

Arizona. State mine inspector.

Annual Report



OF THE

State Mine Inspector State of Arizona

For the year ending November 30, 1912



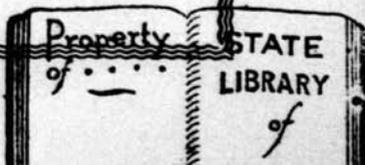
Published by Board of Control, by authority of Chapter
53, Session Laws of the Second Special Session
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OFFICE OF THE STATE MINE INSPECTOR

Phoenix, Ariz., December 31, 1912.

To His Excellency, Geo. W. P. Hunt, Governor of Arizona.

Sir: In accordance with Sec. 16, Sub. H. B. No. 46, enacted by the Legislature of the State of Arizona, prescribing the duties of the Mine Inspector, I hand you herewith my report, which includes the work done by this office for the year ending November 30, 1912.

(Signed) G. H. BOLIN,
State Mine Inspector.

Prior to May 15, 1912, the State of Arizona had no Mine Inspector. The office was created by the Constitutional Convention. A mandate was inserted therein requiring the Legislature at its first session to enact laws prescribing the duties, powers and qualifications of the Mine Inspector and Deputy Mine Inspectors. I have been ably assisted in the work by Deputies Mr. William Farrell, Mr. John Harper and Mr. J. C. Wilson.

Owing to the fact that the emergency clause was passed in connection with the Mining Code, the various mining companies that are operating in the State were very defective as to compliance with the Code. In many of the larger mines, and some of the smaller ones, we found the ventilation very poor. We gave instructions to the agents in charge to remedy such defects so that a sufficient amount of pure air would circulate through all parts of the mine where men were working. In many cases the humidity was so great that it was almost impossible for the employees to do an average shift of work without impairing their health to a marked degree.

I want to impress upon the minds of the managers of the different mining companies operating in the State of Arizona, and I am speaking from a practical view point, that they cannot reduce the cost of production of ores by any system they adopt more than they can by properly ventilating all the workings of the mine. To obtain the best results the interest of the employer and employee must be interdependent. If the employee in the mines sees that conditions are made as safe as possible for his health and safety he naturally takes more interest in the work he is doing, and will accomplish more, and do his work in a better manner than he could if the mine was operated in a "slip shod" manner. Some of the operating mines have men employed whose duties are to see that enough pure and cool air circulates through all workings to reduce the temperature to at least 70 degrees Fahrenheit. This is a very commendable method. The managers of mines where this system is used say they can reduce the cost of production to a very marked degree. The miners can do more work and they can get experienced and steady miners when operating under these conditions.

Almost every system of working metaliferous mines is used in operating the mines of Arizona. Owing to the fact that the character and value of the ore differs greatly in the various districts is responsible for the different systems in use.

We have attended six inquests, and have inquired into and ascertained the facts, so far as possible, relative to the cause of all fatal accidents. The coroner's inquest in many of the fatal accidents were held before we could arrive at place of same, but we have received copy of coroner's inquest on all fatal accidents. There is no provision in the Code where a special deputy can receive compensation for his services, therefore we cannot have one in each mining camp that is operating.

The following is a brief report of the different mines inspected. A great number of them have been visited two times, and wherever defects were found to exist requests were made, or notices served on operators for the remedying of the same. In most cases the defects were remedied at the earliest possible time.

COCHISE COUNTY

CALUMET & ARIZONA MINING CO.

The JUNCTION and HOATSON mines are situated in the Warren Mining District. The nature of these mines is copper, and the average tonnage is about 20,000 tons per month. The method of working is by square setting and filling, and some slicing. There were two inspections made of this property and at the time of the first inspection there were 503 men employed, and 423 at the second inspection.

The OLIVER, MAG and COLE shafts are situated in the Warren Mining District. The character of the mine is copper, and the average tonnage was about 10,554 at the time of the first inspection, and 20,000 tons per month at the second. The method of working the mine is by square sets and stulls, and they employ about 435 men.

The GERMANIA SHAFT is situated in the Turquoise Mining District in Courtland. The nature of the mine is copper, and the average tonnage is about 2,600 tons per month. The mine is worked by square setting, and employs 55 men. The general conditions are all good.

COPPER QUEEN CONSOLIDATED MINING CO.

The GARDNER, LOWELL, SACRAMENTO and DALLIS SHAFTS are situated in the Warren Mining District. The character of the mine is copper, and the average tonnage is about 32,000 tons per month. There were two inspections made of the mine, and at the time of the first inspection they employed 1121 men, and 1139 at the second inspection. The mine is worked mostly by square setting.

The UNCLE SAM, ZAR, SPRAY and HOLBROOK CLAIMS are situated in the Warren Mining District. The character of the mine is copper, and the average tonnage per month is about 26,000 tons. There were two inspections made of this property. The mine is worked by square setting, and employs 1062 men.

TEJONE MINING CO.

