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Fortnightly Market Review Number 16 of Nat. C. Goodwin &



ANALYTIC REVIEW OF MINES AND SECURITIES OF GREAT GOLD CAMP

Expert Opinion Based on Thorough Examination of District and Inquiry Into Incorporations.

EARLY PRODUCTION ASTONISHING

Rawhide Proving Its Right to an Eminence in the World of Gold Mining-Geology of the District Assures Permanency to Fabulously Rich Ore Bodies-No Milling Problems-Ores Are Not Refractory-Camp's Important Mining Securities Which Represent "Inside" Properties With Ore-Queen, Coalition, Grey Eagle Fraction, Ballon Hill, Mascot and Other Offerings.

Reno (Nev.), March 6, 1908, INCE our last Fortnightly Market Review was issued the camp of Rawhide has more than doubled its population and the camp now contains more than 9,000 people. The rush to the district is increasing in volume hourly and the newcomers are pouring into the district at the rate of 150 or 200 a day.

Many sensational strikes have been made during the past fortnight, several of them disclosing at a depth, warying from 60 to 125 feet, large budies of high grade ore that exceed in size and values any previous discoveries in the state.

The developments to date fully substantiate the prediction made in the last issue of this Market Review that Rawhide is developing into the greatest gold camp in the United States.

THE GEOLOGY OF RAWHIDE.

Several geologists and mineralogists of national reputation have during the past month made a careful study of the formation of the district, and without exception they declare that all the indications point to the permanency of the ore deposits.

The genesis of the ores of the district is three-fold, viz.: Stockworks, impregnation and replacement. The porphyries, which are acidic in type, found in the immediate vicinity, un doubtedly represent two geologic ages. It is in the earlier porphyries that all the values thus far have been found. These values are encountered over a most extensive area, it being well with-In the confines of accuracy to say a territory three miles square. On the eastern side of this area lie three very prominent hills, named from north to south, Grutt Hill, Balloon Hill and Murray Hill. These hills immediately bound the town of Rawhide on the east, while Hooligan (or McLeod) Hill and Silver King Hill lie just west of the main street of the town. That some of the largest bodies of highgrade ore ever discovered in the world exist in these hills is now conclusive ly demonstrated. How these ore bodies were found is an interesting study as well as most encouraging one, "Stockworks" is a term given to a reticulated mass of rock which is made up of a number of small seams and yeins running in every conceivable direction and filled with silica and metals. If this were the full meaning of "stockworks" it would seem a very discouraging condition, but fortunately there are larger and major veins here which are found not only in the shearing zones, but also as fractures, thus affording double vent to the ascending waters and their precious accompaniments, gold and silver. This represents impregnation.

1 estate, consisting of 65 acres practically covering the center of Balloon Hill, and including the Balloon, March Rose and Diabase claims and the Balloon Fraction. This company is incorporated for 1,000,000 shares of a par value of \$1 each; 300,000 shares are in the company's treasury.

Rawhide Coalition Mines Company's holdings, embracing eight claims and there fractions, or a little more than 160 acres, covering a large part of Balloon Hill, Grutt Hill, Murray Hill all of Hooligan Hill, all of Silver-King Hill and all of the townsite. The company is incorporated for 3,000,000 shares of a par value of \$1 each; 750,. 000 shares are in the treasury.

Grey Eagle Fraction, which has been eased in its entirety for two years to the Grey Eagle Fraction Mining and Leasing Company, which has just been incorporated with a capitalization of 1,000,000 shares; 350,000 shares are in the company's treasury. This fraction. which contains about eight acres, is probably the most valuable piece of ground of its size in the district. It adjoins the Balloon claim and the Balloon Fraction of the Rawhide Queen Mines Company on the northeast, and has the extension of the great Kearns No. 2 vein opened up on the Balloon Fraction, next door. It is bordered on the other side by the bonanza Mascot

Italization. Shares in the parent com-] pany, owner of the ground under lease, the Rawhide Queen Mines com-pany, are in hol demand at from \$1.60 to \$1.75 on a million-share capi-

talization. Kearns Lease No. 1, on the Balloon claim of the Rawhide Queen Mines company, the lease being operated by the Original Rawhide Mining company, is almost as rich a piece o ground as Kearns No. 2. The devel opments on the eighty-foot level dur ing the past ten days have been of a sensational character. The ore which is forty-five feet wide and shoot, which is forty-five feet wide and samples 355 a ton from wall to wall, has been drifted on for 100 feet in each direction, and samples taken all along the drifts indicate that the values are uniformly the same as in the crosscut. Three carlonds of ore averaging \$200 a ton have been shipped to the smelters from this lease, and regular shipments of ore of this grade or better will be nade from both of the Kearns leases from this time forward. profit.

STRIKES OF DAILY OCCURRENCE

time forward.

