

# NEWHOUSE AND MAJESTIC COPPER MINES READY FOR MIGHTY OUTPUT

CULMINATING forces have been at work in Beaver county this year. If anyone doubts this, a visit to Milford, Frisco, or the new camp of Newhouse, now being reared along the foot hills of the San Francisco range of mountains above the Wah Wah desert, will remove all such doubts. Indeed, vast changes are taking place in this southern mining region and the day is not far distant when its mines will be contributing extensively towards supplying the world with copper.

For a good many years Beaver county has been looked upon as a future copper camp of importance and a complete realization of this is about to take place. It is quite generally conceded that the "copper belt of Beaver county" will rank second to Bingham in the production of the bronze metal within a very short time, and, with development, it seems likely to equal, if it does not excel, the camp made famous by its Utah Consolidated, Bingham Consolidated, Boston Consolidated and United States mines.

Although Beaver county has been recorded with the honor of being the scene of the first discovery in Utah of metal mines, the development of its mineral districts has been slow as compared to others in this state. It is true the region prospered in the halcyon days of silver, during which times the rich surface ore deposits yielded handsomely. The Horn Silver at Frisco was discovered back in those days, and strange as it may seem, was the only property in the whole county that was developed to any great depth until recently. It was common talk at one time that the Horn Silver contained about all the ore worth mining down that way and while it was paying dividends, the balance of the mining districts of the county remained dormant for many years.

About five years ago mining men began to investigate. Eastern capital began to come in, so inviting did the field look to them. In this, A. B. Lewis played an important part, and it would be unfair to him not to recognize the fact that it was through his efforts that a good many thousand dollars were turned this way for development purposes, although much of it was judiciously spent, after the organization of the Majestic Copper Mining & Smelting

such recognized bonanzas as the Utah Consolidated and Boston Consolidated at Bingham.

Events of the year now drawing to an end indicate very clearly that Mr. Newhouse still maintains this opinion: for the Newhouse Mines & Smelters corporation, which was organized with the Cactus properties for a basis, has already spent over \$2,000,000 in the development of the mine and in providing it with equipment, and when this work of preparation is finished, Mr.

foreed. Everything will be kept orderly and the officers and the men under them will have a common meeting point, where they may come in contact and become better acquainted. A gymnasium, bowling alley, billiard and pool tables, etc., will make up a part of the club's equipment.

## SCHOOLS AND CHURCHES.

A hotel for the accommodation of transients will be built early next year and just as soon as possible public schools and churches will be established. The government of the town will be an ideal one; in fact, it will be a model mining camp in truth. It is doubtful if another could be found anywhere in the world to compare with this one, only recently established in Beaver county. In a little time lawns and shade trees will be planted and thus it will truly become an oasis in the desert. A large plaza, or park, is centrally located in the town, from which all streets radiate. Surrounding it will be beautiful dwellings, the hotel to be built next year, the club house, and near by will be erected the station house of the San Pedro, Los Angeles & Salt Lake railroad, especially designed for Mr. Newhouse.

## THE GREAT CACTUS MINE.

This much about the town. Now something about the Cactus mine, to which the growing village owes its existence. The property fell into the hands of a French syndicate something like 20 or 25 years ago, and was equipped with a mill for concentration and also with a smelter of crude design. Both plants were operated, but not with very much success. The result was activity ceased in Copper Gulch and the mine became practically idle, remaining so until Mr. Newhouse secured an option on it. But before executing it, a large amount of money was spent in the development of the ore bodies and in the conduct of a series of metallurgical experiments. The development of the mine was left to Morris M. Johnson, recognized by many as being one of the most competent mining en-

gineers in the west, while the metallurgical tests were conducted under the direction of A. J. Bettles, whose ability in that line had been recognized by Mr. Newhouse some time previous to this.

PRELIMINARY WORK SATISFACTORY.

The result of the preliminary work proved eminently satisfactory, and the Cactus mine was bought. When its importance had become thoroughly established, naturally, the question of reduction works came up. The water problem was a serious one. At Milford, a supply sufficient for all needs could be had, but the question of transportation stood as an obstacle. Finally, negotiations were entered for the purchase of the Wah Wah springs, located on the west side of the Wah Wah valley, where a man by the name of Grover kept a feeding station for sheepmen, as well as a stopping point for the stages operating between Frisco and Ely, Nev.