The MAXORN SHAFT is situated in the Turquoise Mining District at Gleeson. The mine is of a copper nature, and they employ 17 men. They are only sinking at present. The general conditions are good.

ARIZONA UNITED MINING CO.

The REPUBLIC and MAMMOTH SHAFTS are situated in Johnson. The character of the mine is copper, and the average tonnage is about 375 tons per month. The mine is worked through an inclined shaft, and employs 35 men. The general conditions of the mine are good.

BANANZA BELT COPPER CO.

SHAFTS Nos. 1 and 2 are all surface work. The mine is located in Johnson, and employs 51 men. Character of the mine is copper, and the average tonnage is about 100 tons per month. General conditions are good.

COMMONWEALTH MINING & MILLING CO.

The B SHAFT of SILVER WAVE CLAIM is situated in the Turquoise Mining District at Pearce. The character of the mine is gold and copper. All prospect and development work at present. They employ 41 men. The general conditions of the mine are good.

GREAT WESTERN COPPER CO.

The MAMIE and MARY SHAFTS are situated in the Turquoise Mining District at Courtland. There were two inspections made of the mine, and general conditions were found to be good. The character of the mine is copper, and is worked by square sets, also some stulling and filling. They employ 91 men. The average tonnage is 3,000 to 4,000 tons per month.

JOHNSON COPPER DEVELOPMENT CO.

The CLIMAX SHAFT is situated in Johnson. The character of the mine is copper. They were only sinking a shaft and

driving one drift at the time of the inspection. They employ 8 men, and the general conditions are good.

LEONARD COPPER CO.

The CHARLESTON SHAFT is situated in the Turquoise Mining District at Gleeson. The character of the mine is copper, and the average tonnage is about 5,000 tons per month. The method of working the mine is by square setting and filling. There were two inspections made, and at the time of the first inspection they employed 139 men, and 110 at the second. The general conditions were all good.

SHATTUCK-ARIZONA COPPER CO.

The SHATTUCK SHAFT is situated in the Warren Mining District in Bisbee. The character of the mine is copper, and at the time of the first inspection they were only doing development work. At the second inspection the average tonnage was about 6,000 tons per month. The method of working the mine is by square setting and stulling, and they employed 72 men at the first inspection, and 118 at the second. General conditions were all good.

ARIZONA COMMERCIAL COPPER CO.

The COPPER HILL SHAFT is situated in the Globe Mining District, and the average tonnage is about 300 tons per month. The character of the mine is copper ore, ledge deposit. The method of working the mine is by vertical shaft, drifts, crosscuts, etc. There were two inspections made of this mine. Twenty-three men were employed at the time of the first inspection, and 33 at the second. General conditions at the time of the first inspection were good with a few exceptions. No signal code in use and remedies somewhat lacking for the care of the injured. All defects were remedied at the time of the second inspection.

IRON CAP COPPER CO.

The WILLIAMS SHAFT is situated in the Globe Mining District at Copper Hill. The character of the mine is copper ore, ledge deposit. The mine is worked by vertical shafts, drifts, cross-

cuts, etc. There were two inspections made of the mine. Eleven men were employed at the time of the first inspection, and 35 at the second. General conditions were good with the exception of no gates on cages, but that defect was remedied at the time of the second inspection.

MIAMI COPPER CO.

The CAPTAIN, RED ROCK, RED SPRING and ST. JOHNS SHAFTS are situated in the Globe Mining District at Miami. Two inspections were made of this property. The Red Rock and St. Johns were the only shafts included in the second inspection. The character of the mine is copper. Decimated chalcocite in schist, and it is worked by auxiliary raise, and sub-level shrinkage stope. The average tonnage is about 90,000 tons per month. The number of men employed at the first inspection was 647, and 615 at the second. The general conditions were good with the exception of sign boards lacking, but this defect was remedied before the second inspection. They also installed new signal code, and better wash and change room accommodations.

GIBSON COPPER CO.

The GIBSON MINE is situated in the Summitt Mining District at Bellevue. The character of the mine is copper sulphide ore, ledge deposit. There were two inspections made of this property, and at the time of the first inspection the average tonnage was 175 tons per month, and 34 men were employed. At the second inspection the average tonnage was 300 tons per month, and 50 men were employed. The method of working the mine is through shaft, drifts, raises and stopes. There were several defects found at the first inspection and they had not been attended to at the second inspection. Written notice in regard to same will be served immediately.

UNITED GLOBE MINES

The GREY SHAFT is situated in the Globe Mining District of Globe. There were two inspections made of this property. The character of the mine is copper ore, vein deposit. At the time of the first inspection the average tonnage was 1,500 tons per month,

and 44 men were employed. At the second inspection the tonnage was 2,000 tons per month, and 62 men were employed. General conditions were good with a few exceptions. No gates on cages, no signal code or fire helmets, and no remedies for the care of the injured. These defects were remedied before the second inspection, with the exception of fire helmets.

