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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: JOHNSON CAMP

ALTERNATE NAMES:

JOHNSON PIT
BURRO PIT EXTENSION
COPPER CHIEF

COCHISE COUNTY MILS NUMBER: 567

LOCATION: TOWNSHIP 15 S RANGE 22 E SECTION 26 QUARTER SE
LATITUDE: N 32DEG 06MIN 00SEC LONGITUDE: W 110DEG 04MIN 25SEC
TOPO MAP NAME: DRAGOON - 7.5 MIN

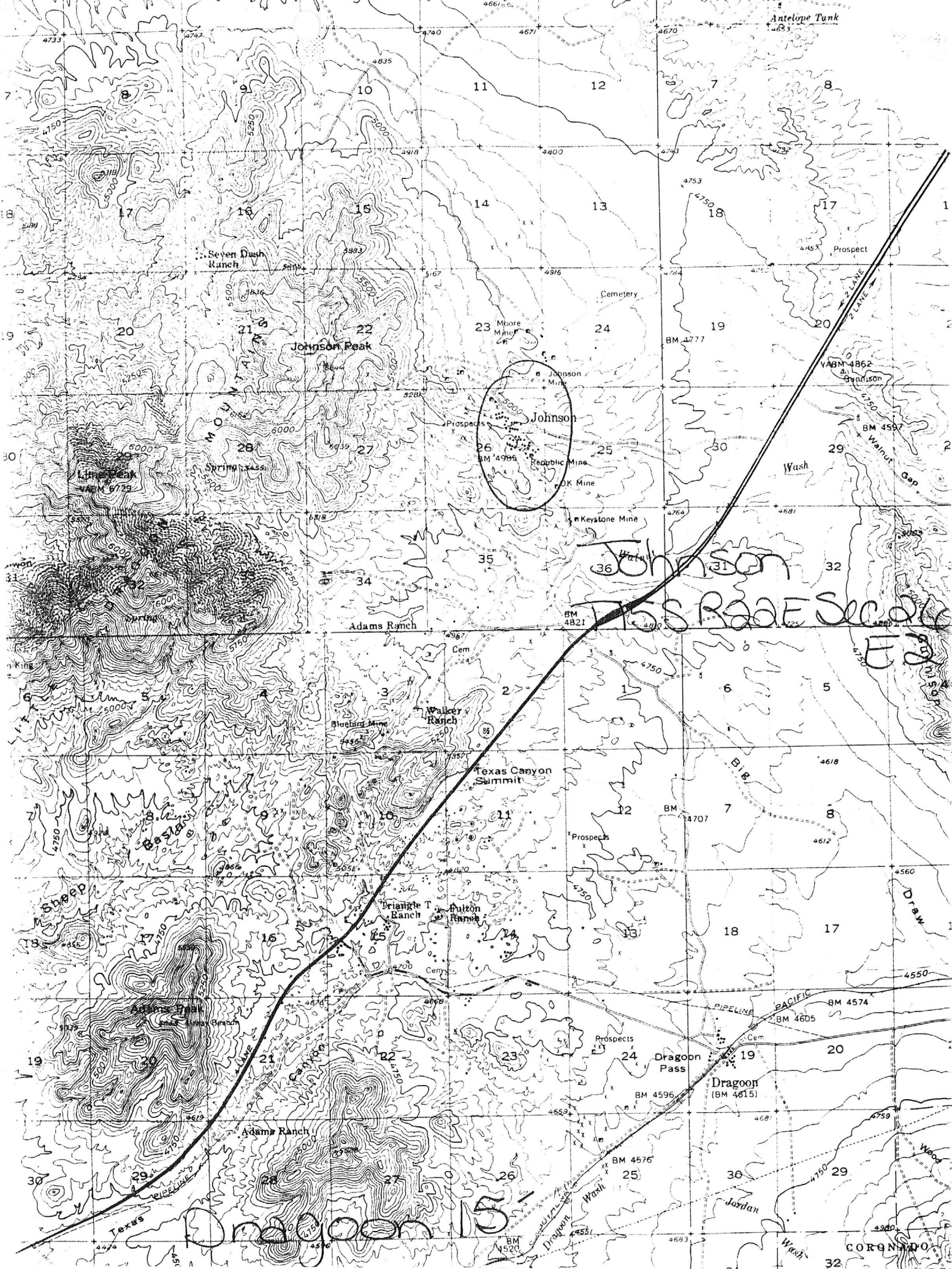
CURRENT STATUS: PRODUCER

COMMODITY:

COPPER OXIDE
COPPER SULFIDE
ZINC

BIBLIOGRAPHY:

ADMMR JOHNSON CAMP FILE
HIRT, WILLIAM, 1979, PERSONAL COMM
US MSHA 1978, METAL-NONMETAL MINE FILE REF.
ROMSLO, 1949, USBM RI 4504
USGS PP 416, 1962, GEO OF DRAGOON QUAD.



Antelope Tank

Seven Dush Ranch

Johnson Peak

Johnson

Adams Ranch

Johnson
Johnson Road Sec 26
E 2

Palicer Ranch

Texas Canyon Summit

Orange T. Ranch
Culton Ranch

Adams Ranch

Adams Ranch

Dragoon Pass

Dragoon (BM 4615)

Dragoon

CORNADO

CORONADO COPPER & ZINC

Cu, Zn

Cochise 2 - 1

E. V. Given, Dragoon

'43

NAME OF MINE: COPPER CHIEF

COUNTY:

DISTRICT:

METALS:

OPERATOR AND ADDRESS:

MINE STATUS

DATE:

DATE:

6/15/44	Coronado Copper & Zinc Philip Wiseman, 1206 Pacific Mutual Bldg., L.A. 14	6/15/44	Developing
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GIVEN, E. V. (Mine Supt.)

~~Dragoon, Ariz.~~

~~Tiger (prop)~~

('48)

See CORONADO ZINC COPPER CO. - re gas app.

12-14-44

REPUBLIC

Cu, Pb, Zn

Cochise 2 - 1

T 15 S, R 22 E

W. A. Hooton, Box 44, Dragoon

Coronado Copper & Zinc Co., Dragoon

'42

'46

DISTRICT:

METALS: CU

OPERATOR AND ADDRESS:

MINE STATUS

DATE:

DATE:

5/1/44	Coronado Cu-Zn Co, Dragoon or 1206 Pacific Mutual Bldg. Los Angeles, California	5/1/44	Developing
4/45	G.W. Nicholson, Dragoon	9/45	Milling
10/47	70 Men Employed		

CYPRUS JOHNSON COPPER COMPANY

Cyprus Mines Corp. (file)

MAPS - Upstairs in the flat storage area - Thrid Drawer

California Mining Journal, May, 1974, p. 13

Mining Congress Journal, May, 1974, p. 13, 16

Skillings Mining Review, January 26, 1974, p. 20
" " " April 13, 1974, p. 23
" " " February 2, 1974, p. 14

Mining Engineering, March, 1974, p. 12
" " May, 1974, p. 55

E/MJ, June, 1974, p. 136 (personnel)
" July, 1974, p. 27 (gen. info.)
" January, 1975, p. 78

Mining Annual Review 1974, p. 297, 299 (gen. info.)

See: Keystone Mine (file) Cochise Co. 7/6/79 a.p.

Metamorphism and volume losses in carbonate rock near Johnson Camp: Cooper, J.R.; Geol. Soc. American Bull. V. 68 No. 5, p. 577, illus. incl. geol. sketch map, May 1957

Chalcopyrite Blebs in Sphalerite at Johnson Camp, Arizona - geology file

Pyrometasomatic ore deposits at Johnson Camp, Arizona by Arthur Baker III, 1953 - FPK office

IC 7788

~~RI 5650~~

USGS P.P. 416 p. 135, 165

Mining Engineering 4/73, p. 42

Skihings Mining Review 6/9/73, p. 21

ABM Bull. 187, p. 2, 7,30

Information from MINE INSPECTOR'S OFFICE - August 15, 1957

✓
REPUBLIC & MOORE MINES (123 claims) Cochise Dist., COCHISE CO. 4-4-57
Johnson Camp, Ariz.

DOWN

Owner - CORONADO CU & ZN 1206 Pacific Mutual Bldg., Los Angeles
Operator - " " " "

Pres. Geo. D. Deb " "

Sec. C. W. Six " "

Supt. ✓ Fred E. Gray)

Agent " " ") Box 44, Dragoon, Ariz.

CU - ZN - 6238 tons 132 men

L.A.S.

Mining World - Nov. 1959



B206

May 25, 1898

Hubernite in Cochise County

Prof. W. P. Blake, director of the school of mines of the University and territorial geologist, recently visited the wolframite claim of Messrs. Cornelison & Smith near Russellville and on his return talked to the Star editor as follows:

"Yes it is an important discovery; so important and generally interesting to steel producers in this and other countries that I went at once to inspect the locality and made a special report upon it to the governor, as territorial geologist, and hope to issue a bulletin on the subject from the school of mines. The mineral is the variety of wolframite called "Hubernite", it being a combination of tungsten and manganese with only a little iron oxide. The quality is excellent. There are no noxious impurities. It is mixed with white quartz from which it can be readily separated by ore dressing machinery and other methods.

It is very heavy; nearly seven and a half times as heavy as an equal bulk of water. It is a comparatively rare mineral, but occurs in Cornwall, in Germany and lately has been imported from Australia. The occurrence of wolframite in Arizona was announced in the report of the Arizona school of mines for the year 1896 but no shipments have been made from here. A few years ago a vein of hubernite was opened in New Mexico, near Separ (?) station, and a shipment was made from Deming to Philadelphia, but the locality was soon exhausted. There has since been an urgent demand for the mineral from Philadelphia and from England. The manufacturers of steel take a great interest in any discovery of the mineral and are willing to pay a good price for it when it is pure and a high grade. It should contain at least 10 per cent of tungstetic acid, and therefore must of necessity be well purified and freed from all quartz and gangue, which cannot be done without machinery.

"The mill at the school of mines is well suited to this work and if favorable terms for freight and cargin can be made, it is possible that the owners of the claim will accept my offer to dress the ore for them. At present they are engaged in collecting together a few tons from the cappings to make a trial shipment; after which the owners, Messrs. Cornelison & Smith--will proceed to develop their claims by sinking shafts.

"The ore occurs in veins of quartz from a few inches to a few feet in thickness, traversing a coarse-grained granite in the foothills of the dragoon mountains in Cochise County. It is thus conveniently placed for exploration and shipment. A wagon can be driven to the ledges.

"As this mineral does not decompose by weathering, a considerable quantity is found amongst the debris of the croppings. Large masses can be picked up around the ledges. A specimen of this kind, weighing fifteen and a half pounds was presented to me by Mr. Walker of Russellville and is deposited in the mineral collection of the school of mines. I also brought in a 75 pound mass of quartz, penetrated by large prismatic masses of hubernite. This from the claim known as the 'Black Beauty'. Over a dozen claims have been taken up in one group.

"This ore is of course not in one continuous body. It occurs in bunches at intervals in the quartz. The quantity has got to be determined by sinking shafts and by cutting exploring pits and trenches. The value at the market ranges from \$60 to \$100 per ton."

B200

June 1, 1898 -- Mr. A. M. Wein was down from Russellville yesterday. Wein & Mitchell lately shipped 40 tons of good ore to the Silver City smelter.

June 1, 1898 -- Mr. C. E. Bosworth of Doming, was here last week, enroute to the scene of mining operations at Dos Cabezas,..... Before returning, Mr. Bosworth made a flying trip to Russellville to look over the recently discovered kubernite claims. He brought back with him a large specimen showing the unfamiliar mineral distributed in regular masses in white quartz. Mr. Bosworth represents a Philadelphia company which consumes this metal in large quantities.

Sept. 21, 1898 -- A dispatch from Tombstone last Thursday announced the sale by Smith Bros. and Otto Moore of their seventeen wolfram claims at Russellville for \$100,000. This is good news, if true.

Sept. 23, 1898 -- It is stated that Stein & Boericks who purchased the wolfram claims at Russellville contemplate the erection of a concentrating plant at that place. This will make a brisk camp at that point and will bring additional business to Wilcox.

Sept. 23, 1898 -- B. F. Halderman of Russellville was here today in quest of laborers to collect for shipment a quantity of wolfram ore from the claims recently purchased by F. E. Canda of New York. Mr. Canda is expected to visit his property in October.

Oct. 19, 1898 -- Mr. Boericks of Stein & Boericks has a force of fifteen or twenty Mexicans at work on his wolfram claims at Russellville.

November 2, 1898 -- The mill connected with the mining department of the University is being put in order for a test run upon a couple of carloads of wolframite ore from the Dragon mountains.

Nov. 2, 1898 -- Stein and Boericks are said to have nearly fifty men at work. F. E. Canda is also contemplating work on a large scale.

Wednesday, April 26, 1899 -- Mr. A. M. Wein of Russellville was a visitor at this office yesterday. Mr. Wein recently sold to Geo. W. Jacobs of New York, the Copper Chief mine in Peabody camp, Cochise district. Mr. Fitzgerald several days ago began hoisting ore from the Peabody mine for sorting and shipment. The same parties have mining properties in Pima county and Mexico, and have ordered a smelter to be erected in El Paso.

August 9, 1899 -- It is said that the Peabody mine of Russellville changed hands for \$25,000.

October 18, 1899 -- The Dragon mining company, operating the Peabody copper property at Dragon Summit, Arizona has become one of the largest shippers of high grade ore to the El Paso Smelting works.

October 25, 1899 -- Asa Walker of Dragoon, came down Saturday. Mr. Walker is interested in 25 Wolfram claims from which he is shipping ore at \$490 per ton or about 22.8 cents per pound.

Nov. 15, 1899 -- The Dragons
Cochise County's Northwestern Strip of Mining Country

Cochise Station, likewise Dragoon Summit, are the shipping points of the Dragoon mountains just east of Benson, Cochise county. Very little has been said of the northern section of the Dragoon range, that portion lying below the Southern Pacific railway line and what has been said generally

-O
-P
-Y

Nov. 23, 1898 -- Shipments of wolframite ore are being made from Stein and Boericke claims at Russellville to the Arizona School of Mines at Tucson, where it is put through a concentrating process.

Nov. 23, 1898 -- Messrs. Fiege & Co. are about to start a commissary at Russellville to supply the employees of the two wolfram companies. R. D. Lusk will have charge of the store.

Nov. 23, 1898 -- Mr. A. H. Wein was in from Russellville Friday. Messrs. Wein & Mitchel lately sent a forty ton shipment of rich Peabody ore to the Guggenheim smelter in Mexico. They have lately opened up a good body of high grade ore in the Peabody mine, which they are working under lease, and their own claims are also showing up well.

Dec. 28, 1898 -- Shipments of wolframite ore from the new mines above Willcox are coming in freely of late. Over fifty tons have been delivered at the university since the discovery. The ore is quite valuable, about \$300 per ton. The product of the ore after treatment is used in hardening steel. It is being mined with great ease. Report says from five to seven tons per man can be knocked down.

Mar. 22, 1899 -- Messrs. Stein & Boericke who have been shipping wolfram ore from their claims at Russellville, discharged most of their miners last week. As they still retain a few men, it is thought that the suspension of work may be but temporary.

Mar. 29, 1899 -- John Miller's new strike has brought out from the east a government expert, who has purchased a group of ten wolframite mines and will commence shipping ore to a concentrator at once. The ore Miller and others have shipped will run 70 per cent. This property lies two miles east of Russellville and three miles north of Dragoon Station of the S. P. railroad in this county. The work here has been confined to a few owners and the opening of another company insures a thriving burg there.

Peabody Mine Bonded (Bisbee Orb)

Mar. 29, 1899 -- From a reliable source the Orb learns that the old Peabody mine in the Winchester district near Russellville, has been bonded to El Paso parties for \$25,000. The mine at present belongs to W. D. Hubbard, of Hartford, Connecticut, who purchased it from a company at a low figure because it was reported as being worked out. For the past few years it has been worked under a lease by Messrs. Wein & Mitchell who have made a snug little sum for themselves out of their lease. At present there is a fourteen foot ledge of ore in the face of the drift which runs well in copper and carries considerable silver. Six thousand dollars has been paid down on the bond and the holders of the bond will soon put to work a number of men in taking out ore and further developing the mine.

The old Russellville Co., which owns 10 patented claims in this same district, is making an effort thru its representative in London to place the property on the market for \$250,000. In this group are several well developed claims, the shafts ranging in depth from 50 to 150 feet, beside a number of drifts and cross cuts, all of which show copper ore and of a good percent. Should this property be taken and work started it would make the Winchester Dist. one of the best in the country.

B 200

Several other parties likewise have excellent prospects, notably Frank Perry and Melzer Osborn, the latter of whom holds his property at \$30,000. The bent index of promise in a camp is found in the ore shipments. Four different outfits are shipping regularly from Johnsonville via Cochise, viz., The Dragoon Mining Company, S. S. Campbell, W. de H. Washington, who is working the Osborn mine, and Wien & Mitchell. It will be readily understood from these brief notes that the outlook for Johnsonville or Peabody camp is exceedingly bright.

Mar. 7, 1900 -- Johnsonville - The busy little camp, variously known as Johnsonville and Peabody camp, has enjoyed a season of comparative quiet since fate gave such a tragic termination to the tumultuous career of Dave Watt. A few nights ago, however, three Mexicans, surcharged with liquid inspiration, kicked down the door of Fiege & Co.'s store and met with a warm reception from Manager Frank Libby, who gave them a fusillade of shots from his pistol. Deputy Sheriff Mulkey was notified and on Monday arrested and brought in Ramon Sorrand another Mexican charged with the offense. The third cannot be found.

Activity in the camp increases and prospects continue to improve. The Dragoon Mining company is making regular daily shipments of ore from Cochise. About seventy Mexicans are employed by this company, who have already taken out more than four times the cost of the mine. They use a gasoline hoist.

The Mammoth mine, S. S. Campbell, manager, is steadily increasing his force of men. A steam hoist is in operation and a smelter will probably be erected as soon as development justifies the step.

The St. George mine, recently leased by Messrs. Bannon and Scherrer, the owners, to a Chicago company, is to be developed on a large scale. We are informed that contracts have been let for three shafts and that inside of ninety days sufficient men are to be at work to constitute three shifts for each of the proposed shafts.

May 30, 1900 -- Wolframite Mines at Dragoon Summit
Asa Walker came in from the Dragoon Summit Saturday and called at our office. He is interested in some of the wolframite mines that are located near the Summit. He has a number of claims and is working four men regularly. They take out from two to three hundred pounds of wolframite per day. The ore sells in the east for about \$450 per ton. At present Mr. Walker is working with a dry washer, but later when the rainy season begins will begin placer operation on a larger scale. Beside having several good placer claims he owns a number of claims which show liberal outcropping of ledges. The wolframite found here is of the purest quality and the deposits are the largest known in the world.
Mr. Walker is making regular shipments and these mines are proving a little mint to him.

May 6, 1900 -- Four different shipments of copper ore have been received during the past few days, by the El Paso smelter from newly developed prospects in the Dragoon mountains.

May 6, 1900 -- From Frank Perry and Leanord Page, who arrived in Tombstone from Johnson, the prosperous mining camp in the Dragoons, three miles from Russellville, it is learned that the camp has a population of over 300, says the Tombstone Prospector. At the Peabody mine 165 Mexican miners are on the payroll, and two carloads of copper ore are shipped to El Paso daily. The Peabody is under the supervision of H. J. Clifford. At the Mammoth mines, some thirty-five or forty Americans are employed, and the property is looking exceedingly well. These mines are being opened by an eastern company, and are in charge of S. S. Campbell. Messrs. Perry, Mitchell and Wien, own some promising copper claims, which are also doing well.

Perry, Mitchell and Wie own some promising copper claims, which are also doing well. Several groups of mines are being negotiated for under bond, and the district is growing in prosperity. The Wolfram claims about Russellville are valuable and attracting attention. Altogether that section is rapidly coming to the fore in mining development.

