend and contemporary of Fred Gibbs, who has leased around here, told me that when he leased the Binghampton in the mid-1920's he saw the mineralization in the shaft, and also that it was not very attractive. I would not think that surface drilling in this area would stand much chance of developing ore reserves.

On the other hand, I was lent a longitudinal section of the Copper Queen (which adjoins the Binghampton on the east) which shows proven and probable reserves in place. According to Mark Gemmill, these reserves were not exploited (I didn't ask him the reason for this. It may have been legal, as the Binghampton and Copper Queen wrangled for years.)

I suggest that we have nothing to do with the exploration which is going on around the Binghampton but that we explore the possibilities of a joint venture to explore the Copper Queen alone. I asked Dr. Greene to visit us when he is here on the 14th of this month and we could pursue the technical aspects of the latter proposal at that time.

PG:b

PAUL GILMOUR

cc: C. R. Sundeen
File

REPORT ON

ARIZONA BINGHAMTON COPPER MINE

BY HOWARD W. SQUIRES.

Location:

The Arizona Binghamton property is located about six miles from Mayer, Arizona, a town on the Crown King branch of the Santa Fe Railroad, and about fourteen miles from Humboldt Smelter, and thirty-two miles from the city of Prescott. It is situated on the big Schist Belt which traverses Yavapai County, and along which belt are located the large, and many of them famous, copper mines of Yavapai County, Most notable of these mines are the United Verde and United Verde Extention, and need no introduction to the mining public. The next large mine to come in recently at depth is the Verde Central, whose owners are now reaping the benefit of deep development work, and have lately encountered ore on the 1800 level of this property, similar in character and grade to the Verde Extention ore bodies, and apparently a large tonnage.

The Blue Bell which is owned by the Humboldt Smelter and for years has been their main-stay for ore, is on this belt and is about fourteen miles from the Binghamton. About twenty-five miles South from the Binghamton is the Kay Copper whose recent developments have brought this property into prominence.

Geology:

So much has been written about the geology of the copper mines situated on the Yavapai Schist Belt that it is hardly necessary to go into this in any detail, but it is notable that quartz porphry intrusions in this Schist are no doubt responsible for the genesis of the ore. This quartz porphry where it intrudes in the surface is very acid and has been squeezed so that it has the appearance of planes of schistosity. All of the large copper mines have found their bodies of ore at the contact or near these intrusions in shear zones of the Schist.

A great many of the ore bodies are marked on the surface by typical copper gossans, comprised of iron stained quartz full of vugs, showing traces of copper carbonates and oxides and very often rich in gold.

The gossans of the Binghamton are typical of the Yavapai County deposits and are as described above.

REPORT ON ARIZONA BINGHAMTON COPPER MINE

Description of Property
and Equipment:

The Arizona Binghamton owns an estate about one mile long and one-half mile wide, inwhich are located several copper bearing deposits, only one of which however, has been developed to any extent. The company owns all of the dwellings on the property consisting of Managers residences, several Bunk houses, office and store building, Superintendents residence, warehouse, office and individual houses for families, pumping plant on the Agua Fria River; capable of housing a force of 100 workmen.

They also have two shaft houses on what is known as the Main Shaft and No. 1 Shaft, equipped with electric hoists on both shafts; the Main Shaft being equipped with a steel gallows frame 75 feet high, two hoisting compartments and manway, a large compressor with capacity of 875 cubic feet of air per minute, a new double drum Nordburg hoist, equipped with a 200 H.P. motor capable of hoisting to a depth of 2000 feet. This shaft at the collar is equipped with two Gates type crushers driven by electric power. The collar of the shaft is concreted down 50 feet and is in excellent condition down to the bottom 1200 feet.

Number 1 Shaft is a single compartment shaft and manway equipped with a cage and counter balanced, ore bin, crusher driven by electric motor, and connected to the mill by a 1200 foot railroad tramway. The hoist on the shaft is driven by 75 H. P. motor. There are two double sullivan compressors capable of making 700 cubic feet of air per minute, electrically driven.

There are also blacksmith shop, machine shop, and store houses situated between the Main Shaft and No. 1 Shaft.

The mill is a 300 ton plant, electrically driven, containing two Marcy mills, Flotation unit consisting of Inspiration Pneumatic cells, Dorr thickener for dewatering, 3 Olliver filter presses, necessary pumps, motors, shafting, ore bins, concentrate bins; and ready to start up immediately.. All of the equipment is in excellent condition and ready to go.

Number 1 Shaft as will be seen by the map, has a depth of 600 feet and the various levels are connected under ground with Number 1 Shaft to the Main Shaft. Below the 600 foot level where the development work has been done was all done from the Main Shaft, and you will note that very little work has been

done on the 1200 foot level, which is the bottom of the mine.

Description of Surface Ore:

There are four individual areas of mineralization which I noted on the property, only one of which has been developed to any extent. The largest gossan is one which is known as the Belgian claim and has an extent of approximately 1000 feet in length with an average of 100 feet in width. You will note by the map that the 6th level has been driven out several hundred feet to catch the downward extention of this ore body if it exists, and a drill hole was started from the face of the 6th level and run out about 150 feet. They were drilling here when the property shut down the first of April 1925. It is significant that more water was encountered in this face and in this drill hole than in any other part of the mine. The Belgian gossan is iron stained schist, containing traces of copper, lead and zinc. There is a short cross-cut tunnel drifted in from the hill cross-cutting this gossan at a depth of about 50 feet. While no values of any importance were encountered it is interesting to note that the schist and porphry are thoroughly kaolanized due to the action of sulphuric acid oxidization. If there was any considerable copper content in the original primary deposition it is reasonable to expect that at some horizon depth a considerable secondary enrichment may be encountered. The mineralization is certainly large and pronounced enough to justify a good deal of development work on it with the expectation of getting a large body of pay ore at depth.

Above the main workings about 1000 feet away are several good scattered surface showings where considerable copper contents are in evidence and occasional good gold values are found. No work has been done on this deposit.

Down the hill below the main workings and towards the main camp of the property on a hill on which is built the managers house is a showing as good or better in copper carbonates as that on which the main development work has been done. It is not usual to get samples on surface showings about that will run 3 and 4% copper. No work of any description has been done on this deposit.

Where the main work has been done on the property is a surface showing about 400 feet long and from 10 to 20 feet in width, below which the main workings of the property are located. The surface ore body here shows carbonates down to a depth of about 75 feet where a shallow area of enrichment is encountered, and below which this ore is primary, the copper occuring as chalcopyrite. The oxidized zone here is of considerable importance

and I figure that there are 20,000 tons of ore that will average 4% copper. As a matter of comparison and effecting the surface showings on the Belgian Claim, I should say that there are two other ore bodies on this property which have already been described, that with a little work will demonstrate the existance of as much oxidized ore as has been exposed on the ore body where the work has been prosecuted.

Description of Workings:

By an examination of the maps of the underground workings which you have, you will see the length of the ore bodies, the width of the same and their values which are noted on the map. The ore occurs in lenticular massess more or less continuous and varying from width of two or three feet up to thrity feet in places. The ore has been mined mostly as shrinkage stopes, and the levels are in good condition and nearly all of the open.

In passing I should say that the ore has not been mined as clean and clear of waste rock as it might have been, see the Mines Handbook. A few places in the mine could be worked and some of the places in ore now could be worked profitably by selective mining, shovel sorting in the stopes, cribbing up the chutes and filling the stopes with waste for gob. In other places it would be better to mine the ore bodies as shrinkage stopes, passing the ore over picking belts, installed and located at the mine shaft. From my observation I calculate that in this manner 25% of the waste and barren material which has heretofore gone to the mill could be cheaply eliminated and the grade of the ore raised. There are a number of places in the mine where short diamond drill holes have been put out into the foot and hanging walls of the property below faulted areas which have descovered ore which has never been developed or mined.

It would seem from my observation that in two places in the mine drag ore has been mined and the main lenticular mass of ore has not been reached or exposed in the wall and this has also been demonstrated to be true by diamond drilling. Just what tonnage might be developed by going after these places no one can tell and only development work can prove, but the chances are very excellent for considerable ore to thus be developed, which is not considered in this report.

Production:

There has been mined and milled to date from the property, which dates from the year 1916 to April 1, 1925, 212,391 tons of ore, total. From 1916 to 1920 there was milled 156,601

tons which average 2.59% copper. From 1920 to 1923 there was milled 26,541 tons which averaged 3.9% copper and from 1923 to April 1, 1925 there was milled 29,249 tons which averaged 2.8% copper.

Ore in Sight at Present Time:

By referring to the map you will see that throughout the mine there are several stopes that were working at the time the mine shut down. Also some stopes that on the level above had good ore values and on the level below are somewhat lower in grade, but by raising and drifting on them will produce ore of a pay grade for the mill.

The stoped areas are also indicated on the map and considerable probable ore is indicated. This probable ore could no doubt be developed into productive areas by work and with the aid of a picking belt. The actual ore that can now be milled and that will average 2½% copper as it is mined is as follows:

60 x 50 x 9= 27,000
25 x 20 x 10= 5,000
60 x 25 x 20= 30,000
45 x 10 x 60= 27,000
40 x 40 x 10= 16,000
100x 50 x 4= 20,000
40 x 30 x 10= 12,000
30 x 10 x 80= 24,000
15 x 15 x 8= 1,800
70 x 6 x120= 50,400
213,200 cu. ft.
213,200 ÷ 12 = 17,767 tons.

which represents a tonnage of 17,767 tons of ore that will run 2½%.

That which will run 2% represents 6,250 tons and is as follows:

30 x 20 x 70 = 42,000
50 x 5 x 120 = 33,000
75,000 cu. ft.
75 ÷ 12 = 6,250 tons.

Carbonate ore which on the surgace will average 4% copper have 20,000 tons as follows:

REPORT ON ARIZONA BINGHAMTON COPPER MINE

254,000 cu. ft. ÷ 12 = 20,000 tons.

By installing a picking belt and eliminating 25% waste we could reduce the 2½% ore to 13,336 tons of ore that would run 3 1/3% copper. By the same method we could reduce the 2% average the face of it and then we would have about 18,000 tons that would average 3% copper by this method. This together with 20,000 tons of oxide ores which average 4% copper, gives the total tonnage in sight.

In order to start the Binghamton mine and supply enough money until we commence to get some revenue from the shipments, we figure that it would take about $10,000.00. This would allow enough to first take the water out of the mine which would cost not over $500.00 as the mine only makes about 6000 gallons a day and could be taken out in a very few days.

We would then have to purchase some supplies and keep the mine in operation until some revenue commenced to come in The mine could then be put on a basis of treating 1500 tons a month and shipping from the carbonate ore bodies, dueing which time development could be carried on and more ore opened up.

We donot think that any profit could be made out of the operation until other stopes were opened up. The ultimate revenue from the property, assuming the ore could be opened up sufficient to operate the mill at its capacity, would be about as follows:

Revenue and Expense
Basis 300 tons daily of 3% ore.

Heads	3% copper	=	60 lbs.	per ton
Tails	.24 "	=	4.8 "	" "
Concentrates	23% "	=	460 "	" "

$\frac{460 - 4.8}{60 - 48}$ = 8 to ratio of concentration

$\frac{60 - 4.8}{60}$ = 92% Recovery

Milling 300 tons per day Ratio 8 to 1 = 37.5

37½ tons x 30 = 1125.0 tons per month

1125 tons x $50 net smelter return value = $46250 per Mo.

REPORT ON ARIZONA BINGHAMTON COPPER MINE

The operating costs based on past experience at the Binghamton should be on 300 tons daily production basis whould be $3.50 per ton or $31,500 per month, leaving a net profit of $24,700 per month or approximately $300,000 annually.

This does not allow for a better grade of ore than 3% being found, all of which is within the realm of possibility.

In concluding the high lights on the Binghamton are these: We have a very attractive contract for the property considering its importance and chance for development. The surface improvements would cost something over $300,000 to duplicate. The property is ready to start up. The mine shaft is down 1200 feet with excellent chances of finding a great deal more ore in this one ore body. Other ore bodies on the surface with attractive features are there and un-explored. With a comparative small amount of initial money to take possession and start operations, I have no doubt that substantial backing can easily be procured in a shart time which will make the Binghamton one of the big copper mines of Yavapai County.

Respectfully submitted,

Howard W. Squires.

January 1926.

PROSPECTUS

ARIZONA MACHINERY COMPANY
PRESCOTT, ARIZONA

ARIZONA BINGHAMTON COPPER COMPANY

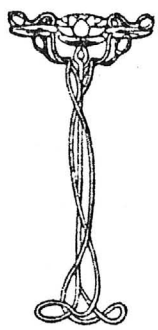
WOODBURY & COMPANY

44 PINE STREET, NEW YORK CITY

will receive public subscription to 80,000 shares
of the capital stock of the

ARIZONA BINGHAMTON COPPER COMPANY

(Incorporated under the laws of Arizona)



Authorized Capital	- -	340,000 shares
Present Public Offering	-	80,000 shares

Par Value $5 per share

ARIZONA BINGHAMTON COPPER COMPANY

DIRECTORS

DAVID COLE - - - - - - - - - El Paso, Texas
Metallurgical Engineer

GEORGE W. JOHNSON - - - - - - - - Stoddard, Arizona
General Manager Arizona Binghamton Copper Company

JAMES S. MURPHY - - - - - - - - Denver, Colorado
Mining

WILLIAM H. REYNOLDS - - - - - - - Long Beach, N. Y.
President Estates of Long Beach

FRANCIS S. VIELE - - - - - - - - Prescott, Arizona
President Arizona Light, Heat & Power Company

E. W. WELLS - - - - - - - - - Prescott, Arizona
President Bank of Arizona

JOHN H. WHYTE - - - - - - - - - New York City
Secretary and Treasurer

REGISTRAR OF STOCK

EMPIRE TRUST COMPANY, 120 Broadway, New York

TRANSFER AGENT

WOODBURY & COMPANY, 44 Pine Street, New York

PROSPECTUS

THE ARIZONA BINGHAMTON COPPER COMPANY'S property consists of six patented claims and four additional claims adjoining them to the west, acquired for protection and held by location, comprising about 175 acres. The claims are as follows:

COPPER RUIN	OTSELIC	ILLINOIS
CHENANGO	GENNEGANTSLETT	VIRGINIA
SUSQUEHANNAH	TENNESSEE	BINGHAMTON FRACTION
	BINGHAMTON	

These claims are located in a part of the range known as the Black Range in the Copper Mountain District, County of Yavapai, Arizona, in an air line about four miles from the Town of Mayer and about five miles from the Town of Humboldt, where the Consolidated Arizona Copper Company's smelter is located.

If it were possible to select a location for a mine, no better one could have been chosen from all standpoints than the site at Binghamton. Although the readers can tell fairly well by the accompanying panoramic picture of the camp, no description could take the place of a personal view of these mountains sloping down to the banks of the Agua Fria River, from which the mine obtains its water supply. The climate is unsurpassed for mining during the entire year.

EQUIPMENT

The mine is equipped with a full plant of modern mining machinery, sufficient to produce 250 tons of ore per day, also a modern flotation mill having a capacity of 125 tons per day, operated by electric power supplied by the Arizona Power Co. The Company owns the town and town site together with the buildings as shown in the accompanying pictures.

DEVELOPMENT

A shaft has been sunk on the Binghamton claim 600 feet deep and veins opened on the 100, 200, 300, 400 and 600 foot levels.

After the Minerals Separation North America Corporation patent came into existence, it was decided to erect a flotation mill with a capacity of 100 tons a day, with the plans so designed that the capacity could be increased unit by unit at a minimum expenditure of money. Work on the mill was begun in March, 1916, and completed August 15, 1916, and it has been operating continuously since.

From August 15, 1916, to April 1, 1917, 24,802 tons of ore have been treated by the mill, which were reduced to 2,389 tons of concentrates. Such concentrates have been shipped to the smelter and have averaged 21.43 per cent. copper. The Consolidated Arizona Smelting Company at Humboldt, after deducting all smelting, refining and copper selling charges, has paid to the Arizona Binghamton Copper Company $243,570.60 net from August 15, 1916, to April 1, 1917, for the 2,389 tons of concentrates.

The flotation mill capacity is now being increased to treat 250 tons of ore per day and will be completed and operating within 60 days, or about June 1, 1917, so that the production and income should be double that of the present time.

Thomas H. Tullock, a graduate engineer of mines of the Columbia School of Mines, New York City, is the manager of the flotation mill and reports as follows:

Arizona Binghamton Copper Company,
Stoddard, Arizona.

Stoddard, Arizona, March 17, 1917.

Dear Sirs:

"The ore of the Arizona Binghamton Copper Company readily concentrates under flotation process. About June 1, 1917, the additional equipment will be installed and the mill will be able to handle 250 tons of ore per day or 7,500 tons a month thereafter."

THOMAS H. TULLOCK,
Superintendent.

James S. Murphy of Cripple Creek, Colorado, who superintended the sinking of the shaft to a depth of 600 feet, and the development work on the various levels prior to the installation of the flotation mill, and who inspected the property during the month of February, 1917, writes as follows:

Arizona Binghamton Copper Company,
Stoddard, Arizona.

Denver, Colorado, March 22, 1917.

Gentlemen:

"I have read the report of Mr. Alexander P. Rogers, of the various ore bodies in the levels inspected by him and I coincide with him in all of his opinions and advices. I desire to add further that the ore body No. 91E mentioned by Mr. Rogers in the 360′ level, continues to the 600′ level and is equally as good both as to values and size. While no development work was done on the 600′ level to open up the ore bodies mentioned by him on the levels above, it is my opinion and belief that when such development work is done, they will be found to correspond with No. 91E, which was opened by me on the 600′ level."

JAMES S. MURPHY.

The Management believes in following the policy as outlined in Mr. Rogers' report, and as soon as it can be conveniently done, without interfering with the present output of the mine, nor checking the increase in production up to 250 tons per day, intends to sink a double compartment shaft a distance of 1,200 feet and enlarge the present shaft from a single to a double compartment shaft to coincide with the one to be sunk from the 600′ level.

A public offering of 80,000 shares of the capital stock is made by the undersigned at Five ($5.00) Dollars per share, payable as follows:

Two ($2.00) Dollars per share to accompany the application for subscription and the balance of Three ($3.00) Dollars per share payable upon notice of allotment. If less than the number of shares applied for is allotted, the sum paid on subscription will be credited on the number of shares allotted. On failure to make the final payment when due, the amount paid on subscription will be forfeited.

The undersigned reserves the right to reject any application, or to allot a less number of shares than applied for.

Applications for subscriptions should be addressed to Woodbury & Company, at their office, 44 Pine Street, New York City, or Bank of Arizona, Prescott, Arizona, on or before May 10, 1917 (on which date subscriptions close), upon the annexed application form accompanied by check payable to the order of Woodbury & Company or Bank of Arizona, Prescott, Arizona.

The undersigned now offers the above issue of stock for subscription.

WOODBURY & COMPANY,
44 Pine Street, New York City.

Dated, New York, April 16, 1917.

Binghamton

Mr. Alexander P. Rogers, well known Mining Engineer of 25 Broad Street, New York City, who made an examination of the property in February, 1917, states:

Arizona Binghamton Copper Company, New York, March 19, 1917.
Stoddard, Arizona.

Dear Sirs:

"In reply to your request for a condensed statement upon your mine, I beg to submit the following:

"On the first level I found the following ore bodies,—No. 99 exposed for 50′ in length, average width 6′, assay 1.97% copper.

No. 100	length	50′,	average	width	16.27′,	assay	1.92%	copper
No. 101	"	100′	"	"	12.00′	"	2.63%	"
No. 103	"	60′	"	"	4.74′	"	1.84%	"
No. 109	"	30′	"	"	5.40′	"	1.75%	"
No. 110	"	180′	"	"	10.00′	"	2.30%	"
No. 111	"	60′	"	"	15.32′	"	2.17%	"
No. 115	"	40′	"	"	4.81′	"	1.76%	"

Second Level

No. 91	length	50′,	average	width	12.96′,	assay	2.65%	copper
No. 101	"	60′	"	"	7.28′	"	5.02%	"
No. 110	"	10′	"	"	1.90′	"	3.10%	"

Third Level

No. 91	length	60′,	average	width	5.22′,	assay	1.76%	copper

No. 110 In two parallel drifts, connected by a crosscut 20′ long, showing values throughout averaging 3.15% copper

102 drift,	length	40′	average	width	5.65′,	assay	1.26%	copper
102 w "	"	100′	"	"	7.69′	"	5.34%	"

"On the 360′ level No. 91E ore body was 80′ in length, 5′ in width and assayed 3.33% copper. It is the only ore body that has been opened up on that level, as the management has not had sufficient time to drift to where the other ore bodies should be found.

"At the time I examined the property the management was mining ore for the mill from the various levels above 360′, no attempt having been made to unwater the shaft below that point.

"The exploration work being carried on to the north at my suggestion should open up other good ore bodies, as the surface indications are fully as good as those under which you have opened up your present ore bodies.

"The shaft from the 600′ level to the surface is already being enlarged into a double compartment shaft, upon my advice, to handle the increased tonnage to furnish 250 tons per day to the mill.

"If the ore exposed on the 6th level is found to be of good grade, I advise you to sink the shaft and open up your ore bodies at deeper horizons.

"On the whole, the property is an interesting one and has considerable promise."

Yours very truly,

A. P. Rogers.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Binghamton & Copper Queen — Date March 28, 1957

District Agua Fria — Engineer Mark Gemmill

Subject: Present Status

The Nipissing Mines Company Ltd. of Toronto, Cananda recently took an option on these adjoining properties and at present is carrying on a drilling program. Information regarding this work has not been made available.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Binghamton Mine (Arizona-Binghamton) Date April 20, 1956

District Agua Fria - 6 miles NE of Mayer Engineer Mark Gemmill

Subject: Present Status

The property consists of about 16 patented claims and is owned by the Pfeffer estate, Valley National Bank, Phoenix, Trustee.

It is well described in the Howard Squires report. Since this report was written probably all reserve ore shown has been mined out. Exploration work done in the late 20s consisting mainly of underground drilling failed to findnnew ore. All surface improvements were removed and the pbroperty abandoned in 1930 and later sold for taxes. It was acquired by the present owner in 1943 who mined and shipped all remaining low grade carbonate ore.

The property has been idle for the past 6 or 8 years. It is presently under option to Dick Naylor, 1228 Atlantic, Los Angeles 22, Calif.

Additional maps and reports are probably in the Colvocoresses files now owned Mr. Allison of the Allsion Steel Mfg. Co.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine BINGHAMPTON Date April 20, 1955

District AGUA FRIA, YAVAPAI COUNTY Engineer Mark Gemmill

Subject:

The owner Ralph Pfeffer died several years ago and I don't know how the title stands today. Shattuck Denn had a lease on the property this past year for examination purposes and probably still holds it. It has been idle since 1947.

DEPARTMENT OF MINERAL RESOURCES

REPORT TO OPA ON ACTIVE MINING PROJECT

DEPT. MINERAL RESOURCES
RECEIVED
DEC 20 1944
ARIZONA
PHOENIX

Date Dec 19 1944

Name of Mine Birchmont Tow

Owner or Operator Geo. L. Hanson

Address Mayer Ariz

Mine Location East of Mayer

Filing Information

File System

File No.

This chart to be used for gallons of gasoline required per month.

PRESENT OPERATIONS: (check X)

Production X; Development; Financing; Sale of mine;

Experimental (sampling); Owner's occasional trip;

Other (specify)

PRODUCTION: **Past and Future.** **Tons**

Approx. tons last 3 months

Approx. present rate per 3 months

Anticipated rate next 3 months

If in distant future check (X) here

EQUIPMENT OPERATED:

Type	Quantity or Horse Power	Miles or Hours Per Month	Gallons Required Per Month
Personal Cars			
Light or Service Trucks			
Ore Hauling Trucks			
~~Compressors~~ Hoist	20	84	840
Other Mine or Mill Eqpt.			

PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.

REMARKS: Nothing Office use — Operation Suspended

ARIZONA DEPARTMENT OF MINERAL RESOURCES

By [illegible]

Field Engineer D & M R

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine BINGHAMPTON ✓ Date October 22, 1942

District Agua Fria Engineer A. C. Nebeker

Subject:

Location: 6 miles east of Mayer, Arizona.

Former name: The Arizona-Binghamption Mining Company.

Owner: ✓ Yavapai County (for taxes).

Operator: None.

Men Employed: None.

Principal Metals: Copper

Production Rate: Idle.

Power: Amt. & Type: None.

Operations: Present: Idle. By reason that the County Supervisors will not accept the bid which has been offered.

Number Claims, Title, Etc: 10 or more titles as above stated.

Description: Topog. & Geog.: The country is cut up by several canyons some with rather steep sides while others are of a gentle slope. The property is just east of the Agua Fria River and at an elevation of approximately 4500 feet above sea.

Mine Workings: Amt. & Condition: The mine workings consist of several thousand feet of drifting, crosscutting and shafts. I saw two shafts, both seem to be in fair condition and I was in a long tunnel of several hundred feet and this was in fair condition. There is no caved ground in this tunnel but there are several places where muck has been shoveled to the side of the tunnel, and where ore shutes appear there is a pile of muck.

Geology & Mineralization: Most of the rock is a schist, the color in places is greenish and in other places a brown iron stained schist.
One sees some quartzites and porphyry and the whole country is of shistose structure. The schists strike North 10 to 15 west and has a steep dip of 72 degrees west. There is considerable iron showing through out wide zones in the schist, and the formation really talks to one and copper can be seen in many places.

Ore: Positive & Probable, Ore Dumps, Tailings: It looks as if all exposed ores have been worked out. There is a large worked-out stope one can see back in the tunnel level, the ore was over 100 feet long and 30 or more feet thick. There is a face or two in the tunnel which could produce some ore. The tailings of thousands of tons is worth testing out, it is possible that improved milling will make a profit.

Mine, Mill Equipment & Flow Sheet: The mill and all equipment once on the property has been sold and moved off.

Road Conditions, Route: The road is good from Mayer to the river at which point one turns to the right and goes down the river about a mile to a ranch which is on the left side of the river, leave your car here and walk about 3/4 mile up the wash to the mine.

Brief History: This property has been an old producer and has produced millions of pounds of copper and thousands of ounces of silver from ores averaging around 3 per cent copper. The workings that are now accessible show large stopes and evidence of large production. It appears that from the tunnel level to the surface there is still possibilities of ore being developed, and what there is below the tunnel level will depend a great deal on the type and amount of work done down there.

I saw some surface croppings, which have not been prospected and which have markings of an ore body, and if this developed into an ore chute, and it very reasonably could, there is still a big mine here. It is hard to tell without maps of the mine how far the workings extend on the lower levels, but from what I can learn, there are possibilities of parallel ore bodies being found.

Remarks: It will take a good size piece of money to equip and get into production from the old mine workings.

The tailings pounds are worth sampling and testing and may return quick copper.

If property for sale: Price, terms and address to negotiate: The county has been trying to sell this property for taxes.

Signed A. C. MEYER

C O P Y

REPORT ON

ARIZONA BINGHAMTON COPPER MINE

BY HOWARD W. SQUIRES.

Location:

The Arizona Binghamton property is located about six miles from Mayer, Arizona, a town on the Crown King branch of the Santa Fe Railroad, and about fourteen miles from Humboldt Smelter, and thirty-two miles from the city of Prescott. It is situated on the big Schist Belt which traverses Yavapai County, and along which belt are located the large, and many of them famous, copper mines of Yavapai County. Most notable of these mines are the United Verde and United Verde Extention, and need no introduction to the mining public. The next large mine to come in recently at depth is the Verde Central, whose owners are now reaping the benefit of deep development work, and have lately encountered ore on the 1800 level of this property, similar in character and grade to the Verde Extention ore bodies, and apparently a large tonnage.

The Blue Bell which is owned by the Humboldt Smelter and for years has been their main-stay for ore, is on this belt and is about fourteen miles from the Binghamton. About twenty-five miles South from the Binghamton is the Kay Copper whose recent developments have brought this property into prominence.

Geology:

So much has been written about the geology of the copper mines situated on the Yavapai Schist Belt that it is hardly necessary to go into this in any detail, but it is notable that quartz porphry intrusions in this Schist are no doubt responsible for the genesis of the ore. This quartz porphry where it intrudes in the surface is very acid and has been squeezed so that it has the appearance of planes of schistosity. All of the large copper mines have found their bodies of ore at the contact or near these intrusions in shear zones of the Schist.

A great many of the ore bodies are marked on the surface by typical copper gossans, comprised of iron stained quartz full of vugs, showing traces of copper carbonates and oxides and very often rich in gold.

The gossans of the Binghamton are typical of the Yavapai County deposits and are as described above.

Description of Property and Equipment:

The Arizona Binghamton owns an estate about one mile long and one-half mile wide, inwhich are located several copper bearing deposits, only one of which however, has been developed to any extent. The company owns all of the dwellings on the property consisting of Managers residences, several Bunk houses, office and store building, Superintendents residence, warehouse, office and individual houses for families, pumping plant on the Agua Fria River; capable of housing a force of 100 workmen.

They also have two shaft houses on what is known as the Main Shaft and No. 1 Shaft, equipped with electric hoists on both shafts; the Main Shaft being equipped with a steel gallows frame 75 feet high, two hoisting compartments and manway, a large compressor with capacity of 875 cubic feet of air per minute, a new double drum Nordburg hoist, equipped with a 200 H.P. motor capable of hoisting to a depth of 2000 feet. This shaft at the collar is equipped with two Gates type crushers driven by electric power. The collar of the shaft is concreted down 50 feet and is in excellent condition down to the bottom 1200 feet.

Number 1 Shaft is a single compartment shaft and manway equipped with a cage and counter balanced, ore bin, crusher driven by electric motor, and connected to the mill by a 1200 foot railroad tramway. The hoist on the shaft is driven by 75 H.P. motor. There are two double sullivan compressors capable of making 700 cubic feet of air per minute, electrically driven.

There are also blacksmith shop, machine shop, and store houses situated between the Main Shaft and No. 1 Shaft.

The mill is a 300 ton plant, electrically driven, containing two Marcy mills, Flotation unit consisting of Inspiration Pneumatic cells, Dorr thickener for dewatering, 3 Olliver filter presses, necessary pumps, motors, shafting, ore bins, concentrate bins; and ready to start up immediately. All of the equipment is in excellent condition and ready to go.

Number 1 Shaft as will be seen by the map, has a depth of 600 feet and the various levels are connected under ground with Number 1 Shaft to the Main Shaft. Below the 600 foot level where the development work has been done was all done from the Main Shaft, and you will note that very little work has been done on the 1200 foot level, which is the bottom of the mine.