The BUCKEYE CLAIM is situated in the Globe Mining District. The character of the mine is copper ore, ledge deposit. There were two inspections made and at the time of the first inspection the average tonnage was 800 tons per month, and 58 men were employed. At the second inspection the tonnage was 500 tons per month, and 36 men were employed. The general conditions were good with a few exceptions. No gates on cages, no fire helmets and no remedies for the care of the injured. These defects were remedied before the second inspection with the exception of fire helmets.

UNITED GLOBE MINES

The GENEVA CLAIM is worked on lease by Geo. F. Wilson and Frank Hubbell, and is situated in the Globe Mining District. The character of the mine is copper ore. There were two inspections made of this property. At the time of the first inspection the average tonnage was 1,800 tons per month, and 22 men were employed. At the second inspection the tonnage was 1,500 per month, and 18 men were employed. The general conditions were good with a few exceptions, but all defects were attended to before the second inspection.

The BUFFALO MINE is of a copper ore nature, and the average tonnage is about 1,000 tons per month. They employ 17 men, and the general conditions are good. This mine is worked through tunnels, draw and fill stopes and drifts.

The WARRIOR MINE is situated in the Globe Mining District, and is of a copper ore nature. The mine is worked on lease by Snell & Fisk. The average tonnage is 2,000 tons per month, and the method of working it is through tunnels, winzes, drifts and stopes. They employ 56 men. No fire helmets or sign boards on hand. The general conditions are good.

INSPIRATION CONSOLIDATED COPPER CO.

The Live Oak Division is situated in the Globe Mining District. There were two inspections made of this property. The character of the mine is decimated copper ore. Only development work is being done at present. The mine is worked through shafts, drifts and crosscuts. They employ 95 men. The general conditions are good.

The JOS BUSCH, SCORPION, COLORADO, MAIN EAST and WEST SHAFTS are situated in the Globe Mining District at Miami. There were two inspections made of this property. The character of the mine is decimated copper ore, and the average tonnage is about 14,000 tons per month. All work is for development and therefore left on the dump. At the time of the first inspection they employed 189 men, and 472 at the second. The general conditions were good with a few exceptions. Helmets, sign boards and signal code lacking, but these will be installed soon. About 900 pounds of powder that is more than twelve months old on hand that will be destroyed at once. All defects were remedied at the time of the second inspection.

OLD DOMINION MINING & SMELTING CO.

The GLOBE LEDGE CLAIM is situated in the Globe Mining District. There were two inspections made of this property. The character of the mine is copper ore, vein deposit, and the average tonnage at the time of the first inspection was 23,000 tons per month. At the second inspection the tonnage was 24,500 tons per month. The method of working the mine is through vertical shaft, drifts, crosscuts and stopes. The number of men employed at the first inspection was 723, and 750 at the second. The general conditions are as good as circumstances will permit, and every effort is being made to improve same.

SUPERIOR AND BOSTON COPPER CO.

The McGAW and LIMESTONE SHAFTS are situated in the Globe Mining District at Globe. The character of the mine is copper, vein deposit. They are not shipping at present. The method of working it is by vertical shaft, drifts and stoping. There were

two inspections made of this property. Sixty-seven men are employed. The general conditions of the mine at the time of the first inspection were good with a few exceptions. No sign boards or signal code, and no gates on cages. Also no helmets. At the time of the second inspection the gates were in course of construction and the sign boards had been placed.

GRAHAM COUNTY

COPPER REEF CONSOLIDATED MINES

The CALIFORNIA TUNNEL is situated in the Standard Butte Mining District at San Carlos. The character of the mine is gold, silver and copper ore, ledge deposit. The mine is worked through tunnels, drifts, winzes, raises and stopes, but they are not producing at present. Twenty-one men are employed. The general conditions are good with the exception of stretchers lacking and no wash or change room. This will be attended to at once.

GREENLEE COUNTY

THE SHANNON COPPER CO.

The SHANNON MINE is situated in the Clifton-Morenci Mining District. There were two inspections made of this property. The character of the mine is decimated copper ore in line and prophyry, and the average tonnage at the time of the first inspection was 23,233 tons per month, and 23,834 at the second. The method of working the mine is through tunnels, drifts, raises, winzes and stopes. They employed 655 men at the time of the first inspection, and 559 at the second. The general conditions were good with the exception of helmets and fire drill.

The EL PASO MINE is situated in the Clifton-Morenci Mining District at Metcalf. The character of the mine is sulphide copper ore in fissure veins, and the average tonnage is about 52 tons per month. The method of working is through tunnels, by drifts, crosscuts and raises. There are 32 men employed. The general conditions are all good.

THE ARIZONA COPPER CO., LTD.