## WATER SUPPLY SECURED.

The deal was consummated, the several springs were developed, and the capacity found to be anywhere from 1,500 to 1,800 gallons per minute. During last year the construction of a pipe line from the springs to the present site of the town of Newhouse, over a distance of eight miles, was commenced. The line was completed this year and went into commission in May last; the water is conveyed through 12 and 14-inch pipe, and delivered by gravity into a concrete reservoir capable of holding 300,000 gallons. From this point the mill is to be supplied through a 10-inch and the townsite through an 8-inch pipe.

The mine, which is a little less than three miles from the townsite, is developed to the depth of 600 feet, and in the workings the Cactus vein is disclosed to a width of from 100 to 115 feet and carries average copper values ranging anywhere from 4 to 7 per cent. There are streaks of very high grade ore, but the bulk of the vein carries ore of a milling grade only. It is estimated that there are 4,000,000 tons and over blocked out at the present time.

The mine will be connected through an adit 5,350 feet in length. At the mouth of which, the ore, after being crushed, will be taken over a standard gauge railroad, about three miles in length, to the reduction works. The adit is nearing completion, and it is expected connections will be made before Christmas day. In this tunnel several fissures of ore have been encountered, and they will receive attention later. A large amount of work has been done at various points in the ore bodies in the main part of the mine, to more fully develop them and more particularly to prepare the several stopes for the mining of a large tonnage daily. In this direction square sets have been incorporated from the 200 level to within 40 feet of the surface, and for a length of 300 feet and a width of 100 feet, horizontally along and across the ore.

## ROOM FOR 200 MINERS.

The present workings of the Cactus make good room for over 200 miners to work at one time in the extraction of ore, which will be brought through the tunnels in ore trains propelled by two electric locomotives.

## ORE CRUSHING DEPARTMENT.

At the mouth of the tunnel the crushing plant and ore bins, with capacity for from 1,500 to 2,000 tons are located. By means of an automatic dumper, the loaded ore cars will be unloaded almost in an instant, when they

achieved the distinction of being chief instruments of three of the largest producing mines in the state. His name will go down in history as belonging to one of the greatest copper miners of the age.

## Majestic's Great Blocks of Wealth.

THE properties of the Majestic Copper Mining & Smelting company, consisting of the O. K., Old Hickory, Harrington-Hickory, Vicksburg, Southern States, Hooper Bay, Larkspur, Copperfield and Treasure groups are situated in Beaver county, Utah. In all, the company owns 120 claims, a smelter site with 640 acres of land adjoining and the San Pedro Springs covering 100 acres, affording sufficient water for any concentrating processes which might be installed in the future.

These properties are all within a radius of nine miles from Milford, situated on the main line of the San Pedro, Los Angeles & Salt Lake railroad, 221 miles from Salt Lake City. The Old Hickory has a spur from the Frisco branch of the main line running direct to the bins and the others have five wagon roads which approach the mines on a grade not exceeding 5 per cent and in such case have a down haul all the way to the railroad, making it possible to lay the ore down at a cost not exceeding 30 cents a ton.

These properties are wonderfully well equipped, having absolutely everything which will be needed for years to come, and supplies on hand, such as timber and tools, to supply the company's needs for a period of many months. There are four 34 h. p. Fairbanks, Morse & Co. gasoline hoists, two smaller ones, one steam hoist, two complete electric equipments, one complete blacksmith and carpenter shops, boarding houses, and in fact everything to be desired, all of the very best types and in perfect condition, so that nothing will have to be expended on surface improvements.

## SMELTER A MODERN ONE.

The smelter is of the newest and most modern construction, situated one and one-quarter miles south of Milford, on the main railroad line. It includes a copper matting furnace of 250 tons' daily capacity, and a silver lead furnace of 100 tons' capacity, together with a complete sampling mill. The accessories, such as an assay office, buildings for men, a storehouse well stocked with smelter supplies, are all included in the equipment, and the furnaces could be blown in at 48 hours' notice. There are four arched chimneys near the smelter, affording ample supply for steam and smelter uses. The fact that the smelter is centrally located in reference to the mines and its railroad connections, give it a most commanding location.

The foregoing was taken from a report made on the properties of the Majestic Copper Mining & Smelting company, submitted by Louis S. Cates, now superintendent of the Boston Consolidated mine at Bingham, who recently conducted an examination of them.

It was the privilege of a representative of the "Deseret" to visit the Old Hickory and O. K. mines of the company during the present month, and it is the firm conviction of the writer that not half has been told about Majestic. In the east and elsewhere some very splendid things have been said about this company's Beaver county properties, they have been pictured in quite glowing terms, yet it is a creditable thing to note that in it all, there has been no exaggeration; not, anyway, by the present management. If any shareholder has any reason to question the assertion, it would do him a lot of good to personally visit the mines and subject himself to a few surprises for some are there.

