

New Year Will Dawn Brightly on Beaver County.

THE BIG MILL IN WHICH THE ORES OF THE CACTUS MINE ARE TREATED.

NEVER before in the history of that southern commonwealth, which bears the distinction of having located within its boundaries the first mining claim for which a United States patent was issued in Utah, has a new year dawned under such promising skies, as will 1906.

While the camps of Beaver county have made progress during the past 13 months, yet the general public has not been kept very well informed of the events that have been transpiring there for the reason that it has been the policy of the operators to carry on their work unostentatiously, without the blowing of trumpets in the heralding of new strikes.

But in summing up what has been done at the end of another anniversary, a person does not need the aid of a magnifying glass to make it clear that the outlook for the future of Beaver county is far from discouraging.

Headway at the Cactus.

At the Cactus mine, the development of which was undertaken several years ago by that distinguished mining operator, Samuel Newhouse, need not be considered as a new enterprise, for the company has continued successfully since the starting of the big concentrating mill at Newhouse early in the year. While the mine has kept the plant fed with an ample supply of ore without the slightest hitch, the management, at the same time, has been engaged in the expansion of virgin territory, with the result that a tremendous tonnage has been added to the already extensive reserves. At the mill, which has been in almost continuous operation since the first ore was dropped into the crushers, continues to turn out a concentrate product from which the Newhouse Mines & Smelters corporation realizes a good profit, which is said, fully comes up to the expectations of Mr. Newhouse and his staff.

Another Big Bonanza.

There are few who realize the importance of the campaign that has been carried on so noiselessly throughout the year by the Frisco Contact Mining company on the east side of the San Francisco range of mountains, and just in the outskirts of the little town of Frisco. Here is being developed one of the coming bonanza mines of the state; at least that is the prediction made for it by engineers who stand at the top notch in their profession, and the evidences are plain that these prognostications will come true.

The possibilities of the ground now embraced in the domain of the Frisco Contact company were realized a number of years ago by D. P. Rohlfing, the well known mining engineer of Salt Lake, who had previously made a careful study of the geological conditions that prevailed at the Horn Silver mine, which has a record of having produced millions of dollars and which for years was the only mine yielding gold, silver, lead and copper in all of Beaver county.

He Located the Faults.

It was left to Mr. Rohlfing to unravel the work of nature, so to speak, and figure out how the great Horn Silver vein had been shifted at the time of the tremendous upheaval in that country ages and ages ago.

Engineers employed by the Horn Silver company, failed to pick up the missing link in the geologic chain until it was too late to acquire this valuable ground, now owned and operated by the Frisco Contact company. It was indeed a serious oversight that the great silver engineers made in this instance, and no doubt it has been regretted many times over, for under the direction of Mr. Rohlfing, an extensive and noted Horn Silver vein has been systematically prospected and is now being opened with the chances favorable for the beginning of a vigorous campaign of production.

Horn Silver Zinc Ore.

At the Horn Silver mine the output of the metals has been even more extensive than it was a year ago. The favorable condition of the market for zinc has enabled the management to move a large tonnage of that class of ore to the zinc smelters of Kansas in addition to the gold, silver and copper bearing rock forwarded for reduction to the smelters of the Salt Lake valley. Little was accomplished in the way of handling the low grade zinc ore of which there are many thousands of tons blocked out in the mine, however, some expensive equipment has been installed by the Centrifugal Concentrating company, owner of the Peck patents, and it will undertake to extract the zinc and separate it from the other metals on a royalty basis.

Development of the Majestic.

Some disappointment is expressed that the Majestic Copper company's properties are not contributing ore to the smelter at Millard, which cost Majestic shareholders a quarter of a million dollars. But since the Majestic mines passed into the hands of Samuel Newhouse, an managing director, it has been his policy, as it always is in the case in anything he takes hold of, to devote a whole lot of energy in systematic development. With the limited means which returned in the treasury at the time of the taking over, he has proceeded cautiously and satisfactory progress is reported. The campaign of exploration has been centered in the main at the Old Hickory copper property and at the Harrington & Hickory mine, a producer of lead ore. In the latter, particularly, the response has been most gratifying and for months it has been a prolific source of revenue. In the O. K. mine, however, have fared very well, they having furnished the market with several carloads of high grade ore.