June 13, 1900 -- Another mining deal took place at Willcox last week for two claims at Johnsonville, in the Dragoon mining district. Col. H. C. Hooker, R. E. Hooker, Joe Hooker and Joseph Schwertner purchased the Magazine and People Party claims from Melzer Osborn and Sam Bigler. These claims join the Peabody, which was recently sold to New York parties for \$25,000 and has produced largely under the new management. The Republic and Mammoth are also on the same belt and are both regular shippers of high grade ore. The consideration of this sale was \$30,000, ten per cent of which was paid cash and the balance to be paid within one year. The ore runs high in copper and also contains some silver. Returns from shipments show 30 percent copper and one ounce of silver to the ton. Considerable ore has been shipped from them lately and the new owners will immediately put a force of men to work and make regular shipments in the future. The mining activity in this section is something wonderful and every day brings to light additional evidence of the untold treasures hidden away in the surrounding mountains.

June 20, 1900 -- H. J. Clifford, superintendent of the Peabody mines spent Saturday and Sunday in Willcox. They are now shipping several car loads of rich ore daily, and 127 men are on their pay roll.

July 11, 1900 -- John Miller, owner of the Good Hope mine and contiguous claims, was down from Dragoon mountains Saturday. He is developing a good mine, and will soon make some shipments.

July 11, 1900 -- Mining activity around Willcox continues, and every week brings evidence of the great mineral resources of the surrounding country. Prospects close to town which are being developed show good ore and bid fair to become good shippers. In the Dragoon mountains new finds are reported, and the copper deposits in the range are almost inexhaustible. Around Johnson operations are in full blast. The Peabody owned by the Federal Copper Co. of New York of which Geo. W. Jacock is president, L. C. Dressor, treas., and J. E. Clifford, manager, is shipping two cars of ore daily from Cochise; other properties around Johnson are being developed. Col. H. C. Hooker, E. R. Hooker, and Jos. Schwertner are working another mine near the Peabody and are preparing to make regular shipments in the future. The Willcox section is full of promise, and capital judiciously invested will perhaps soon make it possible to get in on the ground floor, and yield a hundred fold return.

August 15, 1900 -- H. S. Wein came in from Johnson Sunday. They made a fine strike recently in one of their claims and uncovered a rich body of copper ore. Johnson is destined to be a great copper camp in the near future.

Sept. 5, 1900 -- Bert Bunlap shipped a carload of ore from his Dragoon mines to El Paso last week.

Sept. 5, 1900 -- Wein and Mitchell shipped a carload of rich copper ore from their properties at Johnson. It is estimated that the car will run 40 per cent copper, besides some silver.

The above is but a meagre presentation of the Dragoon, but what is shown would indicate that it has a future of some pretensions.

About 100 miners are at work in the district.

Dec. 20, 1899 -- A. H. Wein, T. K. Mitchell and H. S. Wein signed papers Saturday transferring to the Dragoon Mining company three claims near the Peabody mine for a consideration of \$10,000. This company, under the efficient management of Mr. Clifford, is shipping large quantities of ore. A power hoist has lately been erected at the mine.

Feb. 21, 1900 -- Two prominent stock holders of the Dragoon Mining company which is operating the Peabody mine, arrived at Dragoon Monday. They were Judge Desar and Dr. De Ricketts of New York. They were accompanied by Prof. Pope, the company's expert. The company is reported to have taken out of the Peabody over \$100,000 worth of ore in the last few months.

January 17 -- (1900) Great Mining Revival at Johnsonville
The Peabody and Adjacent Mines Become Active Producers of Copper

As we stated last week, there is increased activity at Johnsonville, Cochise Mining district. S. S. Campbell, who sold the Peabody nearly twenty years ago for \$350,000, recently heard of the reopening of that valuable mine and has returned to develop ten patented claims which he and his associates still own and which give great promise of yielding them another fortune. The following details are given by an acquaintance in whom we have entire confidence:

The Peabody, owned by the Dragoon Mining company, is shipping an average of a car a day of good ore. The retimbering of the shaft is about completed and the new hoist will at once be put in place, when the daily product of the mine will be largely increased. It is well known that, in the shape of back filling in the old working of the mine, are at least 5,000 tons of ore that was left there by lessees during the period of low copper. This ore is now valuable and will cost the company nothing for mining. The Dragoon Mining company has recently purchased from Wien & Mitchell three valuable claims adjoining the Peabody, paying therefor \$10,000 which gives them work for years to come.

W. D. Hubbard who sold the Peabody a few months ago for \$25,000 did well enough, as he got it for a song and had received eight or ten thousand dollars in royalties; but the new owners made a ten strike, as they have already taken out close to \$75,000, and have hardly made a beginning.

The Mammoth mine, owned by S. S. Campbell and Philadelphia parties, is about to be equipped with a hoist and bids fair to become one of the best properties in the district. The ore is sulphide. Mr. Campbell is also exploiting the Republic mine which has an immense body of low grade ore. The mine has been opened to a depth of 200 feet and there is said to be enough ore in sight to supply a thirty ton smelter. Mr. Campbell and associates also purpose developing eight additional patented claims as soon as they can get to it.

On the Blue Bell group, owned by Wein and Mitchell, is a shaft nearly 100 feet deep, with a good showing of ore. At another point on the same property they are opening up a large body of high grade ore, which is estimated to run 25 per cent copper. The Copper Chief group, belonging to the same parties, also promises well, a fine body of sulphide ore being exposed at a depth of sixty-five feet.

Sept. 12, 1900 -- Deputy Sheriff Leanord Page was down from Jhonson Sunday and reports that camp is in a flourishing condition. The Wein's have bonded six claims recently. There is considerable activity in that section.

Oct. 10, 1900 -- H. A Wein was in town Saturday and said they would begin to ship ore from their properties at Johnson in a few days. They now have several car loads in their ore bins.

October 19, 1900 -- John Miller was in from the mines. He and Bert Dunlap were working in the Dragoon last week. The ore body shows up splendidly and the smelter returns for ore shipped runs high.

Nov. 2, 1900 -- H. S. Wein was down from Johnson last week and reports that they are negotiating a cash sale of the Blue Bell group of mines. The property shows up well.

Nov. 30, 1900 -- G. W. Jacocks, president of the Dragoon Land Company, arrived from New York City last week. The Peabody, one of their properties, is now shipping about five carloads of rich ore each week.

Dec. 7, 1900 -- Mining activity in this section is constantly increasing. S. S. Campbell, owner of the Mammoth and Republic mines, will shortly go to Philadelphia. There he will make arrangements to start up his mines again which have been idle for about five months. He has a magnificent group which is capable of turning a great deal of rich ore.

Dec. 7, 1900 -- The Peabody mine of Johnson is shipping five carloads a week. The mine was purchased a little over a year ago for 25,000. Since then about \$400,000 have been shipped from it.

Dec. 14, 1900 --

JOHNSON

Johnson, Ariz., Dec. 10, 1900

A Promising Copper Camp

The bustling town of Johnson is situated at the door of the Dragoon Mountains, seven miles west of Cochise and eight miles north of Dragoon. Fine wagon roads, almost equal to an asphalt pavement lead to the camp from Cochise; the grade between the railroad station and the camp is only 500 feet. Wagons can be hauled over every claim at Johnson.

Mining men from a distance cannot understand, until they have seen for themselves, that a big mining camp can be situated on a level prairie. Their imaginations conjure up heaved towering mountains, deep and lonely glens, where the sun's rays fall only at high noon, and that \$10,000 to \$100,000 must be spent to build a wagon road to a good mine, and set a person down as a champion liar who has the temerity to assert that Johnson is situated on the broad foothills of the Dragoons. Wagons and teams can move with the utmost freedom in every part of the camp.

Water for the camp is supplied by a fine pipeline from Russellville which is a natural basin for the underground flow in that section. Johnson has two stores, Fiege's and W. H. Washington. Both places do a thriving business. Besides the store is a boarding house and other business interests.

The main mine at present operated is the Peabody, which was purchased a year ago at \$25,000, and from which \$500,000 has since been taken out. They are now shipping four car loads a week and employ over 200 men. The property is owned by the Federal Copper Company of New York City, of which G. M Jacocks is president and J. J. Clifford Manager.

The other promising claims join the Peabody. They are the Magazine and People's Party, owned by E. R. Hooker, W. F. Nichols, and Joef Schwertner. They are pushing development work and have a fine prospect.

The Blue Bell group owned by Wein and Mitchell is another fine property. It consists of seven claims. One car of ore was recently shipped from this property which netted over \$900.

Numerous other claims are located in the same vicinity, all showing up beautifully.

Farther to the south and west is Mammoth and Republic group. This magnificent property is considered to be the mother lode of the camp, and consists of sixteen claims, most of them patented. Several shafts have been sunk on large ore bodies which run unsorted from 8 to 30 per cent copper and considerable silver. Cars, hoisting machinery, houses to board and sleep men are on the property, and it is in splendid working shape. It was closed down July 7th, but will resume operations in the near future.

Bigler and Osborn own a number of promising claims adjacent to the Mammoth and Republic.

A. H. Wein has a fine group known as the Copper Chief with well defined ore bodies.

A number of other claims could be noted but space forbids at this time.

Sufficient to say, in conclusion, that Johnson, like Dos Cabezas, is destined to become a magnificent copper camp, whose only rivals will be Bisbee and Jerome.

April 5, 1901 -- L. E. McBain is in town from the Dragoons, where he has been on a prospecting trip. He reports great activity in the Dragoons. The Peabody mine, which he visited on his return trip, is producing two car loads of high grade daily, which is shipped to the El Paso smelter.

May 17, 1901 -- The Black Prince Copper Co. was recently incorporated by Denver parties who have secured seven claims owned formerly by Wein and Mitchell at Johnson. They now have eight or ten men employed doing development work, with a good showing of success. Johnson is certainly booming.

July 12, 1901 -- H. S. Wein came down from Johnson the other day on business. He says things are moving along nicely at Johnson. The Peabody is producing heavier than ever and the People's Party and Magazine mines under the management of Joe Hooker is showing up nicely and taking out considerable ore. Fred Baker recently struck a fine body of sulphide ore in the claims he is developing, while the Black Prince Copper company has a force of men at work developing the Blue Belle group with the very best of showing. Business is brisk up there and the three general stores, Fiege & Co., W. H. Washington, and Anderson & Co. are all doing a fine business. Johnson is bound to become one of the best camps in these parts.

Sept. 20, 1901 -- Burt Dunlap is now getting ready to ship ore. It does one good to see the lights at night time at the Good Hope mine from Cochise. It reveals activity.

Sept. 20, 1901 -- H. S. Wain was down from Johnson Monday, and reports four companies operating up there. The Peabody produce about 100 tons daily. The Black Prince Copper company is working in four different places in their property. They employ a good force of men. In all four places they are in ore, three of which are good shipping ore. In sinking one shaft at the depth of 60 feet, a fine body of ore extending clear across the shaft was encountered. Further sinking has not cut the vein yet. This company has a bonanza, and the ore already taken out almost pays for developing work. One car was recently shipped at a handsome profit, and another is ready for shipment. To look for big deposits on this property. All that is needed is depth.

Oct. 25, 1901 -- The Good Hope mine has two car loads of ore here awaiting shipment as soon as the cars arrive.

Nov. 15, 1901 -- Last Friday the Blue Bell group of mines, located in the Dragon district, were sold to Hugh Mackay & Co., of Denver, for \$30,000. The beneficiaries were J. H. Wien, S. H. Wien and G. H. Mitchell, the owners of the mines, who have been working and developing them for some time. The sale was promoted by Billy Reed, of the Park View Hotel, of this city, who received a substantial commission from the sale. The cash was paid by the Consolidated bank Friday, so that the sale is closed, the sellers have the money and the Denver gentleman have the mines. The properties are very promising, and will be worked on an extensive scale. (Tucson Star).

Nov. 15, 1901 -- Hugh Mackay representing the Black Prince Copper company, a corporation backed by Denver capital has taken up the bond of the Blue Bell group of mines owned by Wien and Mitchell at Johnson.

Dec. 6, 1901 -- A. H. Wien, of Russellville, spent Wednesday at Willcox. The mining activity in his section is continuing unabated. He has bonded the Copper Chief group to eastern parties and development workings exposed greater ore bodies than ever in that group.

July 11, 1902 -- Editorial * THE BLACK PRINCE COPPER COMPANY
Splendid Showing Of This Property

Last Sunday we incidentally dropped into Johnson and had the pleasure of seeing the property now being operated by the Black Prince Copper company. Johnson is a camp which for several years has been in active operation and has several producing properties. The Peabody has produced into the millions and is still in better condition than ever. The Mammoth and Republic is another magnificent property which the owners refused an offer of \$350,000 for some time ago. Numerous other smaller properties are worked at intervals which promise to rival the two before mentioned.

The camp is located in the famous Dragon range which has of late years attracted the attention of mining men, and in which yearly are discovered new and promising properties. It is a continuation of the copper belt extending from Globe, Arizona, including Bisbee, and Cananea, Mexico. Ten miles from Johnson is the Old Terrible mine now a steady producer. Ten miles further we find the Black Diamond which in a few weeks will put in operation a 200-ton smelter -- further on are the Middle March, Copper Bullion and Gleason with its cluster of producing properties and others too numerous to mention. The original locators of the property now owned by the Black Prince Copper company were Messrs. Wien and Mitchell, who have resided at Russellville, two miles away, for nearly twenty years.

For years these gentlemen clorided on the claims and shipped car after car of rich copper ore, making handsome wages.

In May, 1901, they bonded this property to Hugh Mackay, now president of the Black Prince Copper company. Mackay carried on a systematic exploration with a large force of men for six months and at the end of that period satisfied himself of its value and purchased it outright paying spot cash for the whole group. He then organized the company and transferred the claims to the corporation. The company has pushed development work steadily and the results are flattering. The group consists of seven claims containing about 140 acres. The claims all adjoin each other forming a compact body.

The formation consists of subcarboniferous limestone (dolomite) cut by porphyry (felsite) and quartzite dykes. The trend of the porphyry dykes is from northwest to southeast. Mineral stains and ore croppings are visible almost everywhere. The surface croppings are the greatest that we have ever seen. Numerous surface holes have been dug here and there all showing rich ore. In past ages the mineral kettle of mother nature has certainly boiled over fiercely here and scattered its contents lavishly in and about these claims. One treads upon ore bearing rock at every step. On the north side of the porphyry dyke the copper ore is a rich carbonate, while on the south side it changes to sulphides. We descended into an incline of the depth of about 160 feet, which had been run on a ledge. At the fifty foot level we entered a drift running north about 100 feet along the ledge showing with mineral all the way, and one to the south 40 feet likewise in mineral. The ledge runs from 8 to 30 feet in width, and the pay streak in it from 2 to 5 feet. At the 100 foot level are other drifts showing the same condition only the ledge and pay streak increase in size.

At the 155 foot level the same conditions exist, except that the ore is beginning to turn into sulphides and the body is increasing in size. Another ledge not appearing on the surface and running in a northwesterly and southeasterly direction was encountered in the drift at this level. The drift is now run along the ledge in a southerly direction and is approaching the porphyry dike and the outlook is good. There are so many indications that a large body is being approached. The ledge matter is changing into softer limestone, the ore is getting richer in crevices and cracks in the lime and show favorable conditions for large mineral deposits. All that is needed on this ground is to gain depth. The history of every producer in Arizona emphasizes this fact. All the ledges, pockets, and surface outcrops evidently spring from a common source below and sinking will bring the mother deposit to light.

In all about 600 feet of development work has been done, nearly every place showing ore.

There are now several hundred tons of rich ore in sight and several tons of the dumps ready for shipment. No stoping has been done. All the ore taken out has been removed in the regular routine of development work. All the company has also shipped several cars and returns show an average from 16 to 24 per cent copper and from ten to 10 ounces in silver to the ton. The ore taken out has almost paid for the development work, something unusual in mine developing.

The property adjoins the Peabody on the northeast and lies close to the Mammoth and Republic on the southwest. A splendid wagon road leads to

Cochise, a station on main line of the Southern Pacific Railroad, seven miles distant. Water can be secured in a wash a mile or so away. A pipe line has been constructed from Russellville two miles distant from which water for the camp is secured.

The cost of mining, hauling the ore to the railroad, transporting it to the smelter is small. A smelter is now being planned and constructed at Benson, only 30 miles from Cochise station. Few properties are so admirably situated for economical mining and handling of the ore.

To sum up the situation we were well impressed with what we saw and it is seemingly one of the most promising mining propositions that we are acquainted with.

The company is composed of Denver men whose integrity and business standing are too well known for us to dilate upon. The officers are Hugh Mackay, president; Alexander Ross, vice president and treasurer; L. M. Pettitdidier, secretary.

The company is capitalized for \$1,500,000, divided into 1,500,000 shares of the par value of one dollar each, fully paid up and non-assessable, but by no means over stocked or top heavy. It will pay any one who is desirous of investing in stock to go on the ground and examine the property as it is impossible for us in our limited space to do it justice. We confidently look forward to a great producer here, which also seems to be the consensus of opinion of all who have seen and examined it from the experts down to the veriest tenderfoot.

August 1, 1902 -- As stated in our last issue, the Peabody at Johnson has again resumed operations with a good force of men. They intend to increase their force as soon as more miners can be secured. It is also rumored that the Mammoth and Republic will start in a few days. If this proves true, Johnson will be one of the liveliest camps in these parts before many weeks roll by.

Sept. 12, 1902 -- The second shipment of Nuberite from the deposit recently found in the Dragoon mountains has been made and the quality of the ore is improving with depth. Nuberite is one of the ores of tungsten and is in great demand.

Sept. 26, 1902 -- J. B. Gregory of Dragoon, has sold one half interest in his mining property near that place for \$10,000. The final payment to be made in 60 days. The purchasers will begin operation in a very few days.

Mining notes from Oct. 10, 1902 -- *Dragoon Mining News*
There is a probability of a town being built at Dragoon
The Dragoon Mining Co. are working quite a force of men.
Alexander Mackay is working a group of men on his properties adjoining the Peabody mine.
The Federal Copper Co. is shipping ore at the rate of three cars a week to El Paso from the Peabody mine.
The Gregory Consolidated Mining Co., located one mile and a half from Dragoon station is going to erect a leaching plant to treat fifty tons of copper ore a day.

March 27, 1903 -- W. A. Flege of Dragoon, believes the advance in the price of copper will result in a revival of mining in the Dragoon mountains.

especially in the Pea. y mine, located at Johnson near Cochise station. "This mine," says Mr. Fiege, "has already produced a large amount of rich copper ore, and for many months shipped two car loads every day to the El Paso smelter. Since the decline in the price of copper work has been slack there, but I expect soon to see shipments resumed and many additional men put to work."

July 3, 1903 --

IN THE LITTLE DRAGONS

A Range News Representative Visits the Camp of Johnsonville

He finds Operations at this Mining Center Very Active
Having been given a "hunch" some time ago that there would be something doing in the historic old camp of Johnsonville, a Range News representative took a day off last Friday and paid his respects to the camp.

Through the kindness of Mr. B. F. Halderman, we were shown over the field and introduced to the mining fraternity of the district.

We found that the old Mammoth copper mine has been purchased by the Black Prince Copper Co., of Denver.

This company is a well known combination of eastern and Denver capitalists, with Hugh Mackay as its president, who owns and operates paying properties in Colorado.

Mr. Thomas King, the former superintendent, told the writer there was not a better copper mine in the country than the Mammoth and he could not understand why the former owners could not mend their differences and get down to business.

Mr. King expressed himself as well pleased with the methods that were being adopted by the new owners. He says that they are practically mining men, and better yet, they have the capital and are prepared to operate on a large scale.

The main shaft at the Mammoth workings is down 270 feet on a vein of 12 and 14 per cent ore of good width.

There are levels now being cut at 100 and 270 feet. One drift has been run forty feet.

The same company also own the Republic, a good copper prospect with a shaft 160 feet in 10 and 12 per cent ore. At present there are 500 tons on the dumps at this shaft.

