

The Mining Review

May 15, 1907 p. 35

Skidoo News: At a depth of 40 feet, the bottom of the shaft, the ledge on the Osborne-Matthews-Patten lease still holds its size and value, three feet of good looking ore being sunk upon. Throughout the entire workings water courses are encountered which are considered a most favorable indication by Mr. Osborne. A 30-ton dump of good grade ore has been accumulated and is ready for the mill. At 50 feet drifting both ways on the ledge will be done.

San Bernardino Index: Hasson brothers, of Los Angeles, have purchased a number of good prospects close to the Osborne properties, and have formed a company called the Ord Mountain Gold company. It has already spent \$5,000, and has erected lodging, boarding and other houses, and sunk its main working shaft 100 feet in good sulphide ore. A good, twelve horsepower Western gas engine has been installed. The bottom is reported to be all in ore, the latest assay being as high as \$354.72 in gold.

Skidoo News: On the Shackett block, work is being confined principally to the No. 3 and 4 shafts. On the latter, where sinking is being done at the junction of the two rich ledges, a depth of 35 feet has been reached and ore still holds its good grade. On No. 3 shaft, sinking on the flat ledge which at last report was known to be six feet wide, 15 feet through solid quartz has not yet been found the foot and a large dump of ore has been taken out. The depth of the shaft is 20 feet. This ledge is a mammoth, low grade milling proposition.

Skidoo News: As big and rich as ever, with average values away up in the pictures, over a strong three feet, the Hoyt workings have reached a depth of 35 feet. A night shift has been put on the Hoyt shaft and sinking on the rich ore is being rushed continuously. A specimen sample taken from this shaft is one of the curios shown by the Hoyt brothers, the remarkable feature of which being the fact that in its removal the quartz became broken and would have separated had it not been for several wires of gold connecting the two pieces.

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San Bernardino Index: There is considerable talk of a custom reduction plant at Daggett, to handle the ores of that region. The Osborne mines, it is said, could furnish enough ore to keep it running full swing. An immense amount is now ready for taking out, chiefly copper and gold, and although the mass is probably not very high grade, there are large quantities that run from 4 to 15 per cent copper, and from \$3 to \$16 in gold, with bunches of very high grade. The outlook is said to be very good for one of the largest copper properties in the region.

of high grade ore was encountered at the Afterthought mine some days ago, and yet what size the body is cannot at this time be stated. Several weeks ago a shaft was sunk on a vein eight feet wide. When the shaft was down to the fifty foot level, the vein had widened out to fifty-eight feet, and assays ran as high as \$60 a ton. The shaft was continued to the hundred foot level and at this point the values in the ore are much better than at the fifty foot level. A crosscut has been started and is in twenty-five feet on the ore on the hundred foot level, and there is every appearance of the body being larger than on the level above. There is no doubt but what this is the largest body of high-grade ore ever encountered on this property.

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San Diego News: A recent report of the superintendent of the Gold Park Consolidated mines, located in Riverside and San Bernardino counties, says that the two-compartment shaft which is being sunk has reached the 200-foot level, where a crosscut was run to the west, and at a distance of thirty feet the ledge was encountered, being eighteen feet wide at that depth. Considerable other development work has been done. Another hoisting engine, ore bins, etc., will soon be installed.

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Crackerjack News: At a depth of eighty-five feet the main shaft of the Crackerjack Gold company is all in ledge matter, with neither wall in sight. An 18-inch vein carrying high values in gold was struck this week, the ore being shot full of free gold. The Dalkeith tunnel is still in the same formation. It is expected to cut the big ledge in the next few feet.

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Crackerjack News: High grade ore is being sacked at the Crackerjack Bonanza mine, and a shipment will soon be made via Silver Lake and the Tonopah & Tidewater railroad. The owners of the Bonanza also have a force at work developing water in that district, as lack of water has been the greatest drawback. Razor Brothers have a force in the field surveying claims in that section, and the next few months will see much work being done at the Bonanza camp. Regular automobile connection with Crackerjack will soon be established.

Skidoo News: Four feet of \$2,500 ore was struck in the Cocopah tunnel yesterday morning. From many standpoints this is the most important discovery or strike, that has yet been recorded in this district of big values. The ore shoot is cut at a vertical depth of 150 feet, the breast of the tunnel being in about 200 feet, and almost equal values are found on the same ledge at the surface. This gives 150 feet of stoping ground with every indication that these remarkable values prevail throughout the entire distance. The length of the Bonanza ore shoot can only be conjectured at present and how far it will extend below the tunnel level is a problem for time and development to tell. The formation at this depth is perfectly in place and the white quartz vein, thickly studded with flakes and nuggets of pure gold, is as true a fissure as was ever opened by hammer and drill.

Skidoo News:—Ground will be broken for the building of the Skidoo Mines company mill next week. A telegram received by General Manager J. H. McCormack, a mill man from Underwood, South Dakota, will arrive at Johannesburg tomorrow and Mr. Hoveck will send his auto out to meet him. Mr. McCormack is coming prepared to begin building operations immediately and rush the work to completion at the earliest possible date. Three carloads of lumber for the mill have arrived at Rhyolite and will be freighted across Death Valley and delivered at the mine without delay. The first loads are expected to arrive by the time the ground can be prepared for the erection of the building. The milling machinery has been purchased and will be loaded out of the foundries within a few days.

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Crackerjack News: The shaft on the Sunburst, J. H. Lamb's promising mine in the East Avawatz, has reached a depth of thirty-five feet, with the bottom in ore the whole width. High values are obtained from samples taken during the week, the average being better than \$70 in gold and silver. Lamb has established a camp at the shaft and has three men employed sinking. He intends to go to the 100-foot level before drifting on the ledge. A crosscut driven at a depth of twenty feet proved the ledge to be ten feet in width, with well-defined walls.

Crackerjack News: That the east end of Table Mountain is destined in time to rival the more developed opposite slope of that range, seems probable from recent developments in the Mascot, Baker and Edward's property. Samples brought to Crackerjack from the Mascot fairly glitter with free gold, and while assays have not been obtained as yet, it is certain that the ore runs into high figures in the yellow metal. The shaft is down thirty feet now, and the owners intend to continue sinking to 100 feet. The working force was increased during the week.

Crackerjack News: Information was given out this week that a company of Salt Lake and Chicago mining men are considering the purchase of the well-known Rattlesnake group of claims in the East Avawatz, two miles from Crackerjack. An ex-

pect is expected on the ground this week

to make an examination, and it is expected a bond will be taken on the property. The Rattlesnake, which is owned by Mason, Kennedy and Dennemeyer, has considerable development work done at different points on the group, the main shaft being down sixty-five feet. The average of the ledge is about \$100 in gold and silver.

Skidoo News: On the Jack Rabbit, development work is going ahead steadily. Thorough exploration of the various ledges has shown gold values at three or four places. It is believed by J. P. Nash, president of the company, that they have not yet found the richest ore shoot, and the exploration work will continue.

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The Tecopa mine, out of Rhyolite, J. H. Lester, superintendent, is making heavy shipments of ore to Salt Lake. The ore assays about \$28.80 net, to the ton.

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Skidoo News: Messrs. A. J. Paulsen, C. L. King and S. A. King, representing the Skidoo Queen Gold Mining company, are here to make a thorough examination of the property owned by the company preparatory to starting permanent development operations. The Queen's group of claims is situated a mile and a half northeast of town. Recent work disclosed a 12-foot quartz ledge from which assays have been secured running from \$70 up to \$500 to the ton. This is to be thoroughly sampled and the best plan of decided upon, and immediate operations are to follow.

Crackerjack News: Shaft No. 2 of the Crackerjack Gold Mining company is now down fifty feet, and is being rapidly sunk to the 100 level. During the week numerous seams of rich copper ore have occurred in the ledge matter, there also being much iron in the rock. Superintendent Toennies believes that the great Tungate veins will be encountered long before the 100 level is reached, the shaft being sunk for the purpose of striking this ore body. The shaft is being sunk on the contact between the granite and blue lime, in which latter formation the Tungate veins occur. The shaft is being thoroughly timbered, and it is intended to employ another shift on the work soon.

San Diego News: Latest reports from the Golden Harvest mine in San Bernardino county are that high grade copper ore has been encountered in the lower tunnel, though as yet there is not much of it in sight. In another claim owned by the same company, but located some distance from the main property, a valuable deposit of zinc ore has been uncovered.

Crackerjack News: A good strike is reported to have been made on the Dicky Bird property, one mile from Cave Springs, owned by Gilbert and Hathaway. In a cross-cut which was started from a point forty feet from the surface, high-grade ore was encountered. The width of the ledge is not known as yet, the tunnel having penetrated three feet in the ore. Samples run about \$100 in gold and silver.

Skidoo News: While the recent phenomenally rich strike on the property of the Granite Contact Mines company is one of the present day sensations of the camp, it is also of unusual permanent importance to the district generally, because it proves that the high values of Skidoo ores are not confined to one mine or group of claims, but cover a wide area. The Gold Bird is a mile and a half from the Hoyt brothers' lease and the principal workings of the Skidoo mine.

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Crackerjack News: Every man available is now employed on the Crackerjack Bonanza property and no effort will be spared to push development with the utmost speed. The road leading to the shaft is now in good shape for hauling and the hoist ordered can soon be landed at the mouth of the shaft. In the course of sinking the latter about two tons of high-class ore are being taken out daily, steadily increasing the big pile of pay rock already on the dump. In fact, all around the property are evidences of the rapid opening up of what every mining man who visits it concedes will be one of the really great gold mines of the southwestern region. The boarding-house and other buildings will soon be ready for occupancy and an increase in the mine's working force will be made as rapidly as practicable.

San Diego News: J. M. Rockwood, of the Mesa Grande Consolidated Gold and Gem Mining company, has recently returned from a visit to the mines, which are situated about fifty miles northeast of San Diego. Mr. Rockwood brought with him a rough beryl crystal about five inches in diameter, the central portion of which consists of a beautiful crystal of blue topaz. This crystal was taken out of the company's mine while Mr. Rockwood was there. The company has been offered \$1,000 for the specimen, which is now on exhibition in their window at 858 Fifth street, where it is attracting much attention.

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Bernardino Index: Heavy capital
taken hold of one of the many mining

properties of M. T. Amos, in the Silver Lake district. Today a deal was consummated by which William Callam and Mary E. Callam of Denver, Colo., have taken over the Minater and Silver Lake claims in the Silver Lake district, agreeing to pay therefor the sum of \$7,000.

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Skidoo News: Dick Fredrickson has bought Willard Patten's interest in the Macleod and Patten lease, and work will be continued under the changed ownership. Mr. Patten was obliged to give up his work here on account of falling health, he having been suffering with heart trouble for several weeks. This lease is the block of ground adjoining the Hoyt Brothers lease, and a shaft is being sunk to catch the extension of the rich Hoyt ledge. A crosscut is now being driven and the owners think they are getting very near the object of their efforts. If the ledge keeps its course a few more shots should break into it.

Oct. 30, 1907

San Diego News: Dr. J. D. Hammonds, president of the Golden Harvest Milling and Mining company, expects to start for the mines with a gang of men in a few days to operate the mines, which were temporarily closed down last summer on account of the heat on the desert, and the serious illness of Capt. Phillips, who was at that time in charge of the mine.

Skidoo News: "We have struck better ore than any we have had yet. The new discovery carries gold values away up in the pictures." So says T. E. Crawford, the principal owner of the Harrisburg mine. A shaft was sunk through the surface wash, about 100 feet west of the disappearance of the big ledge, and at a depth of fifteen feet encountered solid formation, with the result stated above. It is impossible to tell anything about the size of the ledge, for the bottom of the shaft is entirely in ore. This ore is even richer than that taken from the developed portions of the big ledge.

Skidoo News: The Skidoo Contact has struck rich ore. While cross-cutting to catch the main ledge, a bling lead of quartz was broken into this week, which carries rich values in free gold. Superintendent G. W. Paine says that the new ledge is a dandy. The breast of the tunnel, 100 feet in, has just reached the opposite wall and shows the ledge to be three feet wide. The ore is honeycombed quartz and pans gold quite freely. The main ledge of the property, which is on the contact between the granite and lime formations, is still eighty feet ahead. The unexpected encounter of the new ledge makes it almost a toss-up whether to stick to the original purpose, continuing the cross-cut, or to develop the newly discovered ore shoot. However, it has been decided to continue the tunnel to the contact ledge. Superintendent Paine speaks very enthusiastically of the property, and says he thinks it is going to make a good mine.

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Needles correspondence to San Bernardino Index: One of the promising mining districts that many of our citizens are interested in is the Hikorum district, close to Bagdad, and about 100 miles west of here. Fred Roble and J. L. Medlin, of this place, were among the heaviest owners in this fast becoming rich district. Roble sold to Denair and his associates in the Orange Blossom Mining company one claim. Later he and Medlin sold the claims now comprising the Orange Blossom Extension to a San Diego syndicate. He is still holding a number of very valuable claims there. The Orange Blossom mines are the best developed; over a thousand feet of work, of which over five hundred feet of it is in shaft, has been done. At the four hundred foot level a cross-cut in the foot wall encountered a ledge as high as \$230 in gold and copper. This ledge has been drifted for over 100 feet and the values still hold good and strong, with promises of increased values. There are stations at the 55 foot, 100 foot, 200 foot and 300 foot levels, which are in good ore.

Crackerjack News: L. F. Flormann and Ben Gar, the veteran Montana mining man, have a force of men at work on their Bonanza Mountain property, south of the Bonanza company's ground, and have a good showing. A shaft is being sunk on the ground, and when sufficient depth is attained cross-cutting will be begun.