The HUMBOLDT MINE is worked through the Joy Shaft

and is situated in the Copper Mountain Mining District. The average tonnage per month is about 40,000 tons. There were two inspections made of the mine. The character of the mine is decimated copper ore in porphyry, and it is worked through shafts and adit tunnels by square setting, sub-caving and top-slicing. There were 559 men employed at the time of the first inspection, and 541 at the second. The general conditions of the mine are good with a few exceptions. No sign boards, and explosives are not properly distributed under ground. Also some waste timber to be removed. All defects were remedied at the time of the second inspection.

The average tonnage of the YAVAPAI SHAFT is about 3,500 tons per month. The character of the mine is decimated copper ore in porphyry. The method of working it is by square setting and sub-caving, drifts and crosscuts. There were two inspections made of this property. At the time of the first inspection there were 49 men employed, and 52 at the second. The general conditions were good with a few exceptions. No sign boards, and the powder was not properly distributed under ground. Also no change room. All defects, with the exception of a change room, were remedied at the time of the second inspection.

The LONGFELLOW MINE is operated through tunnels. The character of the mine is decimated copper ore in porphyry, and is worked by drawing from shrinkage stopes and drifting. There were two inspections made. Eighty-two men were employed at the time of the first inspection, and 72 at the time of the second. The average tonnage was about 6,000 tons per month. The general conditions were good with a few exceptions. No sign boards and the distribution of powder to be corrected. All defects were remedied before the second inspection.

There were two inspections made of the CLAY and LIVERPOOL SHAFTS. The character of the mine is decimated copper ore in porphyry. The average tonnage per month is about 9,000 tons. They employ 94 men. The method of working the mine is by square sets, shrinkage, draw and filled stopes. A few defects were noted at the time of the first inspection. Trolley wires were a little low in some places, no sign boards, no change room, and

the powder was not properly distributed. At the time of the second inspection there was no change room, and the trolley wires had not been attended to.

THE ARIZONA COPPER CO.

The MATILDA SHAFT is situated in the Copper Mountain Mining District, and is one of the main working shafts of the Coronada Mine. The average tonnage per month is about 11,000 tons. Two inspections of this property have been made. One hundred and eighty-two men were employed when the first inspection was made, and 263 at the time of the second. The character of the mine is copper ore, ledge deposit. The method used in operating this mine is by square setting, caving and shrinkage. General conditions were good with the exception of change room facilities. The building is under construction but not yet completed.

The CORONADA TUNNEL is being driven to connect with the Longfellow Mine. Fifty-two men are employed. General conditions are as good as circumstances will permit. Air is furnished by two fans.

The METCALF MINE is worked through tunnels. The character of the mine is oxidized copper ore. The average tonnage per month is about 10,000 tons. The method of working the mine is through open cuts and shrinkage stoping. One hundred and thirteen men were employed at the time of the first inspection, and 184 at the time of the second. A wash room and change room was in course of construction at the time the second inspection was made.

The MAMMOTH MINE is worked through tunnels. The character of the mine is fissure vein oxidized copper ore. The average tonnage per month is about 1,700 tons. The mine is worked through tunnels by square setting and open stoping. Sixty-five men are employed. The general condition of the mine is good with the exception of a wash room and change room.

The KING MINE is worked through tunnels. The character of the mine is decimated sulphide copper ore in fissure veins. The

average tonnage per month at the time of the first inspection was about 900 tons, and at the time of the second inspection it was about 3,000 tons. The method of working the mine is through tunnels by shrinkage and square set stopes. Thirty-seven men were employed at the time of the first inspection, and 54 at the second. General conditions of the mine are good with the exception of a change room and wash room. The same was under construction at the time of the second inspection.

DETROIT COPPER MINING CO. OF ARIZONA

The YANKEE SHAFTS and RYERSON TUNNEL are situated in the Copper Mountain Mining District at Morenci. The character of the mine is decimated copper ore in porphyry, and the average tonnage at the time of the first inspection was 22,504 tons per month. At the second inspection the tonnage was 31,867. The mine is worked through shafts and tunnels, by top slicing and square setting in stopes. Three hundred and seventy-eight men were employed at the time of the first inspection, and 452 at the second. The general condition of the mine was good with a few exceptions. Blasting caps to be removed, sign boards placed, and to provide a wash and change room. These were all attended to before the second inspection.

The ARIZONA CENTRAL and COPPER MOUNTAIN MINES are situated in the Copper Mountain Mining District at Morenci. The character of the mine is decimated copper ore in porphyry. The average tonnage at the time of the first inspection was 20,158 tons per month, and 12,234 at the second inspection. When first inspected 247 men were employed, and 284 at the time of the second. The mine is worked through shaft and tunnels, by top slicing. The general conditions at the time of the first inspection were good with a few exceptions. No sign boards, blasting caps to be removed, no wash or change room. All these defects were remedied before the second inspection.

The ESPERANZA SHAFT is situated in the Copper Mountain Mining District. The mine is worked through shaft, drifts and crosscuts, and employs 18 men. Only prospect work at present. A few defects were noted, but these will be attended to at

once. No indicator on hoist, no safety appliances on skip, and storing of powder to be corrected.