The shafts are working day and night and we are told the company will ship a carload of ore daily. In fact, while we were on the ground they commenced shipments, sending a carload to Cochise, the shipping point, last Monday.

A station is being cut on the 50 foot level of the Republic and from this there has been a drift sent out 30 feet into a body of ore with an eight foot breast. At the 100 foot level a drift is 110 feet following a vein which carries copper values of 10 to 12 per cent.

Another shaft known as the Murphy shaft, is down 50 in black sulphides, showing an average of 20 per cent.

The Black Prince Copper Co. have in all a group of 20 claims known as the Republic and Mammoth groups. Robert Mackay, who was in charge, while very conservative in his estimates of what the mine will produce, admits that the property will pay its way from the proceeds obtained from the shipments of ore they are making. In fact the property is a paying proposition today.

Mr. Mackay says the company shall endeavor to keep sinking on the old shafts and at the same time produce enough ore to pay a profit.

As the writer was taking in the Mammoth shaft, he saw two carloads of ore on the dump. Mr. MacKay told us that this was one day's work. Monday they began shipping and will continue to do so until they can put up their own smelter, which is the intention of the new company to do as soon as possible.

The ore is of a self-fluxing nature and the supply of ore that will average 8 per cent is inexhaustible, while a great deal of the better grade will go 12 and 14 per cent. This is better average than is obtained at Bisbee, Morenci and Clifton, and these companies are coining money. This will give one some idea of the bonanza the Black Prince Copper Co. have captured.

In the near future we shall give our readers a more complete report concerning the operation of this company.

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THE WOLFRAM CLAIMS

It was not so very long ago that wolfram created some little excitement in the mining world. The metal is used by steel manufacturers for hardening purposes and four or five years ago was worth on the market \$520 per ton. Today it is worth about \$250. The slump in price has been caused by the increased production and also on account of the fact that the miner has recently learned to know the mineral when he found it. Great veins of this metal can be seen in the Little Dragoons. It appears in its pure form in the shape of nuggets and is found on the surface and in the washes.

AT THE JOHNSON CAMP

July 24, 1905 -- The Black Prince Copper Company Are Developing Their Property and Shipping Ore Daily

Last Friday a Range News representative took a run up to the camp of Johnson to gather a few notes for our readers concerning the mining operations in this interesting district and of course he paid a visit to the Black Prince Copper Company's property.

This company's holdings embrace several groups of rich copper claims, viz: The Mammoth, Republic, Blue Bell and Washington. These properties are located at and along the foot and southeastern slope of the Little Dagoon mountains and about seven miles northwesterly from the town of Cochise, a station on the Southern Pacific railroad, and consists of 28 patented mining claims of 1500 X 600 feet forming a solid block of rich mineral land 600 acres in size, carrying copper and silver in large quantities.

These claims are apparently in the great copper belt running through Arizona from the southeast in Sonora, Mexico, to the celebrated United Verde in northwestern Arizona.

In the Mammoth shaft, which is down 270 feet and in good ore all the way, we found the ore to be a sulphide intermixed with bornite of copper. Copper glance comes in large bodies at the bottom of the shaft with the sulphides. We found from 18 inches to two feet of this class of ore, while the veins on the side of carbonate and sulphide mixed are from 4 to 5 feet wide, giving a pay streak in all of about 6 or 7 feet. There is a drift at the 100 foot level and one at the bottom of the shaft. As these drifts continue they show deposits of rich ore, in places 10 feet thick. The company is opening up these levels preparatory for stoping.

The Murphy shaft, which is down about 52 feet lies 400 feet in a northwesterly direction from the Mammoth shaft, was next visited. When they

Commenced sinking the Murphy shaft, about 16 inches of ore exposed and at the present depth the pay streak has widened to 9 feet of sulphide ore. A car load of the ore was shipped and the smelter returns showed 14½ per cent copper, a remarkably high percentage, considering the depth of the work, and as a consequence the ore taken from the Murphy shaft paid for its development.

Usually when a company undertakes to open up a mining property, they provide for a sinking fund of anywhere from \$20,000 to \$50,000 or more for development purposes and do not expect ore in paying quantities at the start. Thus one can readily comprehend what it meant to a company and its stockholders to have a property that will pay its own way from the grass roots down.

The Black Prince Copper company are doing even better--they are taking out and shipping enough ore to pay for opening up their property and making money besides.

Surface indications on the Mammoth group are apparently their entire length, and running parallel with the Mammoth is the Miantinomah claim belonging to the same group. It has a 60 foot shaft which shows good ore. There is also a large ledge on this claim that shows ore its entire length.

After lunch we sized up the Republic group. Here we descended the Republic shaft to a depth of 140 feet and found two drifts running in opposite directions. One was some 85 feet in length and the other 111 feet and both in good ore every foot of the distance. On this property the company have gone through the carbonates and encountered the sulphides, and they are naturally feeling in good spirits over this fact as it is pretty certain that when the sulphide ore becomes prominent the mine is of a permanent nature.

The Republic is opened up the entire length by cuts and shafts from 10 to 140 feet in depth and shows a good body of ore wherever prospected. We believe it safe to predict the future of this property as assured. The day we were on the ground the company was shipping from the Republic, the ore being of better quality than the average we have seen in the Dragoons. A string of teams may be ^{seen} along the road between the mines and Cochise, the shipping point, daily, hauling ore.

The Blue Bell group was the last, but by no means the least, of this company's properties we had time to inspect. This group of mines was purchased some two years ago by the Black Prince Copper Co., and is a valuable addition to their already extensive holdings.

One shaft on the Blue Bell group is 152 feet in depth, with drifts on the 50, 100, and 150 foot levels. Drifts extend in two directions on the 50 foot level and are in good ore their entire distance, about 50 and 60 feet. We also found the two drifts on the 150 level in plenty of ore, the one to the west being in 50 or 60 feet and in the east drift a cross vein has been encountered and a drift driven along it 300 feet showing glance which carries high copper values.

The ground showing this wolfram has been taken up by eastern steel manufacturers and they have retained Mr. Halderman to look after their property. Their holdings comprise some 25 claims.

MR. BANNOW'S CLAIMS

Mr. Alexander Bannow, who has been in the district off and for the past four years, owns several good prospects, known as the O. K., Roswell, Charles, Mary, Erika, Wolfrime, and Louie. These claims are owned by Mr. Brannow personally. He is part owner in several others that have good locations and indications of carrying some rich deposits of copper.

touched upon the production of wolframite, shipments of which have been made during the current year, not in vast quantities, but certainly a number of carloads. Wolframite is a commodity that commands from \$100 to \$500 per ton. It is not usually found in bodies but in pockets intermixed with copper bearing ore and varying in weight per ton. The Dragoon range is copper in its general characteristics and includes besides those mentioned below, the Bartlett Fitts property on which is a smelter operated by the Copper King Mining Company, which controls claims abutting the Bisbee. The Middle March is in near touch to the Narrett at the south end. The famous Pearce gold and silver mine is within seven miles of and east of the range in the Sulphur Springs valley, which extends up through Willcox to the Graham County line.

Yesterday, J. H. Knowles of Denver was encountered, and from the gentleman a large grist of mining news relating to the north end of the Dragoons was secured. Mr. Knowles is interested in the St. George copper mine which property was abandoned twelve years ago. Mr. Knowles took charge last July and sunk 100 feet, opening up considerable, aside from the shaft. Since acquiring the St. George the owners shipped two carloads of ore weekly to El Paso. Active work in developing will be apparent two weeks hence. Mr. Knowles expressed himself as being well pleased with the property, so much so that he has secured options on four abutting claims. Shipments are made from Summit Station, four miles distant.

The Peabody product of copper ore goes through Cochise station. This property was in litigation during a brief period. G. E. Fitzgerald released his holding to Geo. Jaycocks of New York for consideration of \$23,000. Jaycocks is president of the Peabody company. He placed H. J. Clifford in charge and Louis Ezekiels of Tucson as his assistant. The company have an option on 16 claims adjoining the Peabody. Fifty tons of ore have been sent out daily to El Paso. The ore is high grade copper carbonates and will average 25 per cent. Fifty men are employed at the Peabody. President Jaycocks has been associated with a big smelter propositions at El Paso. Mr. Knowles could not speak intelligently of this matter, however.

Geo. Mulkey is doing considerable work on twenty claims and is getting out wolframite. The production is contracted for up to January. Affairs are in good shape to continue beyond this limit. About sixteen rockers are employed in handling the ore.

The Russellville Mining company (Philadelphian capitalists) own ten patented copper claims. R. Campbell of Pottstown, Pa. was on the property this year and prospected to satisfy himself as to the outcome. Found good showing. Following the examination of Campbell's report, work will be commenced on the claims, probably inside of thirty days.

The Dixie Copper Mining Company have five claims two miles from Dragoon station. Two buildings have been put up. Development work will commence in twenty days. The Dixie Co. has organized under the laws of Arizona. R. R. Harper being the active spirit in the organization. As the name implies the people interested are southerners of Monroe, La. R. Harper, who is a hustler, is president of the company.

Old man Gregory and a Mr. Miller have four copper claims two and a half miles from Summit. They shipped a carload of copper bearing ore to the El Paso smelter last week. It is safe to say that ore would run 17½ per cent.

Mr. Brannow was formerly part owner in the St. George claim which was sold some time ago to a Chicago company. The St. George has shipped some 25 carloads of ore going on an average of 7 1/2 per cent copper.

Of Mr. Brannow's claims the O. K. has had the most work done on it. A 100 foot shaft and cross cut shows good ore. There are 8 or 9 tons of 12 per cent ore on the dumps.

The Hagerman claim has 60 feet of work and shows sulphides of copper.

The Calumet has a 40 foot shaft and good indications.

All the claims show surface indications more or less. Nearly all the claims are decided copper properties, although two or three have a small trace of gold.

THE OLD GLORY GROUP

Mr. B. F. Halderman, who has lived in the vicinity of the copper mine in the Little Dragons for the past 20 years, has made a little stake out of the mining field and has several claims to spare. He was one of the first men to go to work on the Mammoth 20 years ago.

Mr. Halderman owns the Old Glory group of three claims, on which a 45 foot shaft has been sunk. At the bottom of this shaft a drift has been run for some 20 feet along an 18 inch vein. The ore is of an exceptionally high quality, some specimens running as high as 50 and 60 per cent copper. Mr. Halderman is in hopes that with a little more development work he will strike a sufficient quantity to put the property upon a paying basis. The Old Glory group has a slight trace of gold sprinkled through her copper.

Mr. Halderman expects to commence work soon and see if he cannot open up another Mammoth or Republic. We hope he will. *****

A. H. Wien owns the Copper Chief, a promising copper prospect in the camp of Johnson. We are informed that he has made several remunerative deals in this rich field and has faith in the district becoming as flourishing a camp as any in the territory. *****

The Peabody mine is not very active at the present time on account of the management's inability to secure miners, which seem to be scarce. They have advertised for 100 Mexicans.

W. de H. Washington in company with Thomas King, recently sold a group of 10 claims to the Black Prince Copper Company for a snug little sum.

July 17, 1903 -- News comes from Johnson that the Black Prince Copper Co. are making regular shipments. The main trouble seems to be in securing teams enough to haul the ore to the railroad. This company has a group of some 28 claims and some of the ore taken from the Mammoth shaft shows values as high as \$100 per ton. The nature of the ore is a chalcopyrite. The company are now drifting and doing other work on both the Mammoth and the Republic.

To sum up the situation at this camp, is simply to predict another Copper Queen or United Verde. The showing here is greater than Bisbee ever had at the same stage of development. The ore carries more values than that of the Copper Queen and they pay in dividends something like \$5,000,000 annually.

Another advantage the company has, is that the ore carries about 15 per cent iron, which makes a good fluxor.

In conclusion, we might add that the company is composed of Denver men whose integrity and business standing is beyond reproach.

The officers are Hugh Mackay, President; Alexander Ross, vice-president and treasurer; and L. M. Petitdidier, secretary.

The company is capitalized for \$1,500,000 par value \$1.00 per share. Fully paid and non-assessable.

The capitalization is low considering the property and we believe this company has the most legitimate mining proposition we have ever met with.

Reports from various experts, viz: E. Nicholson, Thos. L. Darby and J. Reilly of Colorado, and Otto Metchke of Tucson, all able and practical mining experts of over 30 years of experience, point to the same conclusions we have come to.

THE PEABODY MINE

Sept. 18, 1903 -- Mr. W. A. Fiege, of the Fiege Mercantile Company, talked to the International-American of Douglas about the Peabody mine, located at Johnson camp in the Dragoon mountains, only four miles from Mr. Diege's Summit ranch, the headquarters of his stock industry in that section, says that paper.

"I think the reported shutdown of the Peabody mine will prove to be that the suspension of operation is only temporary," said Mr. Fiege. "I sold the mine to the present owners some five years ago and in so doing I think I made the mistake of my life. The price that I received for the property was \$25,000. It was owned at the time by my sister Mrs. W. D. Hubbard. Since the sale was made, to my knowledge, copper ore has been taken out of the mine and shipped to El Paso that was worth a quarter of a million dollars and I have no doubt that it will continue to yield rich ore for many years yet. Since the Federal Smelting Company began operations at the Peabody I have attended to most of their business at Johnson and conducted a mercantile establishment there in connection with the mine. I have handled all the checks of the company and have almost daily evidence before my eyes of the mistake I made when I sold the Peabody."

Mr. Fiege supplies the Peabody mine and the entire Johnson camp with water, which he has piped from his home ranch. The ore from Johnson has all been hauled to Cochise station and there loaded on the cars.

PEABODY MINE ATTACHED

Sept. 25, 1903 -- Suit has been filed in the district court by the Norton-Morgan Commercial company of Wilcox against the Dragoon Mining company for debt. A writ of attachment was sued out of the clerk's office and the company's property at Johnson was attached by the sheriff's office a week ago Tuesday. A few days previous to this the company decided its property to M. P. Freeman to hold in trust for them.

The company is a sub-corporation of what is known as the Federal Copper Company, who own property in N. M. and has a smelting plant near El Paso, Texas, but whose principal office is in New York City. The Federal Copper Company a few days ago was sued in El Paso for some \$200,000, alleged damages for the violation of contracts for the purchase of mining property in N. M. At the same time an injunction was asked for and also the appointment of a receiver. The injunction was granted and Geo. J. Hilzinger appointed receiver. What effect the proceeding will have on the Dragoon Company is a matter for conjecture.

THE COPPER CHIEF GROUP

Nov. 6, 1903 -- A. H. Wien, who has recently bonded to M. C. Croery and his associates his Copper Chief group of copper claims located in Johnson district

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paid this office a pleasant visit and informs the writer that Mr. McCreery is now down an incline shaft 140 feet which is all in ore. At the 110 foot level a vein of ore almost two feet in width was encountered upon which they are working a force, as well as another force in sinking. Mr. Wien showed us a sample of carbonate ore taken from the drift when run in about six feet. Native copper can be plainly seen in the sample, and he informs us the vein is apparently getting wider as work progresses. Mr. Wien has no doubts but what they will soon strike a large body of ore. The showing so far is very flattering for the amount of development work.

Nov. 20, 1903 -- B. F. Halder, man and wife, old standbys of the town of Russellville, were in Willcox. Mr. Halderman says he is doing the assesment work on his Old Glory group of copper claims in the Johnson camp, and is getting out some good looking ore. He does not think it will be long before there is something doing in that neck of the woods in a mining way.

Nov. 27, 1903 -- B. F. Halderman, of Russellville, was in town Monday on business. In speaking of the rich mineral section in his neighborhood--Johnson--Mr. Halderman stated that the Copper Chief mine, now being worked by Mr. M. C. McCreery, was developing considerable good ore, and that all the camp required to bring it out was someone with capital and a little back bone.

BIG COPPER STRIKE

H. C. MCCREERY UNEARTHS AN IMMENSE BODY OF ORE CARRYING AN ABUNDANCE OF
NATIVE COPPER

IT LOOKS GOOD TO US

Dec. 4, 1903 -- Also to the Mines in Johnson Who Have Claims in the Camp---Ore Similar to That in Cananea

At last the old Johnson camp bids fair to become one of the greatest copper camps in the territory. A recent strike made by H. C. McCreery on the Copper Chief group recently bonded from A. H. Wien bears out the above assertion in a substantial manner. This strike was made last week in a drift running west on the lead from the 110 foot level.

Yesterday Mr. Wien was in town and when he showed the Range News editor a sample taken from the recent strike, he wore a satisfied smile and expression of content.

And why should'nt he! Comparing the ore with that which we have seen come from the Cananea mines, it appears to be very similar. Native copper can be seen without the aid of glasses. In fact one can strip it off in miniature sheets.

The strike does not consist of a mere little pocket, but it seems to be an immense body, the extent of which at this writing has not been determined. The top, bottom and sides of the drift in which the ore was discovered is one solid body. The ore as yet has not been assayed, but put it at a very low estimate and it should go at least 25 to 30 per cent copper and probably some silver and gold.

Mr. McCreery shipped a car of the ore to El Paso Thursday and will have it run through the smelters to determine the average value.

THE JOHNSON CAMP

Feb. 12, 1904--The Prospects Recently Bonded by A. H. Wien to H. O. McCreery and His Denver Associates Show Up Well

SULPHIDES IN QUANTITY

Development is Progressing Slowly but Surely and Large Body of Rich Sulphide Ore is Opened Up.

H. C. McCreery, who is operating on the Copper Chief group of claims in the Johnson district recently bonded from A. H. Wien, was in town Tuesday.

In an interview with Mr. McCreery, we learned that he had recently encountered a large body of sulphide ore of good value. In fact Mr. McCreery left a fair sample of the ore at this office.

The development work now performed consists of a shaft which is down some ---* feet and is all in ore. Two drifts have been run, one east and the other west. These are in about 30 feet and 40 feet respectively and all in ore.

Mr. McCreery has met with success beyond his most sanguine expectations and will develop somewhat more extensively in the future. Should the ore hold out and maintain present values, his people will probably install a mine.

August 5, 1904--A. H. Wien and wife, of Russellville, were in town on business Wed. Mr. Wien says mining operations in the Johnson camp are quiet at present but he has a half baked deal on for the transfer of his valuable group of copper claims to some smelter people.

Sept. 30, 1904--Gideon Boericke, who is working a group of tungsten mines in the Dragoon mountains, recently examined the tungsten mines on the Big Sandy.

Same Edition--Geo. W. Thornton was in town last week from the Dragoons. He says there is quite a stir among the wolfram miners, and that Mr. Burgess, representing a company, is operating a new jig very successfully, which concentrates the wolfram to practically a pure condition, which is worth from \$450 to \$750 per ton, according to the per cent of tungsten. One hour's test run of the jig concentrated 400 pounds of the wolfram, and the machine is declared a success by experts. The company contemplates putting in about ten of the jigs.

Oct. 7, 1904 -- Wolfram mining is attracting considerable attention in the neighborhood, says the Benson Press, and the income from that source is gratifying to the claim owner. The metal brings twenty cents per pound, and the cleanups in some of the claims amount to from 200 to 400 pounds of wolfram daily. The methods of mining are usually the placer process.

Jan. 13, 1905 -- The plant of the southwestern Smelting and Refining company at Benson, has been completed.....The smelter will be running by Jan. 15.

July 14, 1905 -- Thomas King and James Warren of Johnson, Ariz., are in the city. They are mining and shipping copper ore from that camp to El Paso. 20 ounces of silver from the Copper King owned by Goodrich and Upton, of Tombstone, and on which they have a lease. There is considerable mining going on in the district. The Arizona Consolidated is shipping a good grade of sulphide copper from the Republic and Mammoth mines--Bisbee Review.

THE JOHNSON DISTRICT

Aug. 25, 1905 -- Range News Editor Visits the Camp and Notes Great Activity While everyone is more or less familiar with the vast mineral resources of Cochise county, in general, especially the mines which have become famous on account of the millions upon millions of wealth they have produced in a comparatively short time, there is one camp that we feel is bound to rival the Bisbee district, the home of the Calumet and Arizona, Calumet & Pittsburgh, Lake Superior & Pittsburgh, as well as numerous other producers, and the Copper Queen, too well known to require extensive mention in this article.