Crackerjack News: Sacking \$100 ore from the grass-roots down. That is the record of the Rose lease, the first granted by the Bonanza company, on the Arizona claim. The leasers began their work ten days ago, and the first two days' work resulted in a respectable showing of sacked ore below the main company workings. The general average of the ore taken out so far and sacked is \$100 a ton, which will pay the leasers handsomely for their work.

Skidoo News: H. E. Clewell and Albert S. Hoffman arrived from Rhyolite yesterday to look over the property of the Skidoo Contact company, of which they are both stockholders. Mr. Clewell being a director of the company. They were delighted with the result of the summer's work on the property and consider that the showing is such as to warrant the immediate increase of development operations to quite extensive proportions. Mr. Clewell says the camp has grown so much since his last visit here that he could hardly believe it to be the same place.

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San Bernardino Index: That the most pressing requirement of the Mansfield copper mine is an adequate mill is indicated by the quantities of good milling ore now in evidence on the dumps and workings in the several claims of the property. As for shipping ore, the following recent assay from the second level of the Black Cap mine is affording no small amount of satisfaction to the Mansfield management: 2,874.42 ounces silver, six dollars in gold, and 30.94 per cent copper, or a total of about \$2,000 to the ton, according to the prevailing prices in the metal markets. The shipping ore in the Black Cap is being taken out at four different points. Frequent shipments are going forward to the El Paso smelter, and a number of tons have been sent to Denver for concentration test. More ore is being sacked, and will be shipped as fast as ready. The Sweet shaft is going down steadily, the work being in the hands of contractors, who are now approaching the 350-foot level. Besides a mill, a pyritic smelter is also included in the plans of the company, as large quantities of the Mansfield ores are self-fluxing.

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Crackerjack News: Manager E. E. Adams of the Crackerjack Tomboy company, returned from Los Angeles this week after an absence of several days. Mr. Adams says that although money may be scarce on the outside, he will go right ahead with the work that has been started by the company. The shaft on the Tomboy claim will be sent down to the 100-foot point. An assay of \$95 from the bottom of the shaft was obtained this week. The values are in gold and silver.

Skidoo News: Fred Oakes and Dick Ryan have opened up wonderful ore bodies on their Village Belles and Eclipse groups in the past week. The property which consists of two claims and a fraction, in all about forty-five acres, are, in virtue of the latest strike, one of the choicest locations in camp. The group lays on the south side of the Saddle Rocks, which is generally conceded to be one of the giants of the desert. It was intended at first that assessment work only would be done, but that work has opened up such magnificent ore bodies that Mr. Ryan, who left for his home in Lee a few days ago, intends to return and develop the ground without further delay.

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Skidoo News: The News reporter visited the Cocopah Extension property during the week in company with Wilmot H. Smith, who were favorably impressed with the showing. The vein, which can be traced for 900 feet, looks as if it would prove one of Skidoo's bonanza's—and a bonanza in this district is generally a pretty good thing. Only two specimens were examined by the News man—one from the dump and one from the bottom of the shaft. Both showed free gold. The property is beautifully situated—endlining the Cocopah group from which the richest rock of the district was taken. Superintendent Glendenning avers that the lines of the property could not have been laid out to greater advantage if the locators had the present development to go upon.

has been placed to the credit of the great Crackerjack Bonanza mine. This time it is the north drift on the first level that has cut the high-grade shoot. The new ore was broken into on Tuesday, and is the equal of any that has previously been brought to light in that wonderfully rich property. An assay sample of the ore ran \$1,800 in gold and silver, and the whole shoot of ore is of a very high grade. Work is now going on at this point, and some sensational developments may be looked for in the next few days. The strike was made 30 feet out from the shaft. A good-sized vein running parallel to the main Arizona ledge was being followed in the drift. The ore has shown fair values all the way, but on Tuesday afternoon a shot disclosed a good-sized body of the real high-grade stuff. The ore is being sacked from this shoot, and is expected to prove among the richest produced by the mine.

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San Diego News: The boundaries of the new gold field at Dulzura have gradually been extended until they now embrace a territory more than eight miles square. One of the richest strikes thus far reported, is six and a quarter miles northeast of the Dulzura postoffice, and was made by Alfred S. Fields of Descanso, last Sunday. The ledge is two and one half feet wide, lying between walls of granite, and the ore is entirely different in character from that found where the first strikes were made. Mr. Fields brought in one hundred pounds of samples Monday, and the assays show values exceeding \$100 per ton.

San Diego News: Development work has started in earnest in the Dulzura district, and as work progresses the more confidence miners have in the new gold fields. One company has a shaft down thirty feet and the ore at this depth assays double what it did in the croppings. It is the intention of the company to sink 100 feet before cross-cutting the ledge. Another company has sunk twelve feet on a good paying ledge and will not stop until the ore body is tapped at a depth of 150 feet. The company of San Diegans who leased the Donohue mine, have let a contract to sink a 100 foot shaft. Mr. Barnes and a crew of miners will leave San Diego for Dulzura this week. Over forty claims are being opened up.

Haut Enterprise: On Monday afternoon the first payment on the Oro Belle and Oro Belle Fraction was received by Hart & Hitt, and the property formally transferred to the Oro Belle Mines company, a new corporation recently organized under the laws of Arizona, with a capitalization of 1,000,000 shares of a par value of \$1 each. The new company has been promoted by the firm of Andrews & Marsh, who, together with Thos. A. Merritt, a prominent Duluth, Minn., capitalist, Bert Hitt and James Hart, are the heaviest stockholders. Besides the above gentlemen, a number of other Duluth people are interested in the company. The purchase price is said to be in the neighborhood of \$100,000, with a substantial first payment.

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Skidoo News: Steve Osborne returned from Los Angeles on Thursday, where he has been for the purpose of attending a directors' meeting and purchasing a new hoist and other plant. The machinery was at Randsburg when he passed through, and ought to be here within the next four days, which makes a record for quick delivery. Work on the lease is progressing in a highly satisfactory manner, the ore being, if anything, richer than before. President Osborne will shortly reorganize the staff and put on another shift.

Hart Enterprise: A Little Giant quartz mill having a daily capacity of eight tons has been shipped from Goldfield to Hart, and upon arrival early the coming week will be installed near the water tanks north of Main street. The mill has been purchased by George A. Foster & Co. and Hart & Hitt, who will use it for a sampler. The mill is said to be a new departure in the way of pulverizers. It is also said to be a first-class amalgamator, combining the pounding of the stamp with the grinding motion of a muller on a bucking board. A number of these mills are in use in Nevada, and it is claimed to be a great boon to the leaser and small mine owner. If the mill makes good it is probable a number of leasers will install them.

Skidoo News: Tunnel B in the workings of the Skidoo mine was the scene of a great strike yesterday. This tunnel, which Superintendent Squires started in January, is on the main ledge, and is in about seventy feet. While Assistant Superintendent Braley was sampling the breast, he noticed an irregularity in what was supposed to be the footwall. On examination, this proved to be a new ledge of high grade ore. A small sample taken promiscuously was literally smothered with free gold. It is as fine a specimen as any yet taken from the mine. The extent of the new body is not yet known, but anyway, the strike is one of great importance. Where the strike was made, the ledge is ten to eleven feet wide, all of good milling ore, much of it showing free gold.

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San Diego News: At the present time over forty claims in the Dulzara district are being worked by forces ranging from one man to twenty, the largest crew being employed at the Buckhorn, and the next largest at the Artery Consolidated. Both of these properties are looking fine, and the ore continues to improve as sinking on the ledges progresses. It is reported in the camp that a sensational rich vein has been encountered in the ledge matter of the Artery, but the miners have been instructed to give out no information and to show no samples. The vein is about three feet wide.

San Diego News: The new road from the Mazanita camp to the Buckhorn, two and a half miles in length, is completed, and four-horse teams now drive to the mouth of the shaft with materials. Work has been resumed on the shaft and good headway has been made this week. At a depth of fifty feet a crosscut will be run to the ledge from which \$600 ore was taken two weeks ago. This will tap the ledge at a depth of about 150 feet, and it is expected that sensational values will be obtained. Buckhorn stock has advanced from 15 to 20 cents and will probably take another rise next month.

Hart Enterprise: The strike made at the Pfunder lease on Oro No. 1, which was reported in these columns last week, is proving to be among the most important developments to transpire in this district for several weeks. In the crosscut where the ore was broken into the working has penetrated the shoot for a distance of twenty feet, with but one wall appearing. Streaks of high-grade running \$200 per ton and better are scattered through the ore body, while the whole will yield a golden ribbon in the pan, that would indicate high-grade milling values. The ore coming from the crosscut this week averages from \$50 to \$75 per ton, and is being saved for shipment.

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CALIFORNIA MINE BONDED.

(Tonopah, Nevada. Bonanza.)

Los Angeles.—Randsburg's famed the Yellow Aster, is under option to Ancker, cashier and manager of the Big Tehachapi, Kern county, at a price by him and Vice President C. A. Burdett of the present owning company for \$1,500,000. Ancker will reorganize the mining concern, a close corporation, with \$1,000,000 capitalization, and greatly extend the scope of operations. John Singleton, president; C. H. Mooers, secretary; and Dr. R. L. Burchard, treasurer, are the other present directors, reside here, where the stock is held.

Since Singleton, C. A. Burdett and Fred Mooers discovered the mine three years ago, it has shipped to the mine \$5,000,000 gold bullion, of which \$1,500,000 was paid in dividends and \$1,500,000 expended on mills, water plants, roads and development. The property has worked continually day and night, with exception of a three months' shut-down years ago, due to labor troubles.

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NEWS FROM HART.

(Special Correspondence.)

Hart, Calif.—The richest strike ever made in the Hart district occurred last Friday, when five feet of ore, running \$500 per ton, was encountered in the bottom of the ten-foot winze, at the Big Chief lease on the Oro. The strike in the winze is undoubtedly the biggest ever made in this section of the Golden state, from a point of richness. The Big Chief Mining company, which is operating this valuable property, blew in its mill yesterday, and today Hart, not four months old, boasts of already turning out the yellow goods. Ore running as high as \$1500 per ton is awaiting treatment.

The Quartette Mining company is prosecuting developments on the Jumbo property and the hoist which was installed this week in yanking the ore from the shaft in record time. Three shifts are at work and the shaft is being sunk at the rate of three feet a day. The 100-foot level will be reached in about a week, when more men will be put to work crosscutting the massive

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vein in all directions, while the shaft will be continued down to the 200-foot level.

The strike made at the Pfunder lease is proving to be a great thing. In the crosscut where the ore was broken into the working has penetrated the shoot for a distance of twenty feet, with but one wall appearing. Streaks of high grade running \$200 per ton and better are scattered through the ore body, while the whole will yield a golden circle in the pan. The ore coming from the crosscut this week averages from \$50 to \$75 per ton, and is being saved for shipment.

The Bevere & Barret shaft on the Rambler at a depth of fifty feet is in a good grade of mill ore, the entire shaft averages \$20 per ton. Developments at this property prove the continuity of the great Jumbo lode, and considering the massive ledge of quartz which is being penetrated, the Rambler is making good and will be numbered among the big shippers of the district.

The tunnel on the Maguire & Mahana leasehold has penetrated the mountain for a distance of 100 feet. Twenty feet more of work will put the tunnel in the second vein, where sensational values were found on the surface several weeks ago.

At a distance of 165 feet the first vein was encountered in the Hart & Hitt tunnel on the Oro Belle No. 1. A depth of ninety feet has been attained, and the values are improving with every round of shot. The tunnel will have to be run 100 feet further before it reaches the mammoth ore zone opened up in the upper workings.

The Sloan lease is being equipped with a hoist and the shaft sent down. The crosscutting on the fifty-foot level has opened up an immense body of milling ore, the ledge showing values for a width of fifty feet.

The Funk, Miller & Mann lease on the Clapper broke into good values and the rock horns exceptionally well, averaging around \$25 per ton, while streaks of high grade are scattered through the ore body.

The Hart Mining & Leasing company have started operations in the district. At present the holdings of the company consist of the Andrews & Marsh lease on block 5 of Piute Belle No. 1 and the Woodward lease on block 2 of the Oro Belle. The showing at these properties is among the best in that section of the district.

The population of Hart is increasing daily. An unexpected visitor arrived in camp last Wednesday. The new arrival was a son born to Mr. and Mrs. Emory C. Peters. This is the stork's first visit to Hart and the protege will receive a golden loving cup to be made from the gold of the mines at Hart, as a token of honor. Already great things are predicted for this little son of a soldier of fortune.

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Skidoo News: The new plant at the Osborne lease is giving every satisfaction. The engine works smoothly and rapidly, the ore being raised faster than at any other time in the history of the lease. Work at the 140-foot level has proved the ore to be richer than that at the upper levels. What the total output of this lease will prove to be, is a matter for speculation, but even if the present output is not increased it is difficult to see how the fortunate owners can avoid making a pile.

San Diego News: Some fine-looking ore is being taken from the Eureka mine in Dulzura. Huge chunks of it are on exhibition in the windows of several San Diego business houses and they are attracting a great deal of attention. While the samples are from the surface, they so closely resemble the ore taken from the 400-foot level of the Florence mine that even old Colorado miners who have handled the latter, are unable to tell one from the other. It would not at all be surprising that at 400 feet the Eureka will produce richer ore than the famous Florence.