Description of Surface Ore:

There are four individual areas of mineralization which I noted on the property, only one of which has been developed to any extent. The largest gossan is one which is known as the Belgian claim and has an extent of approximately 1000 feet in length with an average of 100 feet in width. You will note by the map that the 6th level has been driven out several hundred feet to catch the downward extention of this ore body if it exists,and a drill hole was started from the face of the 6th level and run out about 150 feet. They were drilling here when the property shut down the first of April 1925. It is significant that more water was encountered in this face and in this drill hole than in any other part of the mine. The Belgian gossan is iron stained schist, containing traces of copper, lead and zinc. There is a short cross-cut tunnel drifted in from the hill cross-cutting this gossan at a depth of about 50 feet. While no values of any importance were encountered it is interesting to note that the schist and porphry are thoroughly kaolanized due to the action of sulphuric acid oxidization. If there was any considerable copper content in the original primary deposition it is reasonable to expect that at some horizon depth a considerable secondary enrichment may be encountered. The mineralization is certainly large and pronounced enough to justify a good deal of development work on it with the expectation of getting a large body of pay ore at depth.

Above the main workings about 1000 feet away are several good scattered surface showings where considerable copper contents are in evidence and occasional good gold values are found. No work has been done on this deposit.

Down the hill below the main workings and towards the main camp of the property on a hill on which is built the managers house is a showing as good or better in copper carbonates as that on which the main development work has been done. It is not usual to get samples on surface showings about that will run 3 and 4% copper. No work of any description has been done on this deposit.

Where the main work has been done on the property is a surface showing about 400 feet long and from 10 to 20 feet in width, below which the main workings of the property are located. The surface ore body here shows carbonates down to a depth of about 75

feet where a shallow area of enrichment is encountered, and below which this ore is primary, the copper occuring as chalcopyrite. The oxidized zone here is of considerable importance and I figure that there are 20,000 tons of ore that will average 4% copper. As a matter of comparison and effecting the surface showings on the Belgian Claim, I should say that there are two other ore bodies on this property which have already been described, that with a little work will demonstrate the existance of as much oxidized ore as has been exposed on the ore body where the work has been prosecuted.

Description of Workings:

By an examination of the maps of the underground workings which you have, you will see the length of the ore bodies, the width of the same and their values which are noted on the map. The ore occurs in lenticular massess more or less continuous and varying from width of two or three feet up to thirty feet in places. The ore has been mined mostly as shrinkage stopes, and the levels are in good condition and nearly all of the open.

In passing I should say that the ore has not been mined as clean and clear of waste rock as it might have been, see the Mines Handbook. A few places in the mine could be worked and some of the places in ore now could be worked profitably by selective mining, shovel sorting in the stopes, cribbing up the chutes and filling the stopes with waste for gob. In other places it would be better to mine the ore bodies as shrinkage stopes, passing the ore over picking belts, installed and located at the mine shaft. From my observation I calculate that in this manner 25% of the waste and barren material which has heretofore gone to the mill could be cheaply eliminated and the grade of the ore raised. There are a number of places in the mine where short diamond drill holes have been put out into the foot and hanging walls of the property below faulted areas which have discovered ore which has never been developed or mined.

It would seem from my observation that in two places in the mine drag ore has been mined and the main lenticular mass of ore has not been reached or exposed in the wall and this has also been demonstrated to be true by diamond drilling. Just what tonnage might be developed by going after these places no one can tell and only development work can prove, but the chances are very excellent for considerable ore to thus be developed, which is not considered in this report.

Production:

There has been mined and milled to date from the property, which dates from the year 1916 to April 1, 1925, 212,391 tons of ore, total. From 1916 to 1920 there was milled 156,601 tons which average 2.59% copper. From 1920 to 1923 there was milled 26,541 tons which averaged 3.9% copper and from 1923 to April 1, 1925 there was milled 29,249 tons which averaged 2.8% copper.

Ore in Sight at Present Time:

By referring to the map you will see that throughout the mine there are several stopes that were working at the time the mine shut down. Also some stopes that on the level above had good ore values and on the level below are somewhat lower in grade, but by raising and drifting on them will produce ore of a pay grade for the mill.

The stoped areas are also indicated on the map and considerable probable ore is indicated. This probable ore could no doubt be developed into productive areas by work and with the aid of a picking belt. The actual ore that can now be milled and that will average 2½% copper as it is mined is as follows:

60	x	50	x	9	=	27,000
25	x	20	x	10	=	5,000
60	x	25	x	20	=	30,000
45	x	10	x	60	=	27,000
40	x	40	x	10	=	16,000
100	x	50	x	4	=	20,000
40	x	30	x	10	=	12,000
30	x	10	x	80	=	24,000
15	x	15	x	8	=	1,800
70	x	6	x	120	=	50,400
						213,200 cu. ft.

213,200 ÷ 12 = 17,767 tons.

which represents a tonnage of 17,767 tons of ore that will run 2½%.

That which will run 2% represents 6,250 tons and is as follows:

30	x	20	x	70	=	42,000
50	x	5	x	120	=	33,000
						75,000 cu. ft.

75 ÷ 12 = 6,250 tons.

Carbonate ore which on the surface will average 4% copper have 20,000 tons as follows:

254,000 cu. ft. ÷ 12 = 20,000 tons.

By installing a picking belt and eliminating 25% waste we could reduce the 2½% ore to 13,336 tons of ore that would run 3 1/3% copper. By the same method we could reduce the 2% average the face of it and then we would have about 18,000 tons that would average 3% copper by this method. This together with 20,000 tons of oxide ores which average 4% copper, gives the total tonnage in sight.

In order to start the Binghamton mine and supply enough money until we commence to get some revenue from the shipments, we figure that it would take about $10,000.00. This would allow enough to first take the water out of the mine which would cost not over $500.00 as the mine only makes about 6000 gallons a day and could be taken out in a very few days.

We would then have to purchase some supplies and keep the mine in operation until some revenue commenced to come in the mine could then be put on a basis of treating 1500 tons a month and shipping from the carbonate ore bodies, during which time development could be carried on and more ore opened up.

We do not think that any profit could be made out of the operation until other stopes were opened up. The ultimate revenue from the property, assuming the ore could be opened up sufficient to operate the mill at its capacity, would be about as follows:

Revenue and Expense
Basis 300 tons daily of 3% ore.

REPORT ON ARIZONA BINGHAMTON COPPER MINE

Heads	3% copper	=	60 lbs. per ton
Tails	.24 "	=	4.8 " " "
Concentrates	23% "	=	460 " " "

$\frac{460 - 4.8}{60 - 48}$ = 8 to ratio of concentration

$\frac{60 - 4.8}{60}$ = 92% Recovery

Milling 300 tons per day Ratio 8 to 1 = 37.5

$37\frac{1}{2}$ tons x 30 = 1125.0 tons per month

1125 tons x $50 net smelter return value = $46250 per Mo.

The operating costs based on past experience at the Binghamton should be on 300 tons daily production basis would be $3.50 per ton or $31,500 per month, leaving a net profit of $25,700 per month or approximately $300,000 annually.

This does not allow for a better grade of ore than 3% being found, all of which is within the realm of possibility.

In concluding the high lights on the Binghamton are these: We have a very attractive contract for the property considering its importance and chance for development. The surface improvements would cost something over $300,000 to duplicate. The property is ready to start up. The mine shaft is down 1200 feet with excellent chances of finding a great deal more ore in this one ore body. Other ore bodies on the surface with attractive features are there and un-explored. With a comparative small amount of initial money to take possession and start operations, I have no doubt that substantial backing can easily be procured in a short time which will make the Binghamton one of the big copper mines of Yavapai County.

Respectfully submitted,

Howard W. Squires.

January 1926.

Oct 22nd, 1942

A. C. Nebeker

Binghampton

6 miles East of Mayer, Ariz

Agua Fria

The Arizona- Binghamption Mining Co

Yavapai County (for Taxes)

None

None

Copper

Idle

None

Idle by reason that the County Supervisors will not accept the bid which have been offered.

IO or more title as above stated

The country is cut up by several canyons some with rather steep sides while others are of a gentle slope. The property is just East of the Aqua Fria riverand at an evelation of approximately 4500 feet above sea.

The mine workings consists of several thousands feet of drifting, crosscutting and shafts. ,I saw two shafts bothseems to be in fair condition and I was in a long tunnel of several hundered feet and this was in fair condition. There is no caved ground in this tunnel but there is several places where muck has been shoveled to the side of the tunnel, and where ore shutes appears there is a pile of muck.

President Brand gold mine will sink a No. 5 shaft in the southwest portion of its mining lease area in South Africa, following an intensive drilling program. Capital cost of the shaft is estimated at $103 million, rising to $151 million. The projected lives of the existing shafts at President Brand will result in under-utilization of the gold plant from 1986 onward. The new shaft will initially be used for workers, materials and ventilation only, although it has been designed for expansion to supply rock hoisting facilities if needed.

Superior Oil Company has signed an option agreement to purchase Nuclear Dynamics, Inc.'s Binghampton copper property for $800,000. The property in the Agua Fria mining district, is approximately 65 mi north of Phoenix, Arizona. The option agreement provides that Superior Oil will conduct an exploration program and if warranted, will make feasibility studies. If such exploration results and studies indicate that development of the property is desirable, Nuclear may at the time elect to retain up to 20% working interest in the properties.

Nicaragua has nationalized its entire mining industry. This nationalization is being implemented by the Sandinist government. Rosario Resources Corp. said that the government has taken over its Nicaraguan mining interest consisting of Rosario Mining of Nicaragua Inc. and Neptune Mining Co. The government has assured Rosario that it will be compensated, but no concrete offer has been made. Rosario has been asked to manage the companies, but the company has not yet made a decision on the request. In addition, Noranada Mines Ltd. confirmed that its 60.5% owned Empressa Minera de el Setentrion, which operates a small gold mine in Nicaragua, had been nationalized. The mine earned $1.8 million in 1978.

Northgate Exploration has entered into a joint venture agreement with Orofino Mines regarding the company's gold prospect in Silk and Horwood Twps., in the Groundhop district of northern Ontario. Under the agreement, Northgate has agreed to expend at least $250,000 in exploration at Orofino's 27 patented claims in the first of a three stage program covering a total planned expenditure of $1.3 million to earn at least a 60% interest in the joint venture properties. Northgate has also agreed to purchase 250,000 shares of a reorganized Orofino company for $300,000 cash and will hold an option to purchase another 250,000 shares at $1.60 per share before Nov. 1, 1982. The first stage covering exploration, appraisal and underground working and approximately 10,000 ft surface diamond drilling will, upon completion, entitle Northgate to a 20% participation in the joint venture properties and, on completion of additional expenditures of $150,000 in the second stage, it will have earned a further 10% participation. If or when Northgate has contributed a total $1.3 million, at least 60% of the participation will have been earned.

Alcan Aluminum Ltd., Billiton Alumina Ltd. and Anaconda Ireland Co. have completed 25% of the work involved in the construction of a $500-million aluminum plant at Anguish, Ireland. The aluminum plant, with scheduled production of 800,000 mtpy, should begin its first shipments in late 1982. In addition, the nation is pushing ahead with its plans to build a zinc smelter to take advantage of the rich ore deposits at the Navan mining area, northwest of Dublin. The proposed zinc smelter would have a refining capacity of 190,000 tpy zinc, at an estimated cost of $200-million. The Navan area, mined for two years by Tara Mines Ltd. Bul. Ltd. of Dublin, which is 49% owned by the Irish government, is also seeking the necessary permits to open another mine there.

The Philippine Associated Smelting and Refining Corp. C Pasar, has made a special request to all copper mining companies in the country to allocate 30% of their copper output to the island's proposed copper smelter by 1983. The proportion of the projected 1983 copper production will total about 138,000 mt. As copper mines expand their production, their contribution to the smelter is expected to increase. Copper producers are also being asked to expand their milling capacity to meet concentrate requirements of the People's Rep. of China, with which the Philippines has signed a seven year trade agreement.

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Superior-Nuclear Dynamics Copper Property Agreement

Option agreement for purchase of Binghampton prospect for $800,000

Kelsey L. Boltz, president of Nuclear Dynamics Inc., has announced that Superior Oil Co. has signed an option agreement to purchase the company's Binghampton copper property for $800,000. The property is in the Agua Fria mining district, 65 miles north of Phoenix, near Mayer, Ariz.

The option agreement provides that Superior Oil will conduct an exploration program and, if warranted, will make feasibility studies. If such exploration results and studies indicate that development of the property is desirable, Nuclear Dynamics at that time may elect to retain up to a 20% working interest in the project.

HOMESTAKE GOLD MINE

The Homestake mine at Lead, S. D., accounts for about one-third of the annual U. S. production of gold. The Carlin mine in Nevada is one of the largest low grade gold deposits discovered in the U. S. in the past 50 years.

LABOR DISPUTE AT INCO'S GUATEMALAN NICKEL MINE

Smelting operations halted

Processing operations at Inco Metals' nickel mining subsidiary in Guatemala have been interrupted by a labor disagreement that began on Nov. 7, when several workers from the ore processing operations requested a review of job classification evaluation. These workers were subsequently supported by other employees who walked off their jobs, thereby halting smelting operations. Mining and various support work have continued uninterrupted.

Exmibal, Inco's majority-owned subsidiary in Guatemala, is continuing discussions with workers in an effort to resolve the dispute.

U. S. GOLD IMPORTS

Of the 288,607 oz. of gold imported by the U. S. during July, 58% came from Canada, 18% from the U.S.S.R. and 15% from Switzerland. In addition, an estimated 262,057 oz. of gold in coins were imported, of which 66% came from South Africa and 21% from Mexico.

Freeport Names Allan Park to New Exploration Post

District exploration manager for Great Basin district in Reno, Nev.

Allan M. Park has been named district exploration manager for the Great Basin district of the U. S., according to Douglas R. Cook, president of Freeport Exploration Co., a subsidiary of Freeport Minerals Co. Mr. Park has offices in Reno, Nev.

ALLAN M. PARK

Mr. Park, who joined Freeport Exploration in 1977 as senior geologist for the Great Basin district, was previously with The Hanna Mining Co. He is a registered professional geologist-Idaho, a member of the A.I.M.E. and the Society of Economic Geologists.

A native of Washington, D.C., Mr. Park received B.S. and M.S. degrees from Stanford University and studied at Queen's University, Kingston, Ont.

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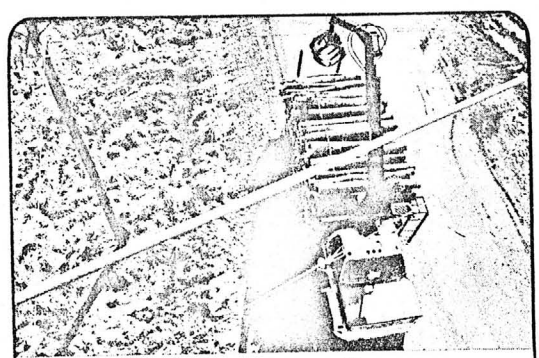

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Ariz. Binghamton Copper Co.
Yavapai Co.

Lieut. W. V. DeCamp, recently of the army, formerly superintendent of the Blue Bell, has arrived from New York city on legal business, being called as an expert in the trial of the Copper Queen Gold Co., vs. the Arizona Binghamton Co., which began yesterday. Lieut. DeCamp returns east later to resume his postgraduate course at the Columbia School of Mines, as an engineer, and expects to return to Prescott during June to remain.

The Arizona Binghampton in the Humboldt district has a large working shaft and either an aerial tramway or a railroad line to Humboldt smelter ahead for next year. Either rail or tram will cut present haulage distance in half. The mine has the ore developed and the increased facilities are well warranted.

G, JANUARY 28, 1919.

TWO WEEKS PROBE OF MINING COMPANY'S DAMAGE SUIT ENDS; JURY ASKS FOR MORE ORDERS

After two weeks of the most minute investigation of facts surrounding the contractual relations of the Copper Queen Gold Mining Co. and the Arizona Binghampton Copper Co. a jury in the superior court last night caused the court, attaches and the contending parties and their counsel to assemble that it might ask for a re-reading of the instructions of Judge Sweeney. If a verdict is reached between the time court adjourned at 10:30 p. m. last night and 10 a. m. tomorrow, that verdict will be sealed and left in custody of the foreman, to be read in open court Monday.

Considering the depth to which the legal probe was inserted in to the knotty questions surrounding the controversy, the arguments of counsel were brief. Everybody who has been connected with the case was worn to a frazzle and nerves were on the point of popping. The short but intensive debate between Messrs. Norris and Spalding for the Queen and George P. Bullard for the Binghampton at the close of the case yesterday afternoon followed a difficult charge to the jury by the court. So many questions of law had come up that Judge Sweeney was compelled to go most deeply into the subject of the jury's legal limitations. His discourse, which was read from a typed memorandum was claimed by attorneys for the defense to have cut off the plaintiff from possible recovery of any damages beyond a comparatively small sum about $33,000. Originall, the Queen had asked about $200,000 damages for the alleged failure of the Stoddard Milling Co., a subsidiary of the Binghampton to mill the ore presented to its bins. Later, the complaint was amended so that about $113,000 was asked for. Under one ruling of the court, $63,000 possible damages was lopped off.

The case brought to the witness stand many experts, men who offered profound knowledge of mining, milling and mine and mill accountancy. The case hung in part on the interpretation of proper charges as mining and milling costs and the subject of cost accounting was explained at almost painful length by batteries of experts.

The case was opened on April 14. The following day, it was delayed while one of the jurors attended the arrival of a child at his home. Resuming on April 16, it has proceeded grimly and doggedly along, with frequent interruptions for the argument of law questions and continual wrangles among the attorneys.

The Arizona Binghampton, in the Humboldt district, has a large working shaft and either an aerial tramway or a railroad line to Humboldt smelter ahead for next year. Either rail or tram will cut present haulage distance in half. The mine has the ore developed and the increased facilities are well warranted.

$10,000 MINING DEAL CLOSED YESTERDAY

The sale of the Hazel and Gold Hill mining claims situated near Stoddard, has been consummated for the sum of $10,000 on a cash basis, it was reported yesterday. The purchaser is the Arizona Binghamton Copper Co., and the sellers are Dr. R. N. Looney, Frank Thornton, and the estate of Charles Kingsley, deceased, which was represented by P. W. O'Sullivan, administrator, all three interests receiving share and share alike.

These claims are contiguous to the main workings of the Binghamton, upon which the above-named owners had performed development during the past several years. The deal had been under consideration for several months, but was held up until the Kingsley estate had been probated sufficiently to allow an order of sale to be issued by the superior court.

Small Mining Deal.

The England and France mining claims, owned by Samuel E. Chaney and located near Stoddard, have been taken over by the Arizona Binghamton Copper Co., the revenue stamps on the deed indicating a $500 deal.

The sale of the Hazel and Gold Hill mining claims situated near Stoddard, has been consummated for the sum of $10,000 on a cash basis. The purchaser is the Arizona-Binghampton Copper company, and the sellers are Dr. R. N. Looney, Frank Thornton and the estate of Charles Kingsley, deceased, which was represented by P. W. O'Sullivan, administrator, all three interests receiving share and share alike. These claims are contiguous to the main workings of the Binghampton, upon which the above named owners had performed development during the past several years. The deal had been under consideration for several months, but was held up until the Kingsley estate had been probated sufficiently to allow an order of sale to be issued by the superior court.

ERDE DAILY COPPER NEW

Somewhere In Arizona

The Arizona Binghamton in the Mayer district, has started to frame the big shaft from the collar, putting on an additional 20 men, making about 80 in all. With the 80-foot steel gallows frame more than half erected, this property will be in a position to commence production on a large scale by February 1. The Arizona Binghamton has a flotation plant, and with the new three-compartment shaft, will be in a position to handle a large tonnage of ore.

BINGHAMTON HAS BECOME PRODUCER DURING PAST YEAR

MAYER, Ariz., Jan. 11.—A very interesting folder has been mailed to the stockholders of the Arizona Binghampton Copper company, by its president, W. H. Reynolds, setting forth the results of a recent meeting of the company's directors and including a report on the company's mine by Horace V. Winchell, a very well known mining engineer and geologist who made, recently, an exhaustive examination of all of the holdings of the company.

For more than two years this company has been operating a copper mine six miles northeast of Mayer, there being an oil flotation mill at the mine, with a daily capacity of about 150 tons. The report shows that over 90,000 tons of ore have been milled and 922 tons of high grade shipped to the smelter which shows a total production of close to 5,000,000 pounds of copper which represents a recovery of nearly 3 per cent. It has been profitable to treat ore as low grade as 2¼ per cent. The ore contains small values in silver.

According to Mr. Winchell's report, there are in reserve about 100,000 tons of ore assaying 3 per cent copper, or better, and about 150,000 tons of a lower grade, all above the 600 foot level. The mine has been developed on the ore zone for a distance of 1400 feet. On the strength of the recommendations of this engineer, the company is now putting down a new 3-compartment shaft a short distance from the old one which will reach a depth of 750 feet by June 1. It is then expected that an entirely new mill will be built with a capacity of 300 or more tons, using the safe flow sheet as used in the present mill. The oil flotation process has been found to be especially well adapted to this class of chalcopyrite copper ore.

As to the future of the mine, this geologist states: "The oxidized zone extends to the depth of about 60 feet. Beneath this there is a very shallow zone of secondary enrichment and below that the ore is primary. The geological character and probable genesis of these ores is such as to indicate indefinite downward extension and there is every reason to believe that future developments to great depth will disclose the existence of even larger ore bodies than those now being worked. The developments prove the presence of a valuable series of ore lenses and indicate the existence of a permanent mine. The extent of mineralization and quantity of ore which may be developed in the future are problematical, but it is c tain that the mine is not yet develop to its full producing capacity and possibilities are attractive."

The Winchell report is of general terest to this immediate mining d trict for it was made on a develop mine in the Yavapai schist where t ore lenses, faults and general form tion could be easily followed. Aga has another geologist of national no

Mine Operating Costs for Year Ending May 31, 1918

EXPLORATION

			Cost per Ton	Cost per Lb.
Drilling	$29,951.69			
Mucking	13,367.74			
Timbering	5,455.82			
Contractors	1,303.03			
Diamond Drilling	4,754.27			
		$54,832.55	$1.20	$ .0220

DEVELOPMENT

Drilling	$7,325.12			
Mucking	3,529.14			
Timbering	7,737.53			
		18,591.79	.41	.0075

EXTRACTION

Drilling	$28,485.05			
Tramming	14,430.41			
Timbering	8,451.90			
Weighing	3,495.87			
M. to M. Tramming	7,534.14			
		62,397.37	1.36	.0250

GENERAL MINE EXPENSE

Superintendence	$9,868.72			
Assaying and Engineering	2,995.12			
Warehouse	1,461.61			
Hoisting	17,663.97			
Compressors	2,909.60			
Shops	8,286.95			
Drill Upkeep	4,630.89			
Tracking	4,311.85			
Piping	5,198.34			
Shaft Upkeep	2,341.35			
Cutting Stations	718.34			
Miscellaneous	11,092.69			
Insurance	7,120.42			
Power	15,701.82			
Administration	13,182.95	107,484.62	2.35	.0431
		$243,306.33	$5.32	$ .0976

Tonnage Milled	45,720.46	Cost per ton	$5.32
Pounds Copper produced	2,493,003	Cost per pound	.0976

Arizona - Binghampton, Mayer, Arizona, have ordered new hoisting equipment complete and have resumed operations of their mill.

Prescott

NOTICE OF APPLICATION FOR UNITED STATES PATENT.

SURVEY NO. 3518.

SERIAL NO. 042567.

July 30, 1919.

United States Land Office,
Phoenix, Arizona.

Notice is hereby given that in pursuance of an Act of Congress, approved May 10th, 1872, ARIZONA BINGHAMTON COPPER COMPANY, a corporation organized and existing under the laws of the State of Arizona, by John A. Ellis, its attorney-in-fact, whose post office address is Prescott, Arizona, has made application for a patent for approximately four hundred and forty-one (441) linear feet on the "COPPER RUIN FRACTION" lode mining claim, bearing silver, copper, gold and other valuable mineral, same being approximately four hundred and thirty-one (431) feet northeasterly and ten (10) feet southwesterly from the discovery shaft thereon, with surface ground three hundred (300) feet in width on said lode; all situate in the Agua Fria Mining District, Yavapai County, State of Arizona, and described by the official plat and by the field notes on file in the office of the Register and Receiver of the Phoenix Land District, Arizona, as follows, viz:

"COPPER RUIN FRACTION" lode, Survey No. 3518, beginning at Cor. No. 1, identical with Cor. No. 5, Survey No. 3421, "TENNESSEE" lode, whence an angle point on the line between the C. C. Secs. 1 and 6 T. 12 N. Rs. 1 and 2 E., and the Std. Cor. of T. 13 N. Rs. 1 and 2 E., bears S. 82° 07′ W., 1420.30 ft.; thence North 15° 36′ E., 440.73 feet to Cor. No. 2; thence South 74° 24′ E. 284.74 feet to Cor. No. 3; thence South 13° 37′ W. 441.00 feet to Cor. No. 4, identical with Cor. No. 1, Sur. No. 3421, "TENNESSEE" lode; thence North 74° 24′ West, 300 feet to the place of beginning, containing 1.793 acres, exclusive of its conflict with the "COPPER RUIN" lode, Survey No. 1694.

These claims are situate in the Southwest ¼ of Section 31 unapproved, Township 13 N., Range 2 E., Gila and Salt River Base and Meridian.

The adjoining claims as shown by the plat of survey are as follows:

On the East, Survey No. 1694, "COPPER RUIN" lode.

On the South, Survey No. 3421, "TENNESSEE" lode, claimant herein.

No known claims on the West and North.

Date of posting this notice on claim the 19th day of July, 1919.

J. L. IRVIN,
Register.

First publicathion August 2.-10t.

NOTICE OF APPLICATION FOR UNITED STATES PATENT

Survey No. 3517.

Serial No. 042160.

United States Land Office, Phoenix, Arizona, June 28, 1919.

Notice is hereby given that in pursuance of an Act of Congress, aproved May 10th, 1872, Arizona Binghamton Copper Company, a corporation organized and existing under the laws of the State of Arizona, by John A. Ellis, its attorney in fact, whose post offic e address is Prescott, Arizona, has made aplication for a patent for fifteen hundred (1500) linear feet on the "Belgium" Lode mining claim, and approximately five hundred fifty-five (555) feet on the "Russia" Lode claim, bearing silver, c opper, gold and other valuable mineral, same being approximately fourteen (14) feet Northwesterly and approximately one thousand, four hundred and eighty-six (1,486) feet Southeasterly on said "Belgium" Lode, and approximately fourteen (14) feet Westerly and approximately five hundred twenty-six (526) feet Easterly on said "Russia" Lode from the respective discovery shafts thereon, with surface ground six hundred (600) feet in width on each of said Lodes, all situate in the Agua Fria Mining District, Yavapai County, State of Arizona, and described by the official plat and by the field notes on file in the office of the Register and Receiver of the Phoenix Land District, Arizona, as follows, viz:

"Russia" Lode, Survey No. 3517, beginning at Cor. No. 1, whence witness Cor. to the W. ¼, Cor. Sec. Six, Township 12 N. Range 2 E. C. & S. R. B. & M., bears N. 89° 50′ 45″, W. 1351.70 feet, thence South 74° 24′ E. 597.33 feet to Cor. No. 2, identical with Cor. No. 1, Survey No. 3421 "Binghamton Fraction" Lode and Cor. No. 5, Survey No. 3421 "Illinous" Lode, claimants herein. Thence South 0° 45′ W., 553.39 feet to Cor. No. 3, thence North 74° 24′, W. 598.56 feet to Cor. No. 4, thence North 0° 53′, E. 553.05 feet to Cor. No. 1, the place of beginning, containing 7.190 acres, exclusive of its conflict with "The Honeymoon" Lode, Survey No. 2543.

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These claims are situated in the W. ½ Sec. 6 unsurveyed Township 12 N. Range 2 E., Gila and Salt River Base

ARIZONA BINGHAMPTON COPPER COMPANY

The annual report of the Arizona Binghampton Copper company shows it to be a coming mine in Yavapai county. The report shows:

Tons of ore milled, 36,605; cost per ton, $4.61; pounds of copper produced, 1,873,358; cost per pound, $.0901. There was a profit on actual mine operation of $21,217.48. The over-head expenses of $27,522.98 make a loss for theyear of $6,305.50. This loss, however, is due to the fact that at the termination of the war, the company had about 1,000,000 pounds of copper on which final settlement had not been made by the smelters and on which they had advanced war-time prices.

During the year $21,968.28 was spent on exploration and $16,658.00 was spent on development work. The total assets of the company amounts to $2,079,933.00.

The prediction of Geologist Horace V. Winchell in the development work, has been amply fulfilled as far as the sinking of the new shaft has gone. The shaft is now down to the 900 level and contracts have been made for new over-head plant of machinery amounting to $40,000. It is expected that a three-compartment shaft will be sunk to the 1200 level within a short time and then Wm. H. Reynolds, president of the company, believes they can mill a tonnage sufficiently large to be able to distribute a handsome dividend to the shareholders, just as they did in 1918.

MAYER DISTRICT ACTIVE

JEROME, Ariz., Sept. 13.—More mining activity is now going on in Mayer district than ever before, according to Engineer A. B. Colwell, who returned last night from a ten days' stay in that region. Colwell spent most of his time on the property of the Arizona Binghamton Copper company, where preparations are just being made to square and timber a new 1,000-foot three-compartment shaft. A raise has been made from the 600 foot level to the surface for this shaft and 160 feet of sinking has been done below the 600. Except for the timbering, the shaft will be complete down to the 1,000 foot level in a short time. The Arizona Binghampton has not produced any ore for several months but will soon be in a position to produce on a bigger scale than ever. A new compressor and other machinery are being installed at the shaft of the Big Bug Copper company, near the Binghampton. The Big Bug has a splendid showing that has recently attracted much attention until a Boston house took a big block of the stock all work was done by hand.

having plans prepared by D. Cole for the construction of a mill and tramway. Estimated cost in several hundred thousand dollars. April 5/19

ARIZONA-BINGHAM (Mayer) — La rich strike made on 600 level. Mill treati 175 tons daily and showing better than 95 recovery. aug 9/19

ARIZONA-BINGHAMTON (Stoddard) General Manager Geo. W. Johnson a nounces a $20,000 Liberty Bond subscr tion by 105 employees of the company. Aug 9/19

Yavapai

ARIZONA-BINGHAM... (Agua Fria) —Larger shaft to be sunk.

NOTICE OF APPLICATION FOR UNITED STATES PATENT

JUL 5 1919

Survey No. 3517.

Serial No. 042160.