This camp is located at Johnson, in the foothills of the Little Dragoon mountains about 8 miles from Cochise, a station on the Southern Pacific Railroad.

*Number of feet illegible

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Feb. 16, 1906 -- A. H. Wien, a prominent mining man and the head of the Wien Commercial Co., of Johnson, spent Sunday in Willcox; Mr. Wien reports wonderful progress in a mining way being made at Johnson. Daily shipments of ore from the Arizona Consolidated still continue and the old Peabody mine is once more assuming active life. The Arizona Michigan Development Co., who have a bond on Mr. Wien's Copper Chief, are putting in place a huge hoisting engine preparatory to opening up that property to some considerable depth.

Feb. 16, 1906 -- B. F. Halderman was in from Russellville Thursday of last week. He paid the News office a pleasant visit and reported everything in a mining way from his district as very active. The wolfram shipments are being made at regular intervals and when warmer weather comes there will be greater activity in this line.

March 23, 1906 -- Mr. Entrikin reported the shipment from his camp of over 1,000,000 pounds of copper ore to the El Paso smelters during the month of February.

April 20, 1906 -- Mort Wien,.....reports great activity at that camp and that the big hoist recently erected on the Copper Chief group works to perfection and is of great assistance in developing that property.

May 18, 1906 -- S. J. Entrikin,.....reports great activity in mining at this camp. Recently several properties have been bonded and at the consolidated and the Copper Chief groups fine sulphide ore or a high grade ore are being extracted in large quantities.

July 27, 1906 --

THE BENSON SMELTER

With the straightening out of the affairs of the Southwestern Smelting and Refining company, it is conceded will come a reorganized company under a new name, and the starting of the smelter plant, says the Benson Press.

That this will be the final outcome is felt for the reason that the people who are interested in the Copper Chief properties, or the Arizona and Michigan Development company, which is making the most extensive improvements for active mining in the Johnson camp and who are also interested in the railroad project from Dragoon station to the camp, are also stockholders in the smelter company.

These people, while not saying much, have been quietly putting their properties in shape to operate on a large scale and at a big profit.

The first of the year will find the Johnson camp working a big force of men and shipping to the Benson Smelter.

August 24, 1906 -- The Keystone Copper company have opened up eight feet of fine ore in the lower tunnel on the mine. The company expects to largely increase its force of miners within the next two weeks and commence shipping ore.

COCHISE DISTRICT BOOMING

Sept. 14, 1906 -- The Cochise district, 12 miles long by ten miles wide, is a scene of special activity these days. Several companies are operating in the district including the Johnson, Black Prince, Peabody, Arizona Mining Consolidated, Mayflower, Arizona and Michigan, Empire Gold and Copper, Yankee Doodle, and other important corporations.

One hundred and fifty men are employed at the Johnson camp, and many others are working for the several companies mentioned.

The Peabody Company is putting in a new hoisting plant, and expects to increase its shipments of ore to the Douglas smelter.

This camp is situated right at the heart of the great carbonaceous limestone belt, which extends in a southerly and southeasterly course through Arizona and into Mexico, and in which may be found the great copper mines at Jerome, Clifton, Globe, Johnson, Bisbee, La Cananea and Nacozari.

During a recent visit to the Johnson district in company with H.O. Davis, president of the Sunset Mining and Milling Co., we had ample opportunity to satisfy ourselves as to the resources of this most promising camp.

We arrived in Johnson Monday afternoon and accepted a very cordial invitation from S. J. Entrikin, a general manager of the Arizona Consolidated Mining Company, to stop over night.

A second invitation was not necessary as we were both tired and hungry, particularly the latter. But our appetites were soon satisfied, for Johnson had two first class boarding houses.

The next morning we were up bright and early and after a hearty breakfast commenced to take in the camp proper. The first property visited was that of the Empire Copper and Gold Mining Co. This company is composed of Los Angeles and Arizona men with J. L. Brooks as president and general manager, Martin J. Cress is vice-president, and H. H. Morrow Sec. & Treas.

This company has a group of fifteen claims lying to the west of the property of the Arizona Consolidated Mining Co., and covers a continuation of the main lead of the Copper Chief, Mammoth and Republic mines for a distance 6,000 feet. Good outcroppings of iron and lime cappings, and well as carbonate copper ores, show prominently on the surface in numerous places.

In company with Mr. Brooks we visited the tunnels being run on this property to open up the ore bodies.

In all there are three tunnels. Tunnel no. 1 is in fifty feet and shows good ore indications the entire length.

Tunnel No. 2 was driven 200 feet where a winze was sunk 120 feet, giving a total depth from the surface to the bottom of this shaft of about 200 feet. Much sulphide copper ore was encountered here in good quantity.

The ore was assayed and yielded an average of 16 per cent copper and gold values from \$3 to \$12 and some silver.

Tunnel No. 3 is in 130 feet and rich black oxides of copper have been encountered running as high as 40 per cent.

Mr. Brooks informs us that his company has in contemplation a three compartment shaft. This they will sink 700 or 800 feet. The first drift to be run from the 300 foot level and then every 100 feet the balance of the way.

The work on this property has been vigorously pushed by General Manager Brooks who is a capable and very energetic person--just what is required to make a property a bonanza, and more particularly so when you have ore in all the workings of a property to lend encouragement to your efforts. The office buildings in this property are of a substantial nature and a credit to the camp.

S. J. Entrikin, General Manager of the Consolidated Mining Co., a Philadelphia corporation, is working a force of about 20 men on their property, which embraces a group of ten patented claims, among them being the Republic and Mammoth upon which extensive development is being carried on. On the former a depth of 260 feet has been attained. Three drifts have been run east and west on the Republic, one on the 60-foot level, another on the 100 foot level, and another at the 160 foot level, making in all about 340 feet of drifting and most of it is in ore with considerable stoping done.

The Mammoth has a depth of 275 feet. Considerable high grade sulphide copper has been shipped from this claim, but at present Mr. Entrikin is devoting the most of his attention to the Republic from which regular shipments of ore are made to the El Paso smelters netting good returns.

The plan of the Arizona Consolidated Mining company, as told to us by Mr. Entrikin, is to do extensive development work and determine the true value of the property.

The company is in good shape financially and is equipped with fifteen horsepower gasoline hoist, in charge of Owen Smith. Hale McCormick is foreman. He is the man who acted as foreman for the Tombstone Consolidated Mining Company and had in charge the sinking of their four compartment shaft to the water level. Mr. Entrikin is short on men and could work several more first-class miners.

Lying between the Republic and Mammoth is the Copper Chief group, owned by A. H. Wien and recently bonded to A. J. Pigeon, who controls large interests in the Benson smelter. Immense quantities of high grade copper ore is on the dump at this property sacked as if ready for shipment. Here an incline shaft is down to 275 feet, yielding both carbonate and sulphide ores in good quantities. To the north of where this ore is sacked and also on the Copper Chief group, a double compartment shaft has been started and is down 70 feet.

The next property to be visited before completing an inspection of the mineral resources of the Johnson camp was that of the Black Prince Copper Co. Here we found Robert Mackay very busily engaged in superintending the sinking of a double compartment shaft.

Mr. Mackay was very enthusiastic about this work. His company's property adjoins that of the Mammoth and Copper Chief groups on the one hand and the Peabody group on the other, giving them a central position in the camp with proven properties on all sides. No wonder Mr. Mackay is enthusiastic. Who wouldn't be when they had the world by the tail with a down hill pull!

This company owns over 147 acres of patented property and about thirty eight acres unpatented. And every acre has strong outcroppings of high grade copper ore on the surface and in the workings.

Situated, as is the property of the Black Prince Copper Company, right in the center of the camp, with every indication that the ground owned by it will prove some of the richest in the camp, but one conclusion is warranted, and that is this: The double compartment shaft, now being sunk, will open up large bodies of high grade copper ore and in all probably will surpass the output of the Peabody mine, which adjoins the Black Prince and which shipped ore to the value of over \$1,000,000 practically from the surface. The shaft on the Black Prince Copper company's property is to have a depth of at least 500 feet when they will commence drifting and cross-cutting the ore bodies.

Everyone familiar with the camp expects that the Black Prince Copper Company will open up a bonanza when the work now under way is carried a little farther, and the unusual croppings and rich ores already encountered in the workings on this company's ground denotes that there must be immense deposits of high grade copper ores underneath.

On our way out of the flourishing camp we passed the immense ore dumps of the Peabody mine and stopped at the store of the Wien Commercial Co. long enough to wet our whistles and exchange a story or two with H. S. Wien before starting home.

Sept. 29, 1905 -- Word from Johnson is to the effect that the old Peabody mine has commenced operation again; S. J. Entrikin, general manager of the Arizona Consolidated Mining Co., of that camp continues to make regular shipments of high grade copper ore to the smelters.

Dec. 22, 1905 -- A. H. Wien, a member of the Wien Commercial Co., at Johnson, and also identified with the mining interests of that camp, and informs us that the Arizona and Michigan Development Co., who has a bond on his Copper Chief group of copper claims, is putting in place a 40 horse-power

(Cont'd)

C-C P-Y

Sept. 14, 1906 -- New hoisting machinery is also being installed at the Black Prince mine, in addition to equipment consisting of diamond drills which are to be used in a thorough exploration of the property.

A new shaft is being sunk by the Arizona and Michigan Development Company. The ore is accumulating on the dump awaiting the completion of the proposed railroad from the Dragoon station. The survey for this line is completed, and the material for its construction is to be provided by the Southern Pacific.

The shaft of the Cochise company is down 125 feet, and an important strike of ore is confidently looked for in the next 75 feet of sinking.

Tom Higgins has located a group of 38 claims near Dragoon station, of which Pat Whalen has charge.

SOMETHING DOING

October 12, 1906 -- T. A. Cox, who is building the Dragoon Mountain & Northern Railroad, is in the city from Dragoon. He said that two miles of the grading have been completed and that six miles of the roadbed will be finished ready for ties and rails by Nov. 1, says the Tucson Citizen. This road is standard gauge and will be ten miles in length. It will go through the mine district of which Johnson camp, north of Dragoon, is the center. Six miles of the road will be over a comparatively level country and the remaining four miles will be through a mountainous country. The railroad is being built by the people who are interested in the Arizona Michigan Co. This company has bonded a group of properties at Johnson camp, the principal one of which is the Copper Chief. This property is located between the Peabody and the Republic properties, both of which are being operated on a large scale.

On the Copper Chief the shaft is down to a depth of 400 feet and is all in ore. A double compartment shaft is also being sunk and has reached a depth of 120 feet. A big hoist is in operation and an air compressor is being installed to operate two machine drills.

It is announced that when the railroad is completed, ore shipments aggregating more than 200 tons will be made from the Copper Chief. The Republic, Peabody and Empire also expect to make big shipments. *****

Nov. 30, 1906 -- A. H. Wien, --has been granted permission by the supervisors to build a pipeline from his ranch to Johnson and furnish water to that prosperous camp.

Sulphides in Dragoons

Dec. 28, 1906 -- J. P. Richardson, president of the Y. D. M. & D. company of Willcox, with branch in Benson and mines located in the Dragoon mountains, stopped over Sunday.

The Benson Press secured a brief interview with Mr. Richardson Monday morning and found him very much pleased over a large body of copper ore just uncovered in the Dragoons in the same lime zone which passes through the Teter-Stone Azurite group and Johnson camp, located between the two places. It has been worked for years by a prospector who owns an interest in the property.

At the surface there is a vein of copper carbonates eight inches thick. A shaft was sunk on an incline of about 60 degrees following the vein. A depth of 20 feet sulphide copper was encountered and when Mr. Richardson left Dragoon last Saturday it was 20 feet wide of sulphide and oxide of copper ore.

Mr. Higgins, who purchased property from J. B. Gregory and G. W. Thorton, some time ago, asked the prospector to put a price on it, but no deal has yet been made.

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January 25, 1907 -- J. P. Richardson, of the Yankee-Doodle Mining Co. operating at Johnson, ---reports cutting a large body of iron in a shaft on his property recently. The shaft has reached a depth of about 100 feet and the indications are very encouraging. Associated with Mr. Richardson are two well known local business men -- H. A. Morgan and W. A. Fiege. Just west of the Yankee Doodle property are some claims belonging to B. F. Halderman and his son is now taking out high grade ore for shipment to the smelter.

Much activity at Johnson

February 1, 1907 -- Mr. Cox, who has been making the grades for the railroad and consulting engineer for the Ariz. and Mich. development Company, stated that there are at present about 300 men employed at Johnson camp. This camp is one of the oldest in the territory, but it was not until recently that development work has been carried on there on a large scale. Men of means are now interested in the district and they are spending large sums in development.

At the Republic property in this camp a new 60-horse power engine will be set up and a double compartment shaft will be sunk to a depth of 600 feet. The sinking will commence as soon as the machinery can be put in place.

At the Peabody, new capital has been interested and there has been a reorganization of the company. The new company will put in new machinery and prosecute the development work with vigor.

At the Arizona and Michigan Development Company a double compartment shaft is down to a depth of 200 feet.

DRAGOON MOUNTAINS

February 8, 1907 -- Recently Mr. C. F. Sammann, of Los Angeles, representing the Nevada Consolidated Mines visited Johnson camp and secured option on many copper mining claims in the district.

The following parties are reported to have given options to Mr. Sammann: Geo. Sherrer, O. T. Smith & Co., Ben X. Williams, J. L. Brooks and others.

Mr. Sammann stated that he was the mining outlook for the company he represented, and that after him would come the expert, upon whose report all property found meritorious would be taken up at the option price.

The shipments of ore from producing mines was considerably reduced during the exceedingly wet weather, which has prevailed over the entire country recently, because at present all ore must be hauled by wagons to the railroad, but the Peabody mine, which is one among a number of regular shippers of copper is preparing to increase its shipments to 100 tons per day.

The new Peabody mine management is already manifesting that energy which characterizes all of Col. Greene's operations.

The old hoist is being moved, new machinery has been ordered and it is stated that the increase of shipments to 100 tons per day is intended to begin even before the new railroad can be in operation.

Difficulty in procuring ties is still hindering the completion of the railroad.

Dr. D. W. Teter, president of the Teter-Stone Azurite mining Co. in the Dragoon mts. has reported that a new strike of copper ore has been made by Mr. T. H. Clemons, while doing work on vacant ground a mile and a half from Dragoon, adjoining, the Dixie Mining Co., holdings being worked by J. B. Neal.

(CONFIDENTIAL)
The ore is iron carbonates, carrying copper and looks good enough to bear shipment.

Mr. Clemons has for years been working a wolframite placer at Russellville and shipping quantities of wolframite ore from Dragoon station regularly, and has plenty of money to develop his new copper strike.

March 1, 1907 -- J. P. Richardson, of the Yankee Doodle Mining Co-operation at Johnson, was showing a rich sample of copper ore to friends Fri. taken from a strike in a cross-cut run from the hundred foot level. The ore will go about 40 per cent copper, besides carrying gold and silver values.

April 12, 1907 -- A. J. Wien -- reported Johnson a mighty lively camp. The Arizona Consolidated Mining Company has received a 40 horse power improved gasoline hoist and is shipping better than a car of ore daily to the smelter. The Arizona and Mich. Development Company is preparing to resume operations on a large scale and have installed new air compressors and power drills. The Black Prince Copper Company is daily expecting the arrival of machinery ordered some time since for sinking a double compartment shaft to a depth of 500 feet. The Bonanza Copper Company (old Peabody mine) is making regular shipments of ore and the Cochise Copper Company is down about 450 feet with a double compartment shaft and encountering favorable mineral indications. The Empire Copper and Gold Mining Company has made a new strike of fair grade copper ore. Three years ago camp was idle, but those who had faith in the district and have so persisted in investing capital are being rewarded for their patience and faith beyond their most sanguine expectations.

May 3, 1907 -- The Magazine Mining company of Johnson Camp is the latest to begin shipping ore. Fourteen cars of 8 per cent copper ore have been shipped already. Three shafts are being sunk and the company is preparing to go to a depth of 500 feet in one of them.

May 31, 1907 -- Washington Group Sold

Through J. W. Gillingham a deal has been made for the Washington group in the Johnson district whereby Jas. A. Robinson and David McCann of Pgh. and representing Pgh capital acquire the mining property known as the Washington group. Consideration not learned.

The property is located on the large side of the mountain adjoining the entire west side line of the Empire Copper and Gold Min. Co.'s mines, where the big strike was made a week ago Sunday. The Washington, there being twenty one claims in the group, has been held by the Ball boys, J. L. Brooks, C. T. Booth and Peter Dworacyk.

THE BONANZA BELT

The Bonanza Belt Copper Company which took over the old Peabody property at Johnson is capitalized at \$3,500,000 with shares at \$10 each. This has been placed on the eastern market.

The property of this company is among the best in the Johnson Camp. A big force is now employed and a double compartment shaft is being sunk. Besides the car (?) shipments are being made daily.

The following well known men are directing the work: R. Allyn Lewis, Pres; Leo Dessar, Vice-President; Shannon, Bird S. Coler, Lewis J. Morrison, William A. Hamilton, Robert Huntley, Edward . Rice, M. E. Marby, sec.; Edward V. Loew, treas; Charles B. Merrill; G. V. Gouyard, consulting eng., and Walter I Ehrich, supt. of mines. Head office is 20 Broad Street, New York City.

BLACK PRINCE PEOPLE ARRIVE

A Dr. Thompson and party arrived at Johnson last Thursday, and expect to be in the district for several days. The new hoist at the mine is being installed this week. This company will be the first to install an electric plant. The showings of the Black Prince are first class and the company is going to push matters as fast as modern machinery and men can do it.

AT THE YANKEE DOODLE

Pres. Richardson of the Yankee Doodle states that the new double compartment shaft is now down to a depth of 35 feet and that he is taking out ore. He expects to go to a depth of 300 feet.

This shaft is within 2,200 feet of the new railroad grade, and only a short spur will be needed so that he can load on the cars.

The Yankee Doodle property is only 3,000 feet southeast of the Republic, one of the biggest mining properties in the Johnson district. They have fifteen claims all told, all in one group adjoining the Republic and four claims in another group located near the Dragoon station. The company is capitalized at \$1,000,000, par value of stock \$1.00. Stock is now selling at 50 cents.

AT THE EMPIRE MINE

Reports from the Empire this week which made a good strike Sunday morning a week ago, are that in the crosscut at thirty feet they struck the hanging wall, but that they were still in ore in the shaft. Thursday three shifts were put on and from now on development work will be pushed as rapidly as possible.

H. H. Morrow, treas. for the Empire Copper and Gold Mining Company returned to his headquarters at L. A. Wed. last after a week's visit to their property at Johnson. He was much elated over the latest strike.

STRIKE AT EMPIRE CAMP

June 7, 1907 -- One day last week at the bottom of the 100 foot vertical shaft of the Empire Co.'s property at Johnson a rich body of green carbonates were encountered which is thought will assay at least 20 per cent.

Later reports received state that since striking this ore they have driven a crosscut from the footwall into 27 feet of ore. Also they have carried down the shaft 25 ft. further and are still in ore. As they have not reached the hanging wall the width of the vein is not known. The vein was struck between the lime and porphyry. The formation is soft to such an extent the augur holes could be driven easily, the miners making 4 to 5 feet a day.

while ^{not} much has been said of this camp in the past, they have things in first class shape; 14 men are employed. A horse whim issued at present but new machinery will be installed before the summer is past. The company have good frame buildings and about eight tents for the accommodations of the men employed.

Aug. 23, 1907 -- J. P. Richardson, Pres. of the Yankee Doodle...reports the working shaft down 90 feet and that he is entering upon the mineral zone and that all indications look better than at any prior time.