Hart Enterprise: R. J. Stone, who is operating the Cyrus Noble mill at Searchlight, was in Hart this week. Mr. Stone stated that he had made arrangements for handling considerable ore from this district, the first shipments to be made within ten days. He further stated that in small shipments leasers could realize a good profit in sending \$15 ore to his mill, while in large shipments, that is about 300 tons per month, he can treat \$11 and \$12 ores at a fair profit to the owner. The cost of transportation to Searchlight is between \$3.00 and \$3.50 per ton, via the Santa Fe.

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San Diego News: Besides the work being done by Mr. Speith, the general manager of the Cleveland-Pacific mine, at Escondido, three leasers are at work on that property. The Poling brothers have 100 tons on the dump, which they have taken from their lease. Some of it is said to run \$1 a pound. Farmer, & Crise are in 280 feet on their lease, and the ore is coming in with every additional foot. Louis Leonard and W. L. Clark are also working on a lease. Mr. Speith has installed a gasoline hoist, with the necessary gear to sink to the 900-foot level. The mill is expected to be ready for custom work in the course of a couple of weeks. This will enable the leasers to speedily realize on the ore they are getting out.

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NEWS FROM HART.

(Special Correspondence).

HART, Cal., May 27.—The intrepid argonauts who invaded this district last January have accomplished wonders in the way of developments, considering the short space of time which has elapsed since the first discovery was recorded here. At least three properties are in operation. Almost simultaneous with the striking of rich ore by Hart & Hitt in their 200-foot tunnel, comes the Quartette with another sensational strike. Twenty feet of pay ore has been passed through while the shaft was being lowered to the 100-foot point. Specimens peppered with free gold, weighing 50 pounds and more, were taken out last week, and 100 sacks of the high-grade is awaiting shipment to the company's 40-stamp mill at Searchlight. Besides the rich grade, the ore bins are bulging with \$25 rock, also destined to be treated within the next few days. The shaft is being continued down, and crosscuts will be run to the east to catch the rich shoot in its dip in that direction.

The Hart & Hitt tunnel has passed through the ledge encountered last week. The working is in 200 feet, having a depth of over 100 feet. Twelve feet of ore shows in the tunnel, and a good-sized shipment was taken out while it was passing through the ore body. This is to be sent to the Cyrus Noble mill at Searchlight for treatment. Numerous samples have been taken across the vein, which shows an average for the whole of \$20 per ton. The tunnel is being continued to a point below the upper workings, and will cut the biggest vein on this estate within 100 feet.

Good values have been encountered in the upper tunnel of the Big Chief lease, while the shaft is showing the usual high-grade streak it has been following from the surface, and at the present depth of 50 feet is 4 feet wide. The lower tunnel, which will give a depth of over 400 feet, is being sent in with all possible speed. George E. Pfunder and associates are co-operating with the Big Chief Mining company in driving this tunnel, which will also be used by them in developing their leasehold on Oro No. 1, where 14 feet of ore has been exposed in an upper crosscut. It will take the latter about three months to reach the desired point, but when they do it will give them over 250 feet depth under the rich shoot encountered through the Todhunter tunnel.

An excursion from Los Angeles is due here on May 30, when representative mining and business men from that city will come to inspect the new gold diggings. Ample accommodations will be provided for several hundred, and besides a visit to the various mines, a banquet and ball will be given at the Norton house in honor of the guests. The Norton is one of the finest hotels in this section of the state.

Cont...

THE LATEST FROM

(Special Correspondent)

HART, Cal., June 10. Abo-
representative business men of Los
fired this camp last Saturday
sion over the Santa Fe, and was
by the Hart Business Men's le-
to the various mines and a hal-
ton house were the chief ex-
tainment. A novel ore exhibit
joshua booth, located on Main
among the places of interest
itors congregated. Specimens
quantity of ore from the various
together with pans and was
for the purpose of showing
ists the character of rock form-
trict. Nothing but words of
heard on all sides for the
excursion will be run over
road sometime this month.

The organization of the
Mining company was perfect-
The claims taken over by the
the Florence and Florence N-
corporators are George A. and
Foster, J. C. Popper, of Rom-
and a number of San Francis-
tive work will be started next
ficient stock has been subscri-
extensive developments.

G. F. Sloan, operating the
the Jumbo, is sacking another
of ore encountered last week
ages around \$100 per ton. The
was made in a north crosscut
is being sunk to the 100-foot

Hart & Hitt are drifting on
recently discovered on the Ore
Over 200 sacks of high-grade
out the past ten days, while

ack is awaiting shipment to the
mill at Searchlight.

Gold Mining company will
work in about ten days on the
and Gray Horse claims, recently
of this company. A large de-
ment was discovered a few
in the Gray Horse.

Give lease, on the Foothills, is
make a shipment of \$35 ore to
mill. Work at this lease has
less but two weeks, and ship-
been taken out from the sur-

cont...

Chief has cut the rich ore shoot
twice north of the shaft. The
around \$150 to the ton, and the
feet in width. The lower tun-
ned a distance of 225 feet. Tod-
associates have started a tun-
east side of the mountain to
the Big Chief working tun-

Hebe Mines company, with \$20-
necessary for development pur-
began active operations about

good deals are made here every
a camp is enjoying a steady
many new companies either
preparing to start work on an
scale.

J. B. FLANNIGAN.

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San Diego News: Reports recently re-
ceived are to the effect that a rich strike of
silver ore has been made at Boulder Creek
by a man named Swingle. The ore is said
to have been assayed, running as high as
sixty ounces of silver to the ton, and in gold
values to the extent of \$10 a ton. While
details of the strike are yet meagre, it is
understood that the vein is an unusually
large one and that steps will be taken by
Mr. Swingle to develop it extensively.

San Diego News: H. H. Neilson of San
Diego, who has a group of eight claims on
Cottonwood creek near Dulzura, and has
driven a tunnel in seventy feet, has re-
cently encountered sylvanite ore. Mr. Neil-
son is said to have a very promising group
of claims and is developing them in a very
energetic manner. He has been averaging
a foot and a half a day on the tunnel, and
intends pushing the development work till
he finds just how good a thing he has got.
It is just such pluck and enterprise that is
needed to develop the mineral resources of
this county.

Searchlight Bulletin: Recent develop-
ment work on the Our Family mine at Cima,
Cal., has exposed a number of minerals
very rarely found. Analyses of New York
chemists of considerable quantities of ore
from the property have given uranium, van-
adium and two other valuable minerals,
as well as a substantial amount of bis-
muth. It is expected that these rare ele-
ments will yield more than the remaining
contents of the vein. The shaft of the
Death Valley-Arcalvada property at Cima is
now to a depth of 400 feet. The company
is now cross-cutting to get under the ore
body exposed in the upper workings. Sev-
eral thousand dollars' worth of ore has
been taken from this ore shoot in the high-
er grade.

cont

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June 30, 1908 p. 35

San Diego News: F. A. Jennings is developing two promising mines at Potrero, twelve miles east of Dulzura. The Angel ledge was discovered last August by Mr. Jennings, Lew Fields and R. Beers Loos. The ledge is three feet and eight inches wide and at the end of a twenty-foot cut forks. Inclines have been run on both, one twenty feet and the other forty feet. A long cut was made before the inclines were started. The last assay made shows a value of \$56.85 in gold and copper. A little over a month ago Mr. Jennings discovered another ledge four miles east of the Angel, which he has named the Devil mine. He

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DISCOVERY IN CALIFORNIA.

(Enterprise, Hart, Cal.)

Development on the North View led by Dr. Murphy, and located a few miles south of Hart, near Vanadium, resulted in the discovery of a carbonate of lead, which occurs in red and brownish hexagonal crystals. As known this is the first time mineral has ever been found in California. The ledge is two and one-half feet thick, the vanadinite lying next to the lead and between it and the hanging wall. The stratas of mineral-bearing are silicate of copper, a brownish hematite, iron and a quartz hematite, and values as high as \$93 to the ton. Some ores are sold on a basis of their acid contents, which is used in making steel. They must contain 2 per cent, which would be worth \$100. The ore in the North View is said to be of commercial value. Lead is used principally in England and Germany, and the output in California is handled by the Vanadium company, located at Nevada mine, near Telluride, Colo.

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NEW CAMP NEAR HART

(Enterprise, Hart, Calif.)
Kewanee, twenty-five miles west of Hart, is the name of a new mining camp in the Kessler range of mountains in San Bernardino county. It is within seven miles of the Salt Lake railroad, and six miles from the Ivanpah branch line of the same. The present shipping point is at Hart.

For several months very little attention has been given out to the prospect, but the discovery of gold at Kewanee has attracted fifty miners have been employed nearly a year, headed by Dr. J. Meade, assayer and chemist, and W. Meade, mining engineer, from Nevada. Some five companies are operating at the present time and all are taking out very high grade ore. The Kewanee Gold Mining company is a group of ten claims located on the ledge of the district and is employing twenty men. A mill has recently been started for extracting the gold. Values of the property range very high. Recently opened a six-inch stringer in the body which assayed \$776 a ton. Another stringer has been found and values are over \$1300. This is a very high grade ore.

Kewanee Extension Gold Mining company has a force of miners employed according to reports from the mine. A shaft is being sunk upon the prospect and a two-foot vein is said to average \$100 in gold.

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San Diego News: An 18-inch vein of rich free milling ore has been struck at the 80-foot level of the Grace shaft of the Cleveland Pacific mine at Escondido. The new strike assays better than \$50 a ton. The five-stamp mill on the property is running night and day on ore from the Barber shaft of the Poling lease. Twenty-four miners and mill men are employed.

San Diego News: The Orange Blossom Extension Mining company has recently received about 250 pound of very fine looking ore from its mines in San Bernardino county, and has placed a portion of the ore on exhibition at the Chamber of Mines, where it is attracting much attention and favorable comment. It is expected that the company's new mill will be ready for operation by the 15th of next month.

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Skidoo News: The Skidoo mill, one battery of which was closed down for three days last week for the purpose of adjusting the water wheel, is now running full capacity again, treating better than thirty-five tons daily. The grade of ore now being crushed is better than the average that has been treated up to the present. While the management does not state the actual value of the ore, it is generally estimated to be well over \$50 to the ton. The plant is doing exceptionally fine work, the plates recovering slightly over 70 per cent of the values. When the cyanide tanks are finished which they will be in about ten days, the output will be highly satisfactory.

Randberg Miner: Things are looking rosy around the Pimmore mine near Johannesburg. Tuesday, while extending a drift the boys cut into a two-foot ledge of good ore running about \$60 per ton. Ground is being rapidly blocked out in several places, and by July first there will be enough ore available to keep the mill going full time. The 10-stamp mill is to be overhauled and repaired and the power changed from steam to gasoline, a 50-horsepower gasoline engine having been contracted for. A. V. Williams is at work with a force of men on the property recently purchased from the Whites. He has a large body of ore blocked out and feels certain of taking out the whole purchase price, \$75,000, inside of a year's work. He will in a short time put on a large force of men.

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Skidoo News: The Shackett lease is still working at high pressure, taking out twelve to fifteen tons of high-grade daily. The showing is constantly improving. There is now nearly \$100,000 worth of ore blocked out, all of which can be removed during the life of the lease. The new hoisting plant on the Osborne lease has been removed and set up on the Shackett ground, which will greatly accelerate operations. The showing is still a matter of surprise to visitors to the camp.

Hart Enterprise: Word received this week from Duluth by The Enterprise is to the effect that active development work will be started by the Oro Belle Mines company about August 1st. A delay has been occasioned by the company making certain new arrangements, which has necessitated W. B. Andrews, the company's engineer, remaining in that city longer than anticipated. A development fund of \$25,000 has been raised, and a campaign of extensive development will be inaugurated at an early date. The property will be fully equipped with machinery.

Aug. 15, 1908 p. 27

San Diego News: On the Dulzura Gold Mining company's property, in which Dr. A. J. Elliott and associates, of San Diego, are interested, several ledges have been exposed and assay values are said to run as high as \$32 per ton. A shaft is being sunk and crosscutting is to be started at the proper depth. The veins are said to be as wide as twenty feet in places. It is also stated that fifty tons of ore have been extracted with milling values. The company has just installed equipment.

Hart Enterprise: A. L. Gottesburen, representing a mining syndicate composed of Colorado people, spent the first of the week in Hart. Before leaving for Coronado Beach last Tuesday he closed a deal with George A. Foster for the purchase of the Long Shot, located about one-half mile north of Main street, paying a substantial cash payment on the property. Mr. Gottesburen expects to return to Hart in about three weeks and commence active development work on the Long Shot. The surface showing on this claim is very good and gold is found along the ledge, which outcrops for a distance of over 500 feet, at most any place a panning is made.

Sept. 15, 1908 p. 27

Hart Enterprise: A big English syndicate has taken over the Colman borax mines in the Belleville mining district. According to the agreement, W. B. Wainwright of Los Angeles is to be the American general manager. A working capital in the sum of \$60,000 is to be provided, of which sum \$30,000 will be forthcoming at once with which to start development work.

Hart Enterprise: L. L. Draper and John H. Williams have taken an option on the old Mesca mines in the Ivanpah district. These mines were good producers in the early days that made Ivanpah famous. The Stanard mine, near Cima, is now shipping fifty tons of ore regularly every week, and developments in that section of the country are looking exceptionally bright.

San Diego News: The first of this week there was placed on exhibition at the Chamber of Mines a display of nickel ore from the mines of Messrs. Myers, Wood, Lockwood and Lynnell. They report that the ledge is about four feet wide and runs from 20 to 40 per cent in nickel. The owners intend to begin development work at an early date. F. E. Feeler, also of Boulder Creek, has contributed samples of ore taken from a claim near the Consolidated mines of that district. The ore shows considerable free gold. The pay streak is only eighteen inches wide, but so far all ore taken out has milled \$18.50 to the ton. The shaft has now reached a depth of fifty feet.