## GREAT O. K. MINE.

This fact is strikingly evident in the

O. K. mine, as well as in the Old Hickory and the Harrington-Hickory which have been undergoing systematic development for several months past under the direction of Ed. F. Freudenthal, the superintendent.

## TRIMENDOUS ORE BODIES.

But in the O. K. mine some tremendously large bodies of copper ore have been opened, and the present showing on the underground safely places that property in the category of Utah's greatest mines. While the O. K. contains considerable high grade ore, the great bulk of it is of a character most susceptible to treatment by concentration before smelting. That a mill of large capacity will be provided during the coming year is very probable.

## DEVELOPMENTS ASTONISHING.

On all the levels, developments almost of an astonishing nature have been made during the past few months, and new ore reserves are being opened constantly, as each day's work progresses. While it is difficult to estimate the tonnage blocked out, 1,000,000 tons is considered to be ultra-conservative. The property has been opened by two shafts, one an incline sunk to the 400 level, and another perpendicular to the same depth. It is the intention to improve the incline by sinking it an additional 100 feet and making it double compartment. Water has been encountered in the winzes sunk below the 400, indicating that the water level has been reached and that the desired change in the character of the ore is about to take place. A new steam hoist will probably be installed during the next year.

## O. K. GEOLOGICAL CONDITIONS.

The geological conditions of the O. K. are sized up by Mr. Cates in the following:

"On the surface a strong, well defined east and west cropping stands out, being 60 feet wide at the point where the incline shaft was sunk, widening to 200 feet opposite the main shaft. This cropping shows heavy copper carbonate stains and even sulphides scattered throughout. The vein is prominent in its croppings for 1,500 feet along its course, showing the same mineralization, and dips 60 degrees to the north. The walls are both of a compact granite and in the vicinity of the vein are mineralized with finely disseminated sulphides, not being of commercial value, but simply showing evidences of strong mineralization. Intersecting this main vein are four cross fissures running north and south. At the level of one of two of these cross fissures with the main vein, large 'shoots' of ore have been encountered and, as these were the smallest, I have ever reason to believe that when the two westerly and stronger veins are encountered, larger 'shoots' will be opened up. The ore is siliceous, carrying the values in carbonates and oxides in the upper workings, changing to the sulphides of chalcocypites and bornite with depth as the water level is approached."

## OLD HICKORY MINE.

What the Old Hickory mine will develop into can only be conjectured, but that it will grow into great proportions there is not the slightest room for doubt, unless all the rules of geology are completely upset. The Old Hickory contains some immense copper croppings; the ore is heavily impregnated with iron and is ideal for fluxing purposes; the veins are large and, with depth, no doubt some very rich ore will be encountered.

The main shaft is down to what is known as the fourth level; this shaft is now being sunk 100 feet deeper and numerous winzes are being sunk in it. One is being sunk from the fourth level and will reach the 500 simultaneous with the shaft, when connections between the two will be made.

## AN IMPORTANT DRIFT.

An important work is the driving of a drift on the first level and which is intended to cut a cross fissure some distance south of the shaft where the vein shows a width on the surface of 250 feet. On the third level the drift is also being run to get under the same ore body. Says Mr. Cates:

"There are two large north and south veins exposed to the east and west contacts of a large belt which has broken through the porphyry dipping 70 degrees to the west. Near the drift, the croppings are 50 feet across, widening to the south into an immense gossan 250 feet wide, being the strongest and most masterly showing in this section of the country. The veins are covered for 2,000 feet on their course by the company's claim and the entire distance shows strong mineralization in iron oxides, copper carbonates and sulphides. Intersecting these north and south veins are four east and west quartz veins all showing mineral from the surface which is demonstrated by numerous small pits and trenches; and similarly to the O. K. at these intersections with the north and south vein the zones of enrichment are encountered. The ore, contrary to the O. K. occurs in a heavy iron gangue carrying high values in copper and sulphides with gold and silver values and affords a most desirable flux for the more siliceous O. K. ores."

## NEW EQUIPMENT INSTALLED.

A new air compressor has been installed and the work of sinking the shaft to the 550 level will be inaugurated at once.

## HARRINGTON-HICKORY MINE.

The Harrington-Hickory mine is principally a lead-silver producer, although a portion of the ore mined there show some copper values. The ore is of a quality of low grade and will probably have to be handled in large quantity to bring in satisfactory returns. A series of experiments are now being made to determine which process is best adapted to the economic treatment of the ore. It is likely that the mine will be connected with the smelter by aerial tramway at no distant day. A larger tonnage is blocked out in this mine than in any of the other Majestic properties.