NOTES FROM JOHNSON CAMP

August 30, 1907 -- Reports are current that the Arizona Consolidated Mining Company of the Republic people will soon install a new hoist and gallows frame on their Mammoth property, west of the Copper chief mine. The Mammoth was until recently worked under lease by Bob Mackay, who mined some of the best ore shipped out of this district.

At the Empire mine, a new hoist, which is now at Cochise station awaiting transfer, will soon be placed in position. It is 40 horse power. Lumber has been ordered for a new gallows frame also. This company is working two shifts steadily and will put on the third as soon as the hoist is ready for operation. In the main shaft they are, we are informed, now down between 225 and 250 feet. At the 225 foot level they have cross cut about 150 feet.

The Cochise Mining Company has reached the 600 foot level in their shaft opposite the Wien Commercial Company's store. They are in blue lime. At present the men are busy cross-cutting both ways on this level, besides cutting a station.

H. J. Clifford, manager of the Magazine property, is taking out ore steadily and getting ready for shipping. This property adjoins the Republic, Copper Chief, Black Prince and the old Peabody ground.

J. P. Richardson, Manager of the Yankee Doodle, keeps work going steadily on his property, his showing getting better with every foot of work.

Some of the best surface showings at a depth of 50 ft, are made on the group of claims owned by Aleck Bannow. His property adjoins the Scherrer claim on the southeast and Wms group on the northeast. In the 50 ft shaft the same class of ore for 20 ft is shown that is being mined by the San Francisco men working the Scherrer property. It shows definitely a continuation of the same ore body. At present Mr. Bannow is not working any men on this group, but is working on claims adjoining the St. Geo group taking out ore.

Rumor has it that the Deckerew group of seven claims, lying between the Copper Chief and the Mammoth, has been sold to St. Louis parties. This is good property, but up to the present time ore shipments have only been made intermittently.

November 1, 1907 -- H. S. Wien -- reports that the Johnson camp slightly dull for the present, owing to the slump in copper, but believes it will only be temporary.

CASH PAYMENT ON JOHNSON MINE

January 17, 1908 -- The Mayflower mining Company made the second payment on the property they are working in Johnson Camp. Mr. and Mrs. Geo. Scherrer received over 22,000 of the money, and Louis Ezekiel, of Tucson received his interest which was one third.

The mayflower shipped two carloads of ore last month, one to El Paso and one to Douglas, which was taken out while prospecting to find the trend of the ore bearing ledge. An incline shaft is now down about 65 feet and is still progressing, but will be discontinued next month as the company has decided to sink a 5 X 8 vertical shaft on the hanging wall of the ledge.

CASH PAYMENT ON JOHNSON MINE (cont'd)

A contract will be let at that time for the first 500 ft. of this shaft, which the co. intends to sink at least 800 ft. and 1200 ft. if necessary to get below the lime and enter the main ore body.

RAILROAD TO BUILD LINE TO MINES

January 24, 1908 -- At the annual meeting of the stock holders of the Arizona & Michigan Development Company and the Dragoon, Johnson & Northern Railroad, it was decided to complete the R.R. between Dragoon and the mines at the earliest practicable date, which will afford the company easy and cheap transportation for its ore, to begin shipping from the property either to the smelter at El Paso or to the Copper Queen smelter at Douglas.

The Arizona and Mich. Company reports sufficient funds to carry out their program and no time will be lost in entering their property in the producing class.

March 6, 1908 -- B. F. Halderman... reports the Empire milling Company installing machinery and making other preparations to commence active operations again.

Mort Wien has just completed a contract for Thos. Higgins who is developing a promising group of copper claims near Dragoon.

March 13, 1908 --

SENSATIONAL COPPER STRIKE ON DRAGON SUMMIT

Word has reached Willcox that the Centurion Arizona Mining Company has just uncovered a most wonderful copper deposit. This company is developing a copper property one and a half miles northwest of Dragoon station. In one place at a shallow depth -- twenty-five feet---they crosscut their ore chute seventeen feet, and 150 feet southeast, in a second shaft, they have just started to crosscut the ore body at a depth of fifty feet. In both instances high grade carbonates and red oxides in vast quantities were encountered. The exact extent of the find has not as yet been determined but it is known to be immense and can be shipped at a good profit at the present price of copper. Work is now being pushed with all possible haste and President Richardson hardly finds time to eat.

NOTES

About one mile south of the Centurion Arizona company's camp the Higgins Development Company has also discovered a good grade of copper carbonates and are down fifty feet on the ore. The trend of the ore body is to the north and dips at an angle of about 35 degrees. They have taken out at least 100 tons of ore in doing this work.

The Dragoon Mountain and Northern Railroad has just had the first switch or "turn out" laid and are expecting daily the arrival of ties and rails.

W. S. Fiege, Vice-President of the Centurion Arizona Mining Co. has resigned on account of his personal business requiring his entire attention.

THE DRAGON SEMI-CIRCLE TO THE FRONT

March 27, 1908 -- The Centurion Arizona Mining Company is proving the Dragoon semi-circle of lime buttes to Bonanzas. This company has recently made a phenomenal discovery of copper ore at a depth of 50 feet.

The "bonanza semi-circle" lays in the shape of a horse shoe, with the points to the southeast to northeast, about one mile apart, with Dragoon

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THE DRAGON SEMI-CIRCLE TO THE FRONT (CONT'D)

station midway between the extreme points. Beginning at the northeast point of the semi-circle, on which is located the holdings of the Centurion Company, we find the contact between the lime and porphyry highly mineralized.

Traveling southwest about one half mile we come to the J. B. Gregory property, the Tam O'Shanter patented claim belonging to the Arizona Consolidated Company, of which E. J. Entriking is manager. These claims have surface showings unequalled in the southwest, and will prove to be valuable with the proper amount of development work -- veritable treasure vaults.

To the south of this valuable group is the property of Thos. Higgins, on which a double compartment shaft is down 200 feet. This shaft will be sunk to a depth of 500 feet as soon as machinery is installed. Adjoining this property is the J. B. Neal Louisiana Company. Apart of their holding is the property of the Dixie Mining Company, long since defunct owing to the non-productive results of its officers. This property of Neals lays idle waiting for capital.

To the southeast of the Higgins Development and Neal Louisiana Companies is the H. J. Clifford and Owen Smith groups, representing the extreme southeast point of the horse shoe. All this property will warrant the most critical examination of capitalists and mining experts.

Southeast of Smith's group at the foot of the big Dragons

NOTES

A bill of sale has been filed at the county seat in which the stock held by Emil Allen in the May Flower Mining Company at Johnson was sold to J. W. Cull, one of the big stockholders. Mr. Allen is the man who located and secured the property, and later formed the company. The property is one of the best showing for surface work in the camp.

The same day an agreement was filed, underdate of Jan. 4, this year, between Geo. Scherrer et al and Louis Ezekiels, with the May Flower Mining Company whereby the balance due on the mining property be paid as follows: Jan 6, 1908; \$3,500; \$500, July 6, and \$5,000 Jan 6, 1909.

March 27, 1908 -- Another delayed document for filing was placed upon the county record the same day. This was a lease given by the May Flower Company to A. Thurman and W. L. Hyatt to 200 feet across the south end of the property for one year. These people are working this lease at this time.

DRAGON LOCALS

April 17, 1908 -- The Centurion Arizona Mining Company is opening up new ore bodies every day. They have recently encountered some very rich malachite copper, many samples taken from the 50 foot level weighing as high as 60 pounds and averaging 30 per cent copper.

Ben X. Williams has made a rich strike of lead ore carrying gold and silver values. This property lies about one mile and a half northeast of the Centurion group. The ore bearing formation is between lime and porphyry and 22 feet wide on the hanging wall of blue lime. Ben is very much elated over his find, which will not only reward him for many years of hard work in an endeavor to gain a competence, but permit of his passing the balance of his life in comfort. It is enough to bring joy to the heart of anyone.

Mr. Cushman, our efficient railroad agent, and I. M. Moore have both become interested in claims to the east of Ben X's property and are now

actively engaged in performing their location work.

East of their property and nearer the railroad Messrs. King and Murdock are engaged in performing annual work and developing their group of seven claims. They have a four foot ledge that carries gold, silver and lead values to the amount of \$56 per ton. The principal metal is lead. They have ore on the claims that runs as high as \$200 to the ton. A concentrate would be a _____ proposition in this neck o' the woods.

P. M. Sebring is employing quite a large number of Mexicans in the Wolfram country. He and T. Clemons are the principal producers of Wolfram in this vicinity, making regular monthly shipments.

J. B. Gregory is taking down some good copper ore that was stripped in the shaft last year in performing his annual work.

The Higgins Company is working a few men on discovery work until they are ready to install machinery. They are uncovering some good ore.

The writer understands that mining operations in the Johnson district are about to resume.

The empire company has a good showing of ore in their main shaft as they approach the 400 ft. level. The Empire deserves to succeed as it has been untiring in its effort to make a paying mine, and it is the only company in Johnson that weathered the financial storm without closing down.

The Dragoon and Northern Railroad seems to be a reality. Mr. Pidgeon never quits an undertaking so insignificant as the building of a short line railroad.

July 10, 1908 -- Thos. King, a pioneer mining man of the Johnson district,....reported the Johnson Development Company was preparing to sink a double compartment shaft on their property which lies to the south of the old Peabody mine.

August 21, 1908 -- Pres. J. P. Richardson of the Cent. Ariz. Min. Co. returned from a business trip to St. Louis. He reports the financial situation rapidly improving and expect to see more money than ever available for the development of meritorious mining enterprises. Mr. R. is now at this camp and preparing to commence operation at once.

August 21, 1908 -- Geo. Scherrer reported mining in the Johnson district assuming it old-time activity. The Dayflower people will sink a shaft to a depth of 500 feet, the Black Prince is working. Bob McKay is doing some work on his claims and Owen Sith is doing his assessment work.

In the Dragoons

August 28, 1908 -- Ben A. William has recently started work for the company of El Paso business men with whom he made a deal concerning his lead claims north of Dragoon Station. He is following the ore vein with an incline shaft.

Sept. 4, 1908 -- Report from Johnson is to the effect that the Empire people struck a fine body of sulphide ore carrying considerable native copper.

December 24, 1908 -- Mes. J. P. Richardson of the Centurion... reports that he expects to ship ore from his property near Dragoon about January. The property is looking fine and the shaft has attained a depth that a power hoist is deemed necessary.

December 24, 1908 -- A. H. Wien ... reported a good strike at the camp last week. High grade copper sulphides were encountered in the shaft of the Arizona and Mich. Devel. Company's property at a depth of 375 feet. The whole bottom of the shaft is said to be in ore. The shaft is an incline and on the Copper Chief Claim. Mr. Wien also reported that a good strike of sulphide ore was made by Ben K. Williams on the Peacock Copper Company's claims. The vein shows three feet and was cut at a depth of 80 feet.

Mining Notes

March 26, 1909 -- Last week the Empire Copper Company made a deal for the O. T. Smith property at Dragoon. The consideration has not been made known. It is proposed by the Empire Company to put in a gasoline hoist of 40 horsepower about one and a half miles west of Dragoon. Another deal of moment was made at the same time on the Jim Neale property which lies near the mountains. C. F. Elliot of the Sharp Elliot Mfg. Co. of El Paso, together with other El Paso men take over the property and plans are now being prepared to develop the property.

July 9, 1909 -- President J. P. Richardson held a meeting of the board of directors. At the meeting it was decided to order a new 15 H. P. hoist which will be installed under the direction of Mr. Richardson. The shaft on the Centurion is now down 210 feet from which a crosscut will be run to tap the main ore body. Pres. R. is very optimistic of favorable results when this is done.

Contractor Thinks He has Struck Centurion Ore Body

Sept. 10, 1909 -- Lacking but three feet of completing his new 200 ft. shaft contract on the Higgins group in the Dragoon-Johnson, near Dragoon, Oliver Merrill last week broke into the same ore body, he says which caused such a sensation a few months ago when the Centurion Min. Co. penetrated a cave full of loose boulders of high grade copper ore, while cross-cutting in a wide contact ledge, more or less mineralized.

This strike on the Higgins group is important because it is located where no alluring surface cropping held out hope to the prospector. It is two thousand feet southwest of the Centurion shaft, and Mr. Higgins began sinking his shaft when the Centurion had nothing but a surface prospect. The shaft is about 300 feet south of the surface cropping of the contact, and was sunk through 100 ft. of clay before any rock formation was reached.

Mr. Higgins bought and paid for the group and deliberately made preparations to sink a shaft in good workmanlike manner, at least 500 feet deep, and shipped in timbers for it. A prospecting shaft, on a different part of the group, however, is where the recent strike was made. It had been started to cut a contact and after sinking 137 feet, was abandoned on the supposition that the granite foot wall had been reached, and that the contact did not amount to anything.

This was in 1907 as Mr. Higgins had about a mile and a half in length of ground, and his claim is near the east end, while his main working shaft was toward the west end about a mile away, it was the supposition that the east end claims would be permitted to revert to the government. Before the end of 1908, however, the great Centurion strike about 2,000 feet farther east, was reported to Mr. Higgins and he contracted with Oliver Merrill to continue sinking on the shaft.

Last year's title work was thus done, and then enough more work was contracted to make good for this year, also, which would take the shaft down to the 200 foot level. If the Centurion cave had been a few feet away the contract would have been completed without cutting into it, and work would probably have been shut down for this year, at least.

About two thirds of the ground between the Higgins shaft and the Centurion workings belongs to the latter, and the remainder belongs to Higgins, so that each has enough of the ore save to mine of vast extent.

Centurion Makes Another Strike

October 1, 1909 -- The Cochise County Press of Sept. 25, says:

Last Sunday evening while Manager Richardson was entertaining Messrs. E. G. Stroud and Wm. Mc Diarmid, of the Ariz. & Cleveland Min. Co. and E. F. Davey, an eastern man, one of his workmen, a Mexican, came hustling up with a sack of ore samples and informed him that they had struck ore again and also a big opening from the drift on the 225 foot level. The Mexican was excited and out of breath. Mr. Richardson and his friends repaired to the shaft and went to the bottom to investigate and found it just as the miner had stated. Next morning Manager Richardson realizing what it meant left for Benson and Bisbee and pulled off all stock on the market for sale at 50¢. Before returning to Dragoon Wed. he put the price on stock up to \$1.00 a share.

During his absence the miners under the advice of Foreman Broadbeck enlarged the opening and a party of them then made investigations and traveled for a distance of over 150 ft. in the cavity, which showed plenty of iron, white lime crystals and silver malachite. Samples taken from the hole are now to be seen at this office.

It is believed that an effort will be made to sink a double compartment shaft on the property and go to a depth of at least 500 feet. With such a shaft there is no telling what they will encounter in drifting back to the contact which is within less than 150 feet of the incline shaft. The miners are well satisfied and as a number of them have taken stock in exchange for part of their wages they are considerably excited over the outlook for the property and it is safe to say that they would not sell their holdings in the company for any small price.

This bids fair to be one of the biggest propositions ever opened up in the county and is fortunately well located, being but one and a half miles north of Dragoon station on the main line of the S. P. and the workings in plain sight of the depot platform.

News of Johnson and Dragoon Districts

Oct. 15, 1909 -- Conditions at Johnson and Dragoon are improving every day. Stockholders interested in the different properties are coming in every week to inspect their holdings. This week H. H. Morrow, secretary and treasurer of the Empire Copper and Gold Mining Co. has been on a visit to manager Seth Merrill of the company at Dragoon and Johnson. While nothing was given out definitely, it is understood that Mr. Morrow's

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visit at this time, coupled with the rich ore struck in the shaft at Dagoon, will mean the installing of a new hoist and other machinery. The Empire shaft at Dagoon, ~~which~~ is now down over 90 feet, and specimens of the ore encountered...show malachite at a glance. As stated some time ago, the company has ceased operations at their Johnson property and are concentrating all of their energy on the Dagoon side.

Manager Miller of the Keystone at Johnson is busy with a force of men putting the new shaft started on their property in good shape. It is now being timbered. It was at the bottom of this shaft, at 40 feet, that they sunk an ~~an~~ incline and opened into the loose ground in which they encountered black sulphide. About ten men are employed by this company.

Considerable inquiry has been made the past week for Centurion stock and it is stated authoritatively that Manager Richardson has a deal on for stock at the advanced price of \$2.50, which if consummated, will mean plenty of money to commence operations on a large scale. About 100 claims have been located in the Dagoon country within the past two weeks. Thursday, a Bisbee man by the name of Waldon, located eight claims on the flat between the Centurion and S. P. railroad within a short distance of the depot.

Hal Merrill, who has been ranching at Gila, and who returned a few weeks ago, has filed one bunch of 36 claims for himself and others that stretch from the Centurion on the Dagoon side to the Keystone on the Johnson side and now has a crew of men doing the location work. West of the Empire, about twenty claims have been located.

Arizona shipping Mines Co. which took over the Neale claims, are preparing to clean out the main shaft on the property preparatory to sinking.

The new engine for the Johnson, Dagoon and Northern Ry. is on the company's tracks here. How soon the company will commence operations is not known.

Teams are busy every day transferring coke, lumber and iron from Dagoon to Johnson.

The Johnson Smelter Adding More Teams

October 22, 1909 -- This morning John S. Merrill received word from Johnson to put on two more six horse teams. This will make altogether 30 head of freight horses which J. S. Merrill & Sons will have at work for the smelter next week. The smelter is running nicely according to Miles Merrill and Tom Carroll. They came over there this evening and were enthusiastic concerning the magnitude of the ore-caves in the Centurion, which are proving to be very extensive.

Alex Bannow had some samples of rich mineral ore from the Keystone and sulphides from a new strike in the Mayflower.

Jan. 21, 1910 -- Looks like trouble coming

The Johns, Dagoon & Northern Ry. held their annual stock holders meeting and afterwards their directors meeting last Tuesday forenoon..... The sensational event of the meeting was the dropping of Roemer from the board of directors.

From what can be gathered there are clouds gathering on the horizon of the railroad company that will cause bad weather in the near future for the railroad.

Feb. 18, 1910 -- Pres. Richardson of the Centurion reports the Centurion shaft down 325 feet and showed us some samples of ore taken from that level. The character of this ore looks very much like copper matte and is highly impregnated with native copper. The samples are not from the main vein but from an intrusion in the lime. Crosscutting will soon start for the main vein which has been cut on each level as it is reached. Mr. Richardson is naturally very enthusiastic over the new strike and he reports every indication points to a tremendous ore body below.

April 15, 1910 -- Manager J. P. Richardson of the Centurion...reports the shaft down 325 feet and a crosscut being run from this point to cut the ore body.

May 13, 1910 -- Long article on Albert Whiting Demand \$75,000 from Bell of the Black Prince stock.

Aug. 12, 1910 -- Ben K. Williams...from his Texas-Ariz. property in the Dragons, reports net returns from the shipment of his last car of ore at \$2596.84. Mr. W. has ordered hoisting machinery and is expecting its arrival next week. He reports that Pres. Richardson of the Centurion has made a good strike of high grade copper on the 400 foot level of the shaft.

Dragon Station

Sept. 16, 1910 -- The mineralized mountain around Dragon station, which is in plain sight of Benson, toward the rising sun are quite active at present, as shown by the following notes from an international correspondent:

"The Centurion mine will be shipping ore to the smelters within 60 days. The company has made no contracts yet, but will probably ship to the Copper Queen, unless the Benson smelter should be ready by that time. The Benson smelter people are trying to tie up the ores for from three to five years. The present development consists of an incline shaft 400 feet deep, with an average of 135 feet of drifts on each of the four levels where stations have been cut. The fifth station is being cut. There is ore all the way from 40 feet below the surface, with increasing values as depth increases.

Thomas H. W. is making patent surveys on his forty claims, some of which join the Centurion on the West.

The Red Mountain people are going ahead, showing good copper, silver, gold and lead.

Ben K. Williams is shipping ore that finds richer returns with every car load. (Texas-Arizona)

The Strout Brothers are working the Ariz-Cleveland group, that joins the Texas-Ariz. mine. It is rich in silver and lead.