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Big Pine Herald: S. G. Musser has been doing steady development work on the Golden Fleece property near Fish Springs, two men having been steadily employed. A shaft fifty feet deep has been sunk, the bottom of which is all in ore that carries gold values from \$7 to \$50. The pay streak is eighteen inches wide. Mr. Musser is contemplating extensive exploration on this property in the near future.

Sept. 30, 1908 p. 27

Big Pine Herald: Sandy Lockrie, controlling the Buckboard, located some 20 miles south of here, has opened up a rich pay streak of ore in a shaft 30 feet deep, on which he had assay returns of \$537.70 per ton, the lowest assay being \$501.25 per ton. These assays were made at Sodaville, the higher specimen being picked from a 10-inch streak, and the lower one being an average piece from this pay dirt. All the values were in free gold. Lockrie also has a property near Benton, which has been worked to considerable extent many years ago, when Indians were employed to pack out the ore, and over \$16,000 in silver was taken from the mine. He proposes to develop both properties, as the showings on them warrant the belief that rich shippers will be developed very soon.

Big Pine Herald: The camp of Lee, which lies in the Funeral range, on the east side of Death Valley, but still in Inyo county, is giving a good many signs of life, one of the most marked being the organization of a board of trade for the purpose of furthering the interests of that district. B. L. Wheeler has been made president of this organization, and Claude Kincaid secretary. A strike has been reported from the Little Lee group, owned by W. C. Rice, and located in this district. The find was made at the 45-foot level, on an incline shaft, and the values were found to be high in lead, silver and copper. It is one of the most important finds yet made in this section. Rice is also interested in the California-Bullfrog property at Lee, which has gold ore that is said to resemble very nearly the ore found on the Mother Lode in this state. A tunnel over 500 feet deep has been driven into their property.

Hart Enterprise: What is considered the biggest strike ever made in this district, or in this section of the Golden State, for that matter, occurred at Hart & Hitt's Oro Belle No. 1, early in the week. A bonanza streak of ore from two to three feet in width has been uncovered for a distance of nearly 50 feet, assaying close to \$300 per ton. On both sides of this streak of high-grade lies six feet of very good mill ore, making the total width of the vein nearly fifteen feet. The milling grade runs from \$15 to \$20 a ton.

Oct. 30, 1908 p. 27

Hart Enterprise: Under the superintendency of William L. Foster the Little Giant mill is being put in condition to treat some of the high-grade ores of the camp. A portion of the old foundation is being torn out and a substantial cement foundation will be substituted. When the mill was installed several months ago it was soon discovered that a mistake had been made in mounting the heavy machinery on an insecure foundation, which resulted in a great deal of unnecessary vibration, causing considerable trouble in its operation. With this remedied it is the opinion of Mr. Foster that the mill will prove a success.

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Hart Enterprise: One of the most important deals to occur in this district for many months was closed last Tuesday, when A. B. Hall secured a bond from Hart & Hitt on the Oro Belle No. 1 and Oro Belle No. 2 claims, the consideration being for \$100,000. A cash payment was made down and another juicy installment is due in thirty days, the balance running six months and one year from date of sale. Mr. Hall represents a Philadelphia company having over \$250,000 in its treasury, and proposes to operate the property on an extensive scale. He has also secured an option on the ground upon which is located at Hart & Hitt springs, situated one mile north of town, where sufficient water will be developed to run a stamp mill of large capacity.

cont...

The Success of the Orange Blossom Extension

BY WILL C. HIGGINS

The Mining Review
Nov. 30, 1908 p. 15

All of the readers of The Mining Review undoubtedly take an interest in mining, for it is a most fascinating pursuit; but this interest centers, not in the sinking of a shaft, the running of a drift, or the mere operation of a mill, but in the final results; the retorts or bricks of gold and silver; for, without these bars of yellow metal, these tangible, matter-of-fact evidences of "Wall Street" currency, these substances of enduring and imperishable wealth, mining is a failure; and monuments to such failures are to be found in almost every mountainside, and in nearly every canyon.

And yet failure cannot always be attributed to mining propositions not lacking in merit, for such failure can be traced back to the direct cause, and this is the absence of good business management; the absence of first class business methods and lack of experience and ability. When, therefore, one hears of a pronounced success in mining operation, he may rest assured that, in addition to a splendid mine and equipment, the affairs of the company have been under the direction and management of a man of more than ordinary ability, in fact, and enterprise,

and who has the confidence of his people, and their co-operation and unity of action, as well; for without harmony, no mining proposition can flourish; and eventually spell "Success" with Capital letters.

At the camp of the "O. B. X." company the handwriting on the wall reads SUC-

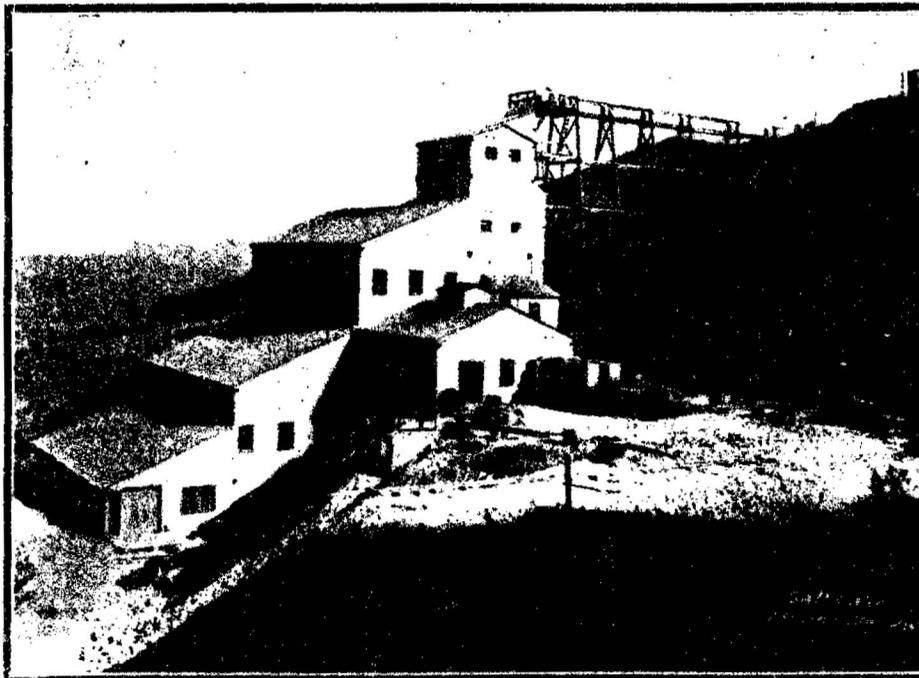
Black Hand, for O. B. X stands for a corporation whose operations are above-board, and whose successful work means an increase in the world's supply of gold, "velvet" money for fortunate stockholders, and the development of a district within whose environments there are wonderful deposits

of gold-bearing ore which are only awaiting the application of capital, labor and intelligence in order that they may be diverted into the channels of trade and commerce. O. B. X., in fact, is the trade-mark of the Orange Blossom Extension Mining & Milling company; and, be it said, the success which has crowned the company's initial efforts gives every assurance that it will eventually take rank as one of California's greatest gold producers.

Many of our readers, we know, have stood on the brink of Niagara and have witnessed the mighty fall plunging into the

abyss below. The sight is inspiring, impressive; but must be witnessed in silence, for speech is futile and unheard because of the thunder of the waters as the catastrophe to the river takes place.

In a stamp mill the same experience overwhelms the visitor, for the thunder of



Orange Blossom Extension Nissen Mill.

(Photo by Will C. Higgins.)

CESS, and the capitals employed are so large that they could well be used in display poster work.

Because we use the cabalistic symbols "O. B. X." it must not be thought that the writer is referring to some secret and mystic organization, such as the K. K. K., or the

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the stamps, as they rise and fall with clock-work regularity, compels silence; for words, shouted into the ear, are inaudible; as soundless as would be a whispered conversation conducted by individuals stationed miles apart. The mill-man shouts something at the visitor. His lips move, but there is no sound. The visitor smiles, shakes his head yes or no, and tries to look wise. But he hears nothing, and does not comprehend until the millman rubs the plates and piles up the gold-bearing amalgam, and then he understands. Later the millman touches the visitor with his hand, motions him to come outside, and then tells him of the weight of the stamps, the number of drops to the minute, and that the rock going through would average \$10 to the ton.

This was the experience of the writer when he visited the camp of the O. B. X. and was conducted through the company's up-to-date and finely equipped milling plant by James A. Hodgman, the president of the company, and its general manager.

The Orange Blossom Extension.

The Orange Blossom Extension M. & M. company is a Los Angeles corporation, owning and operating a group of twenty claims in San Bernardino county, California, ten miles north of Amboy. The company was organized less than two years ago, and yet, in this brief space of time, it has extensively developed its property and equipped the same with a fine hoisting plant and an eight-stamp Nissen mill; the improvements and mine development, to date, costing in the neighborhood of \$300,000; and, he it said, the company's camp is a most ideal one, and its counterpart would be difficult to find or duplicate in any section or portion of the west.

Mine Operation and Development.

In the development and operation of the Orange Blossom Extension a double-compartment shaft has been sunk to a depth of 720 feet, following the vein on its dip for practically 500 feet, or until the fissure straightened up. From the 500 to the 720 the shaft was continued in the hanging-wall side of the vein. The bottom is about eighty feet west of the ore-body; and a cross-cut is now being run back to the ore. The shaft is most substantially timbered from top to bottom, and the stations are large and roomy. From the shaft drifts have been run on the vein on the 100, 200, 400, and 500-foot levels, principally to the south, all in large and massive bodies of pay ore, and it is estimated that, in the mine workings, at the present time, there is now enough ore blocked out and in sight to keep the com-

pany's mill in constant and successful operation for several years to come. During the sixteen months that the company has been in possession of its property over 3,000 feet of underground work has been accomplished. The ventilation of the mine is accomplished through six and eight inch pipes, a fan being used which is driven by a small Fairbanks-Morse engine.

Formation and Geology.

The general formation of the O. B. X. is an adesite-porphry, and the vein, which is a ledge which can be traced on the surface for a distance of five or six miles, is a true fissure, with a northerly and southerly strike, and having a dip to the west of about 53 degrees down to the 500-foot level. To the north is what is called "Old Dad" mountain. This is composed of gray granite, and, it is believed that, with greater depth, the Orange Blossom Extension vein will be a contact between porphyry and granite—two of the greatest mineral-bearing formations known to mining science and practice.

The Orange Blossom Extension vein is contained between no narrow walls. Stringers are unknown in the vocabulary of the camp, and seams and veinlets are foreign to that locality. It seems as if the underground workings had disclosed a veritable mountain of ore, and twenty-foot breasts of a first-class milling product are of no uncommon occurrence, while, quite frequently, the values disclosed border onto the sensational. The footwall of the fissure is well-defined, while the hanging lacks in definition, the ore often making in large shoots, with hardly a dividing line between the pay mineral and the country rock. On the 500 level the ore body, as determined by a cross-cut, is all of twenty feet in width, and the entire mass is a fine milling product.

The ore is an oxidized and iron-stained quartz, rather soft in the upper workings, but gaining in hardness with depth. The small percentage of copper present often gives the ore-body a coloring of blue and green which is beautiful to behold, and this makes the proposition doubly attractive. The ore is entirely free milling, and carries, on an average, from \$8 to \$10 in gold, with a little silver present. Copper, to the extent of 1 or 1.5 per cent, is also present, but this does not interfere with perfect amalgamation. At the 720-foot level water has been encountered. Below this level the ore may become base. If such is the case, concentration will necessarily be employed in connection with amalgamation, and the milling plant has been designed with such a change of ore-character in view.

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Mine Equipment.

The Orange Blossom Extension mine is equipped with a 24-horsepower Fairbanks-Morse gasoline engine and hoist, with 1150 feet of cable; but, it is the intention of the company to replace this equipment with a 60-horsepower plant of the same make, removing the lighter engine to its Moonlight claim, where it will be utilized in development work. In the operation of this hoist the ore and waste is raised from the mine and dumped automatically into ore and waste bins. In each level in the mine ore bins and chutes have been constructed, and the ore is handled by gravity from the time it is broken down until it is loaded into the skip for hoisting.

On the 700 level there is a Gould Triplex pump, with a capacity of fifty gallons per minute. This pump is operated by a 15-horsepower electric motor, and the water, in one operation, is raised to the surface through a four-inch pipe, and conveyed to three 10,000-gallon storage tanks located above the mill.

The Power Plant.

The equipment of the power plant at the mill embraces a 60-horsepower Fairbanks gasoline engine, which furnishes the motive power for the mill; a 25-horsepower Fairbanks-Morse gasoline engine operating the dynamo, which furnishes the electric power for the mine pump, in pumping back from the settling tanks, and in lighting the mill, mine, and the camp in general.

Mill Equipment.

The mill equipment consists of eight Nissen stamps arranged in batteries of four each, the stamps being supplied by the firm of Fairbanks, Morse & Co.; a Gates gyratory rock breaker of Allis-Chalmers make; one Allis-Chalmers square-jaw rock crusher; one Wilfley concentrating table, manufactured by the Mine & Smelter Supply company; one frue vanner, and one Dimmick sizer. The stamps weigh 1450 pounds each, and the drop is 102 times a minute, crushing through 24-mesh screens. The stamps handle about seven and a half tons of ore each, on an average, dropping twenty-four hours daily.