DETROIT COPPER CO. OF ARIZONA

The SANTA ROSA MINE is situated in the Copper Mountain Mining District and is doing prospect work at present. The mine is worked through shaft, drifts, crosscuts, raises and stopes. Thirty-eight men are employed. The general conditions are good with a very few exceptions. No indicator on hoist and blasting caps to be removed.

The WATTELL SHAFT is situated in the Copper Mountain Mining District and is all prospect work at present. The mine is worked through shafts, tunnels and stopes, and employs 142 men. The general conditions of the mine are good.

MARICOPA COUNTY

VULTURE MINES CO.

The EAST INCLINE of the TALMAGE CLAIM is situated in the Vulture Mining District at Wickenburg. The character of the mine is gold quartz, and the average tonnage per month is 3,000 tons. The method of working is through inclined shafts, drifts, raises and stopes. There were two inspections made of this property. Eighty-six men were employed at the time of the first inspection, and 105 at the second. The general conditions were good.

MOHAVE COUNTY

MINNESOTA-CONNOR MINING & MILLING CO.

The MINNESOTA MINE is situated in the Wallapai Mining District at Chloride. The character of the mine is gold and silver, but they are not extracting at this time. The method of working the mine is by crosscutting to veins, and they employ 18 men. The general conditions are good.

RUTH GOLD MINES CO.

The RUTH CLAIM is situated in the San Francisco Mining District at Kingman. The character of the mine is gold. Only

development work is being done at present. The method of working the mine is by inclined shaft, and they employ 13 men. The general conditions are good with the exception of poor cable and no remedies for the care of the injured.

WALAPAI MINING DEVELOPMENT CO.

The TENNESSEE MINE is situated in the Walapai Mining District at Chloride. The character of the mine is lead and zinc. Only development work is being done at present. The method of working the mine is by shafts and drifts. Seventeen men are employed. The general conditions are good with the exception of gates on cages, which will be attended to at once.

TOM REED GOLD MINES CO.

The BEN HARRISON, TOM REED, TOM REED NO. 4, OLLA OATMAN and DISCOVERY SHAFTS are situated in the San Francisco Mining District at Oatman. The character of the mine is gold, and the average tonnage per month is 4,200 tons. There were two inspections made of this property. The method of working the mine is by stoping and filling. Seventy-four men are employed. General conditions are good with the exception of good safety appliances. This will be remedied at once.

UNION BASIN MINING CO.

The GOLCONDA MINE is situated in the Walapai Mining District. The nature of the mine is zinc, and the average tonnage per month at the time of the first inspection was 900 tons, and 1,000 at the second. One hundred and one men are employed. The method of working the mine is by inclined shaft, drifts and tunnels. The general conditions are good.

ARIZONA SOUTHWESTERN COPPER CO.

Shaft No. 2 is situated in the Aubery Mining District at Yucca. The character of the mine is gold, silver and lead. They are only developing at present, and the mine is worked through shafts and drifts. Nineteen men are employed. The general conditions are good. Remedies for the care of the injured will be installed at once.

BOUNDARY CONE GOLD MINES CO.

The SURPRISE and GREAT WESTERN MINES are situated in the San Francisco Mining District at Oatman. The character of the mine is gold, but it is all development work at present. The method of working the mine is by vertical shafts and drifts. Thirteen men are employed. The general conditions are good. Remedies for the care of the injured will be installed at once.

CALIFORNIA-NEVADA EXPLORATION CO.

The BADGER MINE is situated in the Walapai Mining District at Chloride, and is of a gold, silver, lead and zinc nature. The average tonnage is about 15 tons per month, and is worked through tunnels and winze. Seven men are employed. The general conditions are good.

The HERCULES MINE is situated in the Walapai Mining District, and is of a gold, silver, lead and zinc nature. The average tonnage is about 30 tons per month. The mine is worked through inclined shafts and drifts. Ten men are employed. The general conditions are good.

FRISCO GOLD MINES CO.

The FRISCO GOLD MINES are situated in the San Francisco Mining District at Union Pass. The average tonnage per month is about 1,400 tons, and the character of the mine is gold. The method of working is through tunnels, drifts and raises. Twenty men are employed. The general conditions are good.

INTERNATIONAL MINES DEVELOPMENT CO.

The GEORGE WASHINGTON MINE is situated in the Walapai Mining District at Mineral Park. The character of the mine is gold, silver and copper, and the average tonnage per month is about 30 tons. The method of working the mine is through tunnels, drifts and stopes. Sixteen men are employed. The general conditions are good.

PIMA COUNTY

TWIN BUTTES MINING & SMELTING CO.

The MORGAN SHAFT is situated in Twin Buttes and is of a copper nature. The average tonnage is about 1,800 tons per month. The method of working the mine is by filling system and timbering when needed. Forty men are employed. The general conditions are good with the exception of the signal code.

PINAL COUNTY

RAY CONSOLIDATED COPPER CO.