United States Land Office, Phoenix, Arizona, June 28, 1919 Prescott

Notice is hereby given that in pursuance of an Act of Congress, aproved May 10th, 1872, Arizona Binghamton Copper Company, a corporation organized and existing under the laws of the State of Arizona, by John A. Ellis, its attorney in fact, whose post office address is Prescott, Arizona, has made aplication for a patent for fifteen hundred (1500) linear feet on the "Belgium" Lode mining claim, and approximately five hundred fifty-five (555) feet on the "Russia" Lode claim, bearing silver, copper, gold and other valuable mineral, same being approximately fourteen (14) feet Northwesterly and approximately one thousand, four hundred and eighty-six (1,486) feet Southeasterly on said "Belgium" Lode, and approximately fourteen (14) feet Westerly and approximately five hundred twenty-six (526) feet Easterly on said "Russia" Lode from the respective discovery shafts thereon, with surface ground six hundred (600) feet in width on each of said Lodes, all situate in the Agua Fria Mining District, Yavapai County, State of Arizona, and described by the official plat and by the field notes on file in the office of the Register and Receiver of the Phoenix Land District, Arizona, as follows, viz:

"Russia" Lode, Survey No. 3517, beginning at Cor. No. 1, whence witness Cor. to the W. ¼, Cor. Sec. Six, Township 12 N. Range 2 E. C. & S. R. B. & M., bears N. 89° 50′ 45″, W. 1351.70 feet, thence South 74° 24′ E. 597.33 feet to Cor. No. 2, identical with Cor. No. 1, Survey No. 3421 "Binghamton Fraction" Lode and Cor. No. 5, Survey No. 3421 "Illinous" Lode, claimants herein. Thence South 0° 45′ W., 553.39 feet to Cor. No. 3, thence North 74° 24′, W. 598.56 feet to Cor. No. 4, thence North 0° 53′, E. 553.05 feet to Cor. No. 1, the place of beginning, containing 7.190 acres, exclusive of its conflict with "The Honeymoon" Lode, Survey No. 2543.

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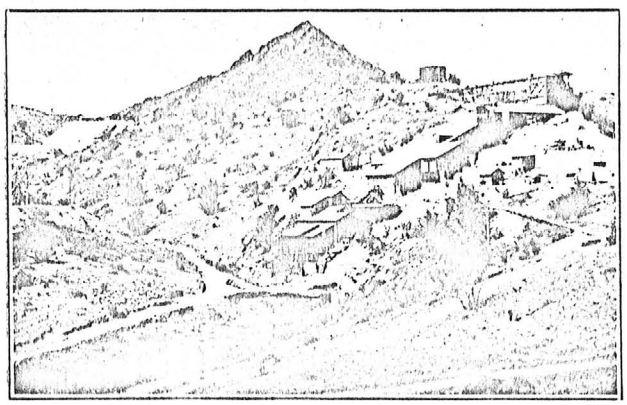
MAYER, ARIZONA

The Binghampton Copper Mine a New Producer.—The Development Extending and a New Shaft to Be Sunk.—Flotation in Successful Operation.

The Arizona Binghampton copper mine is five miles east of Mayer, in Yavapai county. It is an old property that has been in course of development for some time, the money for the work having been furnished by W. H. Reynolds, of New York. The company is incorporated with 340,000 shares at $5. In May 80,000 shares was advertised and much of it was taken by officers and stockholders of the United Verde and the United Verde Extension, at Jerome. Those men have made suggestions as to the method of development. There are three miles of underground workings, and judging by the reports of mining men who have examined the property, there is but a small amount of the work done that does not count. It was the similarity of the formation to that of the Jerome district that induced some of the officials and stockholders of the Jerome mines to become interested. The ore is chalcopyrite with some iron pyrite and tetrahedrite, disseminated in the Yavapai schist. Some of the stopes are 20 ft. wide and



BINGHAMPTON MILL NEAR MAYER

from 100 to 120 ft. long. On the 400-ft. level there is a stope from which a car of ore is shipped daily, running from 13 to 14% copper.

On the 600-ft. level, in the past few days, ore has been found in four shoots that are extensions of orebodies on the 400-ft. level. One-fifth of the output of the mine is coming from the 600-ft. level from the new development work. The nearest deep mine is the Blue Bell, 9 miles south-west, which has developed orebodies 40 ft. wide at the 1000-ft. level.

On August 24, of last year, a flotation mill of 100 tons capacity was started upon the property. The first day's run showed a recovery of 95%, but this has been lowered since for economic reasons to 85 or 90%. The concentrate runs about 20% copper. The mill was built after the plans of the Inspiration mill, designed by H. Kenyon Burch, and built under the supervision of C. B. Clyne.

The mill has exceeded the estimated capacity practically every day since it started. The output for May was approximately 300,000 lb. of copper which netted the company $38,000. The mill has been doubled in capacity, and the new unit will be in operation in a few days with a daily capacity of 250 to 300 tons, which will give an output of about 500,000 lb. of copper monthly. There will be added to this a regular tonnage of high-grade ore, that at present is one car per day. This will be increased as the mine is developed.

The ore is hauled by contract from the mine to the mill, 1200 ft., in trains of 4 to 6 cars drawn by a mule. The ore is dumped from the ore-cars into the coarse-ore bin and broken to pass an 8-in. grizzly. The coarse-ore bin has a capacity of 500 tons. The ore is drawn from this bin onto a slow-moving

United States Land Office, Phoenix, Arizona, June 28, 1919. Prescott

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On the North "France" Lode, unsurveyed, claimant herein.

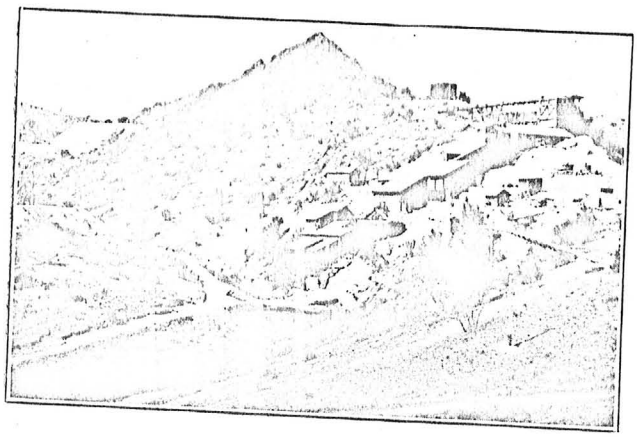
On the East, Survey No. 3421, "Illinous" and "Binghamton" Fraction Lodes, claimant herein.

On the South, Survey No. 2543 "The Honeymoon" Lode, claimant unknown.

On the West unknown.

Date of posting this notice on claim May 29, 1919.

the become mines to become interested. The ore is chalcopyrite with some iron pyrite and tetra[illegible]rite, disseminated in the Yavapai schist. Some of the stopes are 20 ft. wide and



BINGHAMPTON MILL NEAR MAYER

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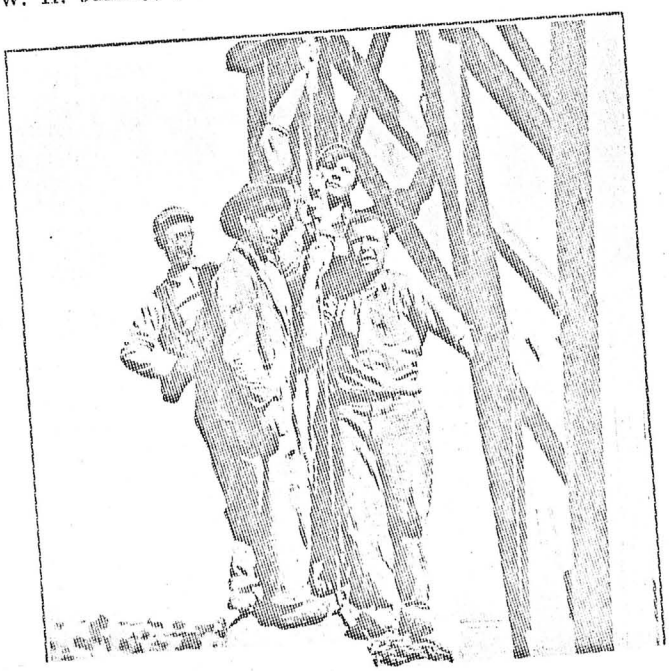
ientific PRESS August 4, 1917

Mountain Key mine may be re-opened this fall by a Silver City company recently organized. The Key shaft is down 900 ft. on an incline and full of water. Work at the Silver Cell property was suspended when diplomatic relations were severed between United States and Germany, as two prominent Germans controled the company. The property has been kept unwatered, however. At the Calumet & New Mexico camp, development continues steadily, the ore taken out being sorted and the high-grade shipped. The average is better than 23% zinc and 25% lead. A good tonnage of low-grade ore has already been blocked out and the company contemplates the erection of a plant this fall.

W. H. Janney, president and general manager of the Re-



Mill Operating Costs, Year Ending May 31, 1918

	OPERATION			REPAIRS				
	Labor	Supplies	Power	Labor	Supplies	Total	Ton	Lb.
Trestle and Ore Bin	....	....	....	$47.74	38.14	85.88	....	....
Coarse Crushing	$3,945.00	$225.06	$1,560.63	429.33	900.16	7,060.18	.15	.0028
Fine Grinding	5,909.30	6,694.80	9,830.80	4,836.73	12,025.76	39,297.39	.86	.0158
Flotation	2,468.62	3,046.01	2,798.45	2,563.05	1,037.61	11,913.74	.26	.0048
Tables	720.48	13.20	466.38	294.83	250.73	1,745.62	.04	.0007
Thickeners	1,474.50	....	322.89	234.27	81.98	2,113.64	.05	.0008
Filters	4,372.52	30.47	771.33	485.50	256.36	5,916.18	.13	.0024
Water Supply	1,328.16	9.77	2,351.95	308.60	639.78	4,638.26	.10	.0019
Tailings Storage	2,546.24	7.68	....	369.34	132.37	3,055.63	.06	.0012
General	30.00	128.61	....	1,251.94	659.07	2,069.62	.05	.0008
Totals	$22,794.82	$10,155.60	$18,102.43	$10,821.33	$16,021.96	$77,896.14	$1.70	$ .0312
Per Dry Ton	$ .50	$ .22	$ .40	$ .23	$ .35			
Per pound Copper	.0091	.0041	.0073	.0043	.0064			

OVERHEAD

		Per Dry Ton	Per Lb. Copper			
Superintendence	$3,441.92	$ .08	$ .0013			
Assaying	1,902.29	.04	.0008			
Insurance	2,208.41	.05	.0009			
Warehouse	931.49	.02	.0004			
Semi-Total	$8,484.11	$ .19	$ .0034			
Office and General Expense	6,579.51	.14	.0026			
Total Overhead				15,063.62	.33	.0060
				$92,959.76	$2.03	$ .0372
Hauling Concentrates				19,646.17	.43	.0079
Road Repairs				1,766.86	.04	.0008
Flotation Royalty				5,785.67	.13	.0023
				$120,158.46	$2.63	$ .0482

Tons Ore Milled	45,720.46	Cost per ton	$2.63
Pounds Copper Produced	2,493,003	Cost per Pound	.0482

The [illegible] four claims adjoins the Binghamton on the west and is owned by Chas. Kingsley, Frank Thornton and Dr. A. R. Looney. This property is well known to all miners in this section of the country and it is claimed that the finest specimens of rock, carrying coarse gold, can be picked up on the dump. Thousands of dollars have been spent sinking, cross-cutting and drifting in the mine and at the present time there is 110 feet of good gold ore uncovered in one drift alone. While the ore will run high it is not given out what it will average, the owners being very conservative in their statements and have no desire to over-estimate their holdings whatever, but from outside sources we have learned that it is very rich in gold, without a trace of copper.

Details of Capital Expenditure for Year 1917-18

Camp Buildings — New Boarding House, Mill Superintendent's House, various Bunk Houses and Dwelling Houses for employees and their families. (There is now sufficient accommodation for a crew twice the size we are at present working.)	$4,863.09
Mine Buildings — The principal items being: Ore Bin and Trestle, new Powder House, High-grade Ore Bin 7, Chute, and various minor buildings.	5,604.19
Mill Construction and Equipment — Principal items being: (See details on separate sheet.)	14,072.13
Mine Equipment — Principal items being: (See details on separate sheet.)	13,227.08
New Motor Truck	600.00
Camp, Office and Boarding House Equipment	1,501.11
	$39,867.60
Expenses on New Claims	385.17
	$40,252.77

Condensed Balance Sheet as of May 31, 1918

ASSETS

PROPERTY		
Balance, June 1, 1917	$1,700,000.00	
Depreciation	13,497.39	
	$1,686,502.61	
New Construction to May 31, 1918	40,252.77	
		$1,726,755.38
CURRENT ASSETS		
Cash	$823.19	
Copper on Hand	11,437.43	
Unexpired Fire Insurance	415.95	
Warehouse Supplies	38,621.11	
Accounts Receivable, Smelters, etc.	26,393.32	
		77,691.00
		$1,804,446.38

LIABILITIES

Capital	$1,700,000.00	
Current Accounts	39,596.18	
Surplus	64,850.20	
		$1,804,446.38

Profit and Loss Account for Year Ending May 31, 1918

Value of Copper and Silver produced from Concentrates, less Smelter charges and freight from Mayer		$429,432.92
Copper produced from Crude Ore		23,203.79
		$452,636.71
LESS		
Mine Operation Costs	$243,306.33	
Mill Operation Costs	120,158.46	
Hauling Crude Ore to Mayer	2,477.79	
		365,942.58
Profit on Operation		$86,694.13
DEDUCTIONS		
Depreciation	$13,497.39	
Bank Interest	1,119.24	
Legal Expenses	5,029.27	
Taxes	2,198.03	
		21,843.93
Surplus		$64,850.20

ARIZONA BINGHAMTON COPPER CO.

Report for Year Ending May 31, 1918

MINE

Tons Milled	45,720.46
High Grade Shipped	922.16
Cost per ton milled	$5.52

Exploration	$98,231.53	Cost per ton milled	$2.15
Development	33,303.47	" " " "	.72
Extraction	111,771.33	" " " "	2.45
	$243,306.33		$5.32

The total amount expended on Exploration and Development is included in cost of operation, as is also all overhead charges.

MILL—PRODUCTION

		Pounds
Copper from ore milled		2,493,003
Copper from high grade		144,638
		2,637,641
Copper taken over from Stoddard Mines Co. on May 1, 1917		16,552
		2,654,193
Sold: Paid for	2,436,125	
Loss in Smelting	150,789	
		2,586,914
On hand May 31, 1918		67,279
Total cost of Mill Operation and Repairs, Road Repairs, Hauling Concentrates and Flotation Royalty, also all overhead charges		$120,158.46
Cost of Milling, per ton		2.63
Cost per pound Copper produced		.0482

SALES

Receipts from Copper Sold	$600,848.60
Receipts from Silver Sold	7,772.31
	$608,620.91
Less Smelter Charges and Freight	164,276.79
	$444,344.12
Cost of Operating Mine and Mill, including haulage of crude ore to Mayer	365,942.58
	$78,401.54
Copper produced in excess of sales	8,292.59
	$86,694.13

OTHER DEDUCTIONS

Depreciation	$13,497.39	
Bank Interest	1,119.24	
Legal Expenses	5,029.27	
Taxes	2,198.03	
		21,843.93
Profit for year		$64,850.20

Average price obtained for copper	.2466 cts.
Average price obtained for silver	.853 "
Average smelting cost	.0674 "

ARIZONA BINGHAMTON COPPER CO.

Report for Year Ending May 31, 1919

MINE

Tons Ore Produced				36,605
Cost of Exploration	$ 40,087.32	Cost per ton, $1.09	Cost per pound,	.0214 cts.
Cost of Development	30,375.82	Cost per ton, .83	Cost per pound,	.0162 cts.
Cost of Extraction	98,317.69	Cost per ton, 2.69	Cost per pound,	.0525 cts.
	$168,780.83	$4.61		.0901 cts.

MILL—PRODUCTION

	Pounds
Copper produced from 36,605 tons ore milled	1,873,358
Copper on hand June 1, 1918	67,279
Total Sales for Year	1,940,637

Total cost of Mill Operation, Repairs, Road Repairs, Hauling Concentrates, Flotation Royalty and all overhead charges	$97,095.13
Cost per ton, milled	$2.65
Cost per pound Copper	.0518 cts.

SALES

(Appended is Statement of Smelter Settlements for the Year)

SUMMARY OF COSTS

Mining per pound Copper	.0901 cts.
Milling per pound Copper	.0518 cts.
Smelting per pound Copper	.0565 cts.
	.1984 cts.
Average selling price per pound Copper	.2045 cts.

Details of Smelter Co. Settlements for Year Ending May 31, 1919

Concentrates received at Smelter:

Wet tons	5453.38
Dry tons	4644.63
Average Moisture	14.83%
Copper content of Concentrates	2,056,704 Pounds
Less in Smelting	116,067 Pounds
Paid for	1,940,637 Pounds

Value of Copper paid for		$384,551.27
7806.36 oz. Silver paid for		7,623.37
Iron paid for		4,680.22
		$396,854.86
Less: Smelter charges	$99,196.50	
Railroad Freight and War Tax	5549.72	
Penalty for Insoll.	4,687.52	
Penalty for Moisture	327.68	
		$109,761.42
		$287,093.44

Average selling price per pound of Copper	20.45 cts.
Treatment	5.65 cts.
Net received from Smelter	14.80 cts.

Condensed Balance Sheet as of May 31, 1919

ASSETS

Treasury Stock		$ 236,750.00
Mining Property Balance June 1, 1918	$1,555,887.40	
New Purchases	13,047.90	
		1,568,935.30
Buildings and Equipment:		
Balance June 1, 1918	$ 170,867.98	
New Construction and Equipment	4,371.42	
	$ 175,239.40	
Less: Depreciation	16,795.14	
		158,444.26
New Shaft	$ 44,575.08	
Main Drifts to New Shaft	19,637.59	
Road to New Shaft	2,871.88	
Shaft Equipment	1,423.13	
		68,507.68
Warehouse Supplies		33,555.24
Unexpired Fire Insurance		524.78
Accounts Receivable		4,215.74
		$2,070,933.00

LIABILITIES

Capital			$2,000,000.00
Bank's Overdrafts			4,496.06
Current Accounts			41,892.24
Surplus Balance June 1, 1918		$ 64,850.20	
Less: Dividends	$34,000.00		
Loss, Current Year	6,305.50	40,305.50	
			24,544.70
			$2,070,933.00

Profit and Loss Account for Year Ending May 31, 1919

PROFIT

From Year 1918			$ 64,850.20
Less: Dividend			34,000.00
			$30,850.20
Current Year Copper Sales		$287,093.44	

LOSS

Mine Operation	$168,780.83		
Mill Operation	97,095.13		
		265,875.96	
Profit on Operation		$ 21,217.48	
Less:			
Interest and Discounts	$ 456.52		
Legal Expenses	4,369.72		
Taxes	5,301.61		
Depreciation	16,795.14		
Other Expenses not Charged to Operation	599.99		
		27,522.98	
Loss for the Year			6,305.50
Surplus to May 31, 1919			$ 24,544.70

Mine Operating Costs for Year Ending May 31, 1919

EXPLORATION

	Labor	Supplies	Misscls.	Total	Cost Per Ton	Cost Per Pound
Drilling	$ 3,387.27	$ 3,043.99		$ 6,431.26		
Mucking	3,089.28			3,089.28		
Timbering	1,139.64	462.10		1,601.74		
Diamond Drilling	10,846.00			10,846.00		
	$ 18,462.19	$ 3,506.09		$ 21,968.28	$ .60	$ .0117

DEVELOPMENT

Drilling	$ 4,890.35	$ 3,719.25		$ 8,609.60		
Mucking	3,543.92			3,543.92		
Timbering	2,501.49	2,003.08		4,504.57		
	$ 10,935.76	$ 5,722.33		$ 16,658.09	.46	.0089

EXTRACTION

Drilling	$ 7,885.63	$ 4,985.35		$ 12,870.98		
Tramming	20,894.80			20,894.80		
Timbering	5,884.51	5,335.99		11,220.50		
Weighing	2,982.86			2,982.86		
Mine-to-Mill Tramming	5,887.83			5,887.83		
	$ 43,535.63	$ 10,321.34		$ 53,856.97	1.47	.0288

GENERAL MINE EXPENSE

Superintendence	$ 7,608.78	$ 5.99		$ 7,614.77		
Surveying and Assaying	2,829.81	112.40		2,942.21		
Warehouse	824.75	51.71		876.46		
Hoisting	10,053.40	1,181.89	$ 5.00	11,240.29		
Compressors	2,115.99	880.06		2,996.05		
Shops	6,696.67	1,178.02		7,874.69		
Drill Upkeep	1,273.87	1,585.10		2,858.97		
Tracking	2,113.24	738.73		2,851.97		
Piping	2,415.22	512.45		2,927.67		
Shaft Upkeep	284.63	7.62		292.25		
Cutting Stations	99.84			99.84		
Miscellaneous	2,118.44	3,911.17	2,749.32	8,778.93		
Administration			9,053.17	9,053.17		
Liability Insurance			5,285.65	5,285.65		
Fire Insurance			274.70	274.70		
Power			10,329.87	10,329.87		
	$ 38,434.64	$ 10,165.14	$ 27,697.71	$ 76,297.49	2.08	.0407
Totals	**$111,368.22**	**$ 29,714.90**	**$ 27,697.71**	**$168,780.83**	**$ 4.61**	**$ .0901**

Tons Ore Milled - - - - - - - - - - - - - - 36,605

Pounds Copper Produced - - - - - - - - 1,873,358

Cost per Ton - - - - - - - - - - - - - - - $4.61

Cost per Pound - - - - - - - - - - - - - .0901

Mill Operating Costs for Year Ending May 31, 1919

	OPERATION			REPAIRS				
	Labor	Supplies	Power	Labor	Supplies	Total	Per Ton	Per Pound
Trestle and Ore Bins	$.....	$.....	$.....	$ 6.00	$ 59.10	$ 65.10	$....	$.....
Coarse Crushing	1,754.63	27.06	1,419.72	1,102.50	2,286.14	6,589.85	.18	.0035
Fine Grinding	5,125.25	5,779.04	8,792.49	1,795.94	7,776.03	29,268.75	.80	.0156
Flotation	973.96	4,033.19	2,544.33	606.09	699.11	8,856.68	.24	.0047
Tables	926.42	9.03	424.15	.....	18.01	1,377.61	.04	.0007
Thickeners	932.24	3.15	293.61	631.57	305.79	2,166.36	.06	.0012
Filters	3,651.59	19.42	701.55	229.47	350.91	4,952.94	.14	.0027
Water Supply	1,454.47	33.63	2,137.10	.....	1,603.32	5,228.52	.14	.0028
Tailings Dam	1,460.56	.....	.....	.....	5.34	1,465.90	.04	.0008
General	.....	.....	.....	1,809.93	1,181.63	2,991.56	.08	.0016
Totals	$16,279.12	$ 9,904.52	$16,312.95	$ 6,181.30	$14,258.38	$62,963.27	$1.72	.0336
Per Dry Ton	$ .44	$ .27	$ .45	$ .17	$ .39			
Per Pound Copper	.0087	.0053	.0087	.0033	.0076			

OVERHEAD

		Per Dry Ton	Per Lb. Copper			
Superintendence	$ 1,275.00	$ .04	$ .0007			
Assaying	855.10	.02	.0012			
Insurance	2,137.18	.06	.0012			
Warehouse	824.75	.02	.0004			
Semi-Total	$ 5,092.03	$ .14	$ .0027			
Office and General Expense	5,153.52	.14	.0028			
Total Overhead				10,245.55	.28	.0055
				$73,208.82	$2.00	$ .0391
Hauling Concentrates				18,086.61	.49	.0096
Flotation Royalty				4 581.50	.12	.0024
Road Repairs				1,218.20	.04	.0007
				$97,095.13	$2.65	.0518

Tons Ore Milled	36,605	Cost Per Ton	$2.65
Pounds Copper Produced	1,873.358	Cost Per Pound	.0518

Mines of Mayer
(By F. W. Bower)

MAYER, Nov. 10.—Thirty-one feet is the width of the new shoot of ore on the 600-foot level of the Arizona Binghamton mine east of this camp, and the average value is going to be high enough to warrant shipping a large part of it to the smelter. The company has not yet decided whether to start the shipments of high grade again to Humboldt or use the high grade with the lower grade to bring up the heads in the flotation mill. The crosscut on the 600 level has cut through one of the strongest veins of ore to be found in the state. It is a continuation of the same vein that has been cut through on all of the upper levels. It settles for good the permanency of the ore bodies in this mine and in fact in the whole Copper mountain district. It has put much new life into the newer companies which are developig properties in this whole Mayer section. Mine Superintendent Chaney, who has been in charge of the Binghamton mine only six months, is the man who studied out the formation of the mine and found the ore. Now that the formation of the mine underground has been "read," it will be an easier matter, according to Superintendent Chaney, to follow down the several ore bodies in the mine and the knowledge he has learned will be of great help to other developing companies in the same district.

The Rio Tonto Copper Mining company has been organized to take over the Patton copper mine which is located a short distance south of the Binghamton and Copper Queen mines. It was owned by John Patton and Warren Davis of Mayer. W. D. Mahoney and P. J. McIntyre, of Jerome, are the principals in the new deal. Extensive work is to begin within sixty days. The property is well developed and considerable high grade and milling ore has been exposed. The company will be sufficiently financed to carry out extensive development work. The property shows the extension of some of the ore veins that have been found on the big mines north. The officers of the company are: President, P. J. McIntyre; vice president, J. W. Jones, of Kingman, and secretary and treasurer, W. D. Mahoney.

BINGHAMTON TO SINK TO THE 1200 LEVEL

HIGH QUALITY OF ORE UNCOVERED CAUSES MANAGEMENT TO ORDER SHAFT PUT DOWN TO TWICE PRESENT DEPTH.

The Arizona Binghampton management has decided to continue the sinking of the main shaft from the 600 level to the 1,200, the first station to be established at about the 700 or 800-foot mark.

The decision to continue work on the shaft followed a conference held this week by President W. H. Reynolds, General Manager George W. Johnson and Superintendent S. C. Cheney. It had for some time been the intention of the company to start sinking at some other location than the site of the present shaft, but a careful examination disclosed the fact that the shaft was right now about as close to the supposed ore bodies as any other one might be, so it was decided to keep sinking on the original shaft.

At the 600, a vein of high grade copper ore, 32 feet in width, was cut, carrying values of an average of 7 per cent. Another vein of somewhat smaller proportions was also encountered at the 600, and it is the belief of the officials that if sinking is continued, other veins will in all probability be cut, which will make the mine one of the really big copper properties of the State.

The Binghampton is at present working something like 150 men, and its daily output from 150 to 175 tons is being put through the company's flotation plant, most of the ore thus treated running about 3½ per cent in the red metal.

By F. W. Bower.

Mayer, Ariz., Oct. 23.—The Arizona Binghampton Copper Company is breaking all its milling records this month. The first six days of the month showed an actual recovery of 12,500 pounds of copper daily. The mill is showing a saving of 90 to 93 per cent copper, and is making a concentrate that is averaging 25 to 27 per cent copper. The last two carloads of concentrates shipped last month to the Humboldt smelter contained 33,369 pounds of copper. On this basis, the company should output more than 350,000 pounds of copper per month, which will make about four and a quarter million pounds for the year. The mill heads are running about 4 per cent copper.

All questions of doubt as to whether or not the veins of ore in this mine go below the 400-foot level, have been settled by the discovery of a vein of ore close to the 500-foot level which has been found to be forty feet wide, of which twenty-five feet will average 9 per cent copper and fifteen feet will go 3 per cent copper. There is no question but that this is a continuation of the large ore bodies that have been furnishing

DEC 13 1917

Prescott Journal Miner: The Arizona Binghamton management has decided to continue the sinking of the main shaft from the 600 level to the 1,200, the first station to be established at about the 700 or 800 foot mark. The decision to continue work on the shaft followed a conference held this week by President W. H. Reynolds, General Manager George W. Johnson and Superintendent S. C. Cheney. It had for some time been the intention of the company to start sinking at some other location than the site of the present shaft, but a careful examination disclosed the fact that the shaft was right now about as close to the supposed ore bodies as any other one might be, so it was decided to keep sinking on the original shaft. At the 600, a vein of high grade copper ore, 32 feet in width, was cut carrying

Nogales—Arizonian
ions, Preserved
eets, etc. etc.
and Food.

Establishing Large Ore Reserves

Arizona-Binghamton Co. Following Methods that Insure Profitable Production for Years to Come

ARIZONA-BINGHAMTON

Approximately 5,000 tons of ore are being milled each month at the Arizona Binghamton Copper Co.'s property at Stoddard. At the same time, about 700 feet of exploration and development work is being done monthly. As a result, while the mine is earning considerable money, the ore reserves are being continuously increased.

The past year has been one of development and improvement. The town of Stoddard, just below the mine, has been almost doubled in size. A new warehouse and a new boarding house have been built. There are many new mine buildings. The company has furnished a school house, gratis. The county allows $900 a year for maintaining the school which now boasts of 15 pupils.

Quite recently an additional 300 gallon pump was installed at the river. This increased the water supply of the camp to 500 gallons per minute. Since the water is not taken direct from the river but is first filtered through the sands, the quality is the best possible and the supply is unlimited.

At present about 150 men are employed by the company.

A station is being cut on the 600 level preparatory to widening and sinking the present shaft to the 1200 level. The old south drift in the 600 level, which was driven 10 years ago, is being opened.

Ample Power at Hand

The initial development of the mine was made under the handicap of limited power. There was available for all purposes less than 200 horse power. This limited the volume of output and added materially to the cost per pound of the copper produced. With November of 1917, the Arizona Power Company so increased its production of electricity that they were able to install six new "100" transformers. As a consequence, the company has available power far beyond their greatest possibility they have advised the opening up of the established ore bodies to at least double the depth so far attained.

The record of ore reserves established by the development work of the past 12 months will be of great interest to all those who know the property.

A Big Body of Rich Ore

A new ore body, No. 105, which assayed more than 9 per cent copper throughout, was opened on the 400 level in May of 1917. In September, this same ore body was opened on the 500 level. The same ore body was encountered on the 600 level in November. At this depth it is about 140 feet long and over 30 feet wide. Explorations have been conducted from this ore body on the 600 level with a diamond drill since October to further establish its extent. Only recently the drill cut through 15 feet of ore to the south of the main ore body. This ore averaged better than 3 per cent copper. It is thought to be a continuation of the big ore body

Crosscut No. 104 in the 600 level went through 32 feet of ore last December. This ore assayed over 3 per cent copper. The management is now drifting in the ore body to determine its length.

Stope No. 94 on the 600 level is up over 90 feet.

Eight different ore bodies have been opened on the 100 level. Three of these ore bodies have been proved experts advise that this will probably give the mine another zone of ore bodies.

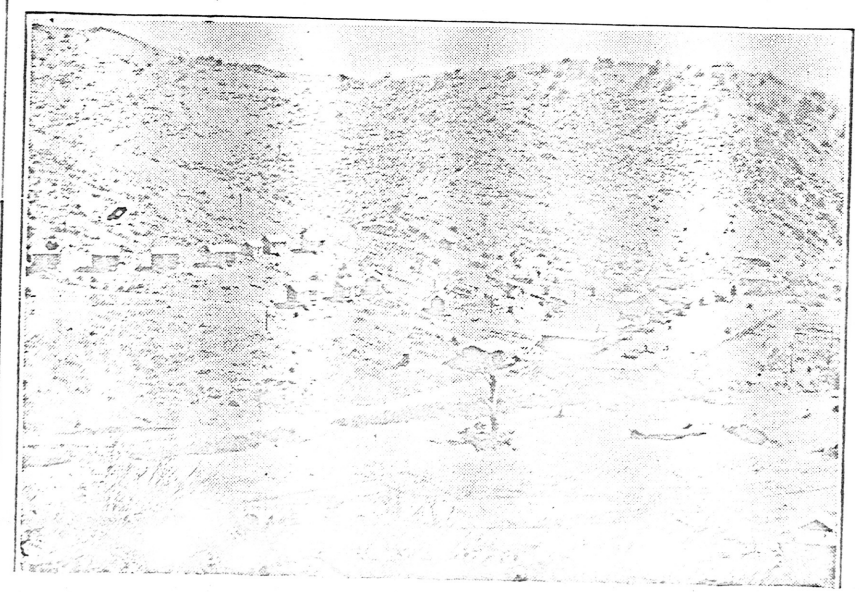
The company controls eight patented claims in the Agua Fria district. The ore is chalcopyrite with some tetrahedrite in the siricitic and chloritic schists.