The mill building is a most substantial structure. The foundations are all of cement. The framework is of heavy timber, while the covering is of galvanized iron. The mortar beds rest on a solid founda-

tion of cement concrete, and, when the stamps are dropping, with all of their mighty force, not a tremble or tremor can be felt in the foundation which supports the batteries. From beginning to end the plant operates by gravity, and therefore upon an economic basis, and the mill operation is so simple, so free from all complex practice that no wonder is expressed when results exceed all expectation.

The Mill Flow.

As the ore comes from the mine it is dumped into bins beneath the hoist. Here it is loaded, by gravity, into cars and trammed about 150 feet to the stop of the mill, where it is dumped onto a grizzly. Fifty per cent of the ore passes through the grizzly and into the fine ore bins; the coarse ore passing over the grizzly and into the coarse ore bin, and then through the Gates gyratory crusher, at the option of the operator. The fines from the breaker pass into the fine ore bins, the coarse ore going into the square-jawed crusher, when it is ready for the stamps. The crushed and fine ore is fed to the stamps over automatic trippers. Water is fed into the stamps with the ore, the flow from the screens going over copper plates, which are heavily charged with quicksilver. The recovery of gold on the plates is about 90 per cent of the assay value of the ore; and this is a recovery which means dividends to company stockholders.

The Wilfley table and the frue vanner are not in use, as the recovery on the plates is too close to admit of the retreatment of the tailings at a profit; but, below water level, it is believed, the ore will make into sulphide form, carrying still greater values, thus presenting a milling and concentrating product. In the meantime, the table and vanner are being used for experimental purposes.

A Picturesque Camp.

The camp of the Orange Blossom Extension is most admirably located on an eminence overlooking the valley below. The outlook is picturesque in the extreme, and a road of easy grade leads to Amboy, the company shipping point on the main line of the Santa Fe railroad.

In addition to the equipment and improvements above alluded to, the company has constructed a number of fine buildings of Oregon pine and California redwood, including a large and nicely furnished office, boarding house, rooming house, two cozy cottages, stable and corral, all of which are painted. The houses, barn and corral are all electrically lighted, and water is piped into every building. Every provision is made for the health and comfort of com-

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pany employes, and sanitary measures are of prime importance with the management, everything about the camp being in order,

and clean and neat. The assay office and laboratory is one of the most finely equipped establishments of the kind to be found in the west, and this equipment, consisting of scales and balances, furnaces and grinders and crushers, the finest to be had, comes from the well-known Los Angeles house of F. W. Braun.

The company also owns a one-half interest in a four-inch gravity pipeline, which brings a fine quality of water from Willow springs on Old Dad mountain, eight miles distant, the line having a fall and head of about 800 feet. The water from this source is only used for culinary purposes, as the water supply from the mine is adequate for all milling purposes, which is a factor of the utmost value and importance to the company.

At Amboy the company has a frame lodging house for the convenience of visitors who come in on the night trains, and also a storage and warehouse building 50x100 feet in dimension, where supplies are housed preparatory to haulage to the mine. A Locomobile auto is maintained, which makes one or more trips daily between the mine and the railroad, and it is the intention of the management to put on two more seven-passenger autos at an early date, as the company, with a far-seeing policy, is arranging so that every person who so desires, may visit the Orange Blossom Extension mine and mill; and a hearty welcome is assured to all, be they millionaires or plain, everyday mining or business men who wish to see for themselves if the very flattering reports from the property be true or otherwise. And, by all means, all who can should avail themselves of this kind invitation. It is well worth while to go just to see and appreciate the magnitude of the O. B. X. mine, to witness a model milling plant in successful operation. Then, if this is not enough to satisfy the most exacting,

without any other trimmings, I might add that the auto ride to the mine is a most delightful one, the cuisine is much better than that found at many so-called first-class hotels, while the welcome accorded the visitor is not half-hearted, but cordial to the extreme.

Everything at the mine and mill is conducted on a broad-gauged plan. Almost everything needed in the way of provisions and supplies is purchased on a large scale—by the carload—and the commissary department is one that any mining company

might well envy. The building has screened walls and a cement floor, and here tons of provisions of all kinds are stored ready for use at any time. In the kitchen at the boarding house a range is installed which is sufficient in its capacity to care for a force of 100 men, although only about forty are now in the employ of the company.

In the near future the company will construct a recreation building for the benefit of its employes. This will contain pool and billiard tables, reading room, swimming tank and bath rooms.

When work was begun in mill construction twenty-six fine mules were purchased, and the management estimates that these are now "velvet" to the company, as their purchase price was more than saved in the difference in the cost of hauling by company teams as against contract work. Mr. Hodgman is extremely proud of his stable of big, sleek mules, and well he may be, for they are equal to any emergency, and give the camp an appearance of importance and stability; for mules cannot be bought for a song, but run into big money in a hurry.

The Town of Hodgman.

Just below the mine and mill a short distance, just far enough so that the music of the stamps will be subdued and softened to some extent, the town of Hodgman will

be established about the first of the year. The little city will be called after President James A. Hodgman, or "Jim," as he prefers to be called by friends and by his employes. Here, according to plans being perfected, a number of neat and cozy cottages will be built for employes of the company having families. The plans also include a big and fine hotel, postoffice building, large general merchandise store, and other buildings necessary to the opening up of a mining district so prolific in promise as is the Orange Blossom region. Water will be piped into each building in the new town of Hodgman, and the place is to be electrically lighted. Mr. Hodgman has not implied that he will have an electric trolley line running between Hodgman and the mine, but his whole plan of operation is of such a magnitude that it is not beyond the realm of possibility that such an innovation is in contemplation.

The company will also begin the building of a new wagon road to the mine through Amboy Pass, making the distance from mine to station about ten miles. When completed the road will be oiled by the company, and it will be so fast that an auto will be obliged to run at high-gear in order to get to its destination first.

The Mining Review
Nov. 30, 1908 p. 18-19

The Blossom Combination.

As previously stated, the Orange Blossom Extension ledge is so continuous that it can be traced on the surface for a distance of over six miles. On this remarkable vein, north of the holdings of the O. X. holdings, James A. Hodgman owns a group of sixty claims, the group being known as the Blossom Combination. In the "Combination" the surface showings are not only wonderful, but also exhibit every indication of depth and continuity. Some little work has been done in the preliminary development of this property, which because of its unusual surface showings would be regarded as already a mine in some sections of the west. In one place erosion has shown the ledge to be at least seventy feet wide, while the crepples tower skyward for a height of twenty-five feet, at least. A general sample of the vein, where opened up, for a width of fifteen feet gave values of 32 per cent copper and \$30.5 in gold to the ton. And, what may seem surprising to many, the ore pans free gold.

It is the intention of Mr. Hodgman, soon after the first of the year, to begin work in the extensive development of this valuable and promising property, and back of this enterprise there will be a close, but strong, company, the operations of which will be mentioned, later on, in these columns.

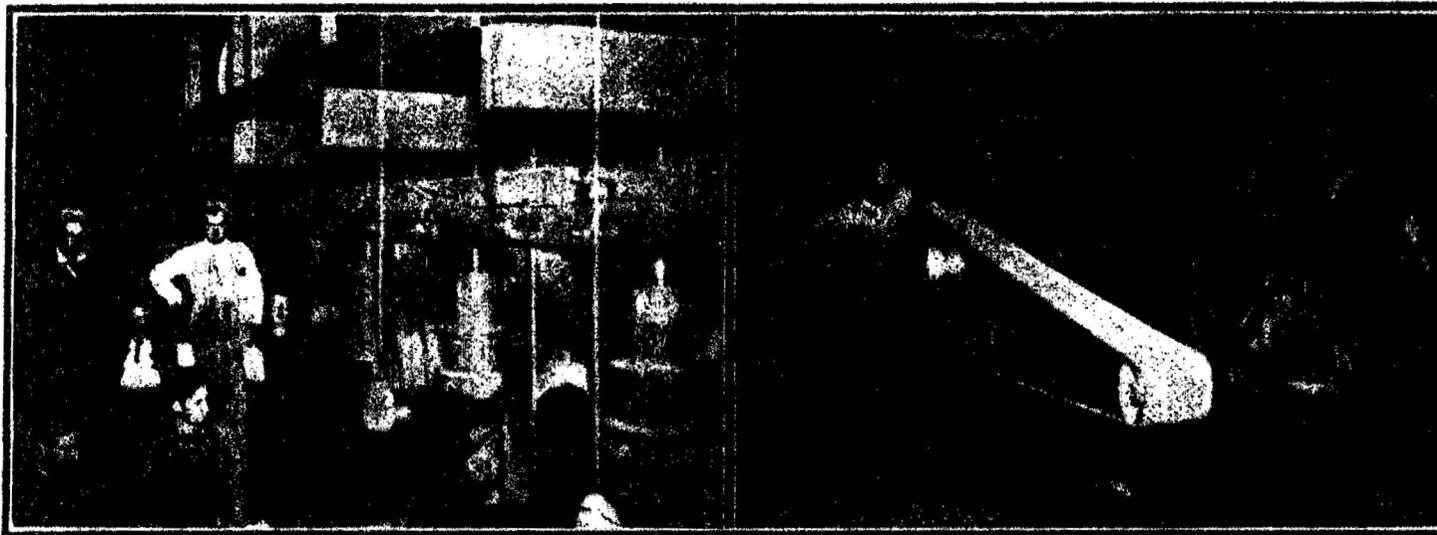
Organization of the Company.

The Orange Blossom Extension Mining & Milling company is capitalized at 2,000,000 shares of a par value of \$1 each. James

A. Hodgman, of Los Angeles, is president and general manager; J. M. Dodge, of San Diego, is vice president; Col. R. V. Dodge, of the same place, is treasurer; Will H. Holcomb, of Los Angeles, is secretary, and Charles Maier, of Los Angeles, is a director. In addition to President Hodgman, the official staff at the mine is composed of Judge L. V. Root, assistant general manager; Walter S. Buchanan is assistant secretary; M. Galbraith is superintendent, and Harry Irwin is chief engineer. The company is a strong one in its personnel. Although hardly more than in existence when the late financial flurry overshadowed the land, work has never been suspended for a moment, and ample capital has always been on hand to carry out the plans of the management in the matter of mine development and mill construction. From the earliest inception of the enterprise, Presi-

dent Hodgman has been almost constantly at the mine, and every detail of the great work which has been carried on has been under his direct personal supervision, and no feature of operation has been neglected by him or left for others to attend to. He has slept in a tent, with all of the attendant discomforts of camp life in its incipiency. He has hauled water a distance of eight miles for days together, and he has never complained of hardships and privations, so confident has he been that in the company's property there was the making of a bonanza. Now, however, he sees a light ahead, and every hope, every claim he has made regarding the Orange Blossom Extension, is evidently reaching fulfillment. He has been a worthy steward, and has ably employed the twelve talents entrusted to his care and keeping.

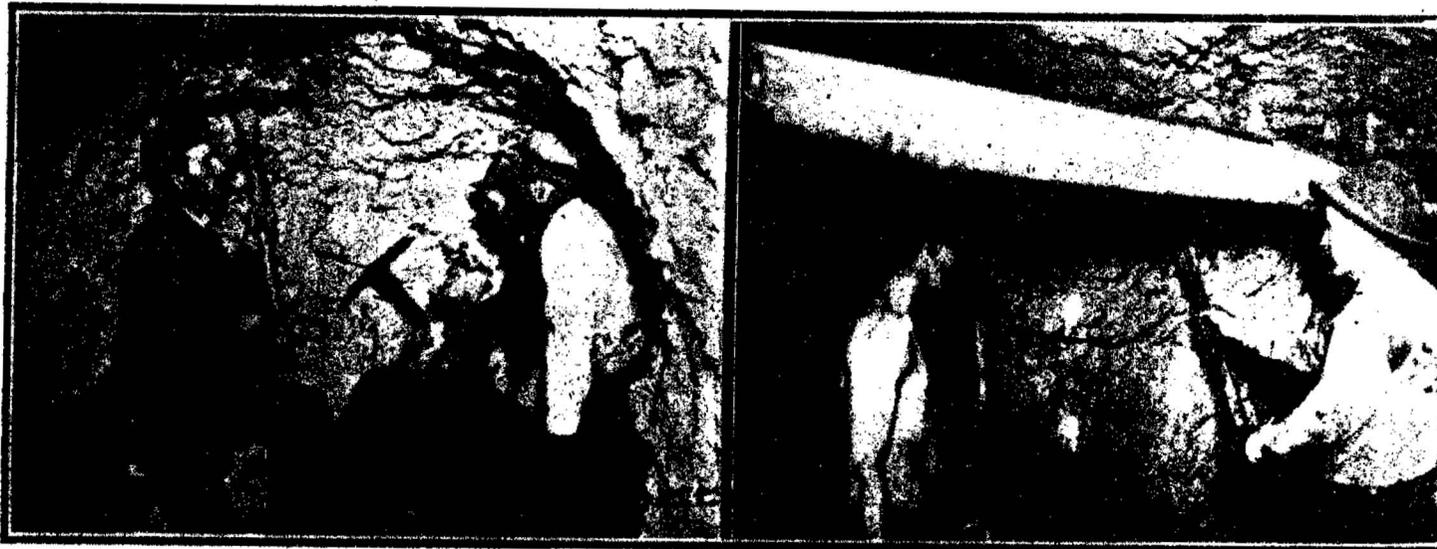
The Mining Review
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Pump Station on the 700-foot Level of the O. B. X.