In addition to these great strikes remarkable discoveries are being made daily on adjoiring and neighboring properties, notably the Murray lease, on the estate of the Rawhide Consolidated the estate of the Rawhide Consolidated Mines company; the Gray Eagle Frac-tion, adjoining the Kenrus No. 2 on the porth-sat; the Grutt, Proskey and Lan-ing leaves on the Wild West claim of the Rawhide Coalition Mines company: the Miller, De Armand and other leaves on Hooligan Hill, within the estate of the Rawhide Coalition; the Litigator claim of the Rawhide Balloon Hill Min-ing company the Ordive. Revnolds and perties in the vicinity.

In the western section of the district, early three miles from the town of tawhide, several important strikes ave been made during the past two weeks, indicating that that part of the istrict contains several promising roperties. The Royal and Tiger, Bull-backer and Stanhalmer situated in backer and Steinheimer, situated in at locality, have opened up shipping e at a depth varying from 29 to 89 eet, the strike in the Royal on the 60-bot level having disclosed ore running a high as \$1,000 a ton.

In short, the developments through out the district uring the past fort-night have fully verified the predictions made in the last issue of this Fort-nightly Market Review and placed Rawhide among the great gold camps world

All the big operators in the country now have their representatives on the ground, making examinations of the principal properties, and a number of important deals have already been consummated. Prices of inside properties are going up by leaps and bounds, and claims representing outside territory, which could have been bought for a few housand dollars two weeks ago, can-not be touched for less than \$50,000 to-lay. Eugene Grutt and associates, who any in Grey Eagle Fraction, which adjoins the Balloon claim and the Bal-loon Fraction of the Rawhide Queen Mines company on the northeast, and is under lease to the Grey Eagle Fraction Mining & Leasing company, have re-fused \$500,000 for that piece of ground, which contains less than eight acres. E, W. King, president of the Rawhide Queen Mines company, who owns 55 per cent of the stock of that corpora-tion, which is canitalized for 1,000,000 tion, which is capitalized for 1,000,000 shares, has just refused \$2 a share for shares, has just refused \$2 a share for his holdings, and he says that he would not for a moment consider an offer of less than \$5 a share. Many leases that are still in the prospect stage have changed hands during the past two weeks at prices ranging from \$5,000 to \$25,000.

POPULATION OF TOWN BIGGER THAN GOLDFIELD.

The town of Rawhide is building up with remarkable rapidly. There are now more than 300 wooden buildings in the camp, and 250 are in course of construction. There are 3,000 tented habitats. Fifteen mule teams of 10 to habitats. 20 animals each are engaged in hauling timber from the railroad, and many smaller teams are being pressed into the service. More than 200 carpenters the service. the service. More than 200 carpenters are employed at \$8 a day, and con-tractors are sending outside for work-men to enable them to complete their contracts on time. Real estate values have been more than doubled in a fort-night, it being impossible to buy for \$25,000 a corner lot which sold two works zero for \$2000 \$25,000 a corner lot weeks ago for \$8,000. Many operators from Nome and the Klondike are now on the ground. tracted by the reports that rich place diggings have been discovered. These placers, which are situated at the lowe end of the town, in the canyon which drains the rich quartz section around Grutt, Bailoon, Murray and Hooligan Hills, are being prospected by means on whether and shafts, and some remarkable values have been encountered. Dirt running as high as \$200 a cubic yard has been struck at several points, and nuggets weighing as high as \$2 are frequently found. It is believed that these placers can be worked at an enormous profil worked at an enormous can be worked at an encoded by the dry-washing process, and if wa-ter sufficient for sluicing purposes can ter sufficient which is now assured, this be developed, which is now assured, this rich ground will produce fortunes in

"During my experience in Montana 1 have been able to mine and mill ores for as low as \$1 a ton, but the veins in Rawhide being narrower than the large deposits in lime in Montana, the cost would be much greater. The higher cosi of labor and power and the cost of water would also add to the expense. But there is no reason why the ores of Rawhide cannot be mined and milled at a cost not to exmined and inflied at a cost not to ex-ceed \$5 or \$6 a ton, while in excep-tional cases, such as those of the Kearns and Ogilvie-Reynolds leases,

they can be treated for \$3 or \$4 a ton. This would bring to the stamps an almost unlimited tonnage of lowgrade ore that could be handled at a "Several outside parties have as sured me that they will erect a large custom mill in the camp within a short time, and the company is await-

short time, and the company is await-ing their decision. If actual construc-tion work is not begun by some one within the next twenty days, the com-pany will at once begin the erection of a mill of sufficient capacity to treat all the ores from its mines." Mr. King's experience in managing some of the best gold mines in Mon-tana has peculiarly fitted him for solv-ing the problem of econmically reduc-ing the ores of the new campy. His first great success was putting the first great success was putting the Gilt Edge mine, situated in Fergus county, Mont., on a dividend paying basis. Several companies had operated