Attention was drawn to the property in early days by the high grade ore in the surface outcroppings. These were so promising that extent that proved beyond a doubt that the ore body was of enormous value and could be worked profitably that any stock in the company was offered to the general public.

The great mass of ore being taken from the mine carries from 50 to 100 pounds of copper to the ton. This is treated by the flotation process in a thoroughly modern mill. It is here reduced to a concentrate carrying about 23½ per cent of copper. This means 470 pounds of copper to the ton.

The concentrates are hauled to Mayer, a distance of about 5 miles in trucks with a capacity of 2½ tons each. At present there are 4 trucks employed. Each truck makes 3 trips a day. This means over 30 tons of concentrates daily.

The concentrates are shipped to the smelter of the Consolidated Arizona



power far beyond such greater possible requirements for several years to come. This insures for 1918, a very considerable reduction in the cost per ton of mining and the cost per ton of treatment over 1917.

Many engineers from the neighboring mines and the big properties at Jerome have examined the Arizona-Binghamton workings. Invariably they have expressed surprise at the unexpectedly large bodies of high grade ore blocked out in the upper workings. Without a single exception as going down to the 600 level. Invariably the ore has proved richer and the size of the ore body increased on the lower levels.

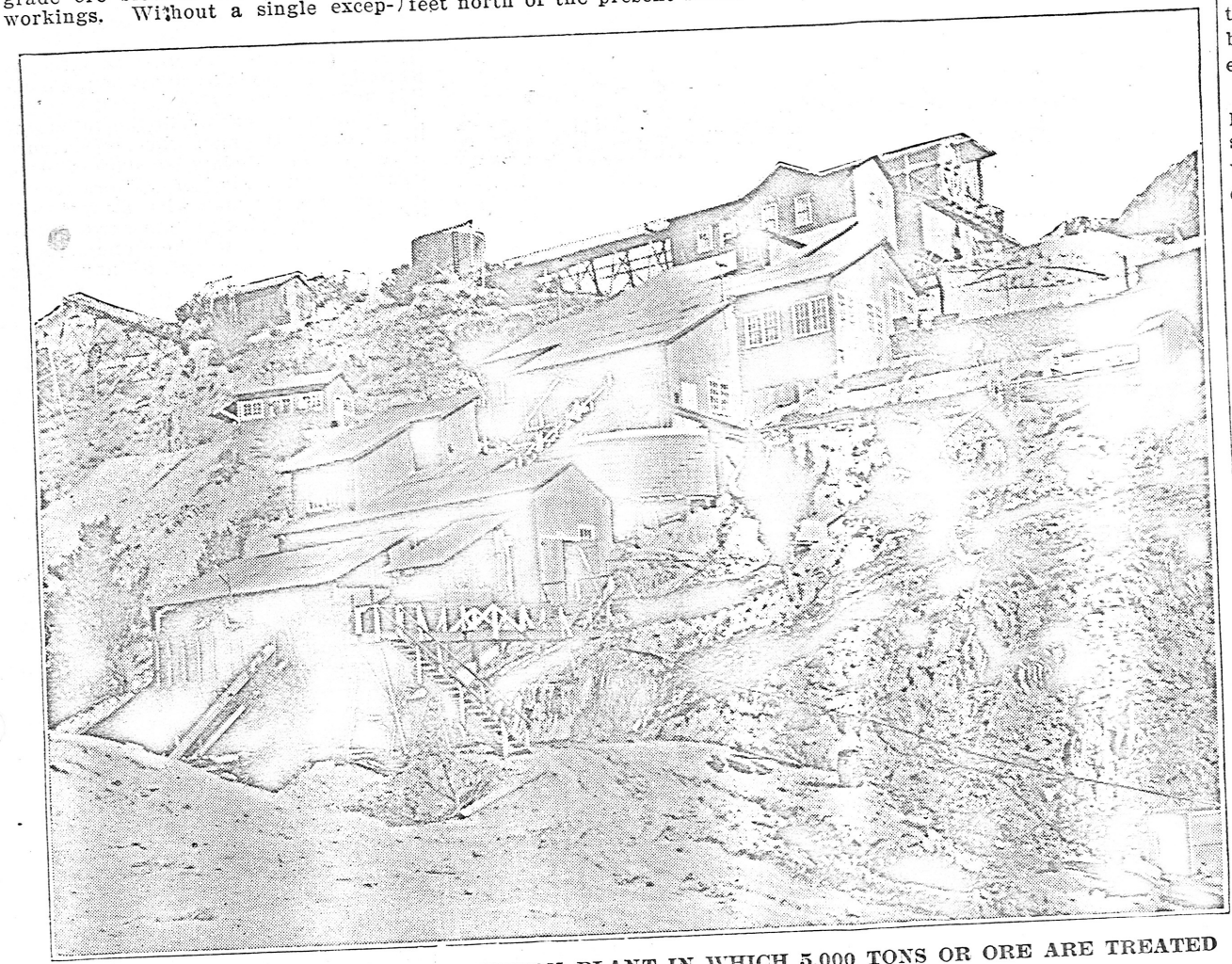
The ore throughout the mine runs from 2½ to 5 per cent copper. In some of the ore bodies the copper content is much higher.

New Ore Zone Opened

The ore bodies now being worked are in the zone near the shaft. A new ore body has been opened 1200 feet north of the present shaft. Extensive explorations followed. Senator Wm. H. Reynolds of Long Beach, New York, was interested and supplied the money necessary for opening up the property to the 600 level and establishing the fact that it was really a mine.

It was not until after a mill had been installed and results secured

STODDARD—THE TOWN AND CAMP OF THE ARIZONA-BINGHAMTON COMPANY ON THE AGUA FRIA RIVER.



ARIZONA BINGHAMTON CO.'S REDUCTION PLANT IN WHICH 5,000 TONS OR ORE ARE TREATED EACH MONTH

Smelting Company at Humboldt. It is a short haul and adds very little to the cost of production.

Insurance Against Delays

Practically every piece of machinery in the mill is carried in duplicate. This precaution has been taken to insure against expensive shutdowns that are often necessitated by the breaking of some part of the machinery.

It has been the policy of the company to prepare itself as fully as possible for the production of ore at the very lowest possible cost per ton. To do this the last year has seen so heavy an expenditure of money for machinery, new workings, and plant that practically the entire earnings of the company to date have been absorbed.

The property, however, is now in such shape that the production for 1917, should be a record not only for value but for margin of profits.

The company has a capitalization of 340,000 shares of a par value of $5 each. The board of directors includes:

Wm. H. Reynolds, President Estates of Long Beach, Long Beach, N. Y.

Geo. W. Johnson, General Manager Arizona Binghamton Copper Co., Stoddard, Arizona.

Francis S. Viele, President Arizona Power Co., Prescott, Arizona.

E. W. Wells, President Bank of Arizona, Prescott, Arizona.

David Cole, Metallurgical Engineer, El Paso, Texas.

Wm. Morchauser, New York City.

The management is particularly conservative. From the beginning it was the purpose of Mr. Reynolds and his advisors to make a mine. After they established the fact that they had a mine they devoted themselves to the depelopment of ore reserves and a method of treatment that would insure continuous production at a most economical rate.

STRONG VEIN OF COPPER CUT ON 600 LEVEL

STRIKE IN BINGHAMTON NOT ONLY ASSURES A BIG MINE BUT GIVES ENCOURAGEMENT TO ENTIRE MAYER DISTRICT.

(By F. W. Bower)

MAYER, Nov. 10. — The Arizona Binghamton Company, locally known as the A. B. C. Company, has gone through 31 feet of high grade copper ore in the new crosscut on the 600-foot level, the grade of ore being high enough, for the most part, to ship to the smelter. The company is undecided whether to start the shipments of high grade again to Humboldt or use the high grade with the lower grade to bring up the heads in the flotation mill. The crosscut on the 600 level has cut through one of the strongest veins of ore to be found in the State. It is a continuation of the same vein that has been cut through on all of the upper levels. It settles for good the permanency of the ore bodies in this mine and in fact, in the whole Copper Mountain district. It has put much new life into the newer companies which are developing properties in this whole Mayer section. Mine Superintendent Chaney, who has been in charge of the Binghamton mine six months, is the man who studied out the formation of the mine and found the ore. Now that the formation of the mine underground has been "read," it will be an easier matter, according to Superintendent Chaney, to follow down the several ore bodies in the mine and the knowledge he has learned will be of great help to other developing companies in the same district.

The Patton copper mine, which is located east of Mayer four miles, has been taken over by the newly organized Rio Tonto Copper Mining Co. It was owned by John Patton and Warren Davis, of Mayer. W. D. Mahoney and P. J. McIntyre, of Jerome, are the principals in the new deal. Extensive work is to begin within 60 days. The property is well developed and considerable high grade and milling ore has been exposed. The company will be sufficiently financed to carry out extensive development work. The property shows the extension of some of the ore veins that have been found in some of the big mines north. The officers of the company are: President, W. A. Moses; vice-president, A. L. Harroun, and secretary, Edna Harroun, of Kansas City. Claude Baker is general manager. There are several excellent partly developed silver-lead properties in this same district.

The Copper Mountain Mines Company is working a force of a dozen men at the old Stoddard mine on the north end of Copper mountain. A gas hoist has been installed and one of the old shafts is being retimbered. This company is a reorganization of the old Stoddard Copper Company which operated extensively a quarter of a century ago. The new company is capitalized for 5,000,000 shares, par value $1. The old mine is one of the best developed on Copper mountain, with many shoots of high grade and milling ore exposed which were developed when only rich ore could be handled. The close affiliation of this company with the Arizona Binghamton, a mile north, in the management, will mean that the experience of developing the lower workings of the Binghamton will be used in the extensive development of the old Stoddard mine. Celora Stoddard is president and general manager of the new company, Senator Reynolds of New York is vice-president, and M. A. Pickett, of Phoenix, is secretary and treasurer.

There are increasing indications of ore in the tunnel that is being run on South Copper mountain by the Mont de Cobre Copper Company. This is the mine that was taken over last Summer by W. A. Tucker, John Ross and James Smith, of Bisbee. The tunnel is being run to tap a strong vein of copper that was followed down in a shaft 60 feet. The formation has changed and some chalcopyrite has appeared in the last drillings.

The announcement made by the Black Canyon Mining Company that a flotation mill is to be erected at the mine five miles below Turkey means a great deal to this high grade silver-lead camp. The mine was originally located by J. D. Thompson, of Prescott, eight years ago, shortly after he had reported favorably on the El Tigre gold mine in Mexico. It was Thompson's report that induced the Kansas City and Bisbee people to buy the property which has since developed into a big dividend payer. Thompson partly developed this Black canyon mine himself and then sold it to the present Kansas City owners. They have run a drift about 800 feet on the main ore body which has opened into a strong vein from 8 to 16 feet wide with a milling grade of ore 500 feet long and the face of the drift is still in ore. The best outcrop is about 100 feet ahead of the present drift face. There are about 300 feet of gold stoping ore above the drift. The ore makes an excellent flotation proposition. The officers of the company are: President, W. A. Moses; vice-president, A. L. Harroun, and secretary, Edna Harroun, of Kansas City. Claude Baker is general manager. There are several excellent partly developed silver-lead properties in this same district.

Developments At The Arizona-Binghamton

MAYER, Ariz., Sept. 22.—The Arizona Binghampton Copper company has completed a run at the new flotation mill at the mine. The showing made is considered remarkable by the management. The first unit of the mill was completed a year ago last month and the second unit, making a combined capacity of 250 tons, was completed a little over a month ago. The daily tonnage is now about 5,000 which is running about four per cent copper. The company has been shipping a carload of the high grade to the Humboldt smelter until just recently. It is now being sent to the mill as sweetening for the lower grade ore. At the present rate of tonnage, the copper output will be between 300,000 to 4000,0000 pounds per month. The extraction is averaging better than 90 per cent. After paying all smelter charges and operating costs at the mine and mill, the company figures that it is making about $35,000 net each month, which is better than $400,000 a year profit. This will pay a dividend of 25 per cent on the entire capitol stock of the company. A larger tonnage could be handled by the mill if it were possible to hoist more ore through the single compartment shaft. At an early date, the company proposes to sink a double compartment shaft.

According to S. E. Chaney, mine superintendent, the mine is showing up more ore every day. On the 200 foot level, a new shoot has been found which is strong and promising. On the 600-foot level, the main fault has been located, which will now lead, it is believed, to the speedy finding of the extension of the big ore lenses that are being stoped on the upper levels.

Thomas M. Tullock, the mill superintendent, who is largly responsible for the success of the milling, has resigned his position and has accepted the management of the Chestatee Pyrites and Chemical company, near Atlanta, Georgia. His place at the mine has not yet been filled.

There is great activity at the Copper Queen mine over the hill east of the Arizona Binghamton mine. The winze and shaft have

Arizona-Binghampton

Mining men, who have been watching the development of the Arizona Binghampton mine, east of Mayer, 5 miles, many of them with shaking heads, are in the "I told you so" class now. Every old prospector on up to the biggest geologists and mining engineers of the country, are saying they always knew one of the richest copper mines in the state of Arizona would be Senator Reynold's mine and from the looks of things, they are going to be right.

This old mine has the same sort of a history as most of the big successes. There are close to three miles of underground workings. On the 200-foot level, there are 11 separate ore shoots, the largest furnishing a stope 20 feet wide.

The output of the mine is one carload of high grade ore which is shipped to Humboldt smelter and from 175 to 200 tons of lower grade milling ore which is treated in the new flotation mill at the mine, this ore running between 2 and 3 per cent copper.

The stockholders during the past few weeks, have been thinking of "anticipated" dividends for the announcement has been made that ore has been encountered on the 600-foot level. The management estimates that the ore on the 400 and the upper levels has an approximate gross value of enough to pay a net profit to the stockholders of much more than the total par value of the stock. The opening up of the same is quite sure to follow will likely double the ore reserves and consequently double the value of the mine.

The three men who are responsible for the present fine showing at this mine are George W. Johnson, the general manager, who is a banker of New York. He gives his personal attention to the management. The mine development is in charge of S. E. Chaney, recently with one of the big copper companies of Ray. The mill superintendent is Thomas M. Tullock, who has had charge of the mill since it started.

NEW MILL AT ARIZONA BINGHAMTON HAS PROVED BIG SUCCESS

MAYER, Ariz., Sept. 29—The Arizona Binghampton Copper Company has completed a month's run at the new flotation mill at the mine five miles east of this place. The showing made is considered remarkable by the management. The first unit of the mill was completed a year ago last month and the second unit making a combined capacity of about 250 tons, was completed a little over a month ago.

The daily tonnage is now about 5,000 which is running about 4 per cent copper. The company has been shipping a carload of the high grade to the Humboldt smelter until just recently. It is now being sent to the mill as "sweetening" for the lower grade ore. At the present rate of tonnage, the copper output per month will be between 300,000 and 400,000 pounds. The extraction is averaging better than 90 per cent.

After paying all smelter charges and operating costs at the mine and mill, the company figures that it is making about $35,000 net each month which is better than $400,000 a year profit. This will pay a dividend of 25 per cent on the entire capital stock of the company. A larger tonnage could be handled by the mill if it were possible to hoist more ore through the single compartment shaft. At an early date, the company proposes to sink a double compartment shaft.

There is great activity at the Copper Queen mine over the hill east of the Arizona Binghampton mine. The winze and shaft have been unwatered and extensive development at these levels is to be carried on as well as in the upper levels.

The announcement made by the Big Ledge Copper company, that construction work at the smelter here in Mayer would be resumed on Oct. 1, means a reawakening of this whole district. This work has been shut down nearly two months. The company has now arranged to take over the smelter by purchase, the capital stock having been increased to $10,000,000 for the purpose. The smelter is to be completed as soon as possible. The second stack is nearly finished and most of the steel frame work for the power house is in place. Two converters and one reverberatory furnace are to be installed which will bring the capacity up to about 800 tons per day.

Several new mining sales have been made during the past few days. The

ARIZONA BINGHAMPTON

The Arizona Binghampton Copper Company, Geo. W. Johnson, General Manager, reports under date of November 1:

During the past month we have opened up a large ore body in the 600 level with an average assay of better than 7 per cent copper. This ore body is presumed to be the same body that we opened up in our 400 level in April of this year; in the raise at the 500 level in September and now found in our 600 level. This ore body was much wider in the 500 and appears to be even wider in the 600.

We milled during the past month 5146 dry tons, with an average head of 3½ per cent copper. We shipped during the month 849 tons of concentrate. The percentage of copper in our concentrate averaged 21.84 per cent. We are now planning to start a new shaft about January 1st, which we propose to sink to the 1200.

The general outlook at this time is very encouraging and we feel confident that we will find at a greater depth larger and richer ore bodies than we have opened up down to the 600.

Pacific National Copper company is a new organization which has taken over the group of coppers owned by F. W. Hatch and J. B. McGarvey, of Mayer, and Humboldt. The property consists of 8 claims and is located two and one half miles northeast of the Arizona Binghampton mine. It has been developed by several shafts and tunnels, the deepest shaft being 250 feet. The owners have shipped 70 tons of ore which returned 35 per cent copper.

in the new crosscut on [illegible] ft. level, the grade of ore being high enough, for the most part, to ship to the smeltery. The company has not decided whether to start the shipments of high-grade again to Humboldt or to use the high-grade with the lower-grade to bring up the heads in the flotation mill. The crosscut on the 600 level has cut through one of the strongest veins of ore to be found in the state. It is a continuation of the same vein that has been cut on all of the upper levels. It settles for good the permanency of the orebodies in this mine and, in fact, in the whole Copper Mountain district. It has put much new life into the newer companies that are developing properties in this whole Mayer section. Now that the formation of the mine underground has been "read," it will be an easier matter, according to Superintendent Chaney, to follow down the several orebodies in the mine and the knowledge he has learned will be of great help to other developing companies in the same district.

The 1200 ft., and enlarge the flotation mill. Over 31,000 lb. of copper was produced during the first six days of October. About 30 tons of concentrate is produced daily from 170 tons of ore. 9-26-18

The Arizona Binghampton Copper Co. has increased its capital from 340,000 shares, $5 par, to 2,000,000 shares, $1 par. This will give sufficient capital to pay for sinking the new 3-compartment shaft 1200 ft., enlarging the present flotation mill, and perhaps building an aerial tram from the mine to the Humboldt smelter, a distance of a little over 5 miles. The present workings are on 100-ft. levels to a depth of 600 ft. The output of the mine is now 175 tons daily, producing from 25 to 30 tons of concentrate. 12-14-18

Mayer.—The Arizona Binghampton Copper Co. recently issued a report detailing the director's meeting and including the examination of the property by Horace V. Winchell. In over two years the flotation plant has concentrated 90,000 tons of ore, while 922 tons of high-grade was sent to smelter, the total being nearly 5,000,000 lb. This is equal to 3% ore. As low as 2¼% was treated profitably. Reserves are estimated by Mr. Winchell as 100,000 tons of 3% ore and 150,000 tons of lower grade, all above the 600-ft. level. The total length of the ore-zone is 1400 ft. A new shaft is being sunk to 750 ft. depth, to be finished by June. The mill may be enlarged to 300 tons daily capacity, or double the present size. Generally, the possibilities of this mine are considered attractive. 2-1-19

The England and France claims have been taken over by the Arizona Binghampton Copper Company. 3-1-19

Mayer.—The Arizona Binghampton Copper Co. has purchased the Hazel and Gold Hill claims for $10,000. These are contiguous to the Binghampton. 3-22-19

Arizona Binghamton Copper Co.

Report of the Arizona Binghamton Copper Co., for the year ended May 31, 1919, states that the mill crushed 36,605 tons of ore, from which 1,873,358 lb. copper was recovered. The mining cost was $4.61 per ton of ore, or 9.01c. per lb. of copper; the milling cost was $2.65 per ton of ore, or 5.18c. per lb. of copper; and the smelting cost was 5.65c. per lb. of copper; making the total cost of 19.84c. per lb. of copper, as against an average selling price of 20.45c.

The new shaft is being sunk to the 900 level. On the 750 level an orebody has been cut which is 15 ft. wide and averages 5 per cent copper. This is the same ore shoot encountered on the 400 and 600 levels.

The sale of the Hazel and Gold Hill mining claims situated near Stoddard, has been consummated for the sum of $10,000 on a cash basis. The purchaser is the Arizona Binghampton Copper company, and the sellers are Dr. R. N. Looney, Frank Thornton and the estate of Charles Kingsley, deceased, which was represented by P. W. O'Sullivan, administrator, all three interests receiving share and share alike. These claims are continguous to the main workings of the Binghampton, upon which the above named owners had performed development during the past several years. The deal had been under consideration for several months, but was held up until the Kingsley estate had been probated sufficiently to allow an order of sale to be issued by the superior court. 2-1-19

ARIZONA BINGHAMPTON

The following progress is reported under date of December 15:

Work of sinking the main shaft from the 600 level to the 1200 will continue. The first station to be established will be either at the 700 or 800 foot level.

At the 600, a vein of copper ore, 32 feet wide, was cut, carrying values averaging 7 per cent. Another vein of smaller proportions was also encountered at the 600, and it is the belief of the officials that if sinking is continued, other veins will be cut.

The Binghampton is at present working about 150 men, and its daily output from 150 to 175 ton sis being put through the company's flotation plant, most of the ore thus treated running about 3½ per cent in copper.

It is stated that the Arizona Binghamton Copper Co. during the last half of July received $38,478 for copper shipments to Humboldt smelter, exclusive of freight and smelter charges. During first half of present month same company shipped nine cars of ore which averaged 22 per cent. copper. The surrounding conditions are large ore bodies, smiling mine owners and a brisk demand for stock in the company.

The Arizona Binghampton mine at Prescott shipped $38,478 of copper ore to the Humboldt smelter.

A dispatch from Prescott says:

"The Arizona-Binghampton in diamond drilling has encountered a new ore body which is not connected with any other known ore body. Ore in this territory occurs in lenses in the Yavapai schist, therefore the discovery is very important as it increases the possibilities of the mine. Net profits for the month of June were $20,912. Ore reserves have been increased by 131,875 tons, not including the new increase. Rumors are afloat of extensive improvements to be made and a stock dividend. The stock is closely held and higher prices are predicted."

NOTICE OF APPLICATION FOR UNITED STATES PATENT

Survey No. 3421
Application No. 040389

September 16, 1918.

United States Land Office,
Phoenix, Arizona.

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FOR HEAVY OUTPUT

(From Saturday's Daily)

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Mr. Cole came over last evening from Prescott, where he had been to attend a meeting of the Arizona-Binghampton company directors and to visit the mine of the company. He is one of those who for several years have had large faith in the property and who are now able to congratulate themselves upon their earlier judgment, Arizona-Binghampton being conceded to have passed from the prospect stage to that of an important producing mine with large possibilities in semi-proven ore areas into which development is now being extended and where there is every reason to believe that the present considerable tonnage of blocked out ore will be greatly increased.

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Thence S. 13° E. 782 ft. to Cor. No.

ARIZONA BINGHAMTON

Aug (Mayer) 1921

SPOKANE, Wash.—What became of the Arizona Binghamton mine of Stoddard? I presume they are only shut down temporarily, like most others, on account of the poor market for copper. I wrote them once or twice, but received no answer.—J. C. L.

REPLY—This property was producing at the rate of 250,000 pounds of copper monthly when the Con.-Ariz. Smelting Co. discontinued. It has developed its ore bodies to a depth of 1200 feet and when the mine closed the management was crosscutting at the 900 level to establish at that depth a body of ore that had been developed on the upper levels. The ore ran approximately 3 per cent copper and, at the old labor rate, the copper cost about 18 cents a pound in 1918. There can be no question as to the value and the permanency of the ore bodies. At the same time it would be folly for the management to deplete these ore bodies while copper prices approximate only the cost of production or less. A force of men is employed at the mine who keep the workings free of water. Ultimately, this property should be an attractive profit earner.

company, since

k at the smelter here in Mayer uld be resumed on Oct. 1, ans a reawakening of this ole district. This work has en shut down for nearly two nths. The company has now anged to take over the smelter purchase. The smelter is to completed as soon as possible. e second stack is nearly finish- and most of the steel frame rk for the power house is in ace. Two converters and one verberatory furnace are to be stalled, which will bring the pacity up to about 800-ton a y.

The Big Ledge company has veral mines in this district, two them being developed for a rge tonnage. The Butternut mine the 200-foot level, has a vein, feet wide, of milling ore. This one of the largest bodies of w grade copper ore in the state. veral well-known engineers have cently examined this ore body nd compared it with the largest the west. The ore resembles e characteristic chalcopyrite of is section. What this vein, al- ady so large will develop into, ill be watched with great inter- st by mining men. A flotation ill is to be built soon to handle his ore. A wire tram has been urchased to carry the ore to he railroad.

The Henrietta mine has smaller ore veins but the ore is higher grade. It can furnish a large ton- nage of raw ore for the smelter.

The announcement of this com- pany that it proposes to encourage the small mine owner by taking small quantities of custom ore, will be the making of the camp. There are many very promising prospects scattered within wagon hauling distance of the smelter, that would be developed by the owners or by leasers if they can be assure a market for their ore. The great mining camps of the southern part of this state have been developed largely through the work of the leaser.

Several new mining sales have been made during the past few days. The Pacific National Copper company is a new organization which has taken over the group of coppers owner by F. W. Hatch and J. D. McGarvey, of Mayer and Humboldt. The property con- sists of 8 claims and is located two and one half miles northeast of the Arizona Binghamton mine. It has been developed several shafts and tunnels, the deepest sharft being 250 feet. The owners are at 70 tons of ore which

group is owned by H. R. Noel and James H[illegible], both of Mayer. They have taken an option on the group of claims which adjoin, owned by R. Thacker, of Clarksdale. This will make one of the largest properties in the district. All of the proups are located in the Copper mountain district and certain extensions of the known ore vein.

The Pocahantas Copper company has been financed fully during the past few days. W. W. Skinner, the president, has returned from New York where sufficient capital was found to carry on the mine development and to erect a flotation mill at the mine. Tests are now being conducted on the ore taken from the different openings, to determine the best mill arrangement. The mine is located two miles southeast of Mayer. The stock is held principally in Oklahoma.

The Bisbee leasers, who have taken over the Barbara group of claims on South mountain, have started a tunnel 300 feet below the shaft, in which they opened up a fine body of copper ore. The tunnel will develop depth of foot for foot. The formation has been changing favorably the past few feet. This is one of the most pro-

BINGHAMPTON COPPER.

A copper pro[illegible]y which has recently demonstrated its right to be classed as a mine is the Binghampton in the Mayer district, Arizona, a strike of unusually rich ore being made in the new workings on the 600 level. There are now two oreshoots on this level, about 300 ft. apart, one of which is 18 ft. in width, the other already having been crosscut about 23 ft. The latter shoot is supposed to be an extension of the big shoot recently encountered in the raise from the 600 to the 800 level, the shoot being something like 45 ft. in width at the point cut. The rock from the 18-ft. shoot assays about 8% copper. The ore in the 23-ft. shoot goes nearly 9%. Some picked samples from the new workings run at high as 27%.

The primitive smeltery on the group was the first built and operated north of the Gila river, while the mine itself was one of the first active coppers in the state. I. T. Stoddard, now deceased, was the original owner, and his son, Celora M. Stoddard, and Senator Reynolds of New York (the latter, principal owner of the Binghampton) are backing the movement for the resurrection of this pioneer property under the corporate name of the Copper Mountain Mines Co.

velopment at these levels is to be carried on as well as in the upper levels. Claud Furguson, the mine superintendent, has outlined a system of development that will undoubtedly make this one of the largest and best copper mines in the section. It is estimated that there are about 25,000 tons of milling ore already blocked out. There are half dozen very promising outcrops on the 23 patented claims only one of which has been at all prospected. The company is developing a large reserve of ore with a view of later erecting a flotation mill of large tonnage at the mine. The announcement made by the Big Ledge Copper company, that construction work at the smelter here in Mayer would be resumed on Oct. 1, means a reawakening of this whole district. This work has been shut down for nearly two months. The company has now arranged to take over the smelter by purchase. The smelter is to be completed as soom as possible. The second stack is nearly finished and most of the steel frame work for the power house is in place. Two converters and one reverberatory furnace are to be installed, which will bring the capacity up to about 800-ton a day.

The Big Ledge company has several mines in this district, two of them being developed for a large tonnage. The Butternut mine, at the 200-foot level, has a vein, 50 feet wide, of milling ore. This is one of the largest bodies of low grade copper ore in the state. Several well-known engineers have recently examined this ore body and compared it with the largest in the west. The ore resembles the characteristic chalcopyrite of this section. What this vein, already so large will develop into, will be watched with great interest by mining men. A flotation mill is to be built soon to handle this ore. A wire tram has been purchased to carry the ore to the railroad.

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The announcement of this company that it proposes to encourage the small mine owner by taking small quantities of custom ore, will be the making of the camp. There are many very promising prospects scattered within wagon hauling distance of the smelter, that would be developed by the shaft. A wagon road is to be built from the camp to connect with the Mayer road at the Copper Queen mine. The officers of the company are president, J. W. Langley, vice-president, L. W. Rybon, secretary and treasurer, L. W. Coffee, all of Humboldt. Work is to be started on the property within a few days.

P. J. Montgomery, of Chicago, has been in Mayer with a well known mining engineer, to examine the Harvard-Yale mine south-east of this place, and the Iowa and the Celebration mines, located three miles east of here. It is understood that the reports are favorable. The Celebration group is owned by H. R. Noel and James Harris, both of Mayer. They have taken an option on the group of claims which adjoin, owned by R. Thacker, of Clarksdale. This will make one of the largest properties in the district. All of the proups are located in the Copper mountain district and certain extensions of the known ore vein.

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The Bisbee leasers, who have taken over the Barbara group of claims on South mountain, have started a tunnel 300 feet below the shaft, in which they opened up a fine body of copper ore. The tunnel will develop depth of foot for foot. The formation has been changing favorably the past few feet. This is one of the most promising preperties on the Copper mountain belt.

The Half Moon company has a new hoisting plant erected, south of the Copper Queen mine, and is to commence immediately a 500-foot shaft. Ore has been developed in fifteen or more shafts and pits on this property, which is an extension of the known bodies of both the Copper Queen and the Arizona Binghamton mines. Much of the surface ore is shipping quality.

NOV 27 1917

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ARIZONA-BINGHAMTON
(Agua Fria District)

Geo. W. Johnson, General Manager, reports Oct. 1:

"Mining and development work continues as usual. Our production of copper for August was 279,000 pounds. The September production has not yet been reported. This copper was all mined from the upper levels.