(Photos by Will C. Higgins.)

Flashlight Showing Portion of the Nissen Stamp Mill on the O. B. X.

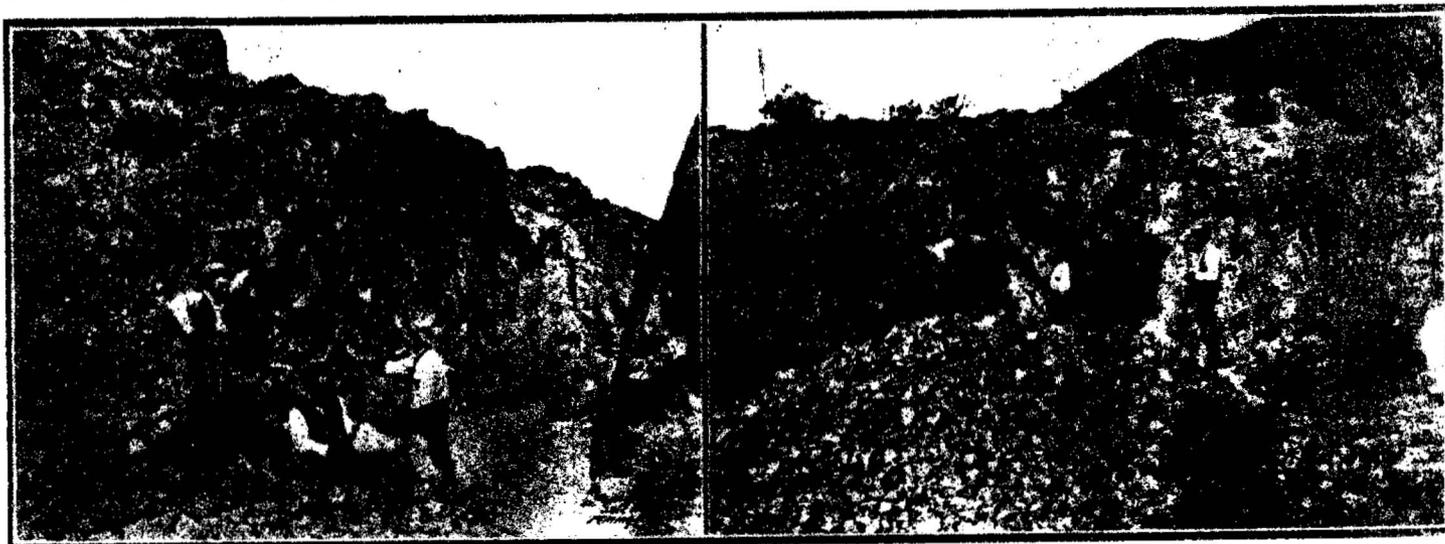


Flashlight on the 500-foot Level of the O. B. X., Showing a Face of Ore Twenty-one Feet Wide.

(Photos by Will C. Higgins.)

Flashlight Showing Full Face of Ore in North Drift on the 100-foot Level of the O. B. X.

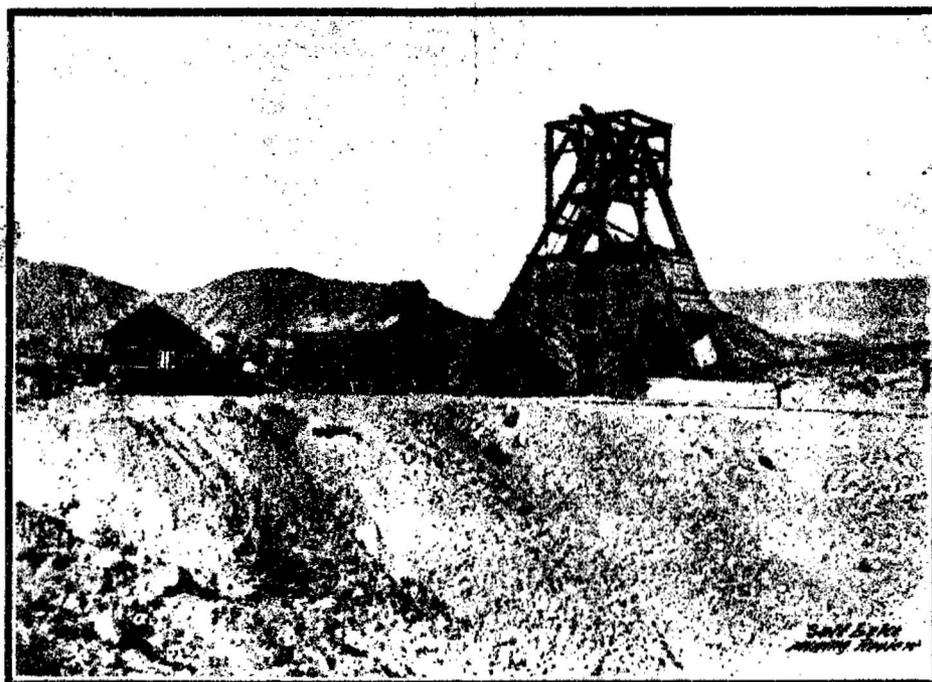
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Glory Hole on the Blossom Combination, Fifteen Feet of High Grade Copper and Gold Ore. Adjoining the O. B. X.

(Photos by Will C. Higgins.)

Cropping of Ore Seventy Feet Wide and Twenty-five Feet High on the Blossom Combination.



Hoisting Plant of the O. B. X.

(Photo by Will C. Higgins.)

The Mining Review
Dec. 15, 1908 p.20

MILL FOR CRESCENT.

(Bulletin, Searchlight, Nev.)

George P. Spittall was in town last Saturday and announced that the Nevada-Victor company would have a mill on its Crescent property within the next thirty days.

In company with Superintendent W. H. Bainbridge, Mr. Spittall had just been to San Francisco and purchased from the Joshua Hendy people a ten-stamp mill complete. However, the building and power will be of a capacity to accommodate ten additional stamps, or a total of twenty.

Mr. Bainbridge, in speaking of the project, said that he would at once start excavating and making other preparations prior to the arrival of the mill, which was promised by the manufacturer within thirty days.

The company claims to have some three years' supply of ore on its Black Rock and Hillside, and in addition, has been promised runs from several leading properties in the Crescent district.

The advent of a mill in the Crescent district, prepared to do custom work, should do much toward general advancement.

Dec. 15, 1908 p.31

San Diego News: L. M. Bellew and associates, of Los Angeles, who sometime since took an option on the Last Chance, at Boulder creek, more commonly known as the Ebe Feeler mine, have shipped a Fairbanks-Morse gasoline hoist to the mine. They will also install a five-stamp mill at an early date. They are also making arrangements to do considerable development work in the mine, which, by the way, gives promise of making a mine of much value.

Hart Enterprise: The Lost Burro group of mining claims in the Gold valley district, twenty-eight miles southwest of Hart, have been purchased from D. G. Warfield and Mark Neumayer, the original locators, by James N. Williams of Los Angeles, with the understanding that he is to supply all the money necessary to open up the property, and agrees to have a stamp mill in operation within six months. The locators retain a half interest and agree to sell their interest at the end of the year for \$40,000.

cont...

Bishop Magazine: One of the most important deals which has been made in Inyo county for several years was the recent sale of the Monster mine located in Lead canyon in the White mountains. The mine, which is a well-developed lead-silver property, was sold to A. A. Stanton, a mining man of Manhattan, Nevada, acting for New York capitalists, and more extensive development work, including the shipment of ore has already been started on the property. The price obtained is known to be over \$20,000, besides 25 per cent of the net proceeds of the ore shipped. The payments are in ten monthly installments. The sale was consummated by J. P. Fitting, formerly engineer for Mr. Chas. Schwab. With him as owners were associated Sam Musser, a well-known mining man, of Big Pine; R. C. Moore, cashier of the Tonopah Banking corporation; L. L. Mushett of Goldfield, and W. A. Sanger of Big Pine.

Nov. 30, 1908 p.27

Enterprise: The Lucy Gray, located near Lyons, has commenced the shipment of high-grade ore to Salt Lake City. It is said that enough milling ore has been shipped to warrant the installation of a mill. The company is contemplating the installation of a 10-stamp Nissen plant. The shaft is down 200 feet with extensive drift at the 100-foot point.

Enterprise News: James Hodgman, general manager of the Orange Blossom Extension at Bagdad, arrived in the city yesterday and departed on the noon train for home, having a jubilation session with Jack and his business partners. Mr. Hodgman brought with him a 52-ounce gold nugget as a result of a short run at the Orange Blossom Extension. It is valued at \$10,000. Hodgman says there is plenty of ore that came from, and there will be great rejoicing among the stockholders of that rich and extensive property.

Dec. 30, 1908 p.27

Needles Eye: The new forty horsepower engine, the three-drill Ingersoll compressor and pumps for the D. & W. Mining company will be received at Parker about January 15th. The company will sink their main shaft to the 1,000-foot level as fast as men, machinery and money can accomplish it.

Jan. 30, 1909 p. 19

The Mining Review
Dec. 30, 1908 p. 27

Bishop Herald: Particulars of the sale of the Deerhorn property, located in the White mountains, near Big Pine, were given for publication this week. This property, one of the best looking prospects in the country, has been taken over by the Montezuma Extension Mining company, which has been reorganized. The principal backers are Burr Brothers company, Inc., of New York City, owners of the famous Consolidated lease on the Florence in Goldfield, which yielded a comfortable fortune.

Hart Enterprise: At a distance of about sixty feet from the shaft, on the seventy-five-foot level, the Sundown encountered its ledge last Tuesday. At the present time the crosscut is just cutting into quartz that is returning encouraging values. Thus far ten feet of ledge matter has been penetrated, with the footwall still to be encountered. The indications are that the ledge is of great width on this level. Work has been resumed in the tunnel and good sized forces are employed in both workings.

San Diego News: C. O. Johnson and F. W. Pfaff, of Riverside, came in the last of last week from a prospecting trip on the desert. They made the trip from Riverside by way of Temecula, Warner's ranch, Coyote Wells and Carisso creek to Dos Ca-

bezas, where considerable time was spent. They were prospecting principally for gems. They report that William Swallow, Clarence Wadsworth and Ralph Jasper are working on the mine owned by James A. Jasper at Dos Cabezas, and are taking out some good gems.

Bishop Herald: One of the most attractive propositions in the Big Pine district is the Golden Fleece, situated about eight miles south of town. The shaft is now down about 100 feet and drifts have been run about twenty feet each way. While the management is discreetly maintaining its own counsel, it is understood they contemplate erecting a ten-stamp mill on the ground, which will add another producer to the county. The property is owned by the Golden Fleece Mining company, represented locally by Sam G. Musser.

LARGE BLOSSOM EXTENSION.

of Good Gold Ore Encountered in Making Upraise.

Readers will remember the article in The Mining Review of November, 1908, concerning the success of the Blossom Extension mines, located at Amboy, in San Bernardino

which gave an accurate description of the development of the mine up to the time it was published. Since then we have heard word that the company has discovered a very fine body of ore in the prospecting the 200 and the 100-foot levels. The body was encountered a short distance above the 200-foot level, and has been traced up to the 100-foot level, and it is likely will extend to the surface.

The body of ore independent of the level on which work heretofore has been done. The entire sides and top of the body for the whole distance are composed of quartz, showing plenty of free gold. This is considered one of the best bodies of ore made in this most excellent mine.

At the 100-foot level the cross-cut has been driven toward the foot-wall, and is now about 165 feet, and several prospectors have been cut, but the main body of ore is expected will be opened in the next few feet. This ore body at the 100-foot level is twenty-one feet wide, and at the 200-foot level it is predicted that it will be still wider and will carry higher

values. Mr. Hodgman, who has so successfully developed this fine property, is at present making arrangements for the installation of a large sinking plant. The company intends to sink below the 100-foot level into the water zone. They are to install one of the very best of Fairbanks-Morse gasoline engines, in which power will be developed to drive the large pumps below the 700-foot level, and also to furnish power for the

expected increase of values with the sinking beyond doubt that far richer ore will be found below the 700-foot level than above, as it is known that the values of the upper ore are leached and are now deposited at and below the water level. The sinking plant will be installed as soon as possible and the work of sinking the 700, 800, and 1,000-foot levels, with the necessary cross-cuts and drifts to open up the bodies at that depth, will be carried on as fast as intelligently-applied methods will produce results.

Thousands of feet of ore in sight are being developed, with a perfect reduction in operation and saving the cost of a constant supply of water, and

Cont.

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Jan. 30, 1909 p. 19

last, but by no means least, with an intelligent, experienced, economical business management, the Orange Blossom Extension company has passed beyond the shadow of the experiment period and has entered the class of legitimate, profit-paying industries, with a very bright future before it.

Feb. 15, 1909 p. 27

Hart Enterprise: Considerable interest taken in the Lucy Gray mine near the Salt Lake road, where a bonanza is said to have been opened at a depth of 200 feet. While drifting from the surface about 100 feet of ore averaging about \$10 a ton has been encountered.

Bodie Miner: Mine Superintendent McNeil was in Bishop from Casa Grande Friday night, with continued good work from the mine. The drifts which

have followed the Dawn of Hope and Dry Bone veins have come together at about 300 feet in from the tunnel. The ledge shows about twenty inches of \$16 ore at that point, while a quantity is ready to be moved out to the mill as soon as it can handle the ore.