county, Mont., on a dividend paying basis. Several companies had operated the property, but in every instance failed to put it on a paying basis. When Mr. King took charge of the mine the cyanide process of extracting gold from refractory ores was in its infancy. By the method in use at the Gilt Eage it required from two to three pounds of cyanide to a ton of gold to make the extraction, and the cost of the eyanide rendered it impossible to make a profit on the ore, which aver-aged about \$6 a ton. Within a short time Mr. King, by the adoption of im-proved methods of his own invention, reduced the quantity of cyanide neces-sary to extract the gold from a ton of ore to less than a third of a pound, and this saving enabled him to operate the mine at a handsome profit. The Parnes-King mine, situated in the same county, was also made a profitable producer by Mr. King, who introduced his new process in reducing its ores. Under his management the two mines produced over \$3,000,006 and paid big profits to the stockholders.

PERMANENCY OF ORE BODIES.

In discussing the question of the permanency of the ore depsits on Bal-ioon Hill, President King said: "When I first visited the district last October, one of the features that led me to believe that the ore deposits would prove to be permanent is that all the evidences point to the deposi-tion of the gold having been made by ascending solutions and that the mineralization is therefore apt to be strong for many feet in depth. In fact, would not be surprised to see the values continue to a depth of 2,000 or 3,000 feet. It very often happens in a lime formation, such as we have in Montana, where the lime has been tilted by eruptive rocks, that the gold-bearing solutions have come up theory of the strate of the st bearing through

"Another thing that strengthens my belief that the ore deposits of the camp go to a great depth is the prevalence of silver values. Nearly all gold-bearing solutions carry more or less silver, and that is generally deposited farther down in the veins; so that the pres-ence of silver is always a good indica-tion of permanency. The ores on the Comstock carried a large percentage or silver, and the depth to which those mines could be profitably worked was limited only by the high temperature which prevails on the lower levels. The Gilt Edge and Barnes-King mines are in lime formation, and they were pockety and gradually 'petered out' at a comparatively shallow depth. We did o to a great depth is the prevalence of liver values. Nearly all gold-bearing

kept dropping day and night on the present development in the leases I have just named. EXPERIENCE IN MONTANA. nance to make money."

ANOTHER EXPERT VIEW.

ANOTHER EXPERT VIEW. ward the hanging wall. There are values from the surface to the bottom of the shaft, but the richest ore and best showing are in the crosscul. The first nine feet of this is in ore running from \$100 to \$500 per ton. The rest of the cross-cut is in ore of a good milling grade of from \$10 to \$20, and the hanging wall is not yet reached. The mineralized part of this vein is a secondary sillification of porphyry and is very soft: that is, the sillification has not been complete. Within this ledge and running parallel with it are tall seams. The mineralization of this is what might be termed "banded:" that is, there are bands of very rich ore alternating with the leaner or poorer grade of corresponding width. These tale seams separate the enriched zones from the leaner ones, and perhaps from the hanging wall of the channels of the gold-hearing solution. I see no reason, geologically or otherwise, for this min-eralization not to extend to great depth and along the entire length of this con-tact. I feel confident that develop-ments in the next 90 days will open up mines that will rival any in the state." mines that will rival any in the state,

RAWHIDE MINES AND PROSPECTS

W proceed to a review of the important mining companies of Rawhide that own inside ground on or surrounding or situated between Bal-loon Hill, Grutt Hill, Hoolgan Hill, Silver King Hill and Murray Hill, which mark the center of activity. In doing so, we bear in mind the mistakes and shortcomings of camp boomers and mining-stock promoters of the Green-water type and of other districts that have been overboomed to the cost and heavy loss of investors. In this con-nection it should be pointed out that Green water was the outgrowth of a conspiracy hatched up in the cafe of the Waldorf-Astoria in New York, and that the securities of that camp were manufactured to feed a growing de-mand for mining stocks that grew out of the tremendous boom that was broughi about by the merger of various Goldheld producers in the Goldheld Rawhide that own inside ground on or Goldfield producers in the Goldfield Consolidated. There is nothing "manufactured" about Rawhide. The camp has grown despite depressed financial conditions throughout the country, and ore discoveries alone are responsible for it. Indeed, but for the fact that the strikes of high-grade made in Rawhide have been of such tremendous throttled in its infancy by the ab-sence of buying power for securities of the average variety, which for months has been evidenced throughout and Rawhide would have died still-born.