"Work has progressed satisfactorily at the 750' level. We are about ready to begin stoping there.

"Exploration continues at the 1200 level. A number of stringers have been encountered but we have not yet penetrated to the main ore body.

"The completion of the machinery installation at the new three-compartment shaft has been held up by delay in the delivery of a part of the electric equipment. This should have arrived long since."

Mining Ind. - 1920

MAYER.—The Arizona-Binghampton is reported to be milling 200 tons per day, with a monthly production of 300,000 lb. of copper. The Shannon Copper Co. will shortly resume operations on its Yeager Canyon property. Reports are current that production has commenced at the Gillespie property of the Arizona Copper & Mining Corporation and a twenty-ton mill will be erected to handle a developed ore-reserve of approximately 20,000 tons. 9-16-20

MAYER.—The Arizona Binghampton, one of the largest mines in the Mayer district, has closed down temporarily owing to the present condition of the copper market. 10-30-20

ARIZONA BINGHAMTON COPPER COMPANY

By William P. DeWolf.

Senator William H. Reynolds, of New York City and Long Beach, N. Y., the dominating factor in the affairs of the Arizona Binghampton Copper Company,—formerly the Stoddard Mines Company—has developed that Company's estate to the stage where it presents dividend-paying potentialities, and the copper-yielding possibilities of an United Verde. That is to say the mine has been opened sufficiently to demonstrate the presence of pay copper ore in tonnage to a depth of 600 feet, under mineralogical conditions conducive to its continuance to a much greater depth, and has produced ore in sufficient tonnage and of sufficient value to demonstrate that it will in due course be numbered with the dividend paying mines of Yavapai County.

The record of the Binghampton, since it passed to the control of Senator Reynolds in 1916, has added appreciably to the value of the copper ore deposits of this section of Arizona, and has, together with the Big Reef, Henrietta, Blue Bell, DeSoto, Butternut, Loma Verde and Sterling, proved the copper ore yielding possibilities of the Copper Mountain—Big Bug Mining districts. These districts are a part of, or more strictly speaking, a continuation of the famous Verde Copper belt. The strike of the main ore-bearing zone across the intervening country about 15 miles, leads direct to the camp of Jerome, where it disappears beneath overlying strata of more recent origin. Mining engineers familiar with this belt of mineralized schist contend that it offers copper ore yielding opportunities equal to those prevailing at Jerome and elsewhere throughout Arizona. Conditions in the Binghampton mine demonstrate the truth of their contention.

From August 15, 1916, to April 1, 1917, the Arizona Binghampton Copper Company's mine produced 24,802 tons of ore. This tonnage was treated at the company's mill, the reclamation being 2,389 tons of concentrates having an average copper content of 21.43 per cent. The concentrates were shipped [illegible] level they will not exceed 3 per cent. copper to the ton, while on the 400-foot level they will break approximately 5 per cent. copper to the ton. On the level first mentioned the general average width of the ore bodies is about ten feet, while on the level last mentioned the general average width is about twenty feet. So far as opened between levels the ore bodies show increased mineralization with depth. Chalcopyrite predominates in the ore and becomes more persistent as the deposits are followed downward. On the lower level, recently unwatered, there is an encouraging showing of copper glance. Copper glance likewise prevails to some extent on the 400-foot level. The ore bodies are as strong and well defined on the 600-foot level as on the levels above and hold forth mineralogical promise of prevailing to a much greater depth.

Mining men in general throughout the Copper Mountain—Big Bug districts are very much interested in the work being done in the Binghampton mine by reason of the bearing it has upon their own operations, and by reason of its bearing upon the future value of the section in which it is located.

Prescott Courier: In Agugust the output of the Arizona-Binghamton mine has been very satisfactory to the management. It is expected that the total in copper returns will be far ahead of any month's work since the flotation mill started to handle ore just a year ago. With scarcely a day's loss the mill has been run over capacity for the past 12 months. The first day's run showed a saving of 95 per cent. A second unit has but recently been added to the plant which makes it possible to treat 250 to 300 tons daily. The daily average is from 180 to 200 tons. The ore averages better than 3 per cent copper. The mine is also producing a carload of high grade ore which runs between 13 and 14 per cent copper. Extensive exploration work is to be started soon on the lower levels of this mine with diamond drills. The first work will be to crosscut the formation at several points to determine the size of known ore bodies that have been encountered in drifts. It has been proven that the several bodies of ore go down as is shown by the newest work on the 600-foot level.

The Arizona Binghampton Co. has purchased a diamond drill equipment and will prospect the lower workings with cross-holes before running mine cross-cuts. The second unit at the flotation-mill has brought the capacity to 250 tons. The high-grade ore that was being sent to the Humboldt smelter is now being run through the mill with the lower grade and satisfactory results have been obtained.

The district is active, especially in the vicinity of Copper mountain. There is a demand for silver properties.

ped to [illegible] smelter at a net profit to the company of $243,570.60 after deducting all smelter, refining and copper selling charges. This record is in itself one of which any mining company might well be proud at the outset of its ore producing career. To mining men and to investors in mining shares the most interesting feature connected therewith probably is the fact that the tonnage mentioned was mined during the ordinary course of development and that there is not a stope of any magnitude in the mine. The condition speaks well for the future of the Binghampton property and for the mine making possibilities of other properties located on the same mineral belt.

Development by shaft, tunnel, drifts and cross-cuts have demonstrated the presence of pay copper ore in the Binghampton mine from about forty feet below the surface to a maximum depth of 600 feet—the last mentioned being the lowest level. Two ore bodies, known as "91" and "102" have been opened on each level from the 100 foot point down. These ore bodies are now undergoing development and are being blocked out as a reserve for future milling needs. No. 102 is supplying the company's mill with approximately 100 tons of ore per day. No ore from No. 91 is at this time going to mill. George W. Johnson, a former New Yorker, is manager of the property. He states that no attempt will be made to mill ore from No. 91 deposit until such time as the milling capacity is increased to 300 tons of ore per day. The units necessary for the purpose are on the ground and will be installed and in operation not later than June 1st. The Binghampton's real era of ore production will begin on that date.

In the meantime cross-cuts will be driven to and through the ore on the levels already established, stopes will be extended in the backs of ore on the various levels, raises and winzes already under way will be completed. The shafts will be sunk to greater depth and the mine will in general be placed in shape to meet the maximum ore reduction demand. Ore is now available for stoping from the 600-foot level to a point well above the 100-foot level, and when these ore backs have been completely blocked out the tonnage in sight will be sufficient to supply the 300-ton mill with grist for a number of years, without drawing upon the ore reserves that will in due course be opened below the 600-foot point.

Both No. 91 and No. 102 ore bodies are widening and increasing their copper contents as depth is gained. Break of the mine on the 200-foot

ARIZONA BINGHAMTON.

Miami, Ariz.—The Arizona Binghamton Copper company of Stoddard, Arizona, and controlled by State Senator W. H. Reynolds of New York, earned in May $38,000 net on a production of 300,000 pounds of copper from the first 125-ton mill unit. The profits exceed 25 per cent on the par value of the 340,000 issued shares, par $5. The second mill unit has been completed and is ready for operation, awaiting new electrical transformers from the Arizona Power company. These are expected daily. In addition to the concentrating ore, the company plans shipping a 40-ton car of smelting ore, running, it is said, better than 10 per cent copper, from the rich ore shoot on the fourth level. The company smelts its products at the Humboldt, Arizona, smelter of the Consolidated Arizona Smelting company, which is now at capacity. It is only six miles from the mine. Arrangements have been made to handle surplus production at the Miami custom smelter.

SILVER MINES IN YAVAPAI ARE BEING OPENED UP

Strike of High Grade Ore On Slope of Tuscumbia Mountain Revives County's Vast Mineral Activities.

MANY OLD PROPERTIES UNDER DEVELOPMENT

Binghamton Copper Mine Is Rapidly Nearing Dividend Close; Expected To Be On Profit Basis In 60 Days.

By William P. De Wolf.

PRESCOTT, Arizona, June 30.—A strike of high grade silver ore made a few days ago on the south slope of Tuscumbia mountain has created somewhat of a stir in local mining circles, and has incited certain old-time Hassayampans to indulge in reminiscences of the days when the silver bonanzas of Yavapai County and the prodigality of their owners was current gossip in an half-hundred mining camps between Santa Fe, New Mexico, and the Golden Gate. That was many years before the fall of the big drought in Arizona when all the bars went dry and the Hassayampans first began to understand that grape juice is a beverage and not a hair tonic.

The long dry spell just referred to has, however, little bearing upon the subject in hand, except as it touches on and appertains to the enforced activities of a nondescript band of bootleggers who are breaking big ones into little ones for the county on the road out beyond Turkey Station. While thus serving the county and their sentence, these dissenters from the status quo of state-wide prohibition accidentally ran across a deposit of ore that samples as high as 500 ounces in silver to the ton.

The ledge was encountered in the vicinity of the old Tuscumbia mine in the Crown King country, a section formerly noted for the number and richness of its silver bonanzas, and is thought to be the continuation of that valuable lode. So far as surface-trenched the deposit is holding its value and bids bids fair to afford its locaters quite as lucrative and a decidedly less precarious occupation than

vided.

Quickens Mining Energy.

The importance of the discovery is reflected by an additional quickening of silver mining activity throughout an area which has already been stimulated by the rapidly enhancing price of silver and by the possibility of its remonetization on or before the close of the prevailing world-wide war. For some time past a number of the old silver properties in the Crown King country have again been operated at a profit—notably the Crown King, Peck and Lane mines—and the tendency of the recent strike near the Tuscumbia is to encourage the exploration of surrounding territory there and elsewhere which has thus far remained unprospected, with a view to opening the extension of ore bodies from which pay ore is now being mined in workings established in former years. This tendency to broaden the scope of operations is not confined to the Crown King section, but applies equally to Walker Basin, Cherry Creek and other districts here which were at one time noted for their output of silver.

During the days of dollar silver the Peck mine outputted about $3,000,000 worth of high grade silver ore, the Crown King mine above $2,000,000 worth, the Tuscumbia mine about $300,000 worth and the Lane mine about $200,000 worth. The Mud Hole and Homestead mines in the Walker Basin district were also prolific producers of silver ores as was likewise the Leghorn mine in the Cherry Creek dictrict. A similar record attaches to the Tip Top mine at Tip Top, formerly worked by Haggin & Hearst, and to numerous other silver, or silver-gold properties throughout Yavapai county. The properties specifically mentioned herein were selected from the roster by reason of the fact that they are again operative or are about to become operative. The ores in a number of these mines show a tendency to make into copper at depth, the condition being one which tends to increase rather than to lessen their popularity and worth.

Two Cases In Point.

This transmutation disposition is particularly noticeable in the gold-silver ores opened in the Homestead mine at Walker Basin and in the Leghorn mine in the Cherry Creek district. Some months ago Mr. J. H. Shockley, of New York City, a well known mining engineer, examined the Homestead property for Irving K. Farrington, also of New York City. Following the examination Mr. Farrington took over the property for a number of his clients. An ore shoot is exposed for a length of 200 feet on both sides of the shaft at a depth of 200 feet. The deposit carries an average of [illegible] gold-silver per ton and shows considerable chalcopyrite and a little copper glance.

BINGHAMPTON'S OWNERS REFUSE FABULOUS PRICE

OFFER OF NEARLY TWO MILLION DOES NOT INTEREST THEM

RUMORED THAT THE PROPOSITION CAME FROM JEROME INTERESTS

(From Wednesday's Daily)

One million, seven hundred thousand dollars was today offered for the Arizona Binghampton copper mine, 40 miles south of Jerome, according to a message received over the E. E. Hutton leased wire at the local office of R. Allyn Lewis.

The offer was made at Prescott by Judge E. W. Wells, who stated that he was representing a large copper-producing company. It is hinted that the company is already interested at Jerome but there is no confirmation of the report.

Senator William H. Reynolds of New York, present head of the Arizona Binghampton Copper company, refused the offer.

The sum mentioned represents the par value of the 340,000 shares of Arizona Binghampton stock outstanding.

Owing to the rich strike recently made at the property, it is apparent that the 80,000 shares being offered now at $5 a share, will be oversubscribed. Had the proposition made by Judge Wells been accepted, that offer would have been withdrawn.

How big the mine is, no one knows, but one can guess. It is a positive fact that on the third level the ore shoot has a width of 40 feet between the walls. The same ore shoot is encountered on the fourth level but its width there has not yet been determined. An inspection shows that the face, sides, top and bottom of the drift, which is being run north, is all solid chalcopyrite ore. Chalcopyrite is a primary formation, while the black copper glance that is associated with it is the secondary enrichment and is the forerunner indication of the making of a big mine. On the fourth level, running easterly from the shaft is another ore shoot, designated as No. 91, where the lowest assay averages 17 percent copper. This ground is now being prepared for stoping. The ore body is not more than 40 feet from the shaft, while the shoot in the northerly drift is about 200 feet from the station. Here are two distinct ore bodies, the magnitude of which has not yet been

ARIZONA BINGHAMPTON MINE NEARS DIVIDEND-PAYING BASIS

(BY WILLIAM P. DE WOLF.)

PRESCOTT, Ariz., April 28.—Senator William H. Reynolds, of New oYrk City and Long Beach, N. Y., the dominating factor in the affairs of the Arizona Binghamton Copper company, formerly the Stoddard Mines company, has developed that company's estate to the stage where it presents dividend-paying potenttialities, and the copper-yielding possibilities of an United Verde. That is to say, the mine has been opened sufficiently to demonstrate the presence of pay copper ore in tonnage to a depth of 600 feet, under mineralogical conditions conducive to its continuance to a much greater depth, and has produced ore in sufficient tonnage and of sufficient value to demonstrate that it will in due course be numbered with the dividend paying mines of Yavapai county.

The record of the Binghamton, since it passed to the control of Senator Reynolds in 1916, has added appreciably to the value of the copper ore deposits of this section of Arizona, and has, together with the Big Reef, Henrietta, Blue Bell, DeSoto, Butternut, Loma erde and Sterling, proved the copper ore yielding possibilities of the Copper Mountain—Big Bug mining districts. These districts are a part of, or more strictly speaking, a continuation of the famous Verde copper belt. The strike of the main ore-bearing zone across the intervening country about 15 miles, leads direct to the camp of Jerome, where it disappears beneath overlying strata of more recent origin. Mining engineers familiar with this belt of mineralized schist contend that it offers copper ore yielding opportunities equal to those prevailing at Jerome and elsewhere throughout Arizona. Conditions in the Binghampton mine demonstrate the truth of their contention.

From August 15, 1916, to April 1, 1917, the Arizona Binghampton Copper company's mine produced 24,802 tons of ore. This tonnage was treated at the company's mill, the reclamation being 2,389 tons of concentrates having an average copper content of 21.45 per cent. The concentrates were shipped to the Humboldt smelter at a net profit to the company of $243,570.60, after deducting all smelter, refining and copper selling charges. This record is in itself one of which any mining company might well be proud at the outset of its ore producing career. To mining men and to investors in mining shares the most interesting feature connected therewith probably is the fact that the tonnage mentioned was mined during the ordinary course of development and that there is not a stope of any magnitude in the mine. The condition speaks well for the future of the Binghampton property and for the mine making possibilities of other properties located on the same mineral belt.

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In the meantime cross-cuts will be driven to and through the ore on the levels already established, stopes will be extended in the backs of ore on the various levels, raises and winzes already under way will be completed, the shaft will be sunk to greater depth and the mine will be completed, the shaft will be sunk to greater depth and the mine will in general be placed in shape to meet the maximum ore reduction demand. Ore is now available for stoping from the 600-foot level to a point well about the 100-foot level, and when these ore backs have been completely blocked out the tonnage in sight will be sufficient to supply the 300-ton mill with grist for a number of years, without drawing upon the ore reserves that will in due course be opened below the 600-foot point.

Both No. 91 and No. 102 ore bodies are widening and increasing their copper contents as depth is gained. Break of the mine on the 200-foot level they will not exceed three per cent copper to the ton

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In fact the ore now in the lower levels, which runs from 8 to 30 percent copper, not including the copper glance, is so rich that it will not be run through the mill but will be shipped direct to the smelter.

The mill which was constructed jointly by the Stoddard Mines company and the Copper Queen Gold Mines company, is now owned exclusively by the Arizona Binghampton Copper company. It is treating at present a tonnage of 125 tons a day, and has a recovery of 93 percent, the concentrates running better than 25 percent copper. The company is now installing a second Morey mill, and has recently installed two Buchart tables which will handle 125 tons a day. Eighty percent of the concentrates will go direct to the filters and not to the flotation, while the balance will go back to the Morey mill and then undergo the flotation treatment. With this installation the company will be equipped to produce 600,000 pounds of copper a month,

Bug mining districts. These districts are a part of, or more strictly spe g, a continuation of the famous Verd pper belt. The strike of the main ore-bearing zone across the intervening country about 15 miles, leads direct to the camp of Jerome, where it disappears beneath overlying strata of more recent origin. Mining engineers familiar with this belt of mineralized schist contend that it offers

for the mine making possibilities of other properties located on the same mineral belt.

Development by shaft, tunnel, drifts and cross-cuts have demonstrated the presence of pay copper ore in the Binghampton mine from about forty feet below the surface to a maximum depth of 600 feet, the last mentioned being the lowestt level. Two ore bodies, known as "91" and "102" have been opened on each level from the 100 foot point down. These ore bodies are now undergoing development and are being blocked out as a reserve for future milling needs. No. 102 is supplying the company's mill with approximately 100 tons of ore per day. No ore from No. 91 is at this time going to mill. George W. Johnson, a former New Yorker, is manager of the property. He states that no attempt will be made to mill ore from No. 91 deposit until such time as the milling capacity is increased to 300 tons of ore per day. The units necessary for the purpose are on the ground and will be installed and in operation not later than June 1. The Binghampton's real era of ore production will begin on that date.

In the meantime cross-cuts will be driven to and through the ore on the levels already established, stopes will be extended in the backs of ore on the various levels, raises and winzes already under way will be completed, the shaft will be sunk to greater depth and the mine will be completed, the shaft will be sunk to greater depth and the mine will in general be placed in shape to meet the maximum ore reduction demand. Ore is now available for stoping from the 600-foot level to a point well about the 100-foot level, and when these ore backs have been completely blocked out the tonnage in sight will be sufficient to supply the 300-ton mill with grist for a number of years, without drawing upon the ore reserves that will in due course be opened below the 600-foot point

Both No. 91 and No. 102 ore bodies are widening and increasing their copper contents as depth is gained. Break of the mine on the 200-foot level they will not exceed three per cent copper to the ton, while on the 400-foot level they will break approximately 5 per cent copper to the ton on the level first mentioned; the general average width of the ore bodies is about ten feet, while on the level last mentioned the general average width is about 20 feet. So far as opened between levels the ore bodies show increasd mineralization with depth. Chalcopyrite predominates in the ore and becomes more persistent as the deposits are followed downward. On the lower level, recently unwatered, there is an encouraging showing of copper glance. Copper glance likewise prevails to some extent on the 400-foot level. The ore bodies are as strong and well defined on the 600-foot level as on the levels above and hold forth mineralogical promise of prevailing to a much greater depth.

Mining men in general throughout the Copper Mountain-Big Bug districts are very much interested in the work being done in the Binghampton mine by reason of the bearing it has upon their own operations, and by reason of its bearing upon the future value of the section in which it is located.

Bisbee Review: One million, seven hundred thousand dollars was offered for the Arizona Binghampton copper mine, 40 miles south of Jerome, according to reports in Prescott several days ago. The offer was made at Prescott by Judge E. W. Wells, who is reported to have stated that he was representing a large copper producing company. It is hinted that the company is already interested at Jerome but there is no confirmation of the report. Senator William H. Reynolds of New York, present head of the Arizona Binghampton Copper Company, refused the offer. The sum mentioned represents the par value of the 340,000 shares of Arizona Bighampton stock outstanding.

the Arizona-Binghampton Copper Company

MAY 1 1917

(By William De Wolf)

Prescott, Arizona, April 26.—Senator William H. Reynolds of New York City and Long Beach, N. Y., the dominating factor in the affairs of the Arizona-Binghampton Copper company—formerly the Stoddard Mines company—has developed that company's estate to the stage where it presents dividend-paying potentialities, and the copper yielding possibilities of a United Verde.

That is to say the mine has been opened sufficiently to demonstrate the presence of pay copper ore in tonnage to a depth of 600 feet, under mineralogical conditions conducive to its continuance to a much greater depth, and has produced ore in sufficient tonnage and of sufficient value to demonstrate that it will in due course be numbered with the dividend paying mines of Yavapai county.

The record of the Binghampton, since it passed to the control of Senator Reynolds in 1916, has added appreciably to the value of the copper ore deposits of this section of Arizona, and has, together with the Big Reef, Henrietta, Blue Bell, De Soto, Butternut, Loma Verde and Sterling, proved the copper ore yielding possibilities of the Copper Mountain-Big Bug mining districts.

These districts are a part of, or more strictly speaking, a continuation of the famous Verde copper belt. The strike of the main ore-bearing zone across the intervening country about 15 miles, leads direct to the camp of Jerome, where it disappears beneath overlying strata of more recent origin. Mining engineers familiar with this belt of mineralized schist contend that it offers copper ore yielding opportunities equal to those prevailing at Jerome and elsewhere throughout Arizona. Conditions in the Binghampton mine demonstrate the truth of their contention.

From August 15, 1916, to April 1, 1917, the Arizona-Binghampton Copper company's mine produced 24,802 tons of ore. This tonnage was treated at the company's mill, the reclamation being 2,389 tons of concentrates having an average copper content of 21.43 per cent. The concentrates were shipped to the Humboldt smelter at a net profit to the company of $243,570.60 after deducting all smelter, refining and copper selling charges. This record is in itself one of which any mining company might well be proud at the outset of its ore producing career. To mining men and to investors in mining shares the most interesting feature connected therewith probably is the fact that the tonnage mentioned was mined during the ordinary course of development and that there is not a stope of any magnitude in the mine. The condition speaks well for the future of the Binghampton property and for the mine making possibilities of other properties located on the same mineral belt.

Development by shaft, tunnel, drifts and crosscuts have demonstrated the presence of pay copper ore in the Binghampton mine from about forty feet below the surface to a maximum depth of 600 feet—the last mentioned being the lowest level. Two ore bodies, known as "91" and "102" have been opened on each level from the 100 foot point down. These ore bodies are now undergoing development and are being blocked out as a reserve for future milling needs. No. 102 is supplying the company's mill with approximately 100 tons of ore per day. No ore from No. 91 is at this time going to the mill. George W. Johnson, a former New Yorker is manager of the property. He states that no attempt will be made to mill ore from No. 91 deposit until such time as the milling capacity is increased to 300 tons of ore per day. The units necessary for the purpose are on the ground and will be installed and in operation not later than June 1st. The Binghampton's real era of ore production will begin on that date.

In the meantime crosscuts will be driven to and through the ore on the levels already established, stopes will be extended in the backs of ore on the various levels, raises and winzes already underway will be completed, the shaft will be sunk to greater depth and the mine wlil in general be placed in shape to meet the maximum ore reduction demand. Ore is now available for stoping from the 600-foot level to a point well above the 100-foot level, and when these ore backs have been completely blocked out the tonnage in sight will be sufficient to supply the 300-ton mill with grist for a number of years, without drawing upon the ore reserves that will in due course be opened below the 600-foot point.

Both No. 91 and No. 102 ore bodies are widening and increasing their copper contents as depth is gained. Break of the mine on the 200-foot level they will not exceed 3 per cent copper to the ton, while on the 400-foot level they will break approximately 5 per cent copper to the ton. On the level first mentioned the general average width of the ore bodies is about ten feet, while on the level last mentioned the general average width is about 20 feet. So far as opened between levels the ore bodies show increased mineralization with depth. Chalcopyrite predominates in the ore and becomes more persistent as the deposits are followed downward. On the lower level, recently unwatered, there is an encouraging showing of copper glance. Copper glance likewise prevails to some extent on the 400-foot level. The ore bodies are as strong and well defined on the 600-foot level as on the levels above and hold forth mineralogical promise of prevailing to a much greater depth.

Mining men in general throughout the Copper Mountain-Big Bug districts are very much interested in the work being done in the Binghampton mine by reason of the bearing it has upon their own operations, and by reason of the bearing it has upon future value of the section in which it is located.

ORE STRIKE IS REPORTED AT MINE IN NORTH

(By F. W. Bower)

MAYER, Ariz., July 19.—Undoubtedly the best of mining news from this section for along time is the announcement by the Arizona Binghampton Copper company of the finding of ore in four places on the 600-foot level. There has been a large amount of speculation on the part of the best mining men of the camp as to whether or not the ore bodies would continue from the 400 to the 600. If they did and if the high grade values kept up, it would make one of the richest copper mines in the state.

There are eleven separate lenses of copper ore in the mine which have been opened on the 400 and the upper levels. The largest vein furnishes a stope 20 feet wide on the 400 from which most of the milling and high grade ore comes. From the new ore bodies on the 600 about 20 per cent of the daily output is now being taken. Every round of holes enlarges the size of the new ore shoots on the 600 and there is no question but that the extension of all of the ore bodies will be encountered on this lower level.

Perhaps there is no set of big mining men in the state more pleased over finding ore in new lower levels in a mine than those at Jerome who have the direction of the United Verde and the United Verde Extension. When, in May, a small block of the Arizona Binghampton Copper company stock was offered for sale to the public by Senator Reynolds, at par value, the Jerome men visited the mine and later bought stock and advised their friends to get in so there is a considerable amount of the stock held by these big operators and their friends at Jerome, Prescott and Phoenix. That was before much work had been done on the 600. The report that the same high grade ore has been encountered on the lower level has set these big operators on edge. It is known that a cash price of par value was but recently made to Senator Reynolds for all of the stock which would give a purchase price of $1,700,000 but the proposition was turned down.

It would be difficult to find a mine with a cleaner record of production since a regular output began. A flotation mill designed by H. Kenyon Burch after the Inspiration type, and built under the supervision of C. B. Clyne, was put into commission August 24 of last year and it has been in continuous operation ever since. The first day showed an extraction of 95 per cent. This has since been reduced for economic purposes to 85 to 90 per cent. For the month of May, an output of 300,000 pounds of copper was made with a net value of $38,000.

In addition to the mill returns, there has been shipped considerable high grade ore averaging 13 to 14 per cent copper. The concentrates average about 20 per cent copper.

The mill has run over capacity up to 125 tons daily. A second unit has just been completed which will give a daily tonnage of 250 to 300 which should produce approximately 500,000 pounds of copper per month.

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ARIZONA BINGHAMTON CO.

Manager Geo. W. Johnson Reports:

During the month of May the Binghamton mill turned out an average of 25 tons of copper concentratives daily. The company's copper matte returns for May totaled approximately 330,000 pounds. Thirty thousand pounds of this matte represented ore from the Copper Queen mine that was milled by the Arizona Binghamton company.

The ore production from the Binghamton mine during May was drawn from No. 105 deposit on the second level and from No. 102 deposit on the third level during the ordinary course of development work. Stoping has been started in No. 91 ore body on the fourth level, in No. 101 ore body on the first level, in No. 102 ore body on the third level and in No. 105 ore body on the second level. The drift north in the new ore body recently discovered on the fourth level has a length of 100 feet at this writing.

On the third level, the ore shoot has a width of 40 feet between the walls. The same ore shoot is encountered on the fourth level but its width there has not yet been determined. An inspection shows that the face, sides, top and bottom of the drift which is being run north, are all solid chalcopyrite ore.

On the fourth level, running easterly from the shaft is another ore shoot, designated as No. 91, where the lowest assay averages 4 per cent copper. This ground is now being prepared for stoping. The ore body is not more than 40 feet from the shaft, while the shoot in the northerly drift is about 200 feet from the station.

Here are two distinct ore bodies, the magnitude of which has not yet been proven. At least one of them is permanent and continuous for the same shoot is on the second and third levels, and also on the sixth, no drifting having been done yet on the fifth.

The ore now in the lower levels, which runs from 8 to 30 per cent copper, not including the copper glance, is so rich that it will not be run through the mill but will be shipped direct to the smelter.

The mill which was constructed jointly by the Stoddard Mines company and the Copper Queen Gold Mines company, is now owned exclusively by the Arizona Binghamton Copper Company. It is treating at present a tonnage of 125 tons a day, and has a recovery of 93 per cent, and concentrates running better than 25 per cent copper. The company is now installing a second ball mill, and has recently installed two Butchart tables which will handle 125 tons a day each.

The ore will first be concentrated on Butchart tables and the coarse concentrate removed, the reject from the tables will be treated by flotation.

With this installation the company will be equipped to produce 600,000 pounds of copper a month, and this output will not include the high grade ore that will be shipped direct to the smelter.

MAY REPORT FOR ARIZONA BINGHAMPTON

Daily Mining Record

Company's Copper Matte Returns For Month Approximated 330,000 Pounds. Mines in Excellent Condition For Bigger Production.

Stoddard, Ariz., June 23.—During the month of May the Binghamton mill turned out an average of 25 tons of copper concentrates daily. The company's copper matte returns for May totaled approximately 330,000 pounds. Thirty thousand pounds of this matte represented ore from the Copper Queen mine that was milled by the Arizona Binghamton company.

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With recent new installation the company will be equipped to produce 600,000 pounds of copper a month, and this output will not include the high grade ore that will be shipped direct

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It would be difficult to find a mine with a cleaner record of production since a regular output began. A flotation mill designed by H. Kenyon Burch after the Inspiration type, and built under the supervision of C. B. Clyne, was put into commission August 24 of last year and it has been in continuous operation ever since. The first day showed an extraction of 95 per cent. This has since been reduced for economic purposes to 85 to 90 per cent. For the month of May, an output of 300,000 pounds of copper was made with a net value of $38,000.

In addition to the mill returns, there has been shipped considerable high grade ore averaging 13 to 14 per cent copper. The concentrates average about 20 per cent copper.

The mill has run over capacity up to 125 tons daily. A second unit has just been completed which will give a daily tonnage of 250 to 300 which should produce approximately 500,000 pounds of copper per month.

The present management of this mine is greatly responsible for the excellent showing that has been made for the past year. The general manager is George W. Johnson, a former banker of New York, who gives his personal attention to the development of the property. The mine superintendent is S. E. Chaney, who came from one of the big mines at Ray. Thomas H. Tullock is the mill superintendent who has had charge of the plant since it started.

The strike of the ore on the 600-foot level in this mine means that another large section of the great gehlid belt from Jerome southward 85 miles has been proven. The mine is only 16 miles south of the two big Jerome mines.

Geologically, ore on the 600-foot level of the Arizona Binghampton would be equal to the 1,300-foot level of the United Verde Extension mine. These Jerome mining men are confident that greater depth will find a uniform increase in the size and value of the ore bodies in this neighboring mine.

The announcement has been made by Claude Fergfuson, superintendent of the Copper Queen company, which has a big developed copper mine adjoining and parallel to the Arizona Binghampton that construction work on a 100-ton flotation mill the same pattern as the Binghampton, will commence within 60 days. This mine has large proven ore bodies on several levels and deeper work is planned.