The Nos. 1, 2 and 3 SHAFTS are situated in the Ray Mining District. The character of the mine is copper, and the average tonnage per month is about 135,000 tons. There were two inspections made of this property. The method of working the mine is by shrinkage system, and they employ 1,579 men. When the first inspection was made the levels were in poor condition. Chutes were unprotected, but most of these defects have been remedied. Sign boards and danger signals are being placed, and stopes are being worked much narrower, which eliminates much of the danger.

SANTA CRUZ COUNTY

The Three "R" MINING GROUP is situated in the Harshaw Mining District. The character of the mine is copper, and the average tonnage per month is about 800 tons. Sixty-eight men are employed. The general conditions are good.

YAVAPAI COUNTY

THE UNITED VERDE COPPER CO.

The EUREKA SHAFT is situated in the Verde Mining District at Jerome. The character of the mine is copper with gold and silver, and the average tonnage is 30,000 tons per month. The method of working the mine is by square setting and bottom slicing, and they employ 548 men. There were two inspections made of this property. The general conditions were good with the exception of manways and openings were not provided with coverings and guard rails. The trolley wires were not of required

height. Most defects were remedied at the time of the second inspection.

THE UNITED GOLD MINES CO.

The ALASKA SHAFT is situated in the Martinez Mining District at Congress. The character of the mine is gold, and is worked through an inclined shaft and drifts. Only development work is being done at present. Six men are employed. The general conditions are good.

YAVAPAI CONSOLIDATED GOLD, SILVER & COPPER CO.

The TIGER SHAFT is situated in the Tiger Mining District at Crown King. The character of the mine is gold, silver and lead, and it is worked through shafts, drifts and stopes. Thirty-four men are employed. The average tonnage is about 950 tons per month. The general conditions are good.

CLEOPATRA COPPER CO. AND HULL COPPER CO.

The SUNNY SOUTH CLAIM is situated in the Verde Mining District at Jerome. The character of the mine is copper, and it is worked through tunnels and drifts. Only development work is being done at present. Eight men are employed, and the general conditions are good.

LAKE SUPERIOR & NEVADA DEVELOPMENT CO.

The ARIZONA MASCOT CLAIM No. 2 is situated in the Tiger Mining District at Crown King. The character of the mine is gold quartz, and the average tonnage is about 2,500 tons per month. The method of working the mine is through shafts and tunnels, and employs 43 men. The general conditions are good.

MONARCH MINING & MILLING CO.

The DENVER MINE is situated in the White Picacho Mining District at Wickenburg, and is of a gold and copper nature. Only development work is being done at present, and the mine is worked through open cuts. Thirty-two men are employed. The general conditions are good.

MONTE CHRISTO MINING & MILLING CO.

The MONTE CHRISTO MINE is situated in the Blackrock Mining District, and the nature of the mine is silver ore. Only development work is being done at present. The method of working the mine is through shaft and drifts, and they employ 15 men. The general conditions are good with the exception of remedies for the care of the injured.

PACIFIC COPPER MINING CO.

The OAKLAND SHAFT is situated in the Silver Mountain Mining District at Crown King. The character of the mine is copper, gold and silver, and it is worked through shafts, drifts and stopes. Only development work is being done at present. Nineteen men are employed. General conditions are good.

COPPER QUEEN MINING CO.

The COPPER QUEEN TUNNEL is situated at Stoddard, and is of copper nature. Only development work is being done at present. The method of working the mine is through crosscuts, tunnels and drifts. They employ 22 men. The general conditions are good with the exception of the signal code.

PICK & DRILL MINING CO.

The HIDDEN TREASURE MINE is situated in the Agua Fria Mining District at Humboldt. The character of the mine is gold, silver and copper, and it is worked through inclined shafts and drifts. Only development work is being done at present. Sixteen men are employed. The general conditions of the mine are good with the exception of the signal code, which will be installed as soon as possible.

ARKANSAS & ARIZONA COPPER CO.

The SHAMROCK CLAIM is situated in the Verde Mining District at Jerome. Only development work is being done at present. The method of working the mine is through the shaft. Fifty-nine men are employed. The general conditions are good with the exception of poor ventilation.

BIG PINE MFG. CO.

The BIG PINE MINE is situated in the Hassayampa Mining District. The character of the mine is gold and silver, and it is worked through tunnels. Only development work is being done at present. They employ 14 men. The general conditions are good.

CONSOLIDATED ARIZONA SMELTING CO.

The BLUE BUCK and BLUE COAT MINES are situated in the Big Bug Mining District. The character of the mine is copper sulphide, and it is worked through shafts, crosscuts and drifts. The average tonnage is 4,500 tons per month. Thirty-nine men are employed. The general conditions are good with the exception of sign boards and the poor condition of wash and change room. These will be remedied at once.

COMMERCIAL MINING CO.