pany. The first-one to become a be-nanza was the Kearns Lease No. 1, situated on the Balloon claim, on the west slope of Balloon Hill, with two additional blocks on the same claim the lease holdings having been incor-porated under the name of the Original Hawhide Mining company, with a cap-italization of 1,000,000 shares of a par-value of \$1 each. A general sample taken last Sunday across three feet in the bottom of the 125-foot shaft as-sayed \$440 a ton, about one-third of the values being in silver. On the 80-foot level the ledge has been crosscut from wall to wall, disclosing forty-five feet of ore assaying \$55 a ton, and drifts run on the ledge for 100 feet each way, show the values to be uniformity about the same for the ch-tire distance, making it one of the busened block grade milling nonvestilions drifts fait on the reaso in the values to be uniformity about the same for the ch-tire distance, making it one of the biggest high-grade milling propositions in the state. The new shaft is down about thirty feet, the foundations for the hoist have been courpleted, and the machinery is being placed in position. Under the terms of this lease, the leasing company is required to sink at least forty feet per month until a depth of 500 feet is attained. The large percentage of silver in the orc in this lease is an indication that the values extend to depth. Kearns Lease No. 2 includes one block of ground ou the Balloon claim 300 feet square and a considerably larger block on the Bal-loon Fraction. This lease has been in-corporated under the name of the Kearns No. 2 Gold Mining company, with a capitalization of 500,000 shares of a par value of \$2 each. A block of the treasury stock was placed on the market a few days ago and over half of it was inmediately taken in Raw-hide at \$1. It is doubtful whether any more of this stock can be had at iess than par. At the present writing this lease is the Sensation of the camp. A general sample across two feet ten inches of the big ledge opened up on the 65-foot level was taken last Saturday and it assayed \$2,920 a ton. The ledge has been crossout 24 feet on this level without encountering the hanging wall, and the entire ore body on this level without encountering the hanging wall, and the entire ore body samples close to \$50 a ton. Assays of from \$100 to \$6,000 throughout this im-mense ore shoot are frequently se-cured. A road is being graded up to the shaft, and two carloads of ore will be shipped within a few days. This ore samples about \$250 a ton, and it is the intention to ship at least three carloads a week of this grade of ore hereafter. The leasing company has just started a tunnet through Balloon Hill from one block to the other, and double shifts of miners are now em-ployed on each end of the tunnet. A 25-horsepower holst has been ordered and will be on the ground within a few days. The Kinkaid lease, which ad-joins the Kearns No. 1 on the south, has been incorporated under the name days. The Kinkaid lease, which ad-joins the Kearns No. 1 on the south, has been incorporated under the name of the Colorado Balloon Mining com-pany, with a capitalization of 1.000.000 shares. The working shaft is now down nearly 100 feet, and the entire shaft for the last 50 feet has been in milling ore of good grade. The St. Ives Leasing company, also on Queen ground, which is incorporated for 1.000.000 shares, has a lease on the block lying between and adjoining the lease, the leasing company is requ' *A* to sink at least 20 feet per month an-til a depth of 500 feet is attain. A large gasoline hoist has Seen ordered and will be on the ground within a few days. The Ogilvle lease, which adjoins the St. Ives on the south, and lies higher up an Balloon Hill, has been incorporated as the Rawhide Ogilvie-Reynolds Leasing company, with a capitalization of 1.000.000 shares. An

good showing on the surface. is driving a tunnel to tap the le at depth. The Bull Pup lease situated on the March Rose claim, and situated on the March Rose claim, and adjoins the Yost on the cast. Stringers assaying as high as \$25,000 have been found on the surface, and a shaft is being sunk to cut the vein. The lease has one of the very best surface show-ings on Balloon Hill. The Poke lease is also situated on the Maych Rose claim, adjoining the Yost on the cast. Two, well-defined yoins have been Two well-defined veins have been opened up on the surface, and both carry good milling ore. The Nat C. Goodwin lease, which adjoins the Kearns No. 1 and the Ogilvie-Reynolds leases on the cast, is now being de-veloped under the personal direction of veloped under the personal direction of J. G. Flynn, mine manager of the Kawhide Balloon Hill Mining company,

think it is the greatest thing in it world. It is going to be continuous, in for we have opened up the vein at vefor we have opened up the vein at v ous places on the surface for a disu-of 300 feet such way from the shaft is a contact vein, having the finest of walls, both in No. 2 and in Y It beats anything I ever saw. They sucking everything that is coming We have three carloads of ore sa-and na score as the road is great. and as soon as the road is gra shaft we will begin shipping, putting in a 25-horse-power when this is installed we w when this is installed we will a carload every other day. On the period every other day. On the period every other day. On the pebruary 1 bought a controlling in in the Miller lease, situated of Hooligan claim of the Rawhide them Mines company on Hooliga There is an ore-shoot 25 feet wi tending from the surface to the p depth of the shaft, which is de feet. We are drifting on the level, and when I loft camp is ago they had opened up five feet that ran \$175 a ton. On the fo booth at the surface and on the level, where we are cross-cutth ore averages \$10 a ton. The er feet of vein matter, outside of p ore averages \$110 a ton. The entity feet of vein matter, outside of the streak, runs about \$24. I have just four men to work on the Kearns 1. No. 3, which is an extension of Kearns No. 2 on the Balloon Fract and happing over on the March F claim. There are three fine Ideges this ground, assaying over \$80 a We are pushing work there for Kearns No. 2 vein, which runs thro No. 3." No. 3.