Hart Enterprise: As depth is attained in the Oro Belle shaft developments continue to show that the working is going through an immense body of commercial ore, while practically every foot of depth contains better values than the one preceding. It now seems almost certain that the two veins come together at no great distance below the surface, and that the vein-filling into which the shaft is now penetrating has been forced upward by the impact of the two big ledges.

Feb. 28, 1909 p. 27

Keeler Post: Dan McLeod left Keeler at the latter end of last week to superintend the completion of the new house and buildings on the Columbia mine at Darwin. Mr. McLeod has taken over the property on lease which he will work in addition to the Christmas Gift. Shipments on the latter have been suspended pending the blowing in of the Keeler smelter.

Feb. 28, 1909 p. 27

Hart Enterprise: East and west cross-cuts which have been run from the north drift on the Oro Belle, shows the ledge to be thirty-five feet wide at a point about 100 feet from the main tunnel. Superintendent J. C. Hartness stated this week that the entire width of the ore-body exposed by the cross-cuts is of a good commercial grade. Two feet in the east lateral averages \$60 a ton and eighteen feet averages close to \$10 a ton.

Keeler Post: Jeff Grundy and Miles Sargent have been sending down some showy specimens from their property in Wild Rose. This property was purchased and incorporated some months ago by capitalists in British Columbia, who intend to operate on a large scale. It is expected that a shipment will be made to the Keeler smelter within a few weeks. If the haul is found to be profitable, regular shipments will be made. The values are about equal in silver and gold.

Bodie Miner: B. X. Dawson, a successful mining man of Schurz, Nevada, spent last Sunday in Bridgeport. While there he stated that in December he spent a few days in Sweetwater mountains, took some samples that were very satisfying, and it is his intention to spend the coming summer in the Patterson mining district. It is the general impression that he secured an option on the Sweetwater mines and mill, if so, this will give him an opportunity to thoroughly test the district and mill any ore he may extract.

Mar. 15, 1909 p. 27

Hart Enterprise: Manager W. B. Anderson, Superintendent J. C. Hartness of the Oro Belle Mines company, this week ordered a 40-horsepower Western hoist to be installed, and before leaving there ordered its immediate shipment. The hoist will arrive early next week, and the shaft is about ready for its installation and will only be a few days before ready to run.

Hart Enterprise: The Lucy Gray mine, near Lyons, this county, is proving to be one of the richest properties in this section of the state. A recent strike, made on the 200-foot level, shows ore running from \$500 to \$4,000. The first ore opened by a crosscut from the main drift on this level, ran \$500, and this is said to have improved until assays last week ran to \$4,000. It is claimed the rich shoots will average \$1,000 with good bodies of a better value than \$600.

The Mining Review

Mar. 15, 1909 p. 27

Inyo Register: The Inyo Mines Syndicate has completed the purchase of the old Tower mine, in the Yellow Jacket section, a few miles south of Benton. The property belonged to the late John F. Millner estate, and the final step in the deal was the approval, by Superior Judge Murphey at Bridgeport last week, of the sale of the interests of the minor heirs. The investment promises to be of considerable importance. It involves the addition of a quantity of machinery for unwatering the mine as well as for further development.

San Diego News: A partial clean-up of the first run made by the Boulder Creek Consolidated company's cyanide plant, gave a return of about five hundred dollars. This run was made from a lot of old tailings that had accumulated before the high-grade ore in the mine was struck. It was in pretty poor shape, as it contained considerable vegetable matter and dirt. The results are very satisfactory to the company. It is confidently expected that when the old dump has been cleaned up and the mill and cyaniding plant gets to work on new ore that there will be some cleanups that will make the hearts of the stockholders glad.

Keeler Post: President Welch of the Four Metals company, visited Keeler last week, accompanied by Geo. Nickerson, director of San Mateo, W. H. Donald, San Jose, and Horace G. Perry, of San Francisco. The visitors were shown over the smelter and mill and the Cerro Gorda mine.

Keeler Post: Reynolds & Peterson, of Darwin, who have recently taken a bond on the Lane mine, owned and formerly worked by C. C. Lane, the Alaskan millionaire, are hoisting a quantity of ore from the old workings, which, while low grade for hauling to Keeler, gives every indication by its increased value with depth, of approaching one of those pockets of high-grade that made fortunes for the early operators.

Mar. 30, 1909 p. 27

San Diego News: The Colorado Mining & Milling company has received its machinery, the same passing through Ramona on Wednesday last. The company expects to have the mill running the first of April. The ore averages \$10 per ton, and from the present working there is enough ore in sight to run the present mill for many years to come. The mill has a capacity of twenty-five tons per day. As soon as the present mill is in good operating shape the capacity will be doubled. The power is received from a thirty-two-horsepower Fairbanks

Mar. 30, 1909 p. 27

Morse engine, which is large enough to run double the machinery now being installed.

Hart Enterprise: The Oro Belle is fast getting in position for extensive and systematic development work. The new forty-horsepower hoist is ready to run as soon as connections are made with the cooling tanks. The gallows frame is completed, and carpenters are now engaged in enclosing the hoist house with corrugated galvanized iron. Manager W. B. Andrews states that by Monday the work of cutting the station at the 100-foot level will be under way, and in a few days thereafter sinking will be resumed. A crosscut to the east on this level will also be started as soon as the station is completed, and when the required distance is attained an upraise will be made to connect with the sixty-foot winze in the north drift.

San Diego News: The Quartz Diorite Mining company has recently opened up a shoot of ore on its Jockey Club claim that will, from surface indications, put the property among the best in the county. They have twelve feet of ore that at ten feet will average \$20. The company is making arrangements to sink to the hundred-foot level and to crosscut the lode at that depth.

April 30, 1909 p. 28

Hart Enterprise: The Precious Metals Development company, formed by Los Angeles people to exploit the Eaton group of gold properties at Seventeen Mile Point, in the Silver Lake district, San Bernardino county, is arranging for extensive development of the mines and surveying for a gravity pipe line to carry water to the millsite, where it plans to erect a 100-stamp mill in the near future.

Hart Enterprise: The transfer of the Consolidated Mining company's group of claims to the Big Chief Mining company last Thursday concluded the final detail of merging the holdings of the two companies. Manager Wm. L. Foster stated yesterday that active development work on the Fairview will commence next week. A 40-horsepower hoist will be ordered at once.

The Mining Review

June 15, 1909 p. 31

Searchlight Bulletin. Word comes from Amboy that a rich strike has been made on the Gold Belt group, where I. Plummer and Wm. Heath, of Los Angeles, are working a force of some thirty men. The work now being done includes the running of tunnels for water and sinking of a shaft. It is expected that next winter a stamp mill will be in operation, and that a permanent force of 100 men will be employed. The property promises to prove one of the biggest producers in the country, and has opened up rock that fairly blazes with the precious metal. There are about twenty claims in the group. The camp is complete with mining machinery, and the work so far done has attracted considerable attention in that region.

July 15, 1909 p. 31

Hart Enterprise. Encouraged by recent development that has opened a good body of \$100 ore, the Acme Mining company is erecting a five-stamp mill at the mines in the Signal Mountain district, 20 miles south of Hart, and has let a contract to sink the 100-foot shaft another 200. The mill capacity is to be increased, as soon as ore showing will justify it. Drilling and hoisting machinery is in place and everything is asserted to be in best possible shape for economical sinking.

Hart Enterprise: A number of Silver Lake mining properties are sending out shipments almost daily either to the Selby smelter at San Francisco or to Salt Lake, and in all about 50 miners are employed in that section. Frank recently shipped

800 pounds of silver ore that netted him \$1.80 per pound. A shipment from the Jumbo has just netted the owner \$16.17 per ton. Other properties are returning substantial earnings, indicating that there are values in the Silver Lake country which promises to make that section one of the important producers in the county.

San Diego News. The Boulder Creek Consolidated Mining company has contracted with the International Ore Treating company, of Los Angeles, for the installation on the company's property at Boulder Creek, in this county, a new amalgamating plant similar to the one recently installed by the Colorado Mining company in the Grapevine district.

July 30, 1909 p. 27

FOUND ANOTHER LOST MINE.

(Enterprise, Hart, Cal.)

James W. Bailey and J. R. Cunningham, two old-time California prospectors, have discovered what they believe to be a long-lost Spanish gold mine, between Crowder's ranch and the head waters of Lytle creek, in Cajon pass. According to the finders, this old property was abandoned at the close of the Mexican war. While searching for an iron ledge, thought to exist on Crowder's ranch, Bailey explored all of the surrounding country, accompanied by Cunningham, in charge of the ranch at this time, and came across a pitchwork piece of rock wall or ledge, apparently of human handiwork. Many legends of mines and buried treasure cluster about the hills on the ranch; remembering these, the two men investigated the pile of rocks and discovered it to be an old Spanish dwelling. An oven, two Spanish bowls, the hip bone of a human body and relics of days when California was in its infancy were found.

Aug. 15, 1909 p. 31

San Bernardino Sun: A rich strike has just been made by J. S. Reece and associates on the Pearl group, located in the Silver Lake district, this county, where a valuable deposit of cobalt has been discovered. The property was originally located as a strictly copper proposition, the surface indicating a copper blowout, but for some time assays made by experts in several states, show the presence of cobalt, zinc, nickel, gold, silver, copper and other precious metals. The strike is phenomenal, owing to the large number of high-priced metals found in the same matrix, and the values run above \$200 to the ton.

Aug. 30, 1909 p. 31

Hart Enterprise: Manager Geo. A. Foster of the Hart Townsite company this week started a force of men to work on the Oro No. 1 extension, which endlines the Oro No. 1 on the south. Over a year ago a tunnel 140 feet in length was driven on this property, at which point the big ledge outcropping on the surface was encountered. The work was done by leasers, and while the ore exposed is of a good milling grade it would not pay the lessees to ship outside of the district. A drift is now being sent to the south, and there is a strong possibility of opening up a rich shoot of ore by this working, as the vein appears to be the extension of the one now being developed by the Big Chief company on its Oro lease, adjoining the extension on the north.

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Aug. 30, 1909 p. 31

Los Angeles Mining Review: Capt. C. Henry Thompson spent the early part of the week on an automobile trip to San Diego, from whence he visited the Noble mines, Pine Valley district, near Descanso, in company with Mr. E. C. Grove, formerly of Spokane. The property is owned by the Noble brothers and has produced between \$50,000 and \$100,000 from a five-stamp mill run by water power. It is probable that Captain Thompson's visit will result in arrangements for the extensive development of the property.

Sept. 15, 1909 p. 32

Hart Enterprise: Active operations were resumed on the Jumbo Monday under the management of the owners, Messrs. Mack Foster, Pat McCluskey, and Lee Foster. For the present the development work will be confined to a more thorough exploitation of the big ledge from the surface workings. The open cut, which has already uncovered the vein about 30 feet in width, 20 feet of which averages over \$30 per ton, will be continued further west, as the hanging wall has not yet been encountered.

Hart Enterprise: Yesterday the Oro Belle shaft had attained a depth of 360 feet, and within the next thirty days, barring unforeseen accidents, this working will be down to the 400 mark. After a station has been cut east and west crosscuts will be started. Owing to the dip of the main vein, which has been uncovered by the north drift on the tunnel for a distance of over 400 feet, the west crosscut should encounter the orebody on the lower level within a short time, providing, of course, it maintains its approximate dip of 60 degrees to the east.

Sept. 30, 1909 p. 34

Hart Enterprise: Up to yesterday morning the crosscut tunnel being run on the Jumbo, had exposed the ledge for a width of thirty feet, with the heading still in high grade milling ore and with no indication of the hanging wall. As stated before in these columns, the first twenty feet of this magnificent ore deposit averages better than \$30 per ton, but the past ten feet will surpass even this high average. According to Mr. Mack Foster, one of the owners, the last ten feet samples more than \$40 per ton, and anyone even casually examining that part of the cross-cut can readily see that the rock is of a very good grade, for one can hardly pick out a sample without it showing some free gold.

Oct. 15, 1909 p. 35

Hart Enterprise: The Jumbo is fulfilling every promise of becoming a veritable bonanza as development progresses under the management of the Big Chief, which company recently purchased the property for \$75,000. A "glory hole," measuring approximately 6x9 feet, is being sunk on ore averaging from \$50 to \$100 per ton. At no time within the past ten days has the grade of ore coming from this working been below \$50 per ton, and some days it has been as high as \$150 per ton. About twenty tons, valued at \$75 per ton, have been taken out of the "glory hole" this week and the bottom of the shaft continues to show as high values as ever.

Jan. 30, 1910 p. 23

THE LUCY GRAY.

(Age, Las Vegas, Nev.)

The annual meeting of the Lucy Gray Gold Mining company was held at the office of the company at Sunset, Nev., January 3. The old board of directors was re-elected and the officers remain the same as last year.

The annual report of the secretary shows an expenditure of \$20,697.47 on the property for the year and a balance of \$3,190.06 in cash on hand. Orders were placed for a new hoist on the Wabash and the clearing away for its erection was begun immediately. The Wabash shaft is being sunk for the development of water and if water in sufficient quantities is developed a mill will be at once erected.

Two shifts are working on the Lucy Gray claims. The crosscut in the west drift on the 300-foot level, which was started 30 days ago, is now in a good grade of milling ore averaging from \$12 to \$40 per ton. Clean ore from this drift has showed values as high as \$400 per ton.

The company is to be congratulated upon the persistent and successful manner in which they have carried on the development work of the past year and on the very satisfactory financial condition of the company at the present time.