Mr. Fourr has shipped some rich lead carbonates from claim south-east of Dragon.

C. F. Elliot, of El Paso, will soon commence mining the Jim Neal group, half a mile south of the Centurion group.

Nov. 11, 1910 -- The Centurion Company has just broke into the finest body of high grade copper ore they have ever encountered. The strike was made on the 425 foot level in the east drift. The ore is high grade green carbonate of copper occurring in a large body of red oxide of iron and copper. All indications point to very extensive bodies deeper down and from the volume of fresh cool air that comes up from below, one concludes that the system of caves extends to unknown depths. This is evidence of vast and valuable bodies with greater depth.

Nov. 18, 1910 -- Ben X. Williams has secured an option on the Tex-Ariz. Mining property for eastern parties. He was also reinstated as gen. manager but will work only one or two men cleaning up the mine pending the deal which will be closed within the next fifteen days.

Dec. 16, 1910 -- Manager Richardson reports considerable silver is showing up in the ore below the 400 foot level in the shaft.

April , 1911 -- J. P. Richardson, pres. of Centurion Min. Co. of Dragoon, was in Willcox Friday. He reports good work being done in several camps of that district. The Centurion has been shipping steadily for some time, a car of very high grade having just been consigned to the Douglas smelter. The 525 foot level has now been reached and the entire force will be concentrated on the work of crosscutting and drifting. A day and night shift will be kept busy there for the next month. The richness and size of the ore bodies of the Centurion have been increased with each level and it is expected that the development on the 525 foot station will show much value. It is expected that a nearby smelter will soon be blown in and that the shipments of the Centurion will be placed nearer the mine.

The Black Prince at Johnson is now down 1000 feet and under supervision of Mr. Boggs fine work in crosscutting and drifting is progressing.

The Texas Arizona has recently been visited by the president, J. E. Neff of El Paso. The company now has a car of ore in the hands of the El Paso smelter.

The Cleveland Ariz which is the same proposition as the Texas Ariz., lead and silver with some gold values is now actively at work.

BRIGHT PROSPECT FOR CENTURION

June 2, 1911 -- The Centurion mine at Dragoon... is regarded a rich property and the Pres. Richardson is working with much success in the east with plans for furthering the development of holdings.

NEIGHBORING MINES

Aug. 18, 1911 -- J. P. Richardson, of the Centurion is still in New York. During his absence Owen T. Smith is in charge of development work and he reports crosscutting and drifting on the 525 foot level, having crosscut 135 feet, 110 of which is in low grade copper ore, while 16 ft. represents a very high grade ore. They have also drifted on ore 25 feet. The encouraging feature of their work is the increase in width of the ore bodies

having grown from a few feet in width at a 25 foot depth to a maximum width of 115 feet at the 525 foot level. A most remarkable and gratifying feature is that the ore deposit is continuous from the surface to the present level.

The Texas-Ariz. which is some two miles from the Centurion is working steadily. They have crosscut and raised so as to get good air and have encountered some good bodies of lead, zinc and silver ore. The outlook is most encouraging for a big producer.

The United Mines Co., or the Old Republic are pushing development work most vigorously having crosscut in the last month 230 feet. The A. & M. D. Co. or the Copper Chief properties are preparing to resume work and the Keystone Company will begin active development on the 15th of September.

At Johnson Mr. Tong has charge of the Johnson Development Co. and they are installing there a 40 H.P. Fairbanks and Morse hoisting engine and air compressor. A carload of ore is now being prepared for shipment from that camp.

Nov. 10, 1911 -- We hear splendid report from the Centurion mine. At a depth of 625 feet they have struck an ore body measuring 130 feet in width. They are pushing work and expect to have more interesting news to relate later on.

Same -- The Texas-Arizona company is also doing considerable development work, and have good ore in sight. There is also considerable activity in the Wolfram deposits at Dragon.

May 31, 1912 -- J. Hubbard, consulting engineer for the Texas-Arizona Co. states that they have encountered some very fine ore in the Texas properties the last few days, and that they will begin to ship in a short time. The ore is high grade and there seems to be quite an extensive deposit of it.

July 12, 1912 -- A great body of high grade ore has been encountered in the Republic mine at Johnson...either mines at that place are also in operation. With the increased price in copper great activity has been evidenced in the copper camps in this region.

OLD PEABODY MINE REOPENED -----

July 19, 1912 -- The old Peabody mine, which is among the most famous of the old producers in Arizona, having yielded \$2,225,000 previous to this closing some years ago, has again been opened up for operations in the Johnson district by Tom Johnson, and he is shipping over 300 tons per month from the property. The ore is high grade copper carbonate running 11, 12 and 13 per cent copper. The finest copper smelter ever used in Arizona was operated at this mine in _____ ? _____ ?

NEW BOOM STARTS

Aug. 16, 1912 -- Old Johnson is a great copper camp with real merits and so notwithstanding the frowns of pessimists and knockers only awaited its time and now like several other southwestern mining camps that have idle for several years, it has suddenly revived and is beginning a permanent career as a producing camp.

The real leader in the new boom of Johnson camp is the Peabody mine, of the Bonanza Belt Copper Co. owned by New Yorkers. The real inaugurators of this boom are Judge Leo Charles Deszar, the N.Y. Jurist and Author, and Tom B. Johnson, the El Paso assayer.

Oct. 11, 1912 -- A. H. Wien says that Johnson is picking up wonderfully, and that great developments are going on in that region.

Same date -- O. T. Smith from Dragoon, has struck a fine body of ore in the Standard group of claims owned by himself and associates, and is now arranging for machinery to be placed on his works to facilitate further development. Owen is sure that he has a mine. As he is a man of good judgement and knows what he is talking about. He further stated that the Republic was still in the enormous ore body struck some time ago. The body has been explored for 250 feet and they are not through it yet; there seems to be a mountain of it. The ore runs 10 per cent copper. The old Peabody mine has also encountered some great ore bodies, so has the Centurion, and others.

Nov. 8, 1912 -- J. R. Hubbard of the Texas-Arizona property, has just received the returns from another shipment of ore which netted over \$2000 for the car. He reports the property looking very promising, having recently struck another ore body that looks as if it might be better than anything heretofore discovered in his camp.

Feb 7, 1913 -- The Texas-Arizona Co. is taking out some good ore, and is shipping steadily. Owen T. Smith, working on the Standard group of mines, has put in a hoist and an engine, also air compressor and air drills. He will go to work on the incline he is sinking and expects to encounter ore in a very short time.

April 11, 1913 -- Quite a stir has been created at Dragoon over opening up of the immense marble deposit south of that town. A number inspected the property. They have secured large contracts for delivery in N. Y. City, and expect to go to work shortly.

The following supplemental agreement to an agreement dated March 20, 1909, has been recorded at Tombstone; Owen T. and Lizzie Smith, James A. Busenbark, Gideon Roerick and Walter M. Stein, first parties, Empire Copper and Gold Mining Co. second part agrees to move machinery from Empire group to Princess group, being group named in agreement, for use upon said mine, according to agreement.

Ben X. Williams has been given a sheriff's certificate of sale, dated March 29, by Harry C. Wheeler for the following property.

The following agreement to sell has been recorded: Robert Mackay, I. H. Parks and Wm. Deckeraw with Arizona United Mining Co. First parties agree to sell to second parties eighteen mining claims in Cochise Mining District, adjoining Mammoth and Peabody mines, for issuance to them of 125,000 shares stock, second party in pro rata proportion. Second upon fulfillment of conditions of agreement.

June 6, 1913 -- The Ariz. United Min. Co. has closed down all of their properties indefinitely and the Tex-Ariz. Min. Co. has reduced its force to 3. John Miller, who has been working for the Texas-Ariz. people, felt the cut and left for his homestead near Wilcox. W. G. Sipes also left for the same reason.

C. W/ Halderman is selling all of his possessions at a sacrifice; intends to enter business in Douglas.

Sept. 12, 1913 -- Report comes from Dragoon that Seth Merrill, manager of the Empire Gold and Copper Co., brought in as fine a specimen of ore as was ever seen in that town. It runs copper, silver, and gold and the estimated value is about \$200 a ton. This company has increased its working force and will work in the double compartment shaft, as well as where they are, taking out their high grade. Mr. Merrill stated that it will ship a carload of ore this month and will try to follow it up with a carload monthly.

Sept. 19, 1913 -- It is reported that the Mackay Mining Co. of Johnson, in a recent strike made on their property, encountered copper sulphide ore assaying as high as 20 per cent copper.

Nov. 21, 1913 -- Maj. E. F. Woodsworth of Whittier Ca., spent Friday in Willcox in company with O. T. Smith, J. P. Richardson, and other Centurion stockholders. Mr. Woodsworth is gen. Manager and consulting engineer of the company. The Centurion mine has begun work recently in Johnson and Dragoon.

Dec. 1913 -- Robert Mackay reports the property of the Mackay Mining Co. is showing up some good ore. Other camps in the district are also progressing along lines that are encouraging.

COPPER EXPERT INVESTS IN CENTURION (from the Whittier, Cal. News)

January 2, 1914 -- W. E. Simpson, a capitalist of Los Angeles was enthusiastic over the property. He stated that the result of his inspection would be to make a substantial investment in the stock of the company, which he believes to be the best ground floor proposition he has had the opportunity to join.

The Centurion occupies the next ideal site for a copper mine possible for the mine to conceive. Most copper properties are located in regions so inaccessible that hundreds of thousands have to be spent to develop transportation facilities. This is not true of the main line at Dragoon station. The main shaft of the mine is 150 feet above the railroad line, making an easy gravity grade from the property to the railroad. Therefore, there is not the usual transportation problem to solve. One of the strange freaks of nature has placed the Centurion property right at the doors, as it were, of the world's markets.

The mine is located in Cochise county,.....to the east and west of the Centurion holdings are well developed, paying copper mines. The main shaft which has reached a depth of 700 feet, has reached the water zone, and on lower levels are great deposits of sulphide ores running as high as 30 per cent copper. The finding of sulphide ore of permanent character at the water level is what was hoped for by the management and removes every vestige of doubt as to the immense richness of the Centurion.

On the 400 foot level are great deposits of peacock ores showing the effects of leaching and indicating greater deposits as depth which would develop into sulphides as the permanent water level is approached. On the 625-foot level the ore shows a more permanent character, with more pronounced indications of sulphides, and within the next hundred feet of sinking the hopes of the miners are justified by the actual uncovering of the rich and desirable sulphides.

There seems to be no possible doubt of the permanency of the great

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body of ore at this level. Every mining tradition, added to the sum total of evidence in this direction, points to the uncovering of one of the largest bodies of high grade sulphide known to the red metal industry. Indeed I fairly believe the owners of the Centurion are on the verge of opening another Copper Queen, and that this property will make wealthy the men who are devoting their money and time to its development. It is not through sentiment that I am investing my own money in this property, but because I believe the investment will bring big returns.

January 16, 1914 -- O. T. Smith of the Standard Mining Company..... showed us some samples of shale carrying copper that has recently been broken into in his property. Mr. Smith expects to open some important ore bodies in the near future, as it is characteristic of the district to find large bodies of ore under the capping of shale. Mr. Smith reported that the Arizona United was shipping about forty tons of ore daily to the smelter and that there was considerable activity at nearly all the properties in the Johnson district.

February 6, 1914 -- H. A. Morgan reports much activity in the Johnson district. The Arizona United is shipping daily from 50 to 60 tons of ore. Shipments are also going forth from the Old Peabody mine and Mr. Morgan says he was informed by J. P. Long of the Johnson Development company that that this company expected to commence shipments in a couple of weeks.

The Cochise Mining Company has transferred to John Fairfax all the mining claims and personal property making up the plant formerly operated by the Manzora Mining Co. near Dragoon. The consideration given in the deed is only nominal, being \$100.

Suit has been filed by John Gleason against the Arizona United Mining Co. and the Goodrich-Lockhart Co. for the restitution of several mining claims located in the Cochise district. Plaintiff asks that a deed and contract conveying said claims be set aside; that an injunction be issued restraining defendants or their agents from working said mines; also for costs of suit.

An agreement has been entered into between the Arizona United Mining Company and the Goodrich-Lockhart Company, the latter wishing to lease the property formerly operated by the former company. The lease is to extend for ten years and six months and the second party agrees to pay indebtedness and obligations of first party not to exceed \$20,000 and to organize an operating and development company within six months.

March 27, 1914 -- The old railroad from Dragoon to Johnson has been leased by Halstead Lindsley a Denver mining man, for shipping ore. He is operating the old Republic Copper mine at Johnson camp under bond. Lindsley is shipping 100 tons of ore a day to the Copper Queen smelters. The output of the mines has been largely increased. The Dragoon-Johnson road has not been operated much since the panic of 1907.

April 3, 1914 -- Advices received from Franklin B. Hardy, the eminent mining engineer connected with the Chicago Mining and Exploration Corporation, are to the effect that examination will shortly be completed of the Dragoon-Arizona Mining Company's properties in the Dragoon mountain. And from all appearances his company would take up its option on the

property and commence work at an early date. The option calls for \$175,000, one-half down and the balance to be paid within a year's time.

April 10, 1914 -- Several important mining deals were consummated throughout Cochise county during the past week, principal among which was the sale of a noted group of eight claims by John Gleeson to the Arizona United Mining Co. The mines are located in the Cochise mining district, otherwise known as the Johnson camp in the Dragoon mountains. The purchase price involved in the transaction has not been made known.

J. T. Long has disposed of his interests in the noted little Rush Extension mining claim located in the Cochise mining district to the Arizona and Michigan Development Company.

Dec. 4, 1914 -- It is reported that the Centurion Arizona Mine has put on a small force of men with a view to increasing the number as financial conditions in the future will permit.

May 21, 1915 -- One man was killed and another had his leg broken at the Republic mine when the bail of a bucket loaded with ore broke and allowed the bucket, which was being hoisted, to drop to the bottom of the shaft.

Oct. 22, 1915 -- Edward Hubbard of Hubbard & Hubbard, mining engineers of Dragoon, -- reported the mines of the Johnson district shipping regularly and stated that some of the prospects of the district were being developed along lines that indicated their giving a good account in the future.

Dec. 17, 1915 -- O. T. Smithe of Dragoon, reported that he had shipped wolfram to the value of more than \$300,000 from the claims he is working for an eastern syndicate and of which he is in charge. He has ground several single specimens of the ore that are valued at \$300 or more and reports the mill, which reduces the ore for shipment, as working successfully in every particular.

Centurion Officers

Jan. 14, 1916 -- At the annual meeting of the stockholders of the Centurion Arizona Mining Co. the following were elected directors: H. A. Morgan, J. W. Angle, M. S. Richardson, J. P. Richardson, E. F. Woodworth, John Scott, and W. H. Purdy, the three latter of California.

It was reported by Mr. Richardson that he believed the company had financial prospects that would permit the company very active in the near future.

Jan 21, 1916 -- Lem Wallace was in Johnson and reports that mining district on a considerable boom. New residences and business houses are being built.

Mar. 17, 1916 -- John Fairfax, who some time ago took over the old Manzora mine near Dragoon and established a rest cure resort,..... reports the discovery of some good ore in the bottom of a 300-foot shaft recently put down on the property.

March 24, 1916 -- Mr. D. C. Masters says that tungsten looks good to him and he will stay in Willcox only long enough to do some necessary work when they will return to look after their mining interests at Dragoon. Mr. Masters, Lee Adams, Dell Robinson and J. Womack of Cochise are in partnership, having twenty claims showing tungsten.

Former Ranch Now Producing Tungsten

April 7, 1916 -- Mr. and Mrs. J. A. Hubbard of Dragoon were Willcox visitors Tuesday. Mr. Hubbard has been identified with the mining industry of the Cochise district for a number of years and reports that he had an associates recently closed a deal for the old Ed Halderman ranch which is now being placered for tungsten. Mr. Hubbard reports good progress and states the returns thus far have been very satisfactory.

April 14, 1916 -- Mr. Dave Adams recently sold a tungsten placer claim and is still enthusiastic over the mining possibilities of Dragoon.

Large Shipments of Tungsten Being Made

April 28, 1916 -- There is a great activity in the tungsten mines in the Dragoon district, and shipments are increasing daily. The district has been the scene during the past week of considerable development work and a number of new properties are being opened. More claims are being worked in that tungsten district than ever before and the number of miners working is much larger.

At the Premos chemical camp the tungsten concentrator is being worked day and night and regular shipments of high grade tungsten concentrates are being made to the works at Premos, Pa. Many individual owners are at work on tungsten claims, and cleaning up good profits from their efforts. The present high prices of this ore, about \$90 per unit (or twenty pounds of "standard"), which is 60 per cent tungstic acid contents, has caused all sorts of "high grading" to be done and there is said to be hardly a day passing but what some of the Mexicans are caught carrying off pieces of the rich ore. Several parties are now under arrest for trying to get away with about \$750 worth of tungsten ore and are now held in the county jail at Tombstone. It is further said that there are a number of parties in the vicinity of the Dragoon and Premos camps making a business of buying high grade ore.

Shipments of several hundred pounds of tungsten ore has been taken from the little Dragoon to Benson and shipped from there. Several mining deals have been made in the Dragoon camp in the past few weeks and leases are being let on a number of claims. All of the owners realize that the golden opportunity is at hand and are taking advantage of it because a termination of the European war, they fear, might cause a slump in the tungsten market.

At the outbreak of the European war, the American tungsten market was very dull, and prices very low, being only \$6.00 to \$8.00 per unit. At that time Australian and other tungsten ores were in the market in competition with American tungsten, causing many idle properties. Now all this is changed.

Use of Tungsten

The most common use for tungsten,.... the embargo was placed by Great Britain on tungsten ores out of Burma and Australia, whereupon the prices of tungsten rose rapidly, until \$60 more per unit has been paid on ore carrying 60 per cent and more of tungstic trioxide. The small quantity of this ore coming from Japan, Peru and Bolivia, South America, is hardly appreciable in affecting the market. This has started a hot hunt for these ores all over Colorado, California, Arizona, Sonora and New Mexico. Almost daily new tungsten finds and deals are reported from various camps, such as the Little Dragoon, the Bradshaw Mountains in Yavapai, in Mohave county, and other Arizona camps. Discoveries have also been made in the Victoria camp west of Deming and at White Oaks, N. M. and the two last named camps have ~~XXXX~~ already shipped considerably over \$100,000 worth of this ore during the past twelve months.

In Dragoon Mountains

In the Dragoon mountains, the deposits at Russellville, four miles north of Dragoon station, are rich in tungsten. The tungsten minerals there are hubnerite and scheelite, occurring in quartz veins cutting a granite stock which comprises an oval area with an east-west diameter of about four miles and north-south diameter of about two miles. The tungsten minerals occur in quartz veins ranging from a few inches to several feet in thickness and are either disseminated or in sheets dipping about 40 degrees north. The veins run northeasterly. The walls are in most cases sharply defined and continuous for long distances, some being traceable for two miles. It occurs in both regular crystallized quartz and in "bull quartz".

In the arroyos are tungsten placers very rich and easily worked in the wet season. Rockers and long tons are employed, operated by Mexicans who get 10 cents a pound for a concentrate. The average production was ten pounds per day. The nuggets ranged from the size of a grain of corn to lumps weighing several ounces. In former years nuggets ranged from the weight of six to eight pounds were often picked up. Devil's Basin, at the head of Texas canyon has proved very rich in mineral.

Pumps Being Installed on Centurion Property

May 19, 1916 -- J. P. Richardson, president of the Centurion Arizona Mining Co., reports that he met with a fair degree of success in an effort to interest capital in his property, and stated that pumps and hoisting equipment were now being installed at the mine. This will require about 30 days, when aggressive development work will be prosecuted. It is his opinion that the property will soon be in a position to make regular shipments of ore to the smelters.

May 19, 1916 -- Dave Adams of Dragoon reported that the price of tungsten excitement was still at fever heat in the district.

Active Development at Manzana Camp

Oct. 6, 1916 -- Mr. Fairfax informed us that the Manzana mines, of which he is chief owner, were now under active development with about 40 men working on the two shifts.