The COPPER NUGGET and COPPER CHIEF MINES are located in the Copper Basin Mining District at Skull Valley. The character of the mine is copper, and the average tonnage is 800 tons per month. At the time of the second inspection the tonnage was 1,200 tons, and they employed 40 men. The method of working the mine is through shafts, drifts and stopes. The general conditions were good at the time of the second inspection.

YUMA COUNTY**SWANSEA CONSOLIDATED GOLD & COPPER CO.**

The SIGNAL GROUP OF MINES is situated in the Harcuvar Mining District. There were two inspections made of this property. The character of the mine is copper, and the method of working it is by slicing and caving system. The average tonnage at the time of the first inspection was 3,000 tons per month, and they employed 125 men. At the second inspection the tonnage was 5,000 tons per month, and the number of men employed was 92. The general conditions are good.

SERIOUS ACCIDENTS—THEIR NATURE AND WHERE THEY OCCURRED

- June 4th—Joe Ponsetti. Broke collar bone jumping from skip. Vulture Mine.
- June 25th—George Sheppard. Sustained a compound fracture of the left thigh from an explosion of a missed hole. Old Dominion Mine.
- June 25th—Wm. McCracken. Sustained serious injuries about the face from an explosion of a missed hole. Old Dominion Mine.
- June 30th—Amado Gomez. Caught under cage, causing compound fracture of bones of both legs. Leonard Mine.
- July 3rd—Jose Vanegas. Lost one eye and seriously damaged other from an explosion. Ray Mine.
- July 14th—James McNellis. Struck on hip by falling rock. Inspiration Mine.
- August 14th—E. Strup. Fell, bruising back. Inspiration Mine.
- August 16th—L. Meinardi. Leg broken by falling muck. Copper Queen Mine.
- August 21st—Jose Martinez. Fracture above right ankle, caused by falling rock. Ray Mine.
- August 24th—E. W. Hallen. Hurt about the head from a blast. Copper Queen Mine.
- August 23rd—R. W. Thomas. Broken rib, caused by swinging bar. Shannon Mine.
- August 29th—Ruperto Perez. Broken leg, caused by fall of boulder. Ray Mine.
- August 31st—G. Guitierrez. Broken ribs, caused by fall. Shannon Mine.
- September 2nd—Ed. Riley. Slipped on ladder and fell down manway, causing a cut on the head, and back and right side bruised. Copper Queen Mine.
- September 3rd—E. N. Loehne. Broken left leg. Rope broke on which he was sliding down raise. Ray Mine.
- September 7th—J. Ortega. Caught between car and side of drift.

- causing broken left clavicle and abrasion of back. Shannon Mine.
- September 9th—Pedro Lascurine. Struck in eye by piece of steel. Shannon Mine.
- September 27th—Gabriel Setien. Broken rib from fall. Shannon Mine.
- October 5th—Robert Black. Piece of rock from blasting hit thigh, breaking it and badly bruising leg. Copper Queen Mine.
- October 19th—Yvan Gallich. Broken leg from fall. United Verde Mine.
- October 19th—A. Chevez. While stepping out of way of passing car he slipped and fell, and car passed over right leg, causing compound fracture of bones. Shannon Mine.
- October 26th—Henry Johnson. Compound fracture of leg above the ankle. Fell down chute. Copper Queen Mine.
- October 26th—Manuel Narango. Fracture of skull. Struck on head by timber. Miami Mine.
- November 8th—D. Rosenberger. Broken leg and shoulder blade. Hit by slab. Old Dominion Mine.
- November 12th—Rogue Gomez. Both ankles fractured and injury to back, arms and chin. Laggin on which he was standing broke and he fell. Shannon Mine.
- November 16th—Nels Olson. Broken leg. Caught his leg when he fell into cage. United Verde Mine.
- December 4th—E. Gonzales. Fell down raise, fracturing skull. Miami Mine.
- December 13th—M. Setien. Fell down chute, causing fracture of left ankle and contusion of back. Shannon Mine.
- December 14th—D. Tresize. Fell down raise, causing fracture of skull. Old Dominion Mine.

FATAL ACCIDENTS—THEIR CAUSE AND WHERE THEY OCCURRED

- May 20th—Frank Daily. Struck on head and back by large rock. Ray Mine.