The Mining Review

Feb. 28, 1910 p. 39

Los Angeles Herald: A smelter which will use oil as a fuel, have an initial daily capacity of fifty tons and cost about \$20,000 will, it is announced, be installed at Silver Lake, Cal., by the Empire Smelting and Mining company, Merchants' Trust building. The company has purchased in San Bernardino county, near Silver Lake, deposits of ores from forty or more mines and has agreements with a number of shippers of ore by which it will receive a royalty of 10 per cent on net smelter returns for a period of two years. The company estimates that the cost of smelting by the Catton process, which it will use, will not exceed \$4 a ton, including \$1 for betterments, repairs and insurance. Charles A. Giffen is president of the company.

Bishop Herald: Superintendent Lloyd Skinner and Manager Bean, of the Four Metals company, were in Bishop this week, on business for the company. Mr. Skinner stated that the water pipe of the company which supplies the mine, has been frozen for the first time in its existence for a distance of five miles. The pipe is buried in places four feet, but is high in the mountains, and the company has a big job on hand thawing it out. The smelter is not running waiting for repairs, and in the meantime the company is shipping ore to Utah to the United States smelter. This week some sixty-two tons were shipped, and the daily output of the mine is about ten tons. About twenty men are employed by the company, most of them in the mine.

REJUVENATION OF MINERAL PARK.

(Special Correspondence.)

Mineral Park, Ariz., April 6.—Mineral Park, one of the oldest mining camps, and second county seat of Mohave, is active again after years of practical desertion of all but its turquoise mines. At the Keystone, one of the largest of the old-time producers of gold and silver, which is now under bond to a Los Angeles company, the new equipment consisting of a 100-horsepower boiler, 50 horsepower hoist, air compressors and electric generator, has all arrived, and is being rushed into place. The main shaft has been re-timbered throughout its 260 feet, and a new gallows frame nearly completed. Work on water and oil tanks of 11,000 gallons capacity, each, is also well under way. The Young Construction company, of Los Angeles, which recently completed the Tom Reed mill in this county, has the contract for the erection of the machinery.

The Keystone ledge, which occurs in a granite and porphyry, is from six to forty feet wide and outcrops for over 5,000 feet. Its ores are the usual lead, zinc, copper and iron sulphides of the Cerbat range, and carry high values of gold and silver in addition. There are about 7,000 tons of ore on the dumps averaging \$14 per ton, and about 14,000 tons more in the stopes already broken, all of which represents ore thrown aside as worthless when the mine was being worked for gold and silver alone.

There is still very rich ore being encountered in the mine, some of which, found recently, assayed as high as 1,500 ounces in silver, but it is upon the large tonnages of the lower-grade sulphides that a profitable production is estimated. With the new railroad rates to the mill and smelter at Needles, and the very small charges for concentrating and smelting there, even \$8 ore can be worked at a profit. S. R. Porter, who was very successful as manager of the Gold Road mine in demonstrating its large ore bodies, is manager of the Keystone and several other Mineral Park properties. One of these, the Molly, a deposit of low-grade copper from 500 to 700 feet wide, will be prospected soon by a shaft and by churn drills.

The Venture Exploration company, of Duluth, with J. P. Hamilton, superintendent, is sinking a new shaft on the Oneida near Stockton Hill. A larger hoist has been installed with which Hamilton proposes to sink 400 feet before cutting stations. The same company, operating the Cactus mine at Globe, made a record by sinking 540 feet in ninety days, which, for hand-drilling, has probably never been equalled.

Chloride.

Final details of the sale of the Dandy mine in the Weaver district, by Bill Hall to J. P. Hutchinson, of Chicago, were closed several days ago. Hutchinson proposes to continue the present 230-foot shaft to a depth of 500 feet, and to begin at once the erection of a 20-stamp mill and cyanide plant. There are about 10,000 tons of ore averaging \$15 per ton in free milling gold blocked out in the mine.

Superintendent Dan S. Richards has established a camp, built wagon roads and started actual development at the Fairview zinc prospect, sold recently by Graves and Marshall to the White company, of Lima, Ohio. Two old tunnels are being extended and a third one started which will result in a backing of about 400 feet.

The Redemption Copper mine has resumed work on its new concentrating mill, and it is expected to be in operation by May 1st. R. F. Ferguson is superintendent.

Gold Road.

Manager J. L. Phillips, of the Gold Road, reports that the ore being stoped in the east 500 between shafts 1 and 2, is a fine grade of milling ore and much better than was expected. The mill is giving such good results that the March production was \$55,000 or better. Arrangements have been made for reducing the precipitates to bullion instead of shipping them as heretofore.

J. J. Brown, one of the best known operators of Leadville, Colorado, is examining the Ruth mine.

J. H. ROSENBERG.

The Mining Review

May 30, 1910 p. 28

MINING AROUND BARSTOW.

(Special Correspondence.)

Barstow, Cal., May 20.—The Mayflower Mining company is employing a force of men in the development of its promising property fifteen miles west of Barstow.

Joe Goodrich has struck a four-foot vein of ore, in his 20-foot shaft, in the new Goldstone district, that averages \$86 in gold across the ore body.

N. K. Millett, of Daggett, is building a five-stamp mill to accommodate the operators of the old Calico mines.

San Bernardino county supervisors are digging a well in Goldstone district, thirty miles north of Barstow, in order to enable the miners and prospectors of that section to develop their prospects, with the aid of cheaper water.

Smith and Parks, operating the Fremont and First Chance mines, have sacked two cars of gold-bearing quartz, which they expect will run from \$50 to \$100 per ton.

The Golden State Cement company, of Oro Grande, has about completed the installation of its plant.

The Consolidated Pacific Cement company, operating mines and mills at Amboy, is turning out 150 tons daily.

The oil well at Kramer is down about 3,000 feet, and has a showing of some fine oil, but not sufficient in quantity. Many claims have been taken up between Kramer and Barstow.

Many miners and prospectors are working in the vicinity of Silver Lake and Avawatz mountains. The Tecopa mines are shipping 125 tons of lead ore, daily, to the Needles smelter, and the old Riggs silver mine promises a new yield.

T. G. NICKLIN.

June 15, 1910 p. 25

GREAT STRIKE IN THE KEYSTONE.

(Special Correspondence.)

Kingman, Ariz.—What will probably prove the biggest strike ever recorded in Mohave county was made in the old Keystone mine at Mineral Park several days ago, when four feet of high-grade shipping ore, and nine feet of fine milling ore, were cut on the 150-foot level west. Seldom has ore been found in the district so phenomenally rich in native and ruby silver, and certainly never before in such large bodies. Assays made from samples of the 100 tons already broken, run from \$250 to \$2,400 per ton, while there are many tons of "picture" ore which greatly

exceed the latter value. A very conservative estimate of the new find is that the four feet of ore now exposed will average about \$500 per ton without any sorting.

Aside from its bearing on the Keystone itself, the new strike is most important in that it is the result of the newer development inaugurated in the county practically within the last year. The Keystone is merely a type of dozens of old mines now again in operation in the Cerbat range, where work was nearly always abandoned when water was encountered, or when a small pinch occurred in the vein. Like the Golconda and the "C. O. D.," the Keystone is proof of what systematic development will do in this district.

The Keystone, owned by Tom McNeely and Jas. Uncapher, of Mineral Park, was bonded last December by S. R. Porter, of Los Angeles, former manager of the Gold Road mine, to whom, perhaps, more than any one man is due the present great showing of that mine. The Keystone was an old-timer, which in the first 150 feet had yielded nearly a million dollars in silver and gold. Notwithstanding that the vein outcrops for several thousand feet from fourteen to forty feet in width, all work was

practically abandoned for thirty-five years with the first pinch in the ore. Porter re-timbered the shaft, put up a steel hoist and went to work in the pinch. It drifted just fifteen feet and then struck big ore it is proving.

In addition to the ore he is now developing, Porter has about 25,000 tons of ore in the old stopes and on the dump which will be shipped to the Needles at a 30-cent rate, he has obtained from Santa Fe railroad. Actual construction of the spur from the Chloride road to mine will be started this month.

The "C. O. D." mine, whose history is very similar to that of the Keystone, had its first shipment since operations resumed there several months ago. It is expected that the ore just shipped, a thirty tons, will net over \$5,000. The ore shoot, opened several weeks ago, has been showing up well, and a regular production of ore averaging about \$200 per ton is looked for. The second shaft has been cut in the new shaft and another started.

The Mining Review

Aug. 30, 1910 p. 31

Alex McLaren, E. M., superintendent of the property of the Great Gold Belt Mines company, near Amboy, was in Salt Lake, last week, on his way to Golden, Utah, where he made an examination of the Sussannah mine and mill. Mr. McLaren states that the Great Gold Belt is in a most satisfactory condition with sufficient ore blocked out in its workings to justify the installation of reduction works, and that arrangements have been perfected for the installation of a Lane Slow Speed 7-foot Chilian mill.

The Crystal Salt company, operating at Saltus, near Amboy, California, is shipping three carloads of salt a week.

The Pacific Plaster company, of Amboy, California, is keeping its plant in commission night and day.

The Jumbo mine at Hart, California, is soon to be equipped with a Lane Slow Speed Chilian mill.

Nov. 15, 1910 p. 39

Searchlight Bulletin: C. C. Smithson of the Calivada property at Crescent was in town on Tuesday. He is now doing work on the Chapo group. Adjoining the first named is an extension group on which work is being done by Myers and Hendricks, representing San Francisco interests. They have a shaft down fifty feet and report excellent values in free gold ore the same as on the parent property.

The Orange Blossom mine, near Amboy, California, has been sold, at trustee's sale, to John Denair, the original promoter.

Rhyolite Herald: Homer Wilson came in from the Keane Wonder Thursday with a shipment of bullion, representing a partial clean-up at the 20-stamp mill. The value of the bullion was not stated but Mr. Wilson said that the clean-up was a large one and entirely satisfactory. Cooler weather is now prevailing at Keane Wonder camp, and a much higher percentage of values is saved in plating. Work in No. 5 tunnel, from which big developments are anticipated, has been discontinued until the air drills, now being installed, are in commission. Mr. Wilson went on to Goldfield by auto, enroute to attend a directors' meeting in San Francisco.

Nov. 30, 1910 p. 21

A SECOND CERRO GORDO.

(Herald, Bishop, Cal.)

What has been variously heralded as a second Cerro Gordo, the revival of Darwin, the biggest lead find in Inyo of the present generation, was made about two weeks ago by Bert Shiveley, a local prospector, on the Villerael Mining and Milling company's claims six miles northwest of Darwin, just off the Keeler-Darwin road, while doing the

annual assessment work on the group. Shiveley uncovered a ledge of lead-silver ore which is astounding in its richness. Assays return about \$80 to the ton. Lead is carried by the ore to fully 60 per cent of its bulk, and silver is contained in it in varying quantities from 60 ounces up.

A number of Bishop men have been to the strike, W. W. Watterson returning last week with very glowing reports about it. H. M. Gibson, a local freight contractor, was there to see about hauling the ore out, and is highly optimistic as to the real value of the strike. He says there appears to be a huge quantity of the ore right on the surface, the ledge having been concealed by an iron capping which has fooled the hundreds of prospectors that have passed that way during the last fifty years.

The owners of the property believe it to be a continuation of the famous Cerro Gordo vein, it being in the same belt, and not so very far distant, as distances go in the desert. The owners are L. Villareal Madero, N. Blackstock, E. R. Lockhart, T. A. Dudley, E. M. Hills and W. B. Kibbey, all of Los Angeles, and the discoverer, Mr. Shiveley.

There are eight men working on the ground. The rich galena is being taken out in chunks, and two men have mined as high as five tons in one day. The ore is being taken out for shipment now, the road to Keeler being a good one with an easy haul, and \$70 ore paying handsomely for mining. The ledge is from twelve to twenty feet wide. There has been very little development work done so far, and with the fine showing made by this small amount of work, the find looks like a real whale.

The Mining Review
Dec. 15, 1910 p. 29-30

THE STRIKE AT DARWIN.

(Herald, Bishop, Cala.)

The news discovery of an immense lead-silver ore deposit made recently near Darwin, and known as the Villa Real mine, came fully up to the first glowing reports made about it, as was verified by the personal visit of your correspondent. I had been over the ground before. Like many hundreds of other prospectors I walked over, past, and by this fine deposit, which D. F. Shiveley found, and which surely is a fine body of ore, almost certain to prove a very big mine.

A month ago this ground was hungry looking and despised. It had been so during fifty years of prospecting and mine making in that vicinity. Scores of good prospectors imagined they knew every foot of the ground around there, and yet here is something of real worth which all overlooked. But that is the fate of prospectors, and the history of big mines.

Shiveley first discovered evidences of ore about a month ago, and another round of shots disclosed a solid body of it. Open cuts and prospect holes were started at short intervals upon the surface along the ledge of the new strike, and the same ore found in every instance, solid ore without gangue and ready for the smelter. The ore has now been opened up for more than 100 feet.

As a result of this discovery matters are taking on a new color along the Darwin road. Three ore hauling outfits—ten and twelve horse teams—are freighting the ore to the railroad and another team has been engaged.

There are more than 175 tons out and ready for shipment, ten miners are at work and more will be engaged when new accommodations are prepared.

The ore has been assaying \$70, \$90 and \$120 to the ton, but last Monday the ore thrown out of the cuts was found to be heavily impregnated with horn silver, with occasionally a splendid specimen showing. It takes but little horn silver to add greatly to the value of ore.

Old timers claim the property now has

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better surface showing than the famous Cerro Gordo and the Darwin Modoc, lead-