March 30, 1917 -- W. A. Siege was reporting mining activity in Johnson as being the greatest in the history of the camp.

To Work Tungsten Property

August 24, 1917 -- W. J. Anson, mine operator of Los Angeles, arrived in Willcox in company with Atty. John C. Gung'l, went to Dragoon to inspect a tungsten property. Mr. Anson has purchased a portion of this property and within the next ten days will have men at work on it. He immediately shipped machinery out of L. A. and upon its arrival and installation, will begin operation on no small scale.

September 7, 1917 -- Adams, J. S. Angle, and John Gung'l closed a deal for three tungsten claims in the Dragoon section. The consideration was not stated. The sale was made to L. A. parties. The same afternoon Mr. Adams went to Dragoon to meet other parties to whom he expected to sell some other properties of the same character. Mr. Adams states that the mining industry about Johnson and Dragoon is very active and that considerable ore is being shipped daily from that section.

September 28, 1917 -- Around Dragoon the Wolfram properties are again being opened and much activity is manifested in that section. At Johnson a regular boom is due. During the draft period a large quota of men were called from there and shortage of labor thereafter experienced. The place of the absentees have been supplied and the work is beginning again in earnest. Buildings and improvements are going on rapidly and Johnson will this winter have a year of unprecedented prosperity. New properties will be opened up and the old reliable ones will increase their forces.

Mining Willcox and Sulphur Springs Valley

Dec. 14, 1917 -- The mines at Johnson, 25 miles from Willcox have been actively producing for nearly 30 years. They employ a large force of men. At Dragoon Wolfram has been mined intermittently for 25 years. This industry has been active during the last four years.

Movements at Johnson

August 7, 1918 -- Johnson is quite active in spite of the shortage of men caused by the draft. The Arizona United Mining Co. has taken over in the properties owned by it, which has of late been leased by the Cobrison Leasing Co. The principle work done at present by the Arizona United is on the old Republic. They are working through an incline shaft and the length of the incline is about 1100 feet. They are producing 100 tons daily which is being shipped to El Paso smelters. This company employs about 80 men at present. J. E. Libbey has successfully superintended this property for the last six years and it has been a steady producer. A. C. Harmon of Philadelphia, one of the principal owners, is now at the property and expressed himself as being well satisfied with the conditions of the property and its output.

Besides this property there is considerable leasing done. Other properties in operation at the present time are the Dragoon Mountain Copper Co. the Johnson Development Co. the Keystone Copper Co., the Thunderbolt, and the Peabody. About 150 men are employed in the camp and the monthly output runs approximately 3500 tons.

The principal merchants are the Peterson Mercantile Co. and A. H. Wien. Herbert Wien conducts a pool hall and a moving picture show.

MINING INDUSTRY AROUND WILLCOX

Nox. 29, 1918 -- Frank Peterson is working several men on his property and the showing is excellent. Other properties in that sections are starting operations and the coming year will see considerable mineral produced in that district.

The Johnson district is working steadily, although the influence has retarded work. The Arizona United is shipping several carloads per week of high grade sulphide ores. While the other mines are bringing the quota up to a round figure each month.

JOHNSON

Friday, July 25, 1919 -- After a six months case of "sleeping sickness" Johnson has woke up. The Arizona United Mining Co. put a small force of men to work the first of the week repairing machinery, cleaning out the shaft and has added to the force each day with the intention of being in full operation by August 1. The boilers were fired up Tuesday, and everything tested out so there will be no hitch when they start to unwater the shaft, which will not take long as the mine does not make much water.

The Copper chief, formerly the Arizona-Michigan, has been taken over under lease by a new company, who have a force of men cleaning out the shaft, drifts and old stopes getting ready for development work. The power plant has been overhauled, boilers, compressor and hoist put in first class conditions and arias soon as the fuel oil arrives, smoke will be coming out of the stack of this property. From a reliable source it has been learned that this company will start to build a fifty ton concentrator in the near future.

The Johnson Development has had to stop work and retimber their shaft on account of old timbers becoming rotten and unsafe.

The Keystone Copper Co. is working one shift on their O.K. claim, doing development work and opening up a body of ore which has been struck in this shaft.

REPORTS ACTIVITY AT JOHNSON

Aug. 15, 1919 -- Martin Fishback, pres. of the Development Corporation of Arizona which has the Copper Chief mine at Johnson under ten year lease, reports that the mine will begin shipping ore the coming week to the Douglas smelter and that within a short time the power plant will be started up, arrangements having been made for the use of the track of the S. P. to bring oil up to the mine. When the machinery is started air will be furnished for the compressors, when machine drilling will begin, and larger shipments of ore will be the result. Mr. F. also reports that Republic mine is starting on a larger basis than heretofore, and it seems as if Johnson is destined for considerable activity within the next twelve months.

BENSON SMELTER TO BE BLOWN IN EARLY NEXT MONTH

22

Aut. 22, 1919 -- The work on the Arizona Smelting and Power Co.'s plant here is progressing rapidly and it is now expected that the Smelter will be in operation about the first of Sept. A force of men and teams are at work now in grading for the installation of the new railroad spur from the Southern Pacific lines. This work will be completed within the next few days. The work of concreting the smoke chambers and land

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to the shack has been completed. The big compressor has been installed and is ready to be started. The boilers are in place and ready for the fires to be lighted. The oil tank is in shape and a spur will be continued on to it so that the oil can be unloaded direct into the tank. Large cement water storage tank has been completed and already filled with water.

JOHNSON NOTES

Fifteen cars of ore shipped this week.

Lumber is arriving and all arrangements have been made for the erection of a new mercantile house in the camp. J. H. Smith of Dragoon having decided to try and compete with the two stores which are doing business at the present time.

Sept. 26, 1919 -- It is reported that the Mines and Development Corp. of Arizona struck high grade copper ore in two different places on their property this week. The size of the veins are not known at present as the walls have not been reached.

Oct. 3, 1919 -- Martin Fishback, manager of the Mines and Development Corp. of Ariz. was much elated over his new strike. The ore bodies struck still continue, the ore being of a higher grade than at first reported. Assays from one shaft were as high as 20% copper from the other shaft an assay of 31% copper. One place carries red oxide, the other shows native copper and also glance.

Oct. 10, 1919 -- Burnie and Cliff Gibbons have taken a lease on a block of ground from the Mines and Development Corp. They are sinking their shaft as fast as possible. They are in such a hurry to get the work done that one day this week Burnie took the quick way down the shaft instead of the ladders. He says the sudden stop was somewhat of a surprise.

Oct. 17, 1919 -- The Arizona United has curtailed their shipments slightly in order to do more development on known ore bodies. It is reported that they will sink at least one shaft and install new machinery to handle the ore from the lower level.

31

Oct. XX, 1919 -- The ore bodies recently struck by the Mines and Development Corp. still continue. In the No. 1 shaft the entire vein is streaked with glance, making a very high grade copper ore. At the No. 2 shaft they are sinking on the vein. This ore contains much bornite and native copper.

The Arizona United Mining Co. have put on the third shift in order to rush the large amount of development work contemplated. While this work is being done, shipments have been cut so as not to exceed a hundred tons per day.

The Keystone Copper Mining Company are running drifts and raises preparing for a large output of the low grade ore which they have on all levels, for the concentrator that will be erected in the very near future.

Nov. 28, 1919 -- J. N. -- It is reported that the Peabody mine which has been closed down for nearly two years, will start in the near future. It is to be hoped the rumor is true.

Dec. 26, 1919 -- The sale of machinery at the Thunderbolt Copper Mining Company which was postponed Dec. 1 until the 20th was again postponed until Jan 20th.

The Mines and Development Corp. are shipping a car of high-grade ore each day at the present time.

Jan. 16, 1920--Jan 1st, found Johnson still on the map and doing business at the same old stand, sending out the red metal as fast as the price would justify. True, the first half of the year shipments were stopped, not for the want of ore to ship but for the want of a buyer who would give the price that would pay the cost of mining and treating, which is much higher in the small mines we have in Johnson than in the larger ones of Biabee, Globe and other camps, having large production.

On Feb. 1, 1920, the Arizona United Mining Co., the largest producer in the district, closed down indefinitely, owing to the price of copper being lower than the cost of production. On July 1 this company resumed work and have been shipping regularly since that time. Extensive development work has been done and several new ore bodies found, which are being developed for the purpose of producing a large tonnage when the price of copper will justify it. Until this time only the ore from the development work is being shipped. The prevailing opinion is that these shipments are paying all expenses of the new work. The Copper Chief, owned by the Arizona Mich. Development Co. was leased to the Mines and Development Corp. of Arizona. This company composed of Cochise County mining and business men, commenced work on a small scale July 1st, under direct supervision of E. C. Rice, the preliminary work consisting of prospecting some of the ground heretofore passed up. In what is known as the No. 1 shaft, a vein of copper ore was struck on the third level but from all indications it continues downward. In No. 2 shaft sinking was started and ore struck in a very few feet. The size of this vein has not been determined as nothing but sinking has been done, following the ore which is improving in value with depth. No staging has been done by this company, their object being to develop the ore bodies for a large tonnage in the future.

The Keystone Copper Co. continued operations throughout the year, drifting and crosscutting the large veins of milling ore which they have on all levels. No shipping was done by this company as the amount of soaking ore so far developed is small. On Dec. 20, the management reported that eight carloads of machinery had been shipped from Chicago for the concentrator to be erected. Work of installing to commence on arrival of shipment. This will be the first mill in the district and great interest is shown. Exhaustive tests have been made by a number of engineering works and the process adopted shows that this class of ore can be mined at a large profit.

The Johnson Devel. Co. closed down several months, started work Jan. 1st, with a small force. A large amount of work is contemplated.

Jan. 25, 1920 Johnson Notes - Two marine boilers and stacks arrived this week for the Keystone Copper Mining Co. These are for the new power plant to be erected for the purpose of operating the concentrator to be built.

A big strike has been reported on the ninth level of the Arizona United Mining Co. From all reports this is the largest strike ever made on this property, both in size and value of the ore.

Feb. 6, 1920 J. N. - In the mining game Johnson broke even the first month of the year. One mine started, while one shut down. It would not do for all of our properties to operate at once. It might affect the labor market.

Feb. 13, 1920 J. N. - The Mining and Development Corp. of Arizona resumed operations this week after a 15 day shut down. Work at this time is restricted to sinking No. 2 shaft.

March 12, 1920 - J. N. The O. K. shaft of the Keystone Mining Co. is being unwatered, after which work will be resumed on the lower level.

April 30, 1920 - The Keystone Copper Company at Johnson
The Keystone Copper Co. at Johnson is making great improvements upon their properties and arranging for a steady and heavy production in the near future. They have recently purchased 200,000 feet of lumber for the construction of a mill. This will be a mill and flotation process and all machinery will be strictly up-to-date- and the latest and most scientific processes employed in the treatment of ores. Fifty thousand dollars worth of machinery is on the road and will be ready for installation shortly. Two large marine boilers each of a capacity of 100 h. p. each together with a Vickers engine of 200 H.P. will furnish the required power and another ten thousand dollars will be expended for pipe lines and other necessary equipment.

A double compartment shaft is now down 635 feet. This is all piped and equipped with air lines. On the 125 foot level they have a sulphide ore body 25 X 125 feet running from 2½ per cent to 10 per cent copper and some gold and silver. On the 600 foot level they have nine foot ore body running from \$8 to \$16 in gold and 2½ per cent copper. On the O.K. shaft at a depth of 450 feet they have a fine ore body. One car was recently shipped and running 11¼ per cent and one car of picked ore ran 20 per cent.

The plant will be completed in about five months and will be one of the regular producers in this section of the country.

June 18, 1920 J. N. - The Arizona United Mining Co. has started work on the Mammoth which has been closed down for the past 18 months. This property has in the past produced much copper and it is expected the shipments of the camp will be increased from this place in the very near future.

June 25, 1920 J. N. - The Keystone Copper Mining Co. have finished two large concrete water tanks which have been filled with water pumped from the O. K. claim of this company, which it is understood is to be sunk deep enough to develop a water supply for the mill which is being erected.

July 30, 1920 J. N. - The recent heavy rain in this district damaged the roadbed of the Dragoon Northern to such an extent that it was not safe to run trains over it. Not being able to ship ore on this account, the Arizona United Mining Company has been forced to close down until repairs on the railroad can be made.

Sept. 17, 1920 J. N. - J. H. Smith of Dragoon reported that the body of lead-silver ore recently struck on the Arizona-Texas is larger than first anticipated.

Oct. 8, 1920 J. N. - The M. D. C. Trucks are hauling ore from the Mammoth property of the Arizona United Mining Co. to the railroad.

April 8, 1921--Mr. Milo Burke and Los Angeles parties have taken over the management of the Centurion of Dragoon, and we can look for important developments this summer.

June 24, 1921--The Johnson Copper Co. is having a lot of air pipes made for installation in their mines at Johnson.

Oct. 28, 1921--Owen T. Smith.. has been operating the Texas & Ariz. properties for the last year.

Jan. 27, 1922--Quite a number of mining properties will resume operation in the near future. The Centurion mine at Dragoon has changed hands and they are now erecting a smelting plant capable of handling 75 tons daily. This is a new process recently invented. The mining end will be pushed aggressively during the summer months.

March 24, 1922--The Keystone Mining Co. is building their mill at their property at Johnson. It will not be completed until some time this fall.

April 21, 1922--The Johnson Copper Development Co. under the management of J. T. Long is driving into some fine and rich ore on their property at Johnson. During the summer the resumption of much mining work will be noted.

Jan. 23, 1923--Mining activities are starting again at Johnson after a shut-down extending over two years. With the increase of price in copper the mines in that camp will resume work this summer. The Keystone is putting up a large mill which is expected to be ready for operation by fall.

Nov. 30, 1923--Things are quiet in the mining line at Johnson until the price of copper comes back to normal when the usual activities will commence again.

Dec. 28, 1923 -- Cochise County Line will enlarge Development Work

Development on a greatly enlarged scale is to be begun by the Keystone Copper Mining Co. five miles north of Dragoon according to W. W. Miller, Pres. The Keystone company is preparing to develop large bodies of both high and low grade ores from their adjoining

claims, from which they will secure fair values in concentrates. The company is just completing an electrical power plant by which the two mines and the mill will be operated. The company now has fine and modern concentrating plant, which will go into service in about 60 days, when shipping of concentrates will begin. Mr. Miller stated that those behind the venture--Kansas people-- will go right ahead with increased development of the properties, despite the slump in copper, which they believe to be but temporary.

Dec. 12, 1924--Considerable ore which had accumulated on the dumps at one of the mining properties at Johnson was shipped recently. They will not begin operations there to any extent until copper prices have reached a higher level. The Keystone is building their mill and hope to have it in operation during the early part of next year.

April 23, 1926--At the mines of the Keystone Copper Co., they have recently cut a fine ore body of large dimensions, and are continuing the development work. The mill which was completed last summer, is running a good proportion of the time.

April 5, 1929--J. H. Hubbard of Tucson is here having work done on his mining claims.

Feb. 23, 1930-- Increased Activities at Johnson Mining Camp

The old Republic mining properties, comprising a group of about seventy claims, a large number of which are patented, has recently been sold to an eastern syndicate who are at present making arrangements for more extensive development of the property. Pumps are being installed in the old shaft for pumping out the mine preparatory to working on a larger scale. A small crew has been at work in this mine for some time past and regular shipments of ore have been made. The new owners are hiring more men at the present time and it is said that there is a likelihood of a mill being located on their property.

The Johnson Copper Development Co., under the management of Supt. J. H. Walker, is showing renewed activity and the first shipment of ore from this mine is some time was made this week. A small crew has been at work here, but more men will be put on within the next week, or two, according to Mr. Walker.

The Keystone is another mine in the Johnson district that is working steadily with a small force of men.

Aug. 28, 1931--The Centurion Mine shipped a carload of copper ore to the Douglas Smelter, Friday.

Aug. 13, 1933--Matt Lee sustained a badly lacerated right arm when it was accidentally caught in the gears of pump at the Golden Rule mine.

July 27, 1934--A new shaker sieve and ball mill has been received by R. D. Silverman of the Texas Canyon Tungsten Co. which is on the Dave Ad property near the picnic grounds.

Same-- Jim Clark broke his thumb while cranking an engine at the Texas Canyon Tungsten mine.

July 26, 1935--Lightening struck the Miller residence at the Keystone Mine brecking all light globes and setting the roof on fire which was quickly extinguished by the men at the mine.

May 27, 1938--Harry Peake and Ira Calum of Clint, Texas, and Gilbert Priest of Searchlight, Nevada, have leased tungsten properties from A. H. Yeagley. They made a trip to El Paso last week, returning with equipment for working the mine.

August 26, 1938--Stockholders who spent several days in the vicinity of the Keystone mine, left for their homes in Kansas and nearby country Monday morning.

Nov. 13, 1938--Bruce Gilbert reports that he and John Kerrey have had a lucky strike at their lease of tungsten property in Russellville. In one day, he stated, the two men dug enough tungsten to net in the neighborhood of \$150. They look to very good pickings for some time to come, from present indications.

Jan. 27, 1939--Elmer Walker announced here yesterday that Mrs. H. A. Penrose of Washington, D. C. had telegraphed him that she wished to buy half interest in the tungsten claims which Walker owns and operates in the Russellville district. About thirty men are at present employed at the claims. Mr. Penrose is Mr. Walker's mother-in-law.

Oct. 27, 1939 Keystone Mining Men Closed by Courts.

"El Dorado, Ka. Oct. 7 Fraud charges resulting from the sale of \$1,250 in bonds of the Keystone Copper Mining Co. of Arizona have been dropped against seven defendants.

Discharged after a preliminary hearing yesterday before County Judge W. H. Calkins were John W. Blood, U. R. Miller of Wichita, Kan., T. C. Miller of Dragoon, Ariz., Dr. G. R. Dean and Julius T. Gibson of McPherson, Kan, and Norman M. Rehg of El Dorado.

Rehg, financial secretary of the Keystone firm, was bound over to district court for trial on a separate charge of embezzlement. He was released under \$1,000 bond.

April 19, 1940--It was announced here last week that all timbers and buildings are being sold and removed from the Black Prince Mine in the Johnson district. The mine is the property of Mrs. Winifred E. Bartlett of Masenville, Rhode Island.

Friday, Sept, 1940--The American Metal Co. last week shipped a carload of machinery, including a diamond drill to the Republic Mine in the Russellville-Johnson area. John Payne, J. T. Mateen engineer, and Jess Humphries, diamond driller, were sent from the camp to work on the Republic and neighboring claims, the output of which is largely copper.

Sufficient men have been employed to carry out the work planned, including Will Adams, Tony Herrera and Dale Higgins, the two last having been working at the mine for some time past.

Dec. 6, 1940--There is much activity at the Republic mine. Three shifts are working, and a new driller, Tom Ligon, arrived this week from Texas to work at the mine.

Oct. 31, 1941--After many years as a ghost mining town, Johnson is taking on a few signs of resurrection. The Republic mine is working three shifts. They have a new compressor and there are reports of more extensive activities in the near future.

Last winter there were a number of tests made on the grounds of the Republic by the American Metal Co. but the results of these tests were never made public. The name of the present backers of the activities has not been announced to date.

Angelo Pavente, who was replaced several years ago as watchman of the Republic, by Dal Higgins, is again at the mine, and is acting resident superintendent.

Back to 1931 Marble

Aug. 7, 1931--A hoist was purchased in Tucson last week by the Arizona Marble Co. and has been erected on their quarry near Dragon.

OPERATIONS

ARIZONA 1991 ANNUAL REP.

The Johnson Camp Property (Cont'd)

Ongoing geological assessment through mapping and review of past drilling has identified further areas of mineralization in the footwall of the Burro Pit. A series of drill holes are planned to intersect this previously unrecognized potential ore zone. Initial indications are that this zone could contain up to 4,000,000 additional tons of ore grade material.