- May 26th—Gus Swanson. Fell down shaft. Calumet & Arizona Mine.
- June 9th—Jose Gil. Came in contact with trolley wire while kneeling on steel car. Ray Mine.
- June 17th—Edward Johnson. Suffocated by a cave in. Copper Queen Mine.
- June 23rd—Fillippe Castro. Explosion of missed hole. Ray Mine.
- July 14th—M. Lazona. Thrown against post when jumping from a moving train. Ray Mine.
- July 16th—John Roach. Struck by fall of rock. Superior & Boston Mine.
- July 19th—John Wacek. Struck by fall of rock. Calumet & Arizona Mine.
- July 26th—Alberto Fernandez. Struck by falling rock. Copper Mountain Mine. Detroit Copper Co.
- July 29th—John Fogliada. Struck on head by a piece of drill steel. Goldroads Mine.
- August 1st—Albert Torres. Came in contact with live wire and fell on edge of car, receiving a blow over the heart. Arizona Copper Mine.
- August 5th—Lester Hughes. Fell down shaft. Swansea Mine.
- August 14th—George Addis. Fell down shaft. Lagging broke on which he was standing. United Verde Mine.
- August 17th—Ed. Johnson. Fall of rock. Calumet & Arizona Mine.
- August 20th—Frank Skoda. Fell down shaft. Inspiration Mine.
- August 30th—Ramon Ramos. Fall of rock. Calumet & Arizona Mine.
- September 9th—James Hansen. Struck by falling rock. Tom Reed Mine.
- September 12th—Antonio Valdez. Struck on head by fall of rock. Arizona Copper Mine.
- September 14th—C. Islas. Caught between cars when coupling. Ray Mine.

- September 29th—Luis Sainz. Struck by large piece of rock. Ray Mine.
- October 7th—Jake Zurich. Fell down Shaft. Miami Mine.
- October 7th—A. Angiono. Came in contact with live wire while climbing over a car. Ray Mine.
- October 15th—Carlos Infante. Fell down raise. Ray Mine.
- November 2nd—J. Ramos. Drilled in missed hole. Ray Mine.
- November 3rd—I. Morales. Hit by rock. Ray Mine.
- November 9th—Manuel and Pasquel Valesquez. Premature explosion. Ray Mine.
- November 23rd—John Carreon. Fell down shaft. Arizona Copper Mine.
- December 3rd—S. Jacques. Crushed by falling rock. Copper Queen Mine.
- October 9th—Roy Jacobson. Crushed by cage and then fell down shaft. Copper Queen Mine.

Mine	No. of men employed	Fatal accidents	Serious accidents
Arizona Commercial Copper Co.....	33	..	..
Arizona United Mining Co.....	35	..	..
Arizona Copper Co.....	1,357	3	1
Arizona Southwestern Copper Co.....	19	..	..
Arkansas & Arizona Copper Co.....	59	..	..
Banza Belt Copper Co.....	65	..	..
Big Pine Manufacturing Co.....	14	..	..
Boundary Cone Gold Mining Co.....	13	..	..
California-Nevada Exploration Co.....	19	..	..
Calumet & Arizona Copper Mining Co.....	914	3	..
Commonwealth Mining & Milling Co.....	41	..	..
Consolidated Arizona Smelting Co.....	39	..	..
Copper Queen Consolidated Mining Co.....	2,208	3	5
Copper Queen Gold Mining Co.....	22	..	..
Copper Reef Consolidated Mines Co.....	21	..	..
Cleopatra & Hull Copper Co.....	8	..	..
Commercial Mining Co.....	40	..	..
Detroit Copper Co.....	934	..	1
Frisco Gold Mines Co.....	20	..	..
Great Western Copper Co.....	91	..	..
Gibson Copper Co.....	50	..	..
Goldroads Mines Co.....	124	1	..
International Mines Development Co.....	16	..	..
Inspiration Consolidated Copper Co.....	476	1	2
Iron Cap Copper Co.....	35	..	..
Johnson Copper Development Co.....	8	..	..
Lake Superior & Nevada Development Co.....	43	..	..
Leonard Copper Co.....	110	..	1
Miami Copper Co.....	615	1	2
Monarch Mining & Smelting Co.....	32	..	..
Monte Cristo Mining & Milling Co.....	17	..	..
Minnesota-Connor Mining & Milling Co.....	18	..	..
Magma Copper Co.....	69	..	..
Needles Mining & Smelting Co.....	17	..	..
Old Dominion Copper Mining Co.....	750	..	4
Pick & Drill Mining Co.....	16	..	..
Pacific Copper Mining Co.....	19	..	..

Mine	No. of men employed	Fatal accidents	Serious accidents
Ruth Gold Mines Co.....	13	..	..
Ray Consolidated Mines Co.....	1,579	12	4
Shattuck-Arizona Copper Co.....	118	..	..
Superior & Boston Copper Co.....	67	1	..
Swansea Consolidated Gold & Copper Co....	92	1	..
Shannon Copper Co.....	591	..	8
Tom Reed Gold Mines Co.....	75	1	..
Tejone Mining Co.....	17	..	..
Twin Buttes Mining & Smelting Co.....	40	..	..
Three "R" Mining Group.....	68	..	..
Union Basin Mining Co.....	101	..	..
United Globe Mines.....	137	..	2
United Gold Mines Co.....	6	..	..
United Verde Copper Co.....	548	1	2
Vivian Mining Co.....	32	..	..
Vulture Mines Co.....	105	..	1
Warrior Copper Co.....	56	..	..
Yavapai Cons. Gold, Silver & Copper Co....	34	..	..
Totals	<u>12,046</u>	<u>28</u>	<u>33</u>