Skyark Looks Better.

The Skyark Copper property looks encouraging at the close of the old year and those in charge have a better knowledge of the geology of the region than ever before. This company is conducting a campaign along safe lines and ought to win out. The Indian Queen property in Copper Gulch is being energetically developed, and the new shaft will be opened by a long tunnel.

The Burning Moscow mine, in the Star district, has furnished considerable ore to the local markets; the values in gold and silver running high. Development work has progressed during the greater portion of the year at the Black Rock mine in the Beaver Lake district. The Copper Mountain has been idle and there seems to be no hope left to the stockholders, who supplied the funds for the early development, to rescue it.

Newhouse's Cactus Mine.

The Cactus mine owned by the Newhouse Mines & Smelters corporation, is situated on the western slope of the

gulf, overlooking the beautiful Wah valley, where only blight is the lack of water for irrigation.

Prof. Samuel F. Emmons of the United States Geological survey in a contribution to economic geology wrote of this valley thus:

"The region is characterized by extreme aridity, the only water being found in isolated and widely scattered springs, which only furnish an extremely limited supply of this important element. It possesses the weird beauty of outline and coloring peculiar to the desert, and, owing to the absence of the dry atmosphere, the view from any elevated point ranges over a hundred miles or more of alternating broad desert valleys and sharply sculptured mountain ridges. One of the most striking features of the landscape, seen from any high point in the San Francisco mountains, is their greatly longer slope towards the west and their relatively short and abrupt escarpment to the east, the bottom of the Wah valley, on the east, in which are situated the towns of Frisco and the Horn Silver mine."

Where Newhouse Is.

It is on the eastern slope of this valley that the town of Newhouse, which came into existence during the year 1904, is located. It is here that the big mill of the Newhouse Mines & Smelters corporation was built for the treatment of the ores from the Cactus mine, which are brought down over the tracks of the Newhouse, Copper Gulch & Sevier Lake railway, an auxiliary concern, a distance of about two miles. Trains are run up to the mouth of the tunnel through which the mine is operated. At the entrance to the tunnel are located

the crushing plant and ore bins, with capacity for from 1,500 to 2,000 tons of ore. By means of a automatic dumping, the loaded mine cars on emerging from the tunnel, are relieved in an instant of their contents when they are ready for the return trip. After being dumped into the bins and the coarse ground into three 20x30 Blake crushers, crushing it to two inches. From the bins below the crusher, the crushed product is dumped into 40-ton steel cars, when it is ready for movement to the mill.

The latter is a steel structure covering an area of 100x100 feet and contains every necessary device for the economic dressing of ore with the smallest percentage of loss. Incorporated in the plant are four pairs of crushing rolls, four sets of elevators, 24 sets of double compartment chutes, 34 Willey tables, 8 Willey classifiers and a large system of settling tanks and classifiers. The power plant from which energy is derived for the operation of the mine and mill, is built of brick and in size is 50x110, and in it are contained the air compressor, having capacity for

2,500 cubic feet of air per minute, two Westinghouse steam turbines of 500 horse power each, both driving electric generators supplying the power for the mine and mill. The mine is equipped with electric motors for the handling of mine cars. The underground workings are brilliantly illuminated throughout by incandescent lamps. In fact, nothing is lacking in the way of modern equipment.