An overview of the Johnson Camp Operation from the Copper Chief Deposit showing the Burro Pit and SX-EW plant. This "zero discharge" operation produces high grade cathod copper without the need for smelting.

As the Burro pit reserve is exhausted, future mining activities will concentrate on the Copper Chief Ore body. Mine planning parameters were defined at the end of the year along with drill hole layouts which are expected to increase the known reserve at the Copper Chief. The current reserve is 9.6 million tons at 0.42% Copper.

Operating costs are steadily falling at Johnson Camp, and will settle in at designed level as full production is achieved in May 1992.

The Johnson Camp operation is fully permitted and has all the facilities and capital equipment in place to continue producing low cost, high grade copper at present production rates into the next century.



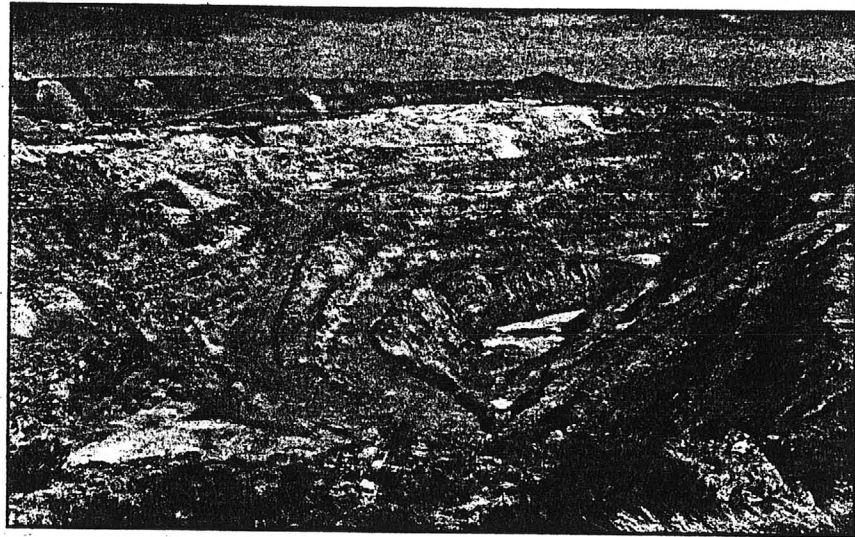
A view of a leach field at the Johnson Camp Mine.

THE JOHNSON CAMP PROPERTY

Located 60 miles east of Tucson, Arizona, and covering an area of over 1300 acres, the Johnson property has been the site of many old mines dating back to the late 1880's. The area once supported a town of 5,000 people located on the site of the Burro Pit. From 1975 to 1986, Cyprus Mines Corporation operated the Johnson mine, with a heap-leach, SX-EW operation producing approximately 100 million pounds of copper.

Reserves at Johnson Camp are derived primarily from three sources: remaining copper unleached in existing heaps; 4,000,000 tons of oxide copper ore in the Burro Pit; and a virgin oxide copper ore body (Copper Chief-Diabase) adjacent to the existing leach area.

Upon completion of its public offering in June, 1990, the Company began construction of a 35,000 PPD SX-EW plant. Leach systems on the



The Burro Pit at Johnson, scheduled for reopening in May, 1991

existing pads were rehabilitated as were collection, raffinate and plant feed ponds.

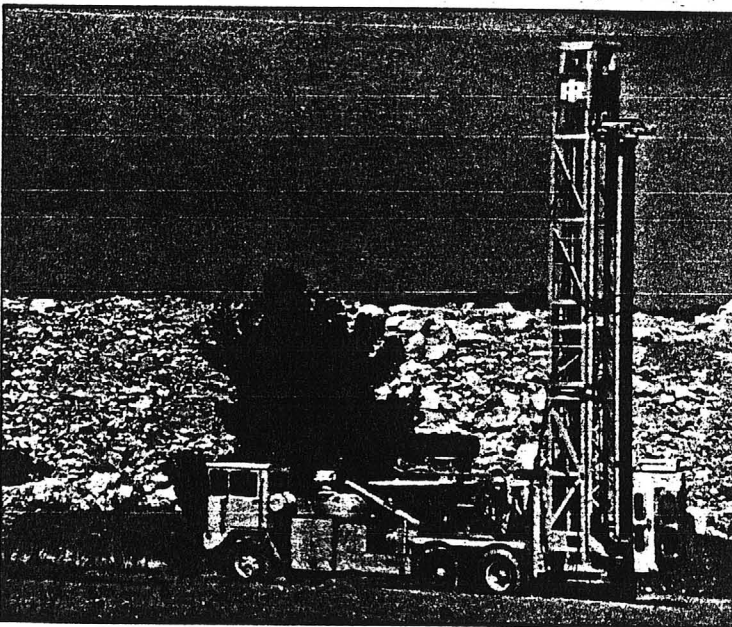
Construction of plants and related facilities was completed in September at a cost of US\$3.3 Million. Commercial production was achieved during October, 1990. A fleet of four Wabco 120 ton trucks and related

loading equipment were financed and mining activity was scheduled to commence in May, 1991.

The Johnson Mine has adequate reserves of copper to produce at a continuous rate of 30,000 pounds of cathode copper for a period of twelve years. It is a "zero discharge" operation and is an environmentally friendly project.

The project employs 40 people in all phases of its operation, most of whom live in the nearby communities of Benson and Willcox, commuting 15 miles daily to work.

The company intends to initiate an active exploration program on the property during the next year and hopes to expand reserves in the area of the undeveloped Copper Chief Orebody.



Blast hole drill rig being readied for operations at Johnson Camp

LEGEND

RECENT
SAND, GRAVEL, WASH
CALICHE, BOULDERS

POST-CARBONIFEROUS
APLITE DIKES AND
QUARTZ VEINS

POST-CARBONIFEROUS
GRANITE

CARBONIFEROUS
LIMESTONE, MARBLE

DEVONIAN?
LIMESTONE AND
SANDSTONE

CAMBRIAN
CHERTY COLOMITIC
LIMESTONE, SHALE
AND SANDSTONE

CAMBRIAN
QUARTZITE WITH
BASAL CONGLOMERATE

PRE-CAMBRIAN
SCHIST

FAULT

DIP

SHAFT

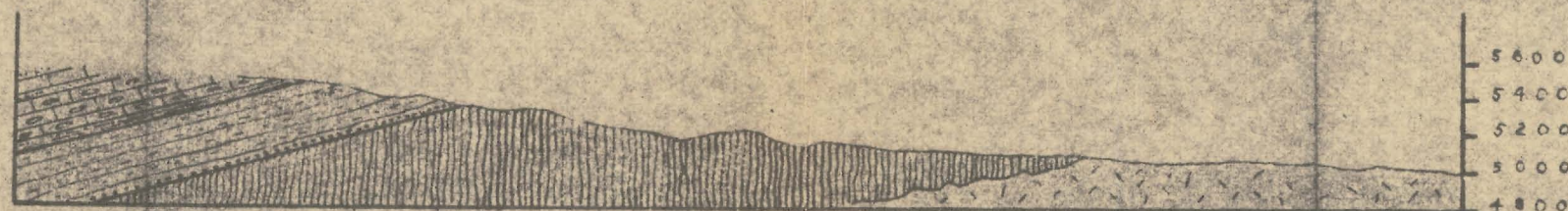


LIST OF MINES

- 1. BLACK PRINCE
- 2. PEABODY
- 3. JOHNSON COPPER DEV. CO.
- 4. MAMMOTH
- 5. COPPER CHIEF
- 6. REPUBLIC
- 7. RICHMOND
- 8. O.K.
- 9. KEYSTONE
- 10. THUNDERBOLT
- 11. PEACOCK

GEOLOGY AND TOPOGRAPHY BY R.E.S. HEINEMAN

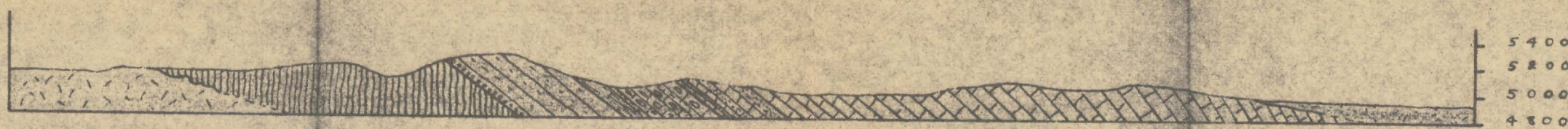
SURVEYED IN 1926-27



SECTION A-B



SECTION C-D



SECTION E-F



CONTOUR INTERVAL
20 FEET

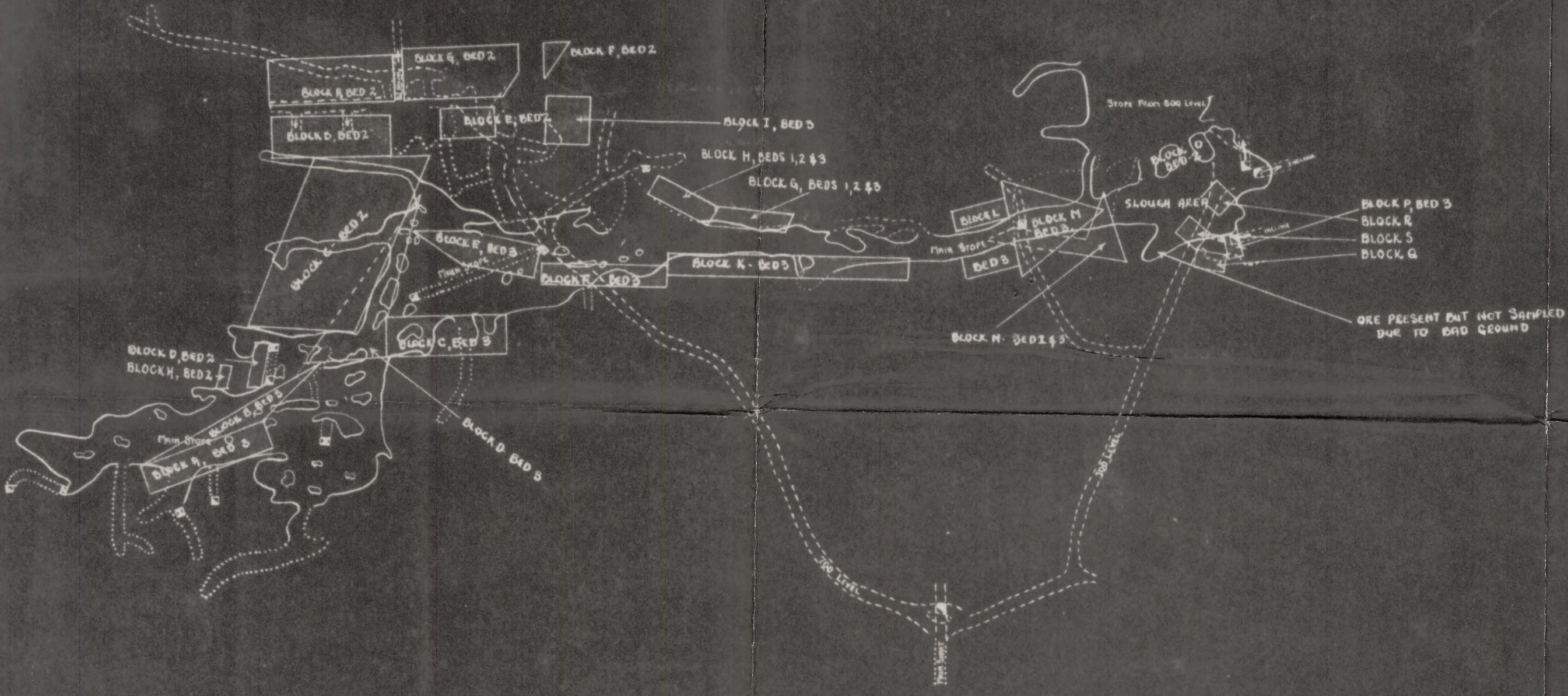
GEOLOGIC MAP AND SECTIONS OF THE JOHNSON MINING DISTRICT, ARIZONA.

REPUBLIC MINE

BLOCK No.	SAMPLES USED	TONNAGE	AVERAGE ASSAYS	REMARKS
A-BED 2	11, 2, 4, 7, 9, 11, 12, 13, 14	6525	6 ¹ 1 ⁰	BETWEEN 900 & 700 LVL. IMMEDIATELY AVAILABLE
B "	11, 2, 3, 4, 8, 15, 16, 17, 18	7100	6 ² 1 ⁰	IMMEDIATELY AVAILABLE
C "	19, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32	14900	4 ¹ 2 ²	AVAILABLE AFTER COMPLETION OF 250' GRADE
D "	31, 32, 33, 34	500	5 ² 3 ⁰	ABOVE BLOCK C, BED 2
E "	29, 24 & 25	1875	5 ⁰ 2 ⁰	IMMEDIATELY AVAILABLE
F "	29, 30, 31	1000	4 ³ 2 ⁰	LOCALLY AVAILABLE 300' BETWEEN 700 & 600 LVL
G "	31, 33, 35, 37, 38	4000	3 ¹⁰ 2 ¹⁰	BETWEEN 700 & 700 LVL
H "	AVERAGE OF BLOCK A SAMPLES	500	4 ¹ 1 ⁰	ABOVE BLOCK C, BED 2
H-BED 3	34, 37, 38, 39	3750	5 ⁰ 2 ⁰	IN FLOOR. AVAILABLE ONLY AFTER RAISING OR ESTABLISHING SOME OTHER MEANS OF EXTRACTING
B "	34, 37, 39 & 40	4000	5 ⁰ 2 ⁰	BELOW BLOCK A-BED 3
C "	41, 42 & 43	4555	7 ¹ 1 ⁰	AVAILABLE IMMEDIATELY
D "	44, 45, 46, 47 & 48	3700	6 ⁰ 2 ⁰	" "
E "	49, 50, 51 & 52	1540	6 ⁰ 2 ⁰	" "
F "	53, 54, 55 & 56	3000	5 ¹ 4 ⁰	AVAILABLE IMMEDIATELY 100' IN 500' LEVEL TRAIL
G-1, 2, 3	57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74 & 75	2200	8 ¹ 3 ⁰	AVAILABLE AFTER DE-ICE
H "	76, 77, 78, 79	4000	7 ⁵ 2 ⁰	AVAILABLE IMMEDIATELY
I "	80 & 81	1140	4 ¹ 2 ⁰	AVAILABLE IMMEDIATELY
J "	82	250	4 ³ 2 ⁰	AVAILABLE IMMEDIATELY
K "	83, 84, 85, 86, 87, 88, 89, 90 & 91	6540	5 ⁰ 3 ⁰	AVAILABLE AFTER STOPPING THROUGH BED 1, 2 & 3
L	AVERAGE OF C1	1710	4 ¹ 3 ⁰	AVAILABLE IMMEDIATELY
M	92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200	83500	5 ¹ 2 ¹	

TOTAL TONNAGE 83500
AVERAGE ASSAY ZN. 5 1/2% CU. 2 1/2%

Property of
W. A. Hooton
Dragoon - Arizona

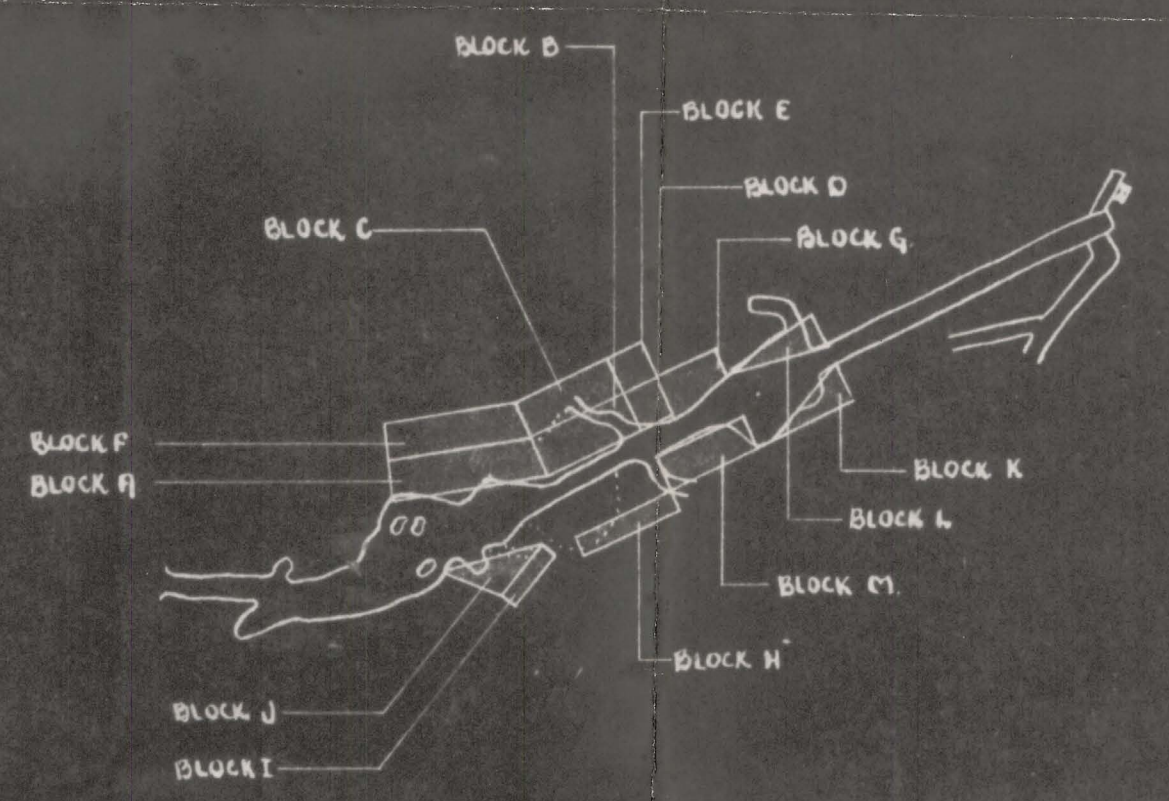


MAMMOTH MINE

MAMMOTH MINE

BLOCK No.	SAMPLES USED	TONNAGE	AVERAGE ASSAYS	REMARKS
A	1, 2, 7	546	5 ⁰ 3 ⁰	BED 1, 2 & 3
B	1, 2, 3	694	5 ⁰ 2 ⁰	BED 4
C	6	580	3 ⁰ 2 ⁰	BEDS 1, 2, 3, 4
D	1, 2, 5	750	4 ⁰ 2 ⁰	BEDS 1, 2 & 3
E	6	240	2 ⁰ 2 ⁰	BEDS 3 & 4 (1 & 2)
F	6	620	3 ⁰ 2 ⁰	BEDS 1, 2, 3 & 4
G	1, 2, 3, 4 & 5	1360	4 ⁰ 5 ⁰	BEDS 1, 2, 3 & 4
H	6	190	2 ⁰ 2 ⁰	BED 3 & 4
I	8	200	6 ⁰ 4 ⁰	BED 4
J	8 & 11	160	3 ⁰ 4 ⁰	BED 4
K	9	220	0 ⁰ 0 ⁰	BED 3
L	9	300	0 ⁰ 0 ⁰	BED 3
M	1, 2, 3, 4 & 5	1825	4 ⁰ 5 ⁰	BEDS 1, 2, 3 & 4

TOTAL TONNAGE 8100
AVERAGE ASSAY ZN. 4% CU. 3%
BED 1 BELOW 2, BED 3 BELOW 1, BED 4 BELOW 3



PERU MINING CO.
HAMOVER, W. V.
PLAN OF REPUBLIC & MAMMOTH MINES
JOHNSON CAMP, DRAGON, ARIZ.
SHOWING
SKETCH & APPROXIMATE LOCATION OF
ORE BLOCKS
TO ACCOMPANY REPORT BY J. PHERNDON
SAMPLED & COMPUTED BY J. PHERNDON
DRAWN BY J. PHERNDON
JANUARY, 1908
SCALE - P. 100'
FILE I NO. 7C