Summing up the showings on markable property, we are con to say that not in the history mining in the west has a such absolute evide given such absolute eviden coming a steady producer o as does the Rawhide Que age. No mine in Goldfield o Creek, the two other really s Quee Creek, the two other really scasado gold camps of this country, has 1 two distinct ore bodies opened up such phenomenal richness and thi ness at the same carly stage of der opment as has the Rawhide Que and we doubt if any mine in either them at any stage of developm showed the presence of rich ore bod of such great width. We are induof such great width. We are to place the Queen mine in a itself, and believe that the Queen mark a new era in American gold m ing. To suggest that Queen sam may eventually sell at \$20 or \$36. may eventually sell at \$20 or \$38, slmply to make a prediction ha seems fully warranted by present or showings and geological condition that surround them. As indicated in the foreword of this market review there is every reason in the work from the geologist's standpoint, for the one hodies of the Duese with ore bodies of the Queen mine ; other properties on Balloon Hill penetrate to the deep, and there pears to us to be only one chance Rawhide Queen stock not becom worth \$20 or more per share in a not distant future, and fast is if Ba loon Hill becomes an acception to n rule and the these of the geologis based or [4] mining tradition, is a braded. We are informed that a plication for listing the Rawhle Queen Mines company's shares on th

San Francisco Stock and Exchan Board has been made and that t shares will, in all probability, be list which was the scene of the exciting trading of the Comstocks in the day trading of the Constocks in the da of Mackay, Fair, Flood and O'Brie within the week. We have been in dated with bids throughout the we at \$1.65 per share for stock in the company, and have been able to or partially fill orders. As far as we a discover, the visible supply of the stock is not over 150,000 share, it balance being held by the owners the control at a price, at this write the control at a price, at this writin known to be \$5 a share. The loo stock was sold during an early per-in the history of the property and reome scattering stock belonging wnership of the early original holder share of treasury stock has been sol and no necessity has been found for because practically all the ground under lease and the company is a ready deriving a heavy income in realities from the leasers. We pred an exciting market for Rawhide Que we advise our friends to lose ao in getting their orders into the ket and possessing themselves of a much of this stock as they can obtain under \$5 per share. We believe 33 share is warranted for this security by present ore showings, and that he shares have a speculative value of from \$3 to \$15 per share in addition Telegraph us your buying orders Give instructions to buy "at the market." The rise will be rapid and will undoubtedly be sustained. It is now bargain time.

PROCESS OF REPLACEMENT. 1

We now come to the third process and really the one which is destined to make Rawhide famous, and that is the process of replacement-a strange metasomatic tirck of nature by which the worthless feldspars are replaced by silica, gold and silver. The replacement process is clearly demonstrable in the Kearns, Murray, Grutt and other leases. It is a harblager of glad tidings to those in Rawhide and to those who are to go there, for it means big ore bodies and a big camp.

The other features of the district. from a geological standpoint, are all extremely favorable to its future. Dikes of basalt and davite may be seen cropping here and there, most of them running in a northerly and southerly direction, and, as a rule, cutting through the country rock at nearly a right angle to the main axis of stratification.

The center of mining activity is on and around Balloon Hill, Grutt Hill Murray Hill and Hooligan (or McLeod) Hill. These four hills adjoin one another and compose the backbone of the district.

The properties embraced in this "in side" territory are the following:

claim and by the ground of the Rawhide Coalition Mines company. Mascot and Mascot No. 1 claims, not yet incorporated.

Grutt Fraction, adjoining the Silver King Annex claim of the Rawhide Coalition Mines company.

Rawhide Consolidated Mines Company's estate of eight claims and four fractions, incorporated for 1,000,000 shares of a par value of \$1. The Murray lease, one of the big bonanzas of the district, is situated on the Bald Hornet claim of this estate.

Rawhide Balloon Hill Mining com. pany's estate, consisting of 65 acres and including the Litigator, Commercial and Commodore claims and the Litigator Fraction. This company is incorporated for 1,000,000 shares of a par value of \$1. The Kearns No. 1 vein passes through the Litigator claim and the Pike and Howard veins of the Rawhide Queen Mines company extend through the Commercial and Commodore claims of this company.

Rawhide claim, the original location of the district, not yet incorporated.