The steam generating plant, is housed in a building 90x100 feet and contains three water tube boilers of 350 horse power each, with various attachments designed with a view to economy. The steel stack at the power house is

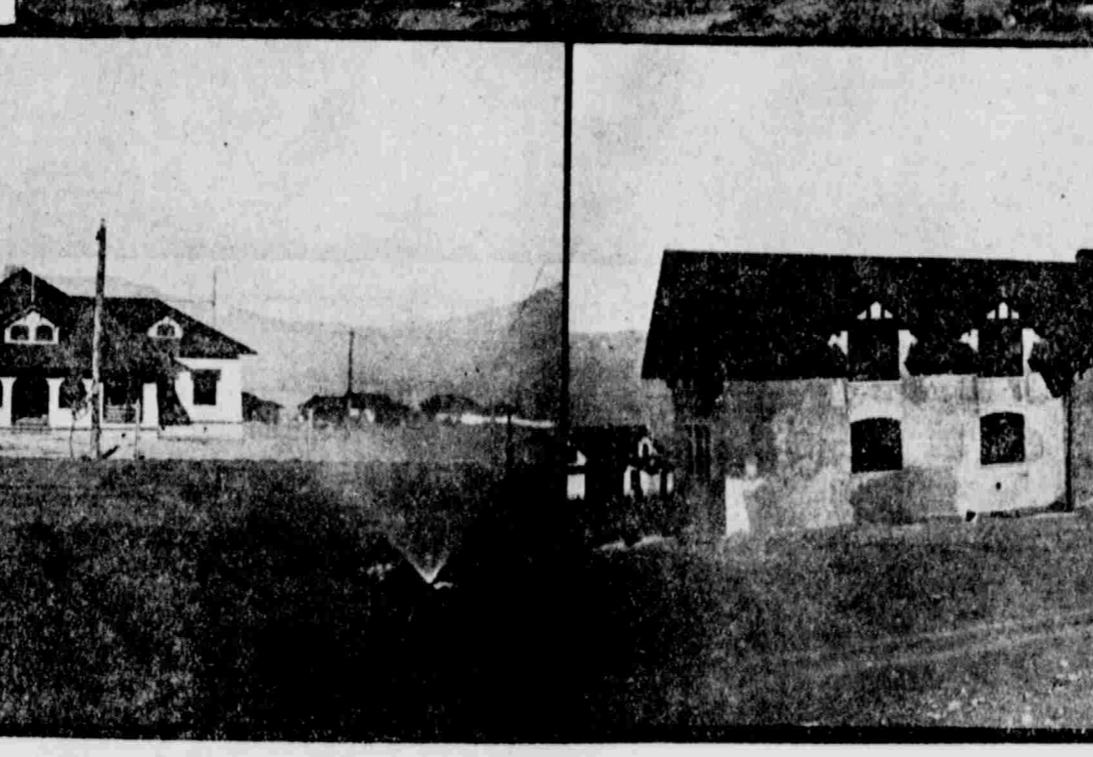
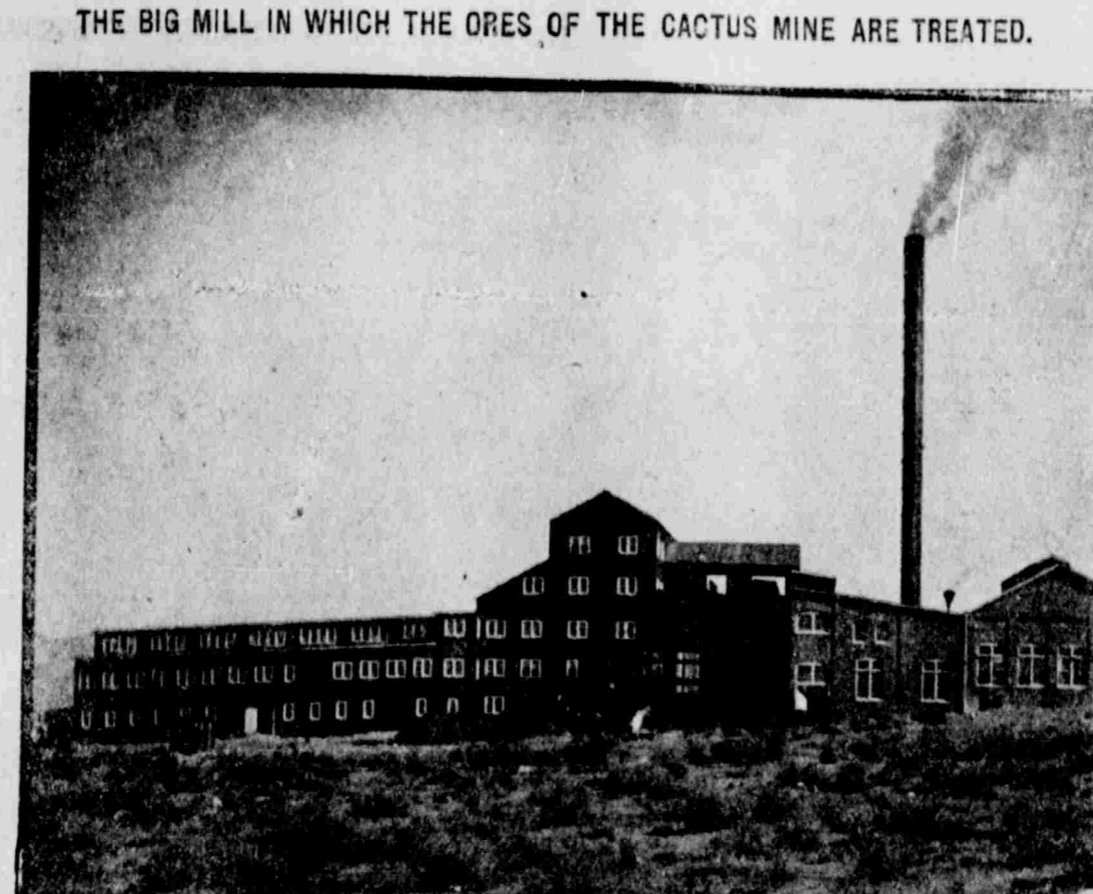
eight feet in diameter, 160 feet high and stands at an elevation above sea level of 5,500 feet.