"On the surface," says Mr. Cates in his report, "a large line belt extends for several miles in a northerly and

(Continued on page 32.)



THE OLD HICKORY COPPER MINE.

ing company of which he was the originator. Senator Lewis held the Cactus mine at one time under an option from the French syndicate which owned it, but unable to execute the terms of the document, he was forced to relinquish it; the property, thereupon, passed to Samuel Newhouse, and the result of his endeavors is in evidence both at the mine and at the town of Newhouse, which is being built into a model mining camp, the like of which can scarcely be duplicated anywhere in the mining world. There are several great mining enterprises being rounded out in Beaver county at the present time. Therefore, this year's labors will culminate in adding new producers and new dividend payers to contribute their influences towards making Utah the greatest of the grand galaxy of mining states.

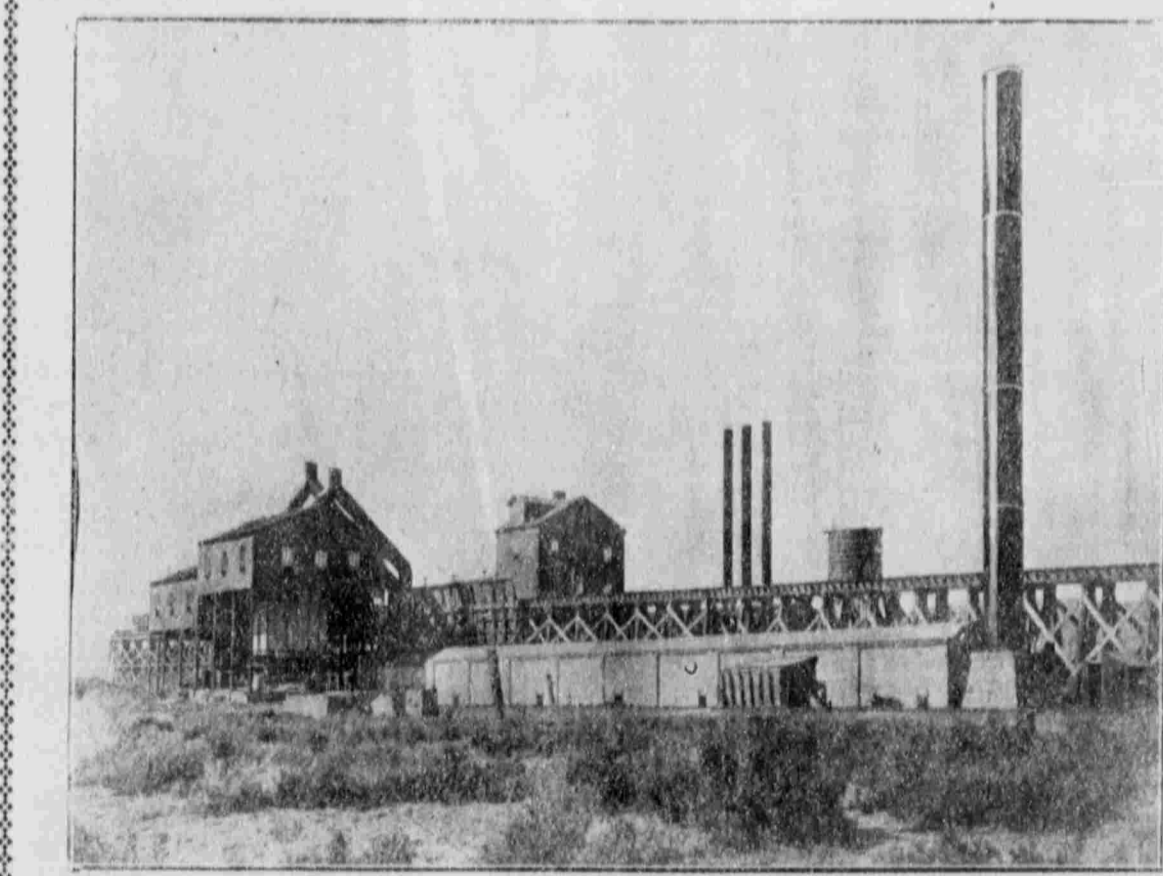
By the first of February, or very soon after that date, the Newhouse mines will be ready to market concentrates; the Majestic Copper will also blow in the furnaces at its smelter soon, and when this event occurs the plant will be started on a run to last indefinitely, so marvelous has been the result of the campaign of development. The organization of the Frisco Mining company, a few months ago, marked the beginning of another important project, although the general public has had little cognizance of the merits of this proposition. The significance of this undertaking lies in the fact that demonstration has proven that the Horn Silver vein, although faulted in numerous places, continues quite regularly both in northerly and southerly directions. The Frisco company has secured patents to a large group of claims and early next year will install powerful hoisting machinery, preparatory to developing its ground, which is likely to assume the proportions of its well known neighbor adjoining. On the south side, the Lulu Mining company is opening up an extension of the Horn Silver vein. This company will also add new facilities during the coming year. The Skylark, Beaver-Harrison, Blue Acre and other mining companies, are conducting energetic campaigns with every reason to believe that their labors are going to prove entirely successful.