Roseberry Rawhide Mining company, of ninety-seven acres, situated between Rawhide Consolidated and Coalition ground on the south. Incorporated for 1,250,000 shares, of which 400,000 shares are in the treasury.

Rawhide Combination Mining company owning the Last Chance claim.

ALL OF THEM HAVE ORE.

On every claim in this segregated area, ore ranging from good milling grade to sensationally rich shipping value has been developed. It is, in our opinion, the most valuable mineral territory of its acreage in the world.

Kearns Lease No. 2, on the Balloon shaim of the Rawhide Queen Mines ompany, has just opened up a body of phenomenally rich ore which places that piece of ground in the front rank of the great bonanzas of history. On the sixty-five-foot level the vein has been crosscut for a distance of twenty-four feet, with no sign of the hung. ing wayy. E. W. King, president of the Rawhide Queen Mines company, assures us that for its entire width this immense ore body gives average assays of from \$40 to \$50 a ton, with streaks of high-grade ore from one to three feet wide that carry the richest ore ever discovered in the West. With-in the past three days the miners broke into a shoot two feet ten inches wide that samples from \$2.000 to \$5,000 a ton. Pannings from this fab-ulously rich shoot yield from \$4 to \$7 from a small egg pan full of the ore. A large tonnage of the richest ore ever mined in the state is now being raised from the sixty-five-foot level and the dump is growing rapidly. Shares in the leasing company oper-ating this lease are hard to obtain at \$1 per share on a millon-share expthe Rawhide Queen Mines company, Rawhide Queen Mines Company's \$1 per share on a millon-share cap-

MILLING FACILITIES.

placer gold.

The question of water for mills and transportation to smelters needs no so-lution in Rawhide. Water in abun-dance, in fact an inexhaustible supply dance, in fact an inexhaustible supply is to be had four miles from camp, on the flat, by sinking 50 feet. Thomas Kearns has just organized a company and raised the capital to supply town and mills with water, and a reservoir is now being erected on Balloon Hill. The nearest railroad station is Schurz, 26 miles gray, on the Southern Parific. The nearest railroad station is Schurz, 26 miles away on the Southern Pacific. The charge for hauling the ores to the railroad is §8. But all the ores can be milled on the ground. The developments on the rich estates of the Rawhide Queen, Rawhide Consolidated and Raw-hide Coalition justify the erection of mills of large capacity to reduce their ores. President E. W. King of the Raw-hide Queen is now considering plans for the installation of a 40-stamp mill at a point near the company's holdings, and it is probable that work will be com-menced early next month. In speaking of his project, King

In speaking of his project, King ald; "While a rich camp like Raw-ide can live for a certain length of time on the high-grade ores, it sconer a bree has greated ores, it sconer time on the high-grade orea, it sooner or later has got to get down to the actual production of buillon on the ground, and the sooner that is accom-plished the better it is for the camp and all the mines in it. A large pro-portion of the orea of the district can be treated by the straight stamp and amalgamation method, but some of the orea which carry high values in affree ores which carry high values in silver, notably those of the Murray lease, will have to be sincited or treated by the concentration and cyanide process. From experiments that I have made in my own laboratory in Helena, I am satisfied that an extraction of from oncentration and cyanide

comparatively shallow depth. We did find the ore below the 400-foot level, and they carried no silver values whatever. I expect to find the heat at whatever. I expect to find the heat at depth in the Rawhide mines, because there are hot springs in the vicinity. In the Michigan copper mines they go down 5,000 or 6,000 feet, and yet the lower levels in those mines are com-paratively cool, while at a depth of 5000 foot in the Constock mines the paratively cool, while at a depth of 2,000 feet in the Constock mines the temperature is almost at the boiling point. The fact that there are hot springs in the vicinity of Rawhide leads me to believe that the mines will repeat the history of the Constock and go to great depth."

KEARNS ON WATER AND MILLS.

Thomas Kearns, owner of the famous Kearns leases at Rawhide, was in Reno Monday, on his way back to the great gold camp from San Francisco, where he spent a week or ten days perfecting plans for the installation of a water works and electric lighting correspond plans for the installation of a water works and electric lighting system and the erection of a stamp mill at Raw-hide. In talking of his plans Mr. Kearns said: "Some time ago I decided to erect a 200-ton plant at Rawhide to reduce the ores from the Kearns leases, and the first problem that confronted me was the development of a water supply. I sunk a well in the flat, about six miles below the camp of Rawhide, and was gratified to find that I could develop an inexhaustible supply of