A Model Mining Camp.

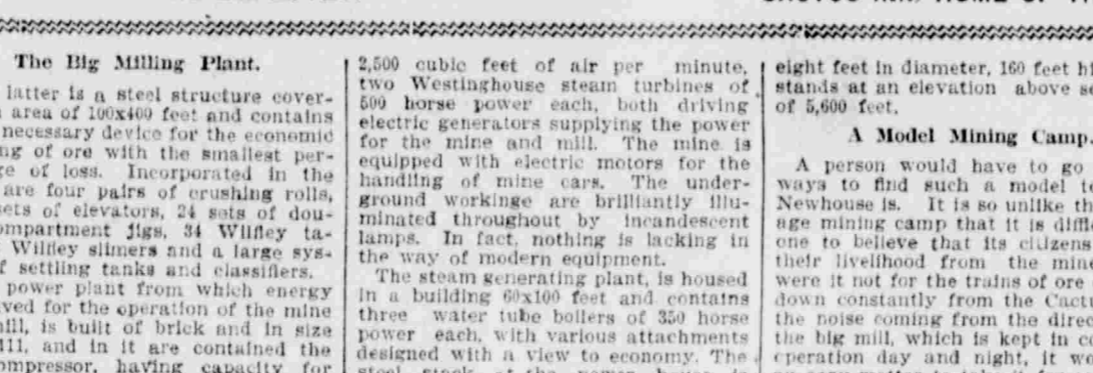
A person would have to go a long way to find such a model town as Newhouse is. It is so unlike the average mining camp that it is difficult for one to believe that its citizens derive their livelihood from the mines, and were it not for the train of ore coming down constantly from the Cactus, and the noise coming from the direction of the big mill, which is kept in constant operation day and night, it would be an easy matter to take it for anything

that a well regulated institution of this kind usually does. It has its reading room, writing room, card room, pool room, also a bar, where drinks are dispensed, but along restricted lines.

It cost the Newhouse Mines & Smelters corporation more than \$1,000,000 to work out the plans laid by Mr. Newhouse to place the mine in condition to produce, but now the company is getting this money back again. It cost \$200,000 alone to purchase the Wah valley springs on the west side of the valley and bring the water across to the town, where it can be used. On the company's pay rolls are names of about 200 men, and each



CLUB HOUSE BUILT FOR THE MINE EMPLOYEES.