## Spent \$2,000,000 To Get Many More

WHEN Samuel Newhouse purchased the Cactus mine, located in Copper gulch, Beaver county, he made the statement to some friends that he had found a copper proposition that would excel anything with which his name had ever been associated, notwithstanding it had been and is still linked with

## CLUB HOUSE FOR EMPLOYEES.

It is the intention of the company, however, to maintain a clubhouse for its employees. A liquid dispensary will be run in connection, as is the case in all well regulated clubs, but no rowdyism will be tolerated and the rules governing the place will be rigidly en-



THE MAJESTIC SMELTER AT MIL FORD.

gineers in the west, while the metallurgical tests were conducted under the direction of A. J. Bettles, whose ability in that line had been recognized by Mr. Newhouse some time previous to this.

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## MILL A STEEL STRUCTURE.

The mill is a steel structure covering an area of 100x400 feet, and contains all the modern and improved machinery for the concentration of ore economically and with the smallest percentage of loss. Incorporated in this are four pairs of crushing rolls, four sets of elevators, 21 sets of double compartment lifts, 24 Wilfley tables, eight Wilfley silencers and a large system of settling tanks and classifiers.

## IMMENSE POWER PLANT.

The power station is of brick and steel construction 45 feet by 111 feet di-

not improbable that another unit will be tacked on during the year 1905. The Cactus ores concentrate about 5 into one.

Almost since the first breaking of ground Field Supt. W. C. Thomas, has been on duty at Newhouse. The construction of the mammoth concentrator and the powerhouse has been under his direct supervision. E. H. Strickland has served the company as its engineer in the field and it was he who laid out the line of the Newhouse, Copper Gulch & Sevier Lake railroad.

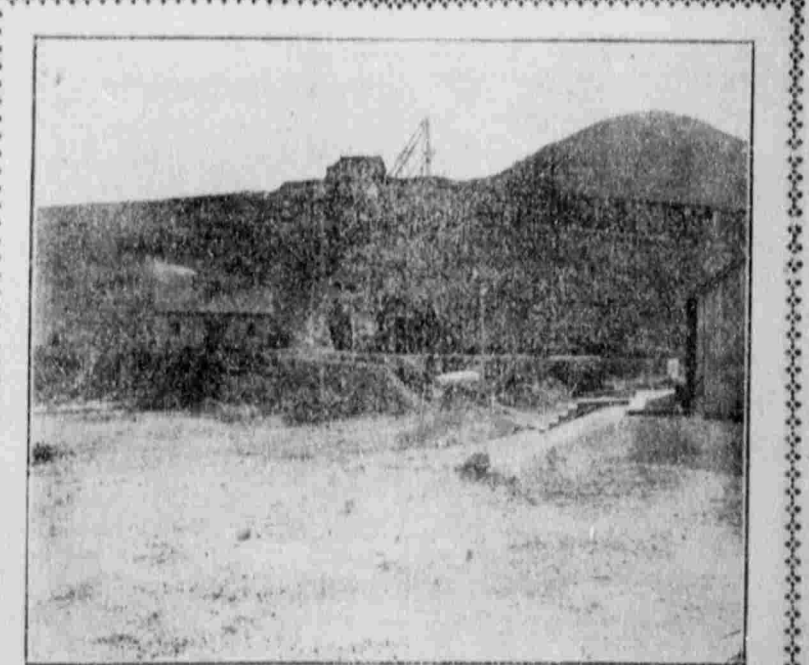
## ORES COME TO SALT LAKE.

Under the provision of a contract entered into with the American Smelting & Refining company the entire output of the Cactus mine will be shipped to the smelters in the Salt Lake Valley for a period of 10 years.

## MEN EMPLOYED, PAY ROLL.

The company is employing at the present time a force of about 200 men at the mine and in the construction work going on in the town, the pay rolls aggregating from \$20,000 to \$22,000 monthly. Several substantial business houses will be built next year, one of them to cost no less than \$10,000.

With the preparatory campaign ended, Samuel Newhouse will have



THE O. K. MINE AND CAMP.