evelop an inexhaustible supply develop an inextantisticle supply of water at a depth of fifty or sixty fect. I then conceived the idea of putting in a water system and electric lighting plant for the camp, and my engineers have been working for several weeks on the plans, making preliminary sur-veys, etc. As a result of their work I have formed a company and have raised have formed a company and have raised \$135,000 cash, the sum estimated to be necessary to carry out the project. We will put in a pumping plant of suffi-clent capacity to supply a town of 10,-000 people and operate 200 stamps. We expect to have the pipe laid within the next sixty days, and if there is no unexpected delay we will have water running in the streats of Rawhice within three months. We are con-structing two reservoirs on the top of structing two reservoirs on the top of Ealloon Hill, which will give sufficient pressure to afford perfect fire protec-tion. We intend to put in a 200-ton reduction plant at the foot of Balloon Hill to handle the ores from the Kearos leases, and this work will be started in ample time to have the plant in commission by the time the

plant in commission by the time the water system is installed." W. E. Devereaux, Jr., of W. B. Dever-eaux & Sons, New York, mining engi-

neers and extensive nine owners in California, Mexico and Panama, the en-gineers of E. H. Harriman, has made critical and extensive examination of the properties in Rawhide. "I are prepared to say," he said, "that I never saw such a remarkable show-ing of gold over such a large area in ing of gold over such a large area in my life as that revealed in a tour over my own laboratory in Helena, I am satisfied that an extraction of from 90 to 97 per cent can be made on all the ores in the camp. The ores of the Miller, on Coalition ground, Kearns No. 2, on Queeo ground, De Armana and Alexander leases, on Coalition ground, in particular, can be treated simply with stamps and plates and a very high extraction made. All of the ores from the leases on Hooligan Hill, where the be Armand and Alexander leases are situated, come under, this classification. There is no reason why fifty stamps could not be

RAWHIDE QUEEN MINES COM-PANY.

The Rawhide Queen Mines company whose ground is centrally located on Balloon Hill, is incorporated for 1.000,-600 shares of a par value of \$1 each, or which 300,000 shares are retained in the treasury for development purposes. The officers of the corporation, which was the first holdign company organ-ized in the district, are E. W. King, president; J. H. Barrett, vice president; the Grey Eagle Fraction into the Mas-cot No. 1 and Mascot, and to wind its way through the Wild West claim of the Bawhide Coalition. Along its course the bonanza showings of the camp ar-being made. The Kearns No. 1 vein matches with the Kearns No. 2. It crosses the Litigator claim of the Bal-loon Hill Mining company, which ad-joins the Queen at right angles, insur-ing an ore shoot on the two properties of fully 1,500 feet long. Thomas Kearns, owner of the Kearns leases, who was in president; J. H. Barrett, vice president, William Lane, secretary, and D. V. Snowgoose, treasurer. The property consists of three full claims and three fractions, viz: the Balloon, March Ross and Diabase claims and the Balloon Fraction and two small fractions not yet named. The estate contains is acres, situated squarely on Balloon Hill with the evention of a small area or acres, situated squarely on Earloon Hill, with the exception of a small area on the extreme north end. A controlling interest in the property was taken over on January 1 of the present year by E. W. King, the well known banker and mine-owner of Montana. Mr. King has been operating in Montana for nearly 20 years, being the moving spirit in the Guit Edge Mining company the Great owner of the Kearns leases, who was in Reno last Monday, said: "I arrived in Rawhide from Goldfield for the first the shout the middle of last Novem-ber. After about five days' investiga-tion I purchased the Grutt leage on Bal-loon Hill, now known as the Kearns lease No. 1, paying \$55,000 for it. When I took charge of the property the shaft was down only 10 feet from the end of the short funnel, but free heat already 20 years, being the moving spirit in the Gilt Edge Mining company, the Great Northern Development company, the Barnes-King Mining company, the Kendall Mining company and the Aider Gulch Mining company and the Aider Gulch Mining company. He built three large mills in Moutana, and has many mining interests throughout the north-west in addition to those mentioned, Mr. King's control produced more than half the gold output of Montana, and he is considered one of the most emi-nent authorities on gold mining in the west. He is speaker of the house the short runnel, but they had already exposed 35 feet of ore that averaged better than \$32 a ion, with several stringers of ore running as high as \$1,000 a ion. I sunk the shaft on a big west. He is speaker of the house in the Montana legislature and former president of the Montana Society of Mining Engineers. A little over four months ago Kings attention was called to Rawhide by C. G. Walker, a pioneer more carloads on the road now that will probably run over \$200 a ton, and as soon as the tow holst is in place we will ship a carload every other day. We months ago Kings attention was called to Rawhide by C. G. Walker, a pioneer of the camp, and he came down from Montana and paid a visit to the new district. After a few days' inspection of the camp and its properties, he bought some stock in the Ruby Silver Mining company, which was operating a lease on the Balbon claim, now owned by the Rawhide Queon Mines company, He learned that J. H. Barreit and D. V. Snewgoose had a bond on all of Balbon Hill and that they had re-bonded it to Hinckley & Harris of Reno for \$56,000. He then came to Reno and bought a nine-tenth interest in the bond from Hinckley & Harris, and when the payments came due he made them and organized the Rawhide Queon Mines company. Four well defined ledges have been opened up on the Rawhide Balbon Hill Mining com-pany, which adjoins the Rawhide Queon on the north and cast. There are twenty-one working leases on the es-tate of the Rawhide Queen Mines comship a carload every other day. We have an immense tonnage of ore in the Kearns No. 1 that will average \$30 a ton. On the \$5-foot level we have cross-cut the vein 45 feet, and more than 300 feet of drifting has been done on the vein at that point. The entire ore-shoot samples \$55 a ton. Down the hill, in another shaft, we have just opened up ore that runs \$1,400 a ton, and in a shaft still further down the hill we have one that assays \$2,380 a ton. We made a shipment from this shaft that netted us \$2,350 a ton. Kearns Lease No. 2. 1 a supplient from this shart that betted us \$2,350 at on. Kearns Lease No. 2. 1 believe, is the greatest mine in the world. I was offered last week \$700,000 for this lease-\$100,000 down and the same amount every month until the entire amount was paid. I refused to consider the proposition, for I can work it invacif as well as anybody else. On