There is sure to be a big movement from now on in the development of other properties all around these two mines. This week, five Bisbee leasers, John Ross, W. A. Tucker, James Smith, Lee Hunt and John Fitzpatrick, took over the Barbara mine a short distance south. They propose to develop the property with their own money. They are interesting several well known big operators in the state.

It is known that capital is being secured for the Pocahontas, Iowa, Half Moon, Big Bug, Jerome Copper, Celebration, Yale and Harvard, Moscow and other properties, which are all located in the south and north strike of the vein in these two big

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Arizona Binghampton Ore Shows Good On 600 Foot Level; Prospect Is Great

(By F. W. BOWER)

MAYER, Ariz., July 19.—Undoubtedly the best bit of mining news from this section for a long time is the announcement by the Arizona Binghampton Copper company of the finding of ore in four places on the 600-ft level. There has been a large amount of speculation on the part of the best mining men of the camp as to whether or not the ore bodies would continue from the 400 to the 600. If they did and if the high grades values kept up, it would make one of the richest copper mines in the state.

There are eleven separate lenses of copper ore in the mine which been opened on the 400 and the upper levels. The largest vein furnishes a stope 20 feet wide on the 400 from which most of the milling and high grade ore comes. From the new ore bodies on the 600 about 20 per cent of the daily output is now being taken. Every round of holes enlarges the size of the new ore shoots on the 600 and there is no question but that the extension of all of the ore bodies will be encountered on this lower level.

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ARIZONA COPPER MINE LOOKS GOOD

Arizona-Binghamton at a Stage Where it Presents Dividend Paying Potentialities. Is Producing Large Tonnage.

(By William P. De Wolf,)
Special to Daily M. & P. Record.

Prescott, Ariz., April 28.—Senator William H. Reynolds, of New York City and Long Beach, New York, the dominating factor in the affairs of the Arizona Binghampton Copper company, formerly the Stoddard Mines company, has developed that company's estate to the stage where it presents dividend-paying potentialities, and the copper-yielding possibilities of a United Verde. That is to say the mine has been opened sufficiently to demonstrate the presence of pay copper ore in tonnage to a depth of 600 feet, under mineralogical conditions conducive to its continuance to a much greater depth, and has produced ore in sufficient tonnage and of sufficient value to demonstrate that it will, in due course be numbered with the dividend paying mines of Yavapai county.

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Development by shaft, tunnel, drifts and crosscuts has demonstrated the presence of pay copper ore in the Binghampton mine from about 40 feet below surface to a maximum depth of 600 feet—the last mentioned being the lowest level. Two ore bodies, known as "91" and "102," have been opened on each level from the 100-foot point down. These ore bodies are now undergoing development and are being blocked out as a reserve for future milling needs. No. 102 is supplying the company's mill with approximately 100 tons of ore per day. No ore from No. 91 is at this time going to mill. George W. Johnson, a former New Yorker, is manager of the property. He states that no attempt will be made to mill ore from No. 91 deposit until such time as the milling capacity is increased to 300 tons of ore per day. The units necessary for the purpose are on the ground and will be installed and in operation not later than June 1. The Binghampton's real era of ore production will begin on that date.

In the meantime crosscuts will be driven to and through the ore on the levels already established, stopes will be extended in the backs of ore on the various levels, raises and winzes already under way will be completed, the shafts will be sunk to greater depth and the mine will in general be placed in shape to meet the maximum ore reduction demand. Ore is now available for stoping from the 600-foot level to a point well above the 100-foot level, and when these ore backs have been completely blocked out the tonnage in sight will be sufficient to supply the 30-ton mill with grist for a number of years without drawing upon the ore reserves that will in due course be opened below the 600-foot point.

Both No. 91 and No. 102 ore bodies are widening and increasing their copper contents as depth is gained. Break of the mine on the 200-foot level they will not exceed 3 per cent copper to the ton, while on the 400-foot level they will break approximately 5 per cent copper to the ton. On the level first mentioned the general average width of the ore bodies is about ten feet, while on the level last mentioned the general average width is about 20 feet. So far as opened between levels the ore bodies show increased mineralization with depth. Chalcopyrite predominates in the ore and becomes more persistent as the deposits are followed downward. On the lower level, recently unwatered, there is an encouraging showing of copper glance. Copper glance likewise prevails to some extent on the 400-foot level. The ore bodies are as strong and well defined on the 600-foot level as on the levels above and hold forth mineralogical promise of prevailing to a much greater depth.

Mining men in general throughout the Copper Mountain-Big Bug districts are very much interested in the work being done in the Binghampton mine by reason of the bearing it has upon their own operations, and by reason of its bearing upon the future

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

DEPT. MINERAL RESOURCES
OCT 26 1942
PHOENIX, ARIZONA

Date Oct 22nd, 1942

Mine Binghampton

Engineer A. C. Nebeker

District Agua Fria

Location 6 miles East of Mayer, Ariz

Former name The Arizona- Binghamption Mining Co

Owner Yavapai County (for Taxes)

Address

Operator None

Address

President

Gen. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Copper

Men Employed None

Production Rate Idle

Mill: Type & Cap.

Power: Amt. & Type None

Operations: Present Idle by reason that the County Supervisors will not accept the bid which have been offered.

Operations Planned

Number Claims, Title, etc. IO or more title as above stated

Description: Topog. & Geog. The country is cut up by several canyons some with rather steep sides while others are of a gentle slope. The property is just East of the Aqua Fria riverand at an evelation of approximately 4500 feet above sea.

Mine Workings: Amt. & Condition The mine workings consists of several thousands feet of drifting, crosscutting and shafts. ,I saw two shafts bothmseems to be in fair condition and I was in a long tunnel of several hundered feet and this was in fair condition. There is no caved ground in this tunnel but there ~~is~~ are several places where muck has been shoveled to the side of the tunnel, and where ore shutes appear there is a pile of muck.

(over)

Geology & Mineralization Most of the rock is a achist the color in places is greenish and in other places a brown iron staine d schist.

One sees some quartzites and porphyry and the whole countryis of shistose structure. The schists strikes North IO to I5 west and has a steep dip of 72 degree west. There is considerable iron shown through out wide zones in the schist, and the formation really talks to one and copper can be seen in many places.

Ore: Positive & Probable, Ore Dumps, Tailings

It looks as if all exposed ores have been worked out. There is a large worked-out stope one can see back in the tunnel level, the ore was over IOO feet long and 30 or more feet thick. There is a face or two in the tunnel which could produce some ore. The Tailings of thousands of tons is worth testing out, it is possible that that improved milling will make a profit,

Mine, Mill Equipment & Flow Sheet

The mill and all equipment once on the property has been sold and moved off.

Road Conditions, Route

The road is good from Mayer to the river at which point one turns to the right and go down the river about a mile to a ranch which is on the left side of river, leave your car here and walk about ¼ mile up the wash to the mine.

Very little money, say, $300 would make a good road up the wash to the mine.

Water Supply

I have not heard of any water in the mine, but plenty water can be had from the river, where a small stream is flowing at all times.

Brief History

This property has been an old producer and has produced millions of pounds of copper and thousands of ounces of silver from ores averaging around 3 per cent copper. The workings that are now accessable show large stopes and evidence of large production. It appears that from the tunnel level to the surface there is still possibilities of ore being developed, and what there is below the tunnel level will depend a great deal on the type and amount of work done down there.

Special Problems, ~~Reports Filed~~

I saw some surface croppings, which ~~has~~ have not been prospected and which have markings of an ore body, and if this developed into a ore chute and it very reasonably could, there is still a big mine here. It is hard to tell with out maps of the mine how far the workings extend on the lower levels, but from what I can learn, there is possibilities of parallel ore bodies being found.

Remarks

It will take a good size piece of money to equip and get into production from the old mine workings.

The tailings pounds are worth sampling and testing and may return quick copper.

If property for sale: Price, terms and address to negotiate.

The county has been trying to sell this property for taxes.

Signed Olo Uebeker

Use additional sheets if necessary. Separate sheets on each problem.

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

Date May 29, 1956

1. Mine: BINGHAMPTON AND COPPER QUEEN

2. Location: Sec. ..... Twp. ..... Range ..... Nearest Town Mayer, Arizona

   Distance 4 miles Direction Northeast Road Condition Good

3. Mining District & County: Agua Fria, Yavapai

4. Former Name of Mine: Same

5. Owner: Evert L. Hagan and Raymond A. Naylor, 115 N. Eastern Ave., L.A., Calif.,

   Address: 115 North Eastern Ave., Los Angeles, Calif., ANgelus 2-5109

6. Operator: None

   Address:

7. Principal Minerals: Copper, little gold and silver

8. Number of Claims: 40 Lode ..... Placer .....

   Patented Yes Unpatented .....

9. Type of Surrounding Terrain: On the Agua Fria River, mountainous.

10. Geology & Mineralization: The country rock is schist which may be extensively mineralized below the surface leach and could develope into a large open pit of which surface operations formerly have been undertaken.

11. Dimension & Value of Ore Body: This information is largely unknown, there being several miles of workings in both mines. In adit #2 on the Queen (being the 400 ft level) we found 33,000 tons of 2.46% ore already blocked on four sides; and in sight in this workings about 100,000 tons of ore in sight of 1-1/2% copper with some gold and silver. Similar ore tonnages are claimed to be in the other metals and other workings. The former owners stated that there was ready to be mined in the several thousand feet of all levels in adit #2 one million tons of ore that was a commercial grade around the 1920's. Our information indicates that the Queen has similar ore developed. The last two engineers examining the property estimated the possibility of an open pit mine with many millions of tons.

12. Ore "Blocked Out" or "In Sight": We don't know other than mentioned in #11, but all indications are that there are many millions of tons of commercial ore.

Ore Probable: The last two engineers estimated the possibility of one-half a million tons.

13. Mine Workings—Amount and Condition: We don't know other than the map enclosed.

	No.	Feet	Condition
Shafts			The workings are claimed to be 13 miles but we consider this high; possibly the correct amount would be 7 or 8. In the Bing, below the 400 they are under water and below the 200 in the Queen likewise.
Raises			
Tunnels			
Crosscuts			
Stopes			

14. Water Supply: Agua Fria River, a 16-inch well, and 24,000 gallons a day from the workings.

15. Brief History: The Bing formerly had an operation around the 1920's of 350 tons a day. The Queen was never a producer though the former owners claimed they had expenses 2-1/2 million dollars in preparation for production, which amount is possibly too hight, but production never commenced.

16. Signature:

17. If Property for Sale, List Approximate Price and Terms: One Million Dollars, to be paid out of ore royalties, but only a sizeable operation would be acceptable.

Oct. 31, 1944

% Senator Carl Hayden
Room 131, Senate Office
Washington, D.C.

Mr. Glenn S. Francis,
P. O. Box 346,
Prescott, Arizona

Dear Glenn,

I am addressing you at the ASMOA P.O. Box for want of a better address, in answer to your wire of Oct. 30, in which you state you are preparing for presentation to Metals Reserve an application for an increased Special Additional Copper premium to be made retroactive on all past production, and asking if I have any suggestions.

I would be highly gratified if members of the mining industry would study the premium price chapter, with its appended documentation, which appears in the Senate subcommittee print #6 on Strategic and Critical Minerals. I am sure you are in possession of a copy. It would save miners from doing a lot of useless work if they understood the premium price plan administration.

If you present the proper figures on the necessity for having an increase in your Special premium, carefully worked out, I have no doubt that it will be granted if the analysis of these figures show the increase to be warranted. This is a standard procedure of readjustment which goes on every day, and if application for such increases are not filed when they become necessary, the burden is on the applicant. There is a strict rule that no premiums above the A class may be made retroactive except to the first of the month in which the application for the premium or the revision is made. It will do no good to file for retroaction behind this point.

The Bagdad, the last time I hear, had nothing but A premiums, and as far as I know never has had a Special. I will check on this.

The Metals Reserve has nothing whatever to do with granting premiums and does not have a representative on the Quota Committee. The application should be filed with this last body, either for new premiums or for revisions. This is all detailed in the report above mentioned.

I want to thank you again for your kindness to me while in Prescott, and to say I will do anything I can to help you get an upward revision, if you will send me duplicates of the application.

Sincerely,

File Broadgate

Nov. 20, 1944

% Senator Carl Hayden

Mr. Glen S. Francis,
220 E. Goodwin Street,
Prescott, Arizona.

Dear Glenn,

Regarding the rumors which you quote about the Bagdad Copper Corporation obtaining a retroactive Special Additional Copper Premium. Bagdad has a Special premium. However, I can now state authoritatively that neither Bagdad nor any other case that has come to my attention has ever had a premium retroactive further back than the first of the month on which the application was filed.

The burden is, and always has been, on the applicant to enter an application for revision the moment he sees he is losing money and can justify the increase. The Government feels that is the fair thing. And whether it is or not, that is the rule under the executive order, relating back to the Presidents agency directives under the second War Powers Act. Not only is it not going to be changed to suit an individual applicant, but even if it could be done, you can readily see that chaos would result and everyone would move in for some of the gravy. I have seen a number of cases where the negligence of the applicant to file has caused him a substantial loss, as shown on his statement. But I never could understand why he should carry this loss beyond a month without trying for an additional premium. I once, early this year, obtained some 8 months back premiums for a Tucson operator, and it amounted to a pretty sum. But although it took that long to fight the case through because of certain policies involved, he HAD filed as soon as the loss showed on his books, so the premium really followed the rule.

As for your case, I think it would be too much of a loss of time to mail me your applications for review before you file. I think you know, and Hobeker can help you if you do not, how to justify your application for an additional premium payment. You only have to show that with present costs you cannot operate and show a reasonable profit, backing the request with actual figures. If you will send me a copy, I will help you with the Committee. However, I must tell you that we are going to have 100,000 tons more copper this quarter than was expected and there is pressure to cut rather than increase special coppers. Get your application in at the earliest date.

I heartily appreciate your kind remarks and you may be sure I shall do my best to deserve them.

Sincerely,

W. C. Broadgate

COPIED FROM:

BRIEF ON ICC HEARING TO ABANDON MAYER RAILROAD - 8-6-57

Page 2

WITNESS SHERWOOD B. OWENS, Mine Owner and Operator during the past 15 years, with mining interests over entire State of Arizona, testified (316-17), in substance:

Presently, is the owner of the De Soto Mine in the Big Bug District about 12½ miles from Blue Bell siding (317-18-45-6). Said mine is being developed under lease arrangement by the De Soto Copper Corpn., which was formed in December 1956, and actual work began about January 15, 1957 (318-19).

The De Soto was first operated in about 1890. It produced slightly in excess of 300,000 tons of pretty good grade ore until 1926 (342-3).

The present management appropriated $250,000, aside from money I previously expended, to determine the ore reserve (319). After preliminary investigation of ten months, conclusion was reached that there was better than a 50-50 chance of developing a six million plus tons ore body of one percent copper (320-25).

From January 15 to May 31, 1957, slightly more than $70,000 were expended (321), leaving roughly $180,000 of private money still on hand (348).

The witness described the methods being used in developing the mine; the first stage of the work has been completed, and 350 to 400 samples taken which practically completes the sampling on the 600-foot level. While it has cost a lot of money, the management is more than satisfied (320-1).

Open-pit operation is proposed with a mill to produce 2,000 tons of concentrates daily which will be shipped to El Paso (325). The open-pit possibilities have not been completely explored but they will be determined by drilling and sampling the mine. Presently, sufficient quantity of good grade ore justifies underground operation (326). In the event it develops that open-pit operation is not feasible, lesser tonnage of high grade ore, ranging from 2,000 to 2,500 tons per month, will be produced by underground mining (325), employing 25 to 30 people (336).

Page 3

Under present conditions, our engineering estimates overall costs of placing the property and mill in operation will be between 6½ and 7 million dollars, of which the 2,000-ton mill will cost approximately 3½ million dollars, of which the 2,000-ton mill will cost approximately 3½ million dollars (332). The effects of the present development work in the De Soto Mine must be obtained not later than May 1, 1958, (336-7).

The Blue Bell Mine, four and one half miles from end of track at Blue Bell, owned by the witness, Sherwood B. Owens, has opened up outstanding area of direct smelting ore (326-7). Exploration work has developed 35,000 to 40,000 tons of high-grade siliceous ore running 2.5 to 2.9 percent copper. As the witness is furnishing fluxing ores for American Smelting and Refining Company, he is in position to ship this ore. Qualified engineer has made complete study of the mine. There is no question but that it can be substantial producing mine by further expenditure of $50,000, which is going to be made (327-8).

Page 3

Flux is simply low grade ore which is of value to smelter because of content of other metal (341).

In the past, the Blue Bell Mine produced and shipped over one million tons of commercial ore over the two loading ramps at Blue Bell which are still there, thus making perfect loading situation (329).

During World War II it shipped about 20,000 to 25,000 tons of ore (350).

The plans of the owners for the development of both the De Soto and Blue Bell Mines took into consideration availability of railroad service from Blue Bell (229). Cost of trucking to Humboldt, instead of to Blue Bell, would be approximately 96 cents per ton compared with rail charge of 28 to 30 cents per ton (330). Continuation of rail service from Blue Bell is absolutely vital to successful operation of the De Soto and Blue Bell Mines not only for the outbound movement of ore and concentrates, but for the inbound movement of machinery and supplies (331).

Page 4

The Iron King and Blue Bell Mines were formerly owned by the Consolidated Arizona Smelting Co., which owned the former smelter at Humboldt, which company went broke (333-42-43). The Iron King Mine was reopened in 1942 by the Shattuck Denn Mining Corporation since which time it has been continously in operation, and presently making a small profit, although the price of zinc is much depressed (333-34).

While the De Soto and Blue Bell Mines were previously shut down, it was not because the metals therein were exhausted (353-4).

It would require 12 bob-tail trucks to haul the ore or concentrates to Humboldt because of the longer distance, while only three such trucks can perform the same service to Blue Bell (354-55).

Page 7

Other principal producing mines tributary to the line between Iron King and Blue Bell, incl., are the Bing Hampton, Copper Queen, Hackberry, Butternut, Minor, Stoddard, Golden Turkey and Silver Cord (376-7-8-9-80-.

The Nipponese Mining Co., Ltd., which is Canadian capital, has an option on the Bing Hampton and Copper Queen Mines. During three or four months in 1956, the properties were being diamond drilled to determine the size of the ore bodies and the grades thereof (382-3).

Page 8

The Hackberry Mine has a good long-range chance; not in the next three years, unless the price of lead and zinc increases. Then there might be considerable activity, depending more on economic conditions (391-2).

The Minor Mine is in the exploration phase. It has good ore indications, but its operation will be further removed than in the case of the De Soto (391).

The Bing Hampton and Copper Queen Mines have a large outcrop of an iron-stained shear carrying small amounts of copper, lead and zinc that have never been explored prior to the work performed in 1956 (392).

Page 9

WITNESS JOE STARNICK, engaged in the mining business about 35 years and presently Superintendent of the U. S. Consolidated Mines, known as Minor properties, 5 miles east of Mayer, testified (409-10), in substance:

That the Minor Mine has both milling and shipping grades of copper and zinc ores. It has done development work such as diamond drilling and presently is at the point where it can go ahead. It is further planning to drive a 700-foot drift (410).

In the near future we will ship ore.We have ore and are exploring, but we still have to run our drift to determine how much ore we will ship. It is hard to say when and what will develop. It could be 2,000 or 200 tons a day. There could be some shipping ore as well as milling ore. We might ship some and blend the ore (411-12).

The high grade ore is definately shipping ore, while the low grade siliceous ores, which the smelters want, would be more profitably milled and blended with high grade ores. To start, we contemplate erection of a mill with capacity of 200 tons per day (411-12).

The Iron King Mine has zinc, gold, silver and lead, and the Minor Mine has copper, zinc, gold and silver ores (412).

We struck ore at the 200-foot level. Ore was shipped out of the Minor Mine during World War II, and six carload trial shipments have recently been made (412-13).

We were going to ship from Mayer but since the line is our of operation, we have to truck the ore to and ship from Humboldt. We must call the Iron King in order to get a place to load and then go and see the station agent at Mayer to order a car. We can move the ore on the Iron King ramp if it is not busy. If Iron King is using the ramp, we must wait until the car is spotted for loading (414).

Page 10

The additional cost of trucking the ore to Humboldt is $1.50 a ton higher than the cost of trucking it to Mayer (414-15-16-17). Illustrating the importance of $1.50 additional trucking cost to Humboldt over Mayer, if we were shipping 200 tons a day, the additional operating cost to us would be $300 a day, which is sufficient to mean a profit or a loss (418).

We have shipped 5 carloads of test ore from Humboldt since January 1, 1957. We expect to ship a few cars during the next six months or a year (420-421).

In operating a mine, every foot you penetrate has to be developed (421). We expect to be in production within six months to a certain degree. Development and operation go hand in hand. The proposed mill, close to the mine, should be in operation inside of a year. The concentrates from the mill will move by rail to El Paso (422-23). I could not be definite about the date; might be before a year or a little thereafter. I am sure that within a year we will have the mill on the property ready to operate (425).

Page 11

WITNESS EUGENE FREDERICK, President and General Manager of the U. S. Consolidated Mine, Inc., and in charge of the Minor properties, testified that $125,000 cash has been spent in development of the mine since work began in August 1955 in exploration, purchase of new machinery and hoist (426-7-30).

WITNESS M. L. HECKLTHORN, practical mine operator, who owns the Oro Fino Mine 18 miles southwest of Mayer, and has a lease on the Stoddard Mine, and is driving a shaft on the St. Anthony Mine testified (421), in substance:

I am not developing a large mine. I am an independent operator and obtain my living by putting up my own money and services for producing ore from various ming properties (437).

Shipped orefrom the Stoddard and Half Moon Mines from Mayer in 1956.

Los Angeles,
Nov. 17, 1944

Dear Bill,

Many thanks for your letter of Oct. 31st. in reply to my telegram to you. Please forgive my negligence in not answering sooner. I will offer no excuses.

I also want to thank you for having the Mining Journal send me an extra copy of Senate Sub Committee Print #6. I have been studying this information.

I have been giving serious consideration and thought to our situation in respect to requesting an increase in our special premium from 7.2¢ per lb. to 10¢ per lb. and in trying to have it made retroactive. We asked for such an increase one year ago

and it was refused.

At the present time we are liquidating our equipment and cutting down the operation to 2 men. These men are working under a contract whereby they assume all expenses in getting the remainder of the ore out and we pay them 90% of all the monies paid us on production of ore from the Binghampton Mine. This is after deduction of freight and treatment charges.

My intention is to submit to the Quota Committee all your figures since commencement of operations last year, including loss sustained on liquidation. I will send you a draft of these figures and my proposed request for suggestions and criticism before sending it on to the Committee. If the Quota Committee is unable or does not do anything for us, possibly we should appeal to the Contract

Termination Board of course our contract or I should say our Special Premium of 7.2¢ per lb. has not been terminated. I do think we are entitled to a profit and when I have all the figures assembled we can better tell just how we came out.

Apparently Bagdad received an increase of 5¢ per lb. on future production and 2 1/2¢ per lb. retroactive on all past production from the time the A and special premiums went into effect. This information is quite definite around Prescott. I will be interested in what you learn.

I have been here in Los Angeles the past week and will return to Prescott Sunday. We are particularly interested in Gold and the possible early resumption of gold mining. I will be devoting my efforts from now on in this direction. One of the

mea one for me trip here was a gold mine equipped for mining and a small mill.

Thanks Bill for your interest and I will send you a draft of our application before submitting same to the Quota Committee. I will also keep in touch with you on some matters that might be of mutual interest. I am planning to spend the next few months up in the Northwest on mining business.

I certainly enjoyed meeting you in Prescott and have hopes of seeing you in Washington some day.

With kindest regards and best wishes.

Sincerely,

Glenn S. Francis
220 E. Goodwin St.
Prescott, Arizona

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

DATE: October 22, 1942

MINE: Binghampton

ENGINEER: A. C. Nebeker

DISTRICT: Agua Fria

LOCATION: 6 miles East of Mayer, Arizona

FORMER NAME: The Arizona-Binghampton Mining Company

OWNER: Yavapai County (for Taxes)

OPERATOR: None

PRINCIPAL METALS: Copper

MEN EMPLOYED: None

PRODUCTION RATE: Idle

POWER--AMOUNT & TYPE: None

OPERATIONS--PRESENT: Idle by reason that the County Supervisors will not accept the bid which have been offered.

NUMBER CLAIMS, TITLE, ETC.: 10 or more titles as above stated.

DESCRIPTION--TOPOGRAPHY & GEOGRAPHY: The country is cut up by several canyons, some with rather steep sides while others are of a gentle slope. The property is just east of the Agua Fria River at an elevation of approximately 4500 feet above sea.

MINE WORKINGS--AMOUNT & CONDITION: The mine workings consist of several thousand feet of drifting, crosscutting and shafts. I saw two shafts, both seem to be in fair condition, and I was in a long tunnel of several hundred feet and this was in fair condition. There is no caved ground in this tunnel but there are several places where muck has been shoveled to the side of the tunnel, and where ore shutes appear, there is a pile of muck.

GEOLOGY & MINERALIZATION: Most of the rock is a schist; the color, in places, is greenish, and in other places, a brown iron stained schist. One sees some quartzites and porphyry and the whole country is of shistose structure. The schists strike North 10 to 15 west and have a steep dip of 72 degrees west. There is considerable iron shown throughout wide zones in the schist, and the formation really talks to one and copper can be seen in many places.

ORE--POSITIVE & PROBABLE, ORE DUMPS, TAILINGS: It looks as if all exposed ores have been worked out. There is a large worked out stope one can see back in the tunnel level, the ore was over 100 feet long and 30 or more feet thick. There is a face or two in the tunnel which could produce some ore. The tailings of thousands of tons is worth testing out, it is possible that improved milling will make a profit.

MINE, MILL EQUIPMENT & FLOW SHEET: The mill and all equipment once on the property has been sold and moved off.

ROAD CONDITIONS, ROUTE: The road is good from Mayer to the river, at which point one turns to the right and goes down the river about a mile to a ranch which is on the left side of river, leave your car here and walk about three-fourths a mile up the wash to the mine. Very little money, say, $300 would make a good road up the wash to the mine.

WATER SUPPLY: I have not heard of any water in the mine, but plenty water can be had from the river, where a small stream is flowing at all times.

BRIEF HISTORY: This property has been an old producer and has produced millions of pounds of copper and thousands of ounces of silver from ores averaging around 3 per cent copper. The workings that are now accessible show large stopes and evidence of large production. It appears that from the tunnel level to the surface there is still possibilities of ore being developed, and what there is below the tunnel level will depend a great deal on the type and amount of work done down there.

SPECIAL PROBLEMS, REPORTS FILED: I saw some surface croppings, which have not been prospected and which have markings of an ore body, and if this developed into an ore chute, and it very reasonably could, there is still a big mine here. It is hard to tell without maps of the mine how far the workings extend on the lower levels, but from what I can learn, there are possibilities of parallel ore bodies being found.

REMARKS: It will take a good sized piece of money to equip and get into production from the old mine workings. The tailings pounds are worth sampling and testing and may return quick copper.

IF PROPERTY FOR SALE--PRICE, TERMS AND ADDRESS TO NEGOTIATE: The county has been trying to sell this property for taxes.

SIGNED A. C. NEBEKER

COPY

REPORT ON

ARIZONA BINGHAMTON COPPER MINE

BY HOWARD W. SQUIRES.

Location:

The Arizona Binghamton property is located about six miles from Mayer, Arizona, a town on the Crown King branch of the Santa Fe Railroad, and about fourteen miles from Humboldt Smelter, and thirty-two miles from the city of Prescott. It is situated on the big Schist Belt which traverses Yavapai County, and along which belt are located the large, and many of them famous, copper mines of Yavapai County. Most notable of these mines are the United Verde and United Verde Extention, and need no introduction to the mining public. The next large mine to come in recently at depth is the Verde Central, whose owners are now reaping the benefit of deep development work, and have lately encountered ore on the 1800 level of this property, similar in character and grade to the Verde Extention ore bodies, a nd apparently a large tonnage.

The Blue Bell which is owned by the Humboldt Smelter and for years has been their main-stay for ore, is on this belt and is about fourteen miles from the Binghamton. About twenty-five miles South from the Binghamton is the Kay Copper whose recent developments have brought this property into prominence.

Geology:

So much has been written about the geology of the copper mines situated on the Yavapai Schist Belt that it is hardly necessary to go into this in any detail, but it is notable that quartz porphry intrusions in this Schist are no doubt responsible for the genesis of the ore. This quartz porphry where it intrudes in the surface is very acid and has been squeezed so that it has the appearance of planes of schistosity. All of the large copper mines have found their bodies of ore at the contact or near these intrusions in shear zones of the Schist.

A great many of the ore bodies are marked on the surface by typical copper gossans, comprised of iron stained quartz full of vugs, showing traces of copper carbonates and oxides and very often rich in gold.

The gossans of the Binghamton are typical of the Yavapai County deposits and are as described above.

Description of Property and Equipment:

The Arizona Binghamton owns an estate about one mile long and one-half mile wide, imshich are located several copper bearing deposits, only one of which however, has been developed to any extent. The company owns all of the dwellings on the property consisting of Managers residences, several Bunk houses, office and store building, Superintendents residence, warehouse, office and individual houses for families, pumping plant on the Agua Fria River; capable of housing a force of 100 workmen.

They also have two shaft houses on what is known as the Main Shaft and No. 1 Shaft, equipped with electric hoists on both shafts; the Main Shaft being equipped with a steel gallows frame 75 feet high, two hoisting compartments and manway, a large compressor with capacity of 875 cubic feet of air per minute, a new double drum Nordburg hoist, equipped with a 200 H.P. motor capable of hoisting to a depth of 2000 feet. This shaft at the collar is equipped with two Gates type crushers driven by electric power. The collar of the shaft is concreted down 50 feet and is in excellent condition down to the bottom 1200 feet.

REPORT ON ARIZONA BINGHAMTON COPPER MINE

Number 1 Shaft is a single compartment shaft and manway equipped with a cage and counter balanced, ore bin, crusher driven by electric motor, and connected to the mill by a 1200 foot railroad tramway. The hoist on the shaft is driven by 75 H.P. motor. There are two double sullivan compressors capable of making 700 cubic feet of air per minute, electrically driven.

There are also blacksmith shop, machine shop, and store houses situated between the Main Shaft and No. 1 Shaft.

The mill is a 300 ton plant, electrically driven, containing two Marcy mills, Flotation unit consisting of Inspiration Pneumatic cells, Dorr thickener for dewatering, 3 Olliver filter presses, necessary pumps, motors, shafting, ore bins, concentrate bins; and ready to start up immediately. All of the equipment is in excellent condition and ready to go.

Number 1 Shaft as will be seen by the map, has a depth of 600 feet and the various levels are connected under ground with Number 1 Shaft to the Main Shaft. Below the 600 foot level where the development work has been done was all done from the Main Shaft, and you will note that very little work has been done on the 1200 foot level, which is the bottom of the mine.