CACTUS INN, HOME OF THE UNMARRIED MEN.



FRISCO CONTACT HOIST AND DUMP.



LOOKING SOUTH FROM THE FRISCO CONTACT.

MISCELLANEOUS MINING CAMPS.

The Mines of Boxelder County.

N the northern part of Utah—in Boxelder county, is the Park Valley mining district. Here, property owners have carried on a quiet campaign, the result of which is improvement. The Century company, of which P. W. Madison of Salt Lake is manager, has devoted its energy to the development of new territory more than to production, but the mine will no doubt be in shape to produce heavily early in the new year. The mill was closed several weeks during the past year, but is now in operation and turning out gold bullion. The Sunrise Mining company, of which Sig Simon of Salt Lake is president, has developed some quite extensive ore bodies and the management of the company is now considering the matter of the installation of a mill next year. A trial run made during the last summer at the Century plant demonstrated that with facilities for treatment, the ore can be made to pay handsomely.

Newfoundland Copper.

In the New Newfoundland mining district, west of the Great Salt Lake, along the Lucin cut-off, a Boston syndicate has displayed considerable energy in the development of the Boston and Terrace copper property with very favorable results. This district promises to become a good producer of copper ore.

La Plata and Sierra Madre.

In the La Plata district, northeast of Ogden, some development work has been done in hopes of discovering the location of the fissures which are believed to cut through that region. Some ore has been found there, but as yet the camp is prospective. Near to Ogden, in the Sierra Madre district, Don Maguire has been tireless in his effort to develop the several properties under his management. The Southern Pacific company has added a group of several claims to its territory and has made progress with the campaign of development that has been conducted there since the beginning of the current year.

Coloradoans in the La Sal.

In the La Sal district, which covers a vast area in eastern Utah and hugging next to the imaginary line which divides the states of Utah and Colorado, development work has been carried on in a small way. Colorado miners, however, are becoming interested in that country and the new year will dawn with the outlook much brighter for the region than at any time in its past history. One cyanide mill has been put in since last Christmas. The consolidation of the International copper property with one adjoining, is probably the most important transaction involving the transfer of property, recorded during the year.

Iron County Iron Districts.

In the iron districts of Iron county, the Colorado Fuel & Iron company,

which has acquired a firm foothold in that portion of the state, has been busy perfecting its titles by doing the work the United States government. Otherwise, this company has displayed no disposition to commence the actual mining of ore in this state. The time will come, however, when Iron county will be one of the busiest mining sections of Utah and it would seem that with the rapid development of the west, with the tremendous demand being made upon manufacturers for steel building material, together with the railroads, the day is not far distant when iron mining in the Bee Hive state will receive encouragement.

Satellite Looking Up.

The outlook for Satellite, in the western portion of Iron county, is much brighter than it was a year ago. The old Johnny and Ophir mines, with their expensive mine and mill equipment, have been inactive. But in other portions of the district some good discoveries have been made; particularly in the Snowflake property, owned by C. A.

Copper in Washington County.

In Washington county the principal mining operations of the year have been carried on by the Utah & Eastern Copper and by the Paymaster Mining companies. The former met with a misfortune several months ago which stopped production for a time. The shaft that had been used ever since the present management of the company collapsed, thus cutting off access to the ore bodies. Almost immediately a tunnel was started, penetrating the mountain lower down and at this writing is nearing the objective point. It has already penetrated the ore and only a few weeks ago, one of the most important strikes of high grade ore in the history of the property was reported. The tunnel will greatly reduce the cost of operation and will place the company in position to produce more extensively than ever before. The smelter, idle for several months, is again in operation. The plant is at Shem City, several miles below the mine. Arcana is the shipping point on the San Pedro, Los Angeles & Salt Lake railroad for the Utah & Eastern. The Paymaster company has put in a small smelter and has that property on a paying basis. The Paymaster is likely to become a mine of considerable importance to southwestern Utah. It is a copper producer. The smelter is located not far from the town of St. George.

No Two Exactly Alike.