RAWHIDE COALITION MINES COMPANY.

This company owns a vast estats, which covers more of the choice is side area of the close-in part of is Rawhide district than any other fit Rawhide Balloon Hill Mining company, and good values have already been found in the shaft which was started last week. The shaft is actually going down on the ore from the grass-tools. The vein that has made the Kearns No. 2 the greatest lease in the camp has been traced across the Oglivie-Rey-nolds lease into the Nat C. Goodwin. Rawhide district than any other are companies. The acreage is bear three times as large as that of it Rawhide Queen, which is itself a u estate. The property consists of elec-ciaims and three fractions, or it acres in all. It is a compact group and embraces all of the ground a Hooligan (or McLeod) Hill, a part of Bailoon 440, nearly half of Grant Hill This vein is the strongest in the dis-trict. It is believed to pass through the Grey Eagle Fraction into the Mas-Hooligan for McLeod) Hill, a part Balloon full, nearly half of Grant Hill all of Silver King Hill and all of ite townsite ground, and may be said b be the heart of the bonanza portion d the district. The names of all the Coalitions claims are as follows: Te Silver King Nos. 1, 2 and 3 Guos I Sharthons claims are as follows: a silver King Nos. 1, 2 and 3, Guess I. Happy Hooligan, Happy Day Sanbas and Wild West claims and the Silver King Annex, Wild West and Silver King Annex, Wild West and said Slice fractions. All of the claims and fractions are prior locations, and com-fractions are prior locations. prise an estate approximately feet wide by 3,000 feet long, more than a half mile square, estate adjoins all of the prof belug properties that have so far produced the sen-tions of the camp. Adjoining R of the north are the Grutt Fraction and the Mascot elaim, on the east Balloon claim of the Rawhide Mines company and the Grey Ear Fraction, two bonanzas, and on the cast and south is the noted Rawlin claim, the original location of the claim, the original location of camp. Eugene Grutt, the big plon operator of the Cistrict, who own heavy interest in the Massor cla Grutt Fraction, Grey Eagle Fract body of ore, all of high milling grade, and now, at a depth of 118 feet, we have four feet of ore that runs over \$400 a ton. We shtpped 60 tons of ore to Gold-field in December, and it returned \$126 a ton net, in carload lots. There are two more carloads on the road now that and Rawhide claim, announces I under no consideration will he pose of his holdings in these si properties. Other noted proper properties. Other noted properlies broperties. Other noted properlies that surround the vast mineral estat of the Rawhide Coalition Mines com-pany are the Roseberry Rawhide ad-the Hoodhum group: the Lass Chane claim, which recently furnished a great sensation, only 400 feet from the Si-ver King Annex and the great fac-hide Consolidated estate, which is and 400 feet away. There is not a great of claims in the heart of the camp the does not either adjoin the Califor-group or lie within a few hundred feet does not either adjoin the Canter group or ile within a few hundred fer of it. There are forty-eight workfil leases in the estate of the Rawnif Coalition Mines company, and twenty already producit, mong the best e one of these are aiready produc high grade ore. Among the best the latter is the noted Lease No.⁴ the latter is the noted Lease No.4 the Happy Hooligan claim, known , the Miller lease. It was recently take over by Thomas Keatas, owner ach famous Kearns leases on Battoan Hi and three shifts of five men used we immediately put to work oil inte pro-erty. He began cross-cutting on the at myself as well as anybody else. On the 60-foot lovel the vein in 24 feet wide, We have large bodies of ore that run from \$300 to \$700 a ton, and there is three feet that assays \$4,000 a ton. I rich show