Description of Surface Ore:

There are four individual areas of mineralization which I noted on the property, only one of which has been developed to any extent. The largest gossan is one which is known as the Belgian claim and has an extent of approximately 1000 feet in length with an average of 100 feet in width. You will note by the map that the 6th level has been driven out several hundred feet to catch the downward extention of this ore body if it exists, and a drill hole was started from the face of the 6th level and run out about 150 feet. They were drilling here when the property shut down the first of April 1925. It is significant that more water was encountered in this face and in this drill hole than in any other part of the mine. The Belgian gossan is iron stained schist, containing traces of copper, lead and zinc. There is a short cross-cut tunnel drifted in from the hill cross-cutting this gossan at a depth of about 50 feet. While no values of any importance were encountered it is interesting to note that the schist and porphry are thoroughly kaolanized due to the action of sulphuric acid oxidisation. If there was any considerable copper content in the original primary deposition it is reasonable to expect that at some horizon depth a considerable secondary enrichment may be encountered. The mineralization is certainly large and pronounced enough to justify a good deal of development work on it with the expectation of getting a large body of pay ore at depth.

Above the main workings about 1000 feet away are several good scattered surface showings where considerable copper contents are in evidence and occasional good gold values are found. No work has been done on this deposit.

Down the hill below the main workings and towards the main camp of the property on a hill on which is built the managers house is a showing as good or better in copper carbonates as that on which the main development work has been done. It is not usual to get samples on surface showings about that will run 3 and 4% copper. No work of any description has been done on this deposit.

Where the main work has been done on the property is a surface showing about 400 feet long and from 10 to 20 feet in width, below which the main workings of the property are located. The surface ore body here shows carbonates down to a depth of about 75

feet where a shallow area of enrichment is encountered, and below which this ore is primary, the copper occuring as chalcopyrite. The oxidized zone here is of considerable importance and I figure that there are 20,000 tons of ore that will average 4% copper. As a matter of comparison and effecting the surface showings on the Belgian Claim, I should say that there are two other ore bodies on this property which have already been described, that with a little work will demonstrate the existance of as much oxidized ore as has been exposed on the ore body where the work has been prosecuted.

Description of Workings:

By an examination of the maps of the underground workings which you have, you will see the length of the ore bodies, the width of the same and their values which are noted on the map. The ore occurs in lenticular massess more or less continuous and varying from width of two or three feet up to thirty feet in places. The ore has been mined mostly as shrinkage stopes, and the levels are in good condition and nearly all of the open.

In passing I should say that the ore has not been mined as clean and clear of waste rock as it might have been, see the Mines Handbook. A few places in the mine could be worked and some of the places in ore now could be worked profitably by selective mining, shovel sorting in the stopes, cribbing up the chutes and filling the stopes with waste for gob. In other places it would be better to mine the ore bodies as shrinkage stopes, passing the ore over picking belts, installed and located at the mine shaft. From my observation I calculate that in this manner 25% of the waste and barren material which has heretofore gone to the mill could be cheaply eliminated and the grade of the ore raised. There are a number of places in the mine where short diamond drill holes have been put out into the foot and hanging walls of the property below faulted areas which have discovered ore which has never been developed or mined.

It would seem from my observation that in two places in the mine drag ore has been mined and the main lenticular mass of ore has not been reached or exposed in the wall and this has also been demonstrated to be true by diamond drilling. Just what tonnage might be developed by going after these places no one can tell and only development work can prove, but the chances are very excellent for considerable ore to thus be developed, which is not considered in this report.

Production:

There has been mined and milled to date from the property, which dates from the year 1916 to April 1, 1925, 212,391 tons of ore, total. From 1916 to 1920 there was milled 156,601 tons which average 2.59% copper. From 1920 to 1923 there was milled 26,541 tons which averaged 3.9% copper and from 1923 to April 1, 1925 there was milled 29,249 tons which averaged 2.8% copper.

Ore in Sight at Present Time:

By referring to the map you will see that throughout the mine there are several stopes that were working at the time the mine shut down. Also some stopes that on the level above had good ore values and on the level below are somewhat lower in grade, but by raising and drifting on them will produce ore of a pay grade for the mill.

The stoped areas are also indicated on the map and considerable probable ore is indicated. This probable ore could no doubt be developed into productive areas by work and with the aid of a picking belt. The actual ore that can now be milled and that will average 2½% copper as it is mined is as follows:

60 x 50 x 9 = 27,000
25 x 20 x 10 = 5,000
60 x 25 x 20 = 30,000
45 x 10 x 60 = 27,000
40 x 40 x 10 = 16,000
100 x 50 x 4 = 20,000
40 x 30 x 10 = 12,000
30 x 10 x 80 = 24,000
15 x 15 x 8 = 1,800
70 x 6 x120 = 50,400

213,200 cu. ft.

213,200 ÷ 12 = 17,767 tons.

which represents a tonnage of 17767 tons of ore that will run 2½%.

That which will run 2% represents 6,250 tons and is as follows:

30 x 20 x 70 = 42,000
50 x 5 x 120 = 33,000

75,000 cu. ft.

75 ÷ 12 = 6,250 tons.

Carbonate ore which on the surface will average 4% copper have 20,000 tons as follows:

254,000 cu. ft. ÷ 12 = 20,000 tons.

By installing a picking belt and eliminating 25% waste we could reduce the 2½% ore to 13,336 tons of ore that would run 3 1/3% copper. By the same method we could reduce the 2% average the face of it and then we would have about 18,000 tons that would average 3% copper by this method. This together with 20,000 tons of oxide ores which average 4% copper, gives the total tonnage in sight.

In order to start the Binghamton mine and supply enough money until we commence to get some revenue from the shipments, we figure that it would take about $10,000.00. This would allow enough to first take the water out of the mine which would cost not over $500.00 as the mine only makes about 6000 gallons a day and could be taken out in a very few days.

We would then have to purchase some supplies and keep the mine in operation until some revenue commenced to come in the mine could then be put on a basis of treating 1500 tons a month and shipping from the carbonate ore bodies, during which time development could be carried on and more ore opened up.

We do not think that any profit could be made out of the operation until other stopes were opened up. The ultimate revenue from the property, assuming the ore could be opened up sufficient to operate the mill at its capacity, would be about as follows:

Revenue and Expense
Basis 300 tons daily of 3% ore.

REPORT ON ARIZONA BINGHAMTON COPPER MINE

Heads	3% copper	=	60 lbs. per ton
Tails	.24 "	=	4.8 " " "
Concentrates	23% "	=	460 " " "

$\frac{460 - 4.8}{60 - 48}$ = 8 to ratio of concentration

$\frac{60 - 4.8}{60}$ = 92% Recovery

Milling 300 tons per day Ratio 8 to 1 = 37.5

37½ tons x 30 = 1125.0 tons per month

1125 tons x $50 net smelter return value = $46250 per Mo.

The operating costs based on past experience at the Binghamton should be on 300 tons daily production basis would be $3.50 per ton or $31,500 per month, leaving a net profit of $25,700 per month or approximately $300,000 annually.

This does not allow for a better grade of ore than 3% being found, all of which is within the realm of possibility.

In concluding the high lights on the Binghamton are these: We have a very attractive contract for the property considering its importance and chance for development. The surface improvements would cost something over $300,000 to duplicate. The property is ready to start up. The mine shaft is down 1200 feet with excellent chances of finding a great deal more ore in this one ore body. Other ore bodies on the surface with attractive features are there and un-explored. With a comparative small amount of initial money to take possession and start operations, I have no doubt that substantial backing can easily be procured in a short time which will make the Binghamton one of the big copper mines of Yavapai County.

Respectfully submitted,

Howard W. Squires.

January 1926.

REPORT ON ARIZONA BINGHAMTON COPPER MINE

By Howard W. Squires

LOCATION: The Arizona Binghamton property is located about six miles from Mayer, Arizona, a town on the Crown King branch of the Santa Fe Railroad, and about fourteen miles from Humboldt Smelter, and thirty-two miles from the city of Prescott. It is situated on the big Schist Belt which traverses Yavapai County, and along which belt are located the large, and many of them famous, copper mines of Yavapai County. Most notable of these mines are the United Verde and United Verde Extention, and need no introduction to the mining public. The next large mine to come in recently at depth is the Verde Central, whose owners are now reaping the benefit of deep development work, and have lately encountered ore on the 1800 level of this property, similar in character and grade to the Verde Extention ore bodies, and apparently a large tonnage.

The Blue Bell which is owned by the Humboldt Smelter and for years has been their main-stay for ore, is on this belt and is about fourteen miles from the Binghamton. About twenty-five miles South from the Binghamton is the Kay Copper whose recent developments have brought this property into prominence.

GEOLOGY: So much has been written about the geology of the copper mines situated on the Yavapai Schist Belt that it is hardly necessary to o into this in any detail, but it is notable that quartz porphry intrusions in this Schist are no doubt responsible for the genesis of the ore. This quartz porphry where it intrudes in the surface is very acid and has been squeezed so that it has the appearance of planes of schistosity. All of the large copper mines have found their bodies of ore at the contact or near these intrusions in shear zones of the Schist.

A great many of the ore bodies are marked on the surface by typical copper gossans, comprised of iron stained quartz full of vugs, showing traces copper carbonates and oxides and very often rich in gold.

The gossans of the Binghamton are typical of the Yavapai County deposits and are as described above.

DESCRIPTION OF PROPERTY & EQUIPMENT: The Arizona Binghamton owns an estate about one mile long and one-half mile wide, in which are located several copper bearing deposits, only one of which however, has been developed to any extent. The company owns all of the dwellings on the property consisting of Managers residences, several Bunk houses, office and store building, Superintendents residence, warehouse, office and individual houses for families, pumping plant on the Agua Fria River, capable of housing a force of 100 workmen.

They also have two shaft houses on what is known as the Main Shaft and No. 1 Shaft, equipped with electric hoists on both shafts; the Main Shaft being equipped with a steel gallows frame 75 feet high, two hoisting compartments and manway, a large compressor with capacity of 875 cubic feet of air per minute, a new double drum Nordburg hoist, equipped with a 200 H.P. motor capable of hoisting to a depth of 2000 feet. This shaft at the collar is equipped with two Gates type crushers driven by electric motor. The collar of the shaft is concreted down 50 feet and is in excellent condition down to the bottom 1200 feet.

Number 1 Shaft is a single compartment shaft and manway equipped with a cage and counter balanced, ore bin, crusher driven by electric motor, and connected to the mill by a 1200 foot railroad tramway. The hoist on the shaft is driven by 75 H.P. motor. There are two double sullivan compressors capable of making 700 cubic feet of air per minute, electrically driven.

There are also blacksmith shop, machine shop, and store houses situated between the Main Shaft and No. 1 Shaft.

The mill is a300 ton plant, electrically driven, containing two Marcy mills, Flotation unit consisting of Inspiration Pneumatic cells, Dorr thickener for dewatering, 3 Olliver filter presses, necessary pumps, motors, shafting, ore bins, concentrate bins; and ready to start up immediately. All of the equipment is in excellent condition and ready to go.

Number 1 Shaft as will be seen by the map, has a depth of 600 feet and the various levels are connected underground with Number 1 Shaft to the Main Shaft. Below the 600 feet level where the development work has been done was all done from the Main Shaft, and you will note that very little work has been done on the 1200 foot level, which is the bottom of the mine.

DESCRIPTION OF SURFACE ORE: There are four individual areas of mineralization which I noted on the property, only one of which has been developed to any extent. The largest gossan is onewhich is known as the Belgian claim and has an extent of approximately 1000 feet in length with an average of 100 feet in width. You will note by the map that the 6th level has been driven out several hundred feet to catch the downward extention of this ore body if it exists, and a drill hole was started from the face of the 6th level and run out about 150 feet. They were drilling here when the property shut down the first of April 1925. It is significant that more water was encountered in this face and in this drill hole than in any other part of the mine. The Belgian gossan is iron stained schist, containing traces of copper, lead and zinc. There is a short cross-cut tunnel drifted in from the hill cross-cutting this gossan at a depth of about 50 feet. While no values of any importance were encountered it is interesting to notethat the schist and porphry are thoroughly kaolanized due to the action of sulphuric acid exidization. If there was any considerable copper content in the original primary deposition it is reasonable to expect that at some horizon depth a considerable secondary enrichment may be encountered. The mineralization is certainly large and pronounced enough to justify a good deal of development ork on it with the expectation of getting a large body of pay ore at depth.

Above the main workings about 1000 feet away are several good scattered sufface showings where considerable copper contents are in evidence and occasional good gold values are found. No work has been done on this deposit.

Down the hill below the main workings and towards the main camp of the property on a hill on which is built the managers house is a showing as good or better in copper carbonates as that on which the main development work has been done. It is not usual to get samples on surface showings about that will mn 3 and 4% copper. No work of any description has been done on this deposit.

Where the main work has been done on the property is a surface showing about 400 feet long and from 10 to 20 feet in width, below which the main workings of the property are located. The surface ore body here shows carbonates down to a depth of about 75 feet where a shallow area of enrichment is encountered, and below which this ore is primary, the copper occuring as chalcopyrite. The oxidized zone here is of considerable importance and I figure that there are 20,000 tons of re that will average 4% copper. As a matter of comparison and effecting the surface showings on the Belgian Claim, I should say that there are two other ore bodies on this property which have already been described, that with a little work will demonstrate the existance of as much oxidized ore as has been exposed on the ore body where the work has been prosecuted.

DESCRIPTION OF WORKINGS: By an examination of the maps of the underground workings which you have, you will see the length of the ore bodies, the width of the same and their values which are noted on the map. The ore occurs in lenticular masses more or less continuous and varying from width of two or three feet up to thirty feet in places. The ore has been mined mostly as shrinkage stopes, and the levels are in good condition and nearly all of the open.

In passing I should say that the ore has not been mined as clean and clear f waste rock as it might have been, see the Mines Handbook. A few places in the mine could be worked and some of the places in ore now could be worked profitably by selective mining, shovel sorting in the stopes, cribbing up the chutes and filling the stopes with waste for gob. In other places it would be better to mine the ore bodies as shrinkage stopes, passing the ore over picking belts, installed and located at the mine shaft. From my observation I calculate that in this manner 25% of the waste and barren material which has heretofore gone to the mill could be cheaply eliminated and the grade of the ore raised. There are a number of places in the mine where short diamond drill holes have been put into the foot and hanging walls of the property below faulted areas which have discovered ore which has never been developed or mined.

It would seem from my observation that in two places in the mine drag ore has been mined and the main lenticular mass of ore has not been reached or exposed in the wall and this has also been demonstrated to be true by diamond drilling. Just what tonnage might be developed by going after these places no one can tell and only development work can prove, but the chances are very excellent for considerable ore to thus be developed, which is not considered in this report.

PRODUCTION: There has been mined and milled to date from the property, which dates from the year 1916 to April 1, 1925, 212,391 tons of ore, total. From 1916 to 1920 there was milled 156,601 tons which average 2.59% copper. From 1920 to 1923 there was milled 26,541 tons which averaged 3.9% copper and from 1923 to April 1, 1925 there was milled 29,249 tons which averaged 2.8% copper.

OLD PUBLISHED INFORMATION ON THE BINGHAMPTON AND THE COPPER QUEEN MINES.

YAVAPAI MAGAZINE

May 6, 1917, Page 10

The Arizona Binghampton Copper Company's property was known until recently as the Stoddard Mines, formerly owned by Mr. Stoddard, Governor of Arizona. At the present time practically the entire stock issued is in the hands of Senatot Reyholds of Long Beach, N. Y. Mr. Reynolds acquired the Stoddard interests in the latter part of 1916, and the present company was then organized to take over the property with the following gentlemen on the Board of Directors: William H. Reynolds, Long Beach, N. Y.; David Cole, El Paso, Texas; James S. Murphy, Denver, Colorado; F. S. Viele, Prescott, Arizona; E. W. Wells, Prescott, Arizona; Geo. W. Johnson, Stoddard, Arizona; John H. White, secretary and treasurer, New York City.

It is now evident that this district is a continuation of the famous Verde Copper belt. The strike of the main ore bearing zone across the intervening country, about 15 miles, leads direct to Jerome, where it disappears beneath overlying strata of more recent origin. The developments in the upper levels of the Binghampton property show ore conditions exactly similar to those encountered at depth in the United Verde Extension. For these reasons the management feels certain that the development, on which they have decided, will establish the property as one of the largest and richest of Arizona's copper mines.

March, 1918, Page 7.

Many engineers from the neighboring mines and the big properties at Jerome have expressed surprise at the unexpectedly large bodies of high grade ore blocked out in the upper workings. Without a single exception they have advised the opening up of the established ore bodies to at least double the depth so far attained.

Attention is drawn to the property in early days by the high grade ore in the surface outcroppings. These were so promising that extensive explorations followed. Senator Wm. H. Reynolds of Long Beach, New York, was interested and supplied the money necessary for opening up the property to the 600 level and establishing the fact that it was really a mine.

It was not until after a mill had been installed and results secured that proved beyond a doubt that the ore body was of enormous value and could be worked profitably that any stock in the company was offered to the public.

The company has a capitalization of 340,000 shares of par value of $5.00 each. The Board of Directors includes: Wm. H. Reynolds, President Estates of Long Beach, N.Y.; Geo. W. Johnson, General Manager Arizona Binghampton Copper Co., Stoddard, Arizona; E. W. Wells, President Bank of Arizona, Prescott, Arizona; David Cole, Metallurgical Engineer, El Paso, Texas; Wm. Morchauser, New York City.

August 1918, page 12.

July, 1918 Production; Milled, 4258 dry tons; copper in heads, 234,505 pounds; shipped 19 cars concentrate 22 percent; ratio, 9.2 to 1. The management reports under date of September 6, 1918, page 16, following is the report for August: Ore milled, 4509 dry tons; copper in heads 268,000 pounds; concentrates shipped 694 dry tons; ratio of concentration 8-2 to 1; Recovery of sulphide copper 90.81 percent; net profit for first quarter in excess of $50,000.00. New shaft will make double production.

ENGINEERING AND MINING JOURNAL, September 29, 1917.

Copper Queen mines, Mayer, Arizona. Copper Queen mines. Ore shipped to big Arizona Binghampton discontinued. Two shafts unwatered. Will sink 300 ft. shaft at adit #1 200-ft deeper. Claude Ferguson, Superintendent.

April 6th, 1918: Arizona Binghampton mines having plans prepared by D. Cole for the construction of a mill and tramway, estimated cost several hundred thousands of dollars.

October 1918: Arizona Binghampton Mines. Assessed valuation of Arizona Binghampton mines as per October 1st, 1918 was $316,692.

November 23, 1918: Arizona Binghampton Mines. Shortage of miners who refused to go underground during influenza epidemic. Began sinking a triple compartment 1200 ft shaft on November 1st, 1918.

November 1918: Mill to be enlarged and new shaft sunk.

January 25, 1919: At coming annual meeting Copper Queen Gold Mining Company expects to provide for 250 ton flotation plant. Property adjoins Arizona Binghampton.

February 1919: Phoenix, Arizona. Suit of Copper Queen Gold Mining Company against Arizona Binghampton Company has been brought alleging failure of the latter to handle 100 tons of Copper Queen ore per day in Arizona Binghampton mill. Damages are claimed to the amount of $118,000. The defendant holds that the company was ready and willing to mill the ore, but that the Copper Queen refused to make delivery. The plaintiff is represented by Attorneys Norris, Spaulding, Favor and Westrelt of Prescott, Arizona. The defendant by attorneys Bullard and Lewis of Phoenix. The case is being tried in the Supreme Court of Yavapai County before Judge Sweeney.

MINING ENGINEERS REPORT BY A.B. ROMBAUER, E.M., Jan. 1926. The properties of the Copper Queen Co., and the Binghampton Co lie side by side, and the contacts dip towards the west at an angle of 60 degrees from the horizontal. In following the ore contact downward for every 100 ft. along the vein 50 ft is gained in a westerly direction. This means a vertical shaft sunk would at 1,000 feet depth intersect the vein 500 ft. west of the vein outcrop. Bearing in mind the fact that the Binghampton and Copper Queen are side by side and that the former has a vertical shaft on its property 1,200 ft in depth it is easy to understand why owners of the Copper Queen should feel some concern over the possibility of trespass on the part of the Binghampton. That the Binghampton is working in close proximity to the Copper Queen is apparent to one in the lower workings of the Copper Queen when the miners blast in the Binghampton.

REPORT OF HOWARD W. SQUIRES: So much has been written about the geology of the copper mines situated on the Yavapai Schist Belt that it is hardly necessary to go into this in any detail, but it is notable that quartz porphry intrusions in this Schist are no doubt responsible for the genesis of the ore. This quartz porphry where it intrudes in the surface is very acid and has been squeezed so that it has the appearance of planes of schistosity. All of the large copper mines have found their bodies of ore at the contact or near these intrusions of the Schist.

(5) Binghampton

E & M JOURNAL, Feb. 1919: Report of the Arizona Binghampton for the year ending May 31, 1919 states that the mill crushed 36,605 tons of ore from which 1,873,358 pounds of copper was recvered. This milling cost was $4.16 per ton of ore or $9.01 per 100 lbs of copper. The milling cost was $2.65 per ton f ore or $5.18 per 100 lbs of copper, and the smelting cost was $5.65 per 100 lbs of copper, making a total cost of $19.84 per 100 lbs of copper against an average selling price of $20.45 per 100. The shaft is being sunk to the 900-ft level. On the 750 level an ore body has been cut which is 15 ft wide and averages 5% copper. This is the same ore encountered on the 400 and 600 levels.

ENGINEERS REPORT ON COPPER QUEEN: The 26 patented mining claims comprise 353.413 acres. (This does not include the 14 Bing claims.) During March, April, May and June 1949, the costs for mining, milling and smelting was $7.88. In tunnel (adit) #2, 400-ft level, 16,000 tons of blocked ore averaging 2.52% copper; 13,115 tons averaging 2.35% copper; 4,000 tons averaging 2.45% copper; total 33,614 blocked tons averaging 2.46% copper. (Mentioned inaccurately as 2.32%) (assays from carloads test shipments and checked by 140 other assays.) Mining $2.34 per ton, 10.67 tons per man; milling charges $2.34 per ton; freight and hauling $2.80 per ton.

REPORT OF HOWARD W. SQUIRES, ENG: There are four individual areas of mineralization which I noted on the property, only one of which has been developed to any extent. The largest gossan is one which is known as the Belgian claim and has an extent of approximately 1,000 ft in length with an average of 100 ft in width. If there was any considerable copper content in the original primary deposition it is reasonable to expect that at some horizon depth a considerable secondary enrichment may be encountered. The mineralization is certainly large and pronounced enough to justify a good deal of development work on it with the expectation of getting a large body of pay ore at depth. Above the main workings about 1,000 ft away are several good scattered surface showings where considerable copper contents are in evidence and occasional good gold values are found. No work has been done on this deposit. Down the hill below the main workings and towards the main camp of the property, on a hill on hich is built the manager's house, is a showing as good or better in opper carbonates as that on which the main development work has been done. It is not usual to get samples on surface showings that will run 3% to 4% copper. No work of any description has been done on this deposit.

Where the main work has been done on the property is a surface showing about 400 ft long and from 10 to 20 ft wide, below which the main workings of the property are located. The surface ore body here shows carbonates down to a depth of about 75 ft where a shallow area of enrichment is encountered, and below which this ore is primary, the copper occuring as calcopyrite. The oxidized zone here is of considerable importance and I figure that there are 20,000 tons of ore that will average 4% copper. As a matter of comparison and effecting the surface showings on the Belgian claim, I should say that there are two other ore bodies on this property which have already been described, that with a little work will demonstrate the existence of as much oxidized ore as has been exposed on the ore body where the work has been prosecuted.

PRODUCTION: There has been mined and milled to date from the property, which dates from the year 1916 to April 1, 1925, 212,391 tons of ore, total. From 1916 to 1920 there was milled 156,601 tons which averaged 2.59% copper. From 1920 to 1923 there was milled 26,541 tons which averaged 3.9% copper and from 1923 to April 1, 1925 there was milled 29,249 tons which averaged 2.8% copper.

Mr. Squires claims in 1926 he found, above water, in the Binghampton 17,767 tons of 2-1/2% ore, 6,250 tons of 2% ore and 20,000 tons of 4% copper ore.

CHARLES A. DINSMORE, ENG.: Tunnel #1 (now #3) is about 800 ft south of the Gracie outcrop and is 280 ft long. At 180 ft in, a drift was run 15 feet. There is a 44-ft winze with a 12-ft west crosscut at the bottom. All this work, from 100 feet in, is in mineralized ground.

In this work a 17 ft quartz dike is encountered running high grade in Calcopyrite, grey copper and glanze with some gold and silver. The balance of this group is the regular mineralized schists, mostly solidified. The power plant is at #2 adit and consists of a Fairbanks Morse gasoline engine of 32 HP operating a three drill air compressor. The air is transmitted to #3, at which latter point development is now concentrated. In all the work in #2, only a section 110 ft in width was found barren, this consisting of lime schists and shale which is thought to be a wall of the silicated schists and quartz.

Tunnel #3 (now #2) is on the north end of the Little Ella, penetrating the Copper Queen, and is 540 ft long at date of writing. At 450 ft a drift is running northeast, now is 60 ft all the way in ore averaging from wall to wall over 4%. The 4-1/2 ft drift is in the center of the vein and does not touch either wall. The mineral is black Yavapai schist and quartz. This entire crosscut is in mineralized ground and crosses much territory carrying excellent values. A dike of porphery makes a rich ore body. Three cross veins from 20 to 60 ft in width are cut, either of which would justify drifting and sinking. The drift is running in a heavy ore body. The face of the crosscut is all in ore. The work here is pending toward the big outcrop of the Gracie grounds, at which point the many veins seem to have come together, and where, in all probabilities, a great body of ore will be found. The main vein shows on the surface on the Gracie at this point to be 200 ft wide and probably 400 ft long, all mineralized. In the work in #2, the primary sulfide Calcopyrite is found in massive bodies, as well as the other sulfides. This feature is extremely interesting. On the surface the ore is strictly carbonate, principally azurite, while in the tunnel backs, at the present time of 250 ft, the sulfides have paid in large bodies.

Work is now all concentrated in #3. This is wise because the drift can be run in pay ore to the point where the surface shows a joining of a number of semi-parallel veins making one big ore body.

REPORT BY A. B. ROMBAUER, E.M.: The ore body is developed in the Copper Queen by means of a tunnel known as the 400-ft level and a 60 degree incline shaft sunk 560 ft below this level, with stations and levels on the 500-600-700-800- and 900 levels. The ore body on the 400 shows a length of 400 ft and is opened up by a raise to the 300 level on the north end. Its width and value varies by a safe average width, as shown by stop openings and raises, is 6 ft and its assay value between 2.5% and 3% cu.

The 800 ft level shows some of the highest grade ore, a solid streak of clean chalcopyrite varying from 10 to 12 inches nd assaying over 20% cu. being in evidence for 73 feet, which was as far as the work progressed before the present shut down.

At the 900 ft level the formation gives promise of a large commercial ore body. The black schist banded with spar attains a width of 100 ft, and 12 ft of this on the hanging wall assays better than 2-1/2% cu. On the 900, a drift south for 300 ft is all in ore averaging nearly 2% cu. and a continuation south of this drift is one of the first developments advised.

From the appearance of the 900 the high grade ore on the 800 and the diamond drill below the 900 which at 140 ft below the 900 encountered an ore body of 15 or more feet in width, with a high grade section of 4 or 5 ft in width assaying from 6% to 7% cu. it appears to the writer that the sinking of the incline shaft another 200 ft and doing some drifting, a very valuable ore body would be found.

Binghampton

MINING ORE VALUES AND TONNAGES FROM OLD RECORDS AND REPORTS.

AND ENGINEERING WORLD, August 26, 1911, page 393.
The Copper Queen Gold Mine is a crosscut tunnel which is in 340-ft. A body of high grade Calcopyrite ore has been uncovered. The the last 160-ft the tunnel has been in ore as copper sulfide was encountered 188-ft in the mouth of the tunnel. The extent of the calcopyrite, which is at a depth of 200 ft. from the surface, is yet to be determined.

TUNNEL #1; The following is the earliest publication, other than foregoing, which is presumably speaking of tunnel #1, as at that time tunnel #2 had just been started. (See Dinsmore's report of 1911 for other information on this tunnel #1) in which no production was ever undertaken. A large tonnage of ore is reported as now being available.

ENGINEERING & MINING JOURNAL, June 16, 1917: Bing mill increased from 100 to 200 tons daily, ore treated about 5% copper.

E & M JOURNAL, June 16, 1917: Arizona Binghampton Copper Co. This company has acquired Stoddard Mines Co. and started milling company. Present mill to be increased from 100 tons to 200 tons daily capacity. Ore treated runs about 5% copper. Ore body on the 400-ft level is 100-ft long and is being sought by crosscut on the 600-ft level.

E & M, Sept. 22, 1917: 200 tons daily of 3% ore, and shipping ore between 13% and 15%.
Sept. 22, 1917: Arizona Big Bug (Mayer) Arizona. Binghampton mines began diamond drilling exploration on the lower levels, mill treating approximately 200 tons daily of 3% ore, and shipping some ore averaging between 13% and 15%.

Jan. 5, 1918: 30-ft of good ore reported on the 600-ft level. Carries considerable 13% and 14% shipping ore.

April 6, 1918: Bing plans construction of (new or addition?) mill and tramway costing several hundred thousand dollars. Feb. 8, 1919 Bing declares dividend of $20,000.00.

April 13, 1918: Milling 5,000 tons per month and drilling 700-ft development. Ore reserves continually increasing.

Jan. 5, 1918: 30-ft of good ore on the 600 level carries considerable 13% and 14% shipping ore.

YAVAPAI MAGAZINE, July 5, 1918, page 13: Manager Geo. W. Johnson reports "We milled 4,200 tons of ore during the month of June. The heads assayed 3.26% copper and the tailings 0.30%. The concentrate was 7 to 1. There was 92% recovery, the concentrates assaying 21.61% copper. We produced 248,000 pounds of copper during the month. Developments on the 600 level are proving very satisfactory. The ore body showed a width of 24 ft at the 400 level and has been established as between 35 and 40 ft wide at the 600. The ore is also of higher grade, being slightly over 4%. Work is being pushed in six heads at the present time."

Aug, 1918, page 12: The diamond drill cut good ore in the 400 level. Ten feet assayed 4.25% copper. This ore is in an entirely new zone. A new stope started on the 400 level and 60-ft long and 12 ft wide, assayed about 3-1/2% copper.

E & M JOURNAL, Oct, 1918: Assessed valuation of Bing $316,000.00.
Novemi 1918: Began sinking new triple-compartment 1,200 shaft.
Feb. 8, 1919: Bing reports mining 36,000 tons, 1,800,000 pounds of copper. Milling cost was $2.65; shaft being sunk to 900 level, and on the 750 level there is 15-ft of ore averaging 5% copper.