As no two mineral fields are exactly alike, it is unsafe to say, without a knowledge of the special conditions the metals do or do not exist in certain rocks. J. C. F. Johnson, an English mining engineer, states that in his own experience, payable gold has been found in the following materials: Quartz, dense and milky, also in quartz of nearly every color and appearance—saccharoidal, crystalline, even in clear glass-like six-sided prismatic crystals—and associated with silver, copper, lead, arsenic, iron as sulphide, oxide, carbonate and tungstate, antimony, bismuth, nickel, zinc, lead and other metals in one form or another, in slate, quartzite mica schist, granite, diorite, porphyry, felsite, calcite, dolomite, common carbonate of iron, and silicious sinter from a hot spring; less plentifully associated with some form of silica or quartz, and that calcite, or oxide of tin, is always found in or near granite containing white mica.

amount of work has been done there during the year, on the Oasis and Overhead properties, owned by J. D. Clive and associates of Salt Lake.

Property is Well Equipped.

During the past year the mine has been equipped with a hoisting engine, a 10-horse power boiler with boiler house, four 60 horse power boilers, blacksmith shop, carpenter shop, assay office, a large dynamometer and other equipment of the modern type. Being so close to the town of Frisco makes it convenient for the miners to have their homes right in town.

The main working shaft is now down to a depth of 500 feet and from this level it is the intention of the company to explore the vein and begin the extraction of ore from that point.

Has Horn Silver Lode.

The Horn Silver lode is a fault fissure, which extends along the eastern base of the San Francisco mountains. The strike of the vein is about north-south and dips to the east about 80 degrees from the horizontal. In a somewhat irregular fashion, as indicated by all the workings and fully determined by all the underground workings in the Horn Silver mine, which extends down about 1,500 feet from the surface. The foot wall on the west of the vein is dolomitic limestone and the hanging wall is limestone. The immense bodies of rich ore of the Horn Silver occur at the intersection of the vein with the east-west faults. Evidently these intersections designate the main channels through which the mineral solutions passed, and along which, in favorable places, they deposited their mineral wealth.

The Discoveries in the Frisco.

The discoveries in the Frisco company's ground are identical with those in the Horn Silver mine, but are better exposed, and are a more rounded manner; the east-west faults are more numerous and outcrops of the metamorphic limestone more prominent.

Frisco Contact a Bonanza.

The Frisco Contact Mining company, mentioned in the foregoing introduction, is the owner of the following patented mining claims: Good Hope, Good Hope No. 1, Good Hope No. 2, Bain of Glead, Scorpion, Scorpion No. 1, Scorpion No. 2, Saxon, Lookout No. 2, Excelsior No. 4, Copper Spring, Frisco, Frisco No. 2, Frisco No. 3, Frisco No. 4, Hesperides, Ruby and Dull Knife, all of which are located in the San Francisco mining district, just outside of the town of Frisco.

For several years this company, of which D. P. Rohlfing is manager, has been conducting a noiseless, but vigorous campaign of development and the condition of the property is rapidly approaching the proud position of a producer of more than ordinary magnitude. That it will become a second Horn Silver, which is said to have produced more than \$400,000, is believed. In fact, the officers of the Frisco Contact are confident of the conclusions reached in the early days of the company by Manager Rohlfing and other engineers.

Has Horn Silver Lode.

The Horn Silver vein can be easily traced into the Frisco Contact Mining company's ground after the system of east-west faults is understood. North of the Horn Silver company's ground an east-west fault throws the vein about 2,500 feet to the west. For several hundred feet up to this point the vein is obscured, being covered by a flow of micaceous, beyond this, however, the vein shows in several bold outcrops of the foot wall limestone, and the several faults following can be easily seen, stepping the vein to the east, through the Frisco Contact Mining company's ground to the Carbonate and Rattler, where it splits and dies away. Through contact with the eruptive rocks the limestone is metamorphosed so as to lose all its original character, in places the character of the andesite—and again being completely silicified as seen in the outcrop above mentioned. This may be taken as one of the reasons that the Horn Silver vein was not traced long ago beyond the Horn Silver company's ground.

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