YAVAPAI MAG., December 1916: Crosscut #104 in the 600 level went through 32-ft of ore which assayed over 3% copper. The management is now drifting in the ore body to determine its length. Stope #94 on the 600 level is up to over 90 ft. Eight different ore bodies have been opened up on the 100 level. Three of these ore bodies have been proved as going down to the 600 level. Invariably the ore has proven richer and the size of the ore body increased on the lower levels. The ore throughout the mine runs from 2-1/2% to 5% copper. In some of the ore bodies the ore content is much higher. The ore bodies now being worked are in the zone near the shaft. A new ore body has been opened 1,200-ft north of the present shaft. Experts advise that this will probably give the mine another zone of ore bodies.

Jan, 1917: Up to January of this year most of our ore came from the adit level and averaged under 3% copper. The last few months the ore has come from the lower levels and has averaged 4%. The ore bodies have both increased in size and richness as we went down. Quite recently we have encountered 12% ore in volume on the 400 level.

May 1917, page 10: Our property earned a net profit of $65,000.00 during the months of February and March of this year. In March our flotation mill treated 3,820 tons of ore (an average of 127 tons per day) of which 680 tons came from the adjoining property of the Copper Queen Gold Co. and 3,140 tons (or about 100 tons per day) was produced from our own mine, a very large part of it being ore removed in the course of our development work.

May 1917: A new ore body, #105, which assayed more than 9% copper throughout, was opened on the 400 level. In September this same ore body was opened in the 500 level. The same ore body was encountered on the 600 level in November 1916. At this depth it is about 140-ft long and over 30-ft wide. Explorations have been conducted from this ore body on the 600 level with a diamond drill since October to further establish its extent. Only recently the drill cut through 15 feet of ore to the south of the main ore body. This ore averaged better than 3% copper. It is thought to be a continuation of the big ore body.

Dec. 1917, page 10: Thirty-one feet is the width of the new shoot of ore on the 600 level of the Arizona Binghampton mine, east of Mayer, and the average value is going to be high enough to warrant shipping a large part of it to the smelter. The company has not yet decided whether to start the shipments again of high grade to Humboldt, or use the high grade with the low grade to bring up the heads in the flotation mill.

March 1918, page 7: Approximately 5,000 tons of ore are being milled each month at the Arizona Binghampton Copper Co's property at Stoddard. At the same time, approximately 700 feet of exploration and development work is being done monthly. As a result, while the mine is earning considerable money, the ore reserves are being continuously increased.

Aug. 1926, page 4: While this underground and overhead work was in progress, the work of slicing some 25,000 tons of surface ore and delivering it to Humboldt smelter had begun. This surface ore body is from 8 to 20 feet wide and averages 5% copper. As the costs of mining transportation and smelting are low, it is expected that this body of ore, for the treatment of which the mill is not adapted, will yield a nice profit.

Brochure

CONFIRMING ORE VALUES AND TONNAGES: ORE SHIPMENTS FROM COPPER QUEEN. 4/25/56

Test cars of ore shipped from 400-ft level of Copper Queen between 3/4/1948 and 9/9/1949. (Original records available)

DATE	CAR	TONNAGE	CU%	AU-oz	AG-oz	% SiO2	% Al2O3	% FE	% S	% ZN	% CaO
3/4/48	ATSF 84124	92400	2.91	0.29	0.003	55.5	8.0	12.7	5.4	0.3	1.3
3/11/48	ATSF 172977 & 83836	197100	2.64	0.34	0.005	57.1	8.4	12.6	5.5	0.1	1.4
3/18/48	ATSF 172067	102300	3.21	0.36	Tr	57.2	8.4	12.9	5.7	0.1	1.5
3/25/48	ATSF 83836	101200	2.61	0.30	0.0025	58.1	8.4	12.2	4.9	0.4	0.9
4/1/48	ATSF 172977	109300	2.89	0.33	0.005	56.7	8.0	12.4	5.5	0.3	1.6
4/9/48	ATSF85690	95300	2.74	0.49	0.017	55.7	9.2	12.7	5.4	0.6	1.7
4/8/49	ATSF 173103	98700	3.33	0.01	0.45	49.7	9.1	14.2	7.2	0.2	2.9
6/4/49	ATSF 130 & 141	84300	3.79	0.015	0.67	52.1	9.1	13.2	5.7	0.0	1.9
9/9/49	ATSF 82989	81700	4.58	0.01	3.5	51.4	8.2				

ASSAY CERTIFICATE - April 12, 1956.

	GOLD Oz. Per Ton	GOLD VAL. Ton	SILVER Oz. Per Ton	SILVER Val. Ton	Tot. Val. Per Ton	% of Copper
Tailings, Auger Hole, both dumps, 10, 15, 21 ft.	.08	$ .70	.98	$ .88	$ 23.92 ? (1)	See comment below on sample results.
Slimes, auger (wet mud 11 ft. below tailings of upper dump	.01	.35	.56	.51	4.54 (2)	.4
Concentrates of tailings from treating process	.14	4.90	17.04	15.34	622.84 (3)	65.5
Tunnel (adit) #2, first station #1 stope. Leached surface sample.	.04	1.40	1.12	1.01	19.89 (4)	1.9
Crosscut tunnel (adit) #2(Overhead) mineralized schist	.04	1.40	.84	.76	8.60 (5)	.7
Tunnel (adit) #2, 4-43 ore body (Map) 2 sta. #3 drift	.03	1.05	.98	.88	53.45 (6)	5.6
Tunnel(adit) #2, 4-63 ore body stope #3 drift (last)	.01	.35	1.24	1.12	72.31 (7)	7.7
Small open pit above tunnel #1 east side	.10	3.50	1.02	.92	26.60 (8)	2.4
Open pit general sample	.16	5.60	1.85	1.67	44.99 (9)	4.1
Open pit, 10 ft north tunnel selected	.08	2.80	1.67	1.50	145.06 (10)	15.3
Tailings	.05	1.75	1.66	1.49	19.80 (11)	1.8

Gold @ $35.00 per oz. Silver @ $.90 per oz. Copper @ $.46 per lb.

Ed Eisenhauer, Jr., Assayer

ASSAY CERTIFICATE - April 23, 1956

Drill sample, lower dump average 1500 lbs.	.02	.70	.96	.86	6.16	.5
Head sample chemical test	.02	.70	.98	.88	7.10	.6

Gold @ $35.00 per oz. Silver @ $.90 per oz. Copper @ $.46 per lb.

Ed Eisenhauer, Jr., Assayer

CHEMICAL TREATING OF TAILINGS, 4/24/56

Tailings as per above 4/23/56 assays had the following results:
100 lbs. tailings assaying - Head sample .70% CU
Copper from chemical treating - 78/100 of 1% or approximately 13 lbs per ton, or $5.33, being .78% CU in total (100 lbs).
Silver - 17 oz. Gold - trace.

Pulp tails .15%
Solution tails .06%
Solution heads .19%

The results of semi-metallic or copper percipitant 68.1%, or .08% over assay, being a claimed possible upgrade. Estimated cost of treating on a capacity of 200 tons per day would be 50¢ per ton. The 150,000 ton dump would, on above figures, return 1,960,000 lbs of copper gross @ 60¢ per pound (this type of metal brings an additional price) or $976,000.00, and silver $14,600.00, plus some gold; less 50¢ (represented cost of treating).
NOTE: Experiments are continuing as to possibility and practicability of this chemical treating of ore and tailings. Chemists and engineers contend the results are a conclusive success. (My comment is that I don't know; though I might add(and of this I am sure) that it has cost me over $1,000.00 to date.

TEST SHIPMENTS: The foregoing described experimental shipments, including a few additional on which the records were not complete, were made during the time further development on the 400 of tunnel #2 (adit) was being continued in 1948 and 1949. This was in preparation for the installation of another mill. The period was when copper dropped to 14-1/2¢, and therefore the undertaking was dropped. These shipping results, and a total of 140 assays, establish the average value of the 33,000 tons of ore as being 2.46% CU, with some gold and silver. Using a copper value of 40¢ and a 95% recovery would result in $617,000.00. In the old records, in discussing values, the term "high grade" has usually been used for shipping grade ores, and "good" values has been used for milling grade. Then, accordingly, such values as 2% and 3% copper would today be high grade, or shipping, ores and those above 3/4 of 1% would be good, or milling grades. Of the latter, it would be estimated that there is much over 100,000 tons of these ores in the 400; as to what tonnages is in the lower workings under water, we can only rely upon the old reports and other records which place the available tonnage developed at one million, and copper values up to 20%, but possibly would only average around 1-1/2% to 2% if all pay ores today are to be considered. This estimate, being accumulated from all sources of information, is believed to be conservative, though to prove this would cost some thousands of dollars for de-watering and sampling. Formerly anything under 2% was not considered, as it would not pay. Our only positive proofs are concerning the ores in the 400 level. It is believed that it can be confirmed that there is sufficient development in the 400 to permit easily determining the 100,000 tons of estimated ore over 1-1/2% to 2% copper. Similar tonnages and values are claimed on the other levels, and that drilling below the 900 discloses a continuation of deeper ore bodies.

DESCRIBING ASSAYS ABOVE:
1. The former assay of 2.6% CU of this same boring was somehow incorrect. Re-assay gave .70%. Also note that assay #12 below, being a 1,500 lb sample taken from the face of the lower dump, assayed the same as the drill holes. This was not expected, it being believed leaching would have occurred from the 35 years of rain.

January 1926

Howard W. Squires

STATEMENT CONCERNING COPPER QUEEN MINE, By A. B. Rombauer, E.M.

I regret that your inquiry relative to the recent development at the Copper Queen Gold Mining Co's property did not come while I was in charge there for it would have been possible to give more exact data as to extent and assay value of ore bodies than is now possible without the mine records. However, a general outline will give you enough information to warrant an examination of the property when the statements herein made can easily be verified.

The contact in which the ore bodies occur is strongly in evidence by the large jagged outstanding reefs showing in places mineralized zones impregnated with oxidized copper ores. On one of the contacts the principal development work has been done and an outline of the extent of the ore body and its value is given herein. It is only proper to state at this time that in the writer's opinion the most promising croppings and contacts lie to the south of the ore developed and with intelligent work would soon prove their value.

It is on a series of parallel contacts immediately west of those of the Copper Queen that the Arizona Binghamton Company have profitably operated for the past several years.

The properties of the Copper Queen Co. and the Binghamton Co. lie side by side, and the contacts dip towards the west at an angle of 60 degrees from the horizontal. In following the ore contact downward for every 100 ft. along the vein, 50 ft. is gained in a westerly direction. This means a vertical shaft sunk, would at 1,000 feet depth, intersect the vein 500 ft. west of the vein outcrop. Bearing in mind the fact that the Binghamton and Copper Queen are side by side and that the former has a vertical shaft on its property 1,200 ft in depth it is easy to understand why owners of the Copper Queen should feel some concern over the possibility of trespass on the part of the Binghamton. That the Binghamton are working in close proximity to Copper Queen is apparent to one in the lower workings of the Copper Queen when the miners blast in the Binghamton.

The ore body is developed in the Copper Queen by means of a tunnel known as the 400 ft level and a 60 degree incline shaft sunk 560 ft. below this level with stations and levels on the 500-600-700-800 and 900. The ore body on the 400 shows a length of 400 ft. and is opened up by a raise to the 300 ft. level on the north end. Its width and value varies by a safe average width as shown by stop openings and raises is 6 ft. and its assay value between 2.5 and 3% cu.

On the 500 level the ore body is cut by a flat fault and is shorter in length, altho a width of 12 and 14 ft obtains for about 50 ft. with an assay value of an average 2% Cu.

On the 600 level there is disclosed a more concentrated mineralization altho not so wide; a south drift was run on this level with average about 2% for about 200 ft. on its length.

The 700 ft. level was driven several years ago and the work is not done on the vein.

The 800 ft. level shows some of the highest grade ore, a solid streak of clean chalcopyrite varying from 10 to 12 inches and assaying over 20% cu. being in evidence for 73 ft. which was as far as the work progressed before the present shut down.

At the 900 ft. level the formation gives promise of a large commercial ore body. The black schist banded with spar attains a width of 100 ft. and twelve feet of this on the hanging wall assays better than 2 1/2% Cu.

On the 900 a drift south for 300 ft. is all in ore averaging nearly 2% Cu. and a continuation south f this drift is one of the first developments advised.

From the appearance of the 900 the high grade ore on the 800 and the diamond drill below the 900 which at 140 ft. below the 900 encountered an ore body of 15 or more feet in width, with a high grade section of 4 or 5 ft. in width assaying from 6 to 7% Cu. it appears to the writer that the sinking of the incline shaft another 200 ft. and doing some drifting, a very valuable ore body would be found and this was strongly advised to the directorate.

The south, and to me, the most promising section of the Copper Queen property, has never been intelligently developed. A vertical shaft was sunk 380 ft. but this shaft passed through the contact close to the surface and no cross cut to the west was driven from the bottom of this shaft to explore the possibilities at that depth. I advised sinking this shaft 200 ft deeper and then cross cutting west wo the contact and drifting on it north. I firmly believe if this work was done together with the work outlined on the 900 level, and the further sinking of the incline shaft 200 ft. farther the Copper Queen Company would be placed in the ranks of dividend paying mines.

I sincerely hope Mr. Goldman that the above statements will place before interested parties the possibilities contained in the Copper Queen Co's property. I am certain, that, if as claimed, the Binghamton have developed large valuable ore bodies by deeper work you are in a more favorable position to do likewise, for your surface showings are more extensive and more promising than those of your neighbor.

June 19, 1919

A. B. Rombauer.

2. This sample was from 10 ft. of apparently slimes from the bottom of the 20 ft hole in the upper dump. Possibly this auger hole was at the point where the tailings spill-pipe emptied.

3. Results of first chemical test of treating tailings. It is interesting to note that the further treatment experiment hereafter mentioned confirmed this result by the percipitant assaying 68.1% and .78% when calculated against the 100 lb sample which was .08% over the assay of the sample head that was tested contended to be an upgrade (?). Note: Further tests are in progress by these chemists and also by other chemists who apparently have an entirely different chemical process, they making the claim that they can, with many ores or tailgs, very greatly upgrade the gold content above a fire (?) by their recovery process.

Assays 4, 5, 6, & 7. These cannot be considered average samples of the blocked ore in the 400 level. To obtain such it would be necessary to shoot the surface, as samples taken from the present surface would be either leached or effected by deposits.

Assays 9 & 10. These came from the small open pit near the top of the ridge above tunnel #1, and in the area of the extensively mineralized outcrop over the main workings in tunnel (adit) #2. Here (in pit) high-graders had been working and sorting out 5% copper ore for shipment until they were run off the property.

Assay 11. Taken from the nearby dump of another property that is available for an operation though there is only about 3,000 tons of tailings and possibly 15,000 tons of ore dump that is said to run 2% copper. One sorted car from this dump brought $2,000.00. The mine is full of water and is said to have from 18 inches to 6 feet, or an average of 2 feet, of bornite. The mine is under water and would be very expensive to re-open.

Assay 12. This is from the same mixed sample that a latter assay ran .70% copper, being the 100 lbs taken from the 1,500 lbs off face tailings.

Assay 13. This is the same as #12, an assay sample of heads for the chemical test.

CHEMICAL PROCESS FOR TREATING TAILINGS AND ORE: The party behind this process has had chemists employed for about a year, and now feels confident he has been successful in the undertaking and claiming it has now progressed beyond the lab and that his pilot has demonstrated it to permit proceeding with a commercial operation; and the free use of the process is offered together with the assistance of his chemists and the use of his pilot plant to establish more certainty.

RE-CHECK OF ASSAYS ABOVE:

	COPPER	SILVER	GOLD
Tailings, re-run of Eisenhauer's #1 assay above, by Whitmore	.7%	.2%	Trace
Note: Error was expected in assay of 2.6% copper in tailings.			
Slimes, by Whitmore; same as assay #2 above by Eisenhauer	.4%	1.1%	Trace

COMMENT: Investigation of the workings above the water would cost several thousand dollars, and only to arrive at a practical estimate would cost $1,000. This being because of the extensive development on these properties (miles of underground workings.) An investigation of this character is hardly practical for us to undertake as anyone interested would want to re-affirm it in a duplication of the work. Therefore we have offered the possible merits as disclosed by submitting all information for anyone interested to check for accuracy, much of which we are not certain of ourselves.

Our assistance is offered by accumulating pertinent information to permit anyone undertaking investigation to have something to direct their investigations by, we advising that a particular working has a certain ore, and then a decision can be made as to the practicability of confirming. If we can accumulate 50 to 100 reports of pay ore tonnages, it should give a definite impetus to the investigations by directing the checks and out effort continues in obtaining information, and it ill be compiled and offered as it is accumulated.

One's precaution must be exercised in the dependability of all information. Usually one's source of information is oral or written, all of which requires some character of confirmation. This is possible, in some instances, "beyond a reasonable doubt", at least concerning some; and concerning others an actual check can be made. Usually in an investigation, some of the reports can be confirmed to a certainty, as for instance: the claim of a million tons of developed ore ready for mining can be established, but the further claim of another million tons of pay ore that is contained in reports, we have not fully established other than that it appears to be correct. Also, some of the values in the foregoing tonnages have been established with a definite ertainty, but other values in shipping, milling, and leaching ores must be sampled to be positive even though we have government, state, engineers, owners, and operators statements, all of which can be accepted as evidence, but not conclusive proof.

We are expending a diligent effort to try and arrive at the merit, and the extent thereof, of these mines. We are attempting to do this without incurring the considerable expense that would be necessary if it were adequately done. Anyone considering would want to duplicate our work before making a conclusion, therefore our most practical program will possibly be to acquire all available information and submit it for their back when their own investigation is undertaken, which anyone would desire to do thoroughly before accepting either of the properties.

U. S. GEOLOGICAL SURVEY

BULLETIN 782

ORE DEPOSITS OF THE JEROME AND BRADSHAW MOUNTAINS QUADRANGLES, ARIZONA

By
Waldemar Lindgren

Washington 1926 Government Printing Office

BINGHAMPTON MINE

EQUIPMENT AND PRODUCTION: The Arizona-Binghampton Mining Co. owns 10 claims north of the river about a mile above the Stoddard ranch. The property is owned by W. Reynolds, of New York, and managed by George W. Johnson. The mine and mill are 300 feet above the creek, and offices and residences are in the river bottom.

The mine has a modern electrical equipment. The developments include a 600-foot shaft, 1,000 feet of adit, and about 4,000 feet of other workings in connection with these. A 3-compartment shaft has been sunk to a epth of about 1,000 feet. There is a 250-ton flotation mill on the property.

The mine was productive from August, 1916, to March, 1919, and lso for some time in 1920. Unfavorable working conditions necessitated its closing, but ore was shipped again in 1923. In all 8,000,000 pounds of copper was sold in the form on concentrates. The mine production up to 1922 was 150,000 tons of 3% ore, carrying 2 ounces of silver to the ton. In addition to 25% of copper, the concentrates yielded 33,197 ounces of silver and about 200 ounces of gold. The concentration is in the proportion of 7:1. The mineis said to contain a considerable amount of developed ore.

GEOLOGY: The road from Mayer to the mine is 4 miles long and leads over gently sloping bare or brushy hills that afford good exposures. Most of the rock is a fissile grayish-green schist. The road is crossed by one well-defined brownish-gray quartzite reef, and several others are seen in the distrance. The quartzite is shattered in placed and filled with white quartz. On both sides of the quartzite is a yellowish-white schistose quartz porphyry. On the east side is also a mass of glassy quartz 40 feet wide with thin streaks and masses of felted black tourmaline. The quartzite and the quartz in places are said to contain a little gold.

In going up to the mine from Agua Fria River the rock first encountered is greenstone schist, in places looking very much like a sheeted volcanic agglomerate. Then follows fissile chloritic schist, appearing like clay slate. At the mill this slate contains a lens of crystalline limestone about 300 feet long and 15 feet wide. It encloses veinlets of quartz with fine bluish tourmaline. A little farther east, near the Copper Queen office, outcrops show schistose and in part fissile greenish quartz porphyry with phenocrysts of quartz. The dump of the Copper Queen mine shows mainly a greenstone schist, some specimens of which have small phenocrysts of quartz.

In the Binghampton mine the schist strikes N. 10° W. and dips 70° W. The schist is greenish and consists mainly of a pressed quartz porphyry; in places it can only be determined as chloritic schist.

THE ORE: The ore occurs in three shoots, or lenses, in places over 10 feet wide. The 105 shoot is 100 feet long and extends down to the 600 foot level. The 91 shoot is 50 feet long and at most 10 feet wide. The shoots have resulted from the replacement of schist by fine-grained quartz, not much crushed. The replaced material contains more or less pyrite but not so much as is usual in these deposits. There is much chalcopyrite, in part embedded in the schist but in considerable part in veinlets with dolomite and quartz. Tetrahedrite with some arsenic is unusually abundant, particularly in shoots 91 and 94, and it seems particularly associated with a white dolomite containing very little iron. Other sulphides are rare. The ore contains much recrystallized chlorite, of which there are two varieties--one with faint double refraction, the other in larger aggregates and dull-yellow interference colors.

The succession of events was as follows: Chlorite was the earliest mineral and was followed by quartz and later by dolomite. The sulphides are in the main later, and the latest of these are sphalerite and the very rare galena. Arsenopyrite was observed in the ore from the adjoining Copper Queen. Much of the chlorite contains small grains of siderite.

OXIDATION AND WATER: The water level stood 80 feet below the surface, and the oxidation had not penetrated any deeper. The chalcocite zone, if present, was very thin. A considerable area of rusty schist is exposed southwest of the mine, and the intention is to explore this rock as indicating a probable zone of sulphide impregnation.

COPPER QUEEN MINE

The Copper Queen mine adjoins the Binghampton on the east and comprises about 25 claims, owned by the Copper Queen Gold Mining Co. The mine is developed by two tunnels 593 and 800 feet long, a 500-foot inclined shaft, and about 8,000 feet of workings. It is stated that there are two ore bodies 7 to 12 feet wide on the 900-foot level, containing chalcopyrite and tetrahedrite with some gold and silver. A 100-ton flotation mill was recently erected. It was not operated in 1922. The ore and country rock are very similar to those of the Binghampton mine.

AGUA FRIA DISTRICT

At the end of the Tertiary epoch of lava flows Agua Fria River laid out a new course for itself over the desolate waste, and now instead of continuing in the open Bighug Valley it runs in a moderately abrupt canyon, which trenches the Yavapai schist and is about 700 feet deep. The rocks exposed are thus mainly schists.

The Yavapai schist here contains a number of quartzite lenses, and its composition is very complex, as described more fully in the section of the Binghampton mine. It contains several deposits of the schist replacement type, of which one of the most valuable is the Binghampton. There has been a considerable production of copper ores, in part smelted, in part shipped, and in part concentrated.

ORE IN SIGHT AT PRESENT TIME: By referring to the map you will see that throughout the mine there are several stopes that were working at the time the mine shut down. Also some stopes that on the level above had good ore values and on the level below are somewhat lower in grade, but by raising and drifting on them will produce ore of a pay grade for the mill.

The stoped areas are also indicated on the map and considerable probable ore is indicated. This probable ore could no doubt be developed into productive areas by work and with the aid of a picking belt. The actual ore that can now be milled and that will average 2-1/2% copper as it is mined is as follows:

60	X	50	X	9	=	27,000	100	x	50	X	4	=	20,000
25	X	20	X	10	=	5,000	40	X	30	X	10	=	12,000
60	X	25	X	20	=	30,000	30	X	10	X	80	=	24,000
45	X	10	X	60	=	27,000	15	X	15	X	8	=	1,800
40	x	40	X	10	=	16,000	70	X	6	X	120	=	50,400

213,200 ÷ 12 = 17,767 tons.

which represents a tonnage of 17,767 tons of ore that will run 2-1/2%.

That which will run 2% represents 6,250 tons and is as follows:

30 X 20 X 70 = 42,000
50 X 5 X 120 = 33,000
75,000 cu. ft.

75 12 6,250 tons.

Carbonate ore which on the surface will average 4% copper have 20,000 tons as follows:

254,000 cu. ft. 12 20,000 tons.

By installing a picking belt and eliminating 25% waste we could reduce the 2-1/2% ore to 13,336 tons of ore that would run 3-1/3% copper. By the same method we could reduce the 2% average the face of it and then we would have about 18,000 tons that would average 3% copper by this method. This, together with 20,000 tons of oxide ores which average 4% copper, gives the total tonnage in sight.

In order to start the Binghampton mine and supply enough money until we commence to get revenue from the shipments, we figure that it would take about $10,000.00. This would allow enough to first take the water out of the mine which would cost not over $500.00, as the mine only makes about 6,000 gallons a day and could be taken out in a very few days.

We would then have to purchase some supplies and keep the mine in operation until some revenue commenced to come in. The mine could then be put on a basis of treating 1,500 tons a month and shipping from the carbonate ore bodies, during which time development could be carried on and more ore opened up.

We do not think that any profit could be made out of the operation until other stopes were opened up. The ultimate revenue from the property, ssuming the ore could be opened up sufficient to operate the mill at its capacity, would be about as follows:

Revenue and expense - basis 300 tons daily of 3% ore.

Heads	3% copper	60 lbs. per ton
Tails	.24% "	4.8 " " "
Concentrates	23% "	460 " " "

$\frac{460 - 4.8}{60 - 48}$ 8 to 1 ratio of concentration $\frac{60 - 4.0}{60}$ 92% Recovery

Milling 300 tons per day Ratio 8 to 1 37.5 1125 tons X $____net smelter return value = $_____

37-1/2 tons X 30 = 1125.0 tons per month

The operating costs based on past experience at the Binghampton should be on 300 tons daily production basis would be $3.50 per ton or $_____ per month.

This does not al low for a better grade of ore than 3% being found, all of which is within the realm of possibility.

In concluding the high lights on the Binghampton are these: We have a very attractive contract for the property considering its importance and chance for development. The surface improvements would cost something over $300,000.00 to duplicate. The property ready to start up. The mine shaft is down 1,200 feet with excellent chances of finding great deal more ore in this one ore body. Other ore bodies on the surface with attract- features are there and unexplored. With a comparatively small amount of initial money take possession and start operations, I have no doubt that substantial backing can easily procured in a short time which will make the Binghampton one of the big copper mines Yavapai County.

OPERATIONS OF THE COPPER QUEEN GOLD MINING COMPANY ARIZONA
(COPIED FROM THE MINING & ENGINEERING WORLD, DECEMBER 9, 1911)

The property of the Copper Queen Gold Mining company is located 6 miles east of Humboldt, Arizona. The ore is chiefly copper with some gold and silver. Many thousands of feet of work has been done, and at the present time three phrases are in ore while a large amount of surface work has developed ore. There are 12 patented claims including a millsite and the ever flowing Agua Fria River. Manager Louis Goldman has bought and is now patenting and holding in trust with a three year option to the Copper Queen company, 11 more contiguous claims. These give the company a large area and embrace the ore making ledges for several miles. The company is chiefly owned in Paris, Texas, and it is practically a closed corporation; Louis Goldman is President and manager; R. F. Scott, Vice-President; William Frank, Secretary; Abe Goldman, Treasurer; Louis Goldman, R. F. Scott, William Frank, Abe Goldman, J. K. Bywater, H. S. Betts, J. H. Gooch are the directors. R. I. Murphy, A. N. Rogers, C. A. Noyes are the Advisory Board. F. Engel of Colorado is chemist and engineer. All work is by contract. John C. Cain having charge of this dept.

In the development of this property, President Goldman was given full charge, coming out from his home to give personal attention to the enterprise. He was not a mining man but the company had employed a couple of engineers to report and recommend and Mr. Goldman has absolutely followed their expert advice. The result being a well developed mine where all the work has been properly done and where every handling ALL THE TIME HAS BEEN IN ORE or as near so as possible. This situation makes it unnecessary to do expensive sinking for development. Nearly all exploitations of the vein system being by initial surface cuts and pits and then by crosscut tunnels, drifts, rises and winzes. The difference is seen in the fact that the 370 ft of shaft costs $22 per foot, while the other work in all approximately 3283 ft cost about $12 a foot and actually serves as well as the higher cost work done.

Tunnel #1 is about 800 ft south of the Gracie outcrop and is 280 ft long. At 180 ft in a drift was run 15 feet. There is a 44 ft winze with a 12 ft west crosscut at the bottom. All this work from 100 ft in is in mineralized ground. Vertical depth here is about 100 ft. Tunnel #2 is on the Little Ella penetrating the Copperopolis. It is 628 ft long, 90 ft from the portal. A drift is run 120 ft to the north. At 75 ft in is a crosscut east 20 ft and west 15 ft. At 96 ft in a shaft was sunk 370 ft. At 300 ft in this shaft a crosscut runs west 129 ft and east 494 ft, and from the bottom of the shaft is a drift 120 ft north. At 165 ft from the portal of tunnel is a drift 75 feet north with east and west crosscuts of 20 feet each. 475 ft from the portal is a south drift 50 ft with east and west crosscuts of 20 ft each. At 583 ft from portal is a drift 120 ft north, 325 ft south and 60 ft on this drift is a crosscut east and west of 35 ft. There are backs here of 325 ft. In this work a 17 ft quartz dike is encountered running high grade in Calco pyrite, grey copper and glanze with some gold and silver. The balance of this group is the regular mineralized schists mostly solidified. The power plant is at #2 adit and consists of a Fairbanks Morris gasoline engine of 32 HP operating a three drill air compressor. The air is transmitted to #3 at which latter point development is now concentrated. In all the work in #2 only a section 110 ft in width was found barren. This consisting of lime schists and shale which is thought to be a wall of the silicated schists and quartz.

Tunnel #3 is on the north end of the Little Ella and penetrating the Copper Queen is 540 ft long at date of writing. At 450 ft a drift is running northeast, now is 60 ft all the way in ore averaging from wall to wall over 4%. The 4-1/2 ft drift is in the center of the vein and does not touch either wall. The mineral is black Yavapai schist and quartz. This entire rosscut is in mineralized ground and crosses much territory carrying excellent values. A dike of porphry makes a rich ore body. Three cross veins from 20 to 60 ft in width are cut, either of which would justify drifting and sinking. The drift is running in a heavy ore body. The face of the crosscut is all in ore. The work here is pending toward the big outcrop of the Gracie grounds at which point the many veins seem to have come together, and where all probabilities are a great body of ore will be found. The main vein shows on the surface on the Gracie at this point to be 200 ft wide and probably 400 ft long, all mineralized. In the work in #2, the primary sulfide Calco pyrite is found in massive bodies as well as the other sulfides. This feature is extremely interesting. On the surface the ore is strictly carbonate, principally azurite, while in the tunnel backs at the present time of 250 ft the sulfides have laid in large bodies.

There is a great amount of other work n the property mostly of a superficial or surface prospecting character. The idea is to determine concentrating ore bodies, and in above tunnel levels when a plant will be installed and development at depth be forwarded by a main working shaft. This purpose is entirely feasible because the sulfides come in at such meager depths. The ore bearing schist is black usually and there is a chloritic schist always closely associated. The quartz and porphry frequently encountered makes fine ore. A small riolite dike makes a gold bearing vein of some enrichment. Considerable spar is found in the ore making materials. Occassionally an altered granite is found, but this is unusual.

The considerable underground development shows the formation to be in place, that is depth gives the same inclusions, the same crosscut dikes, the same mineral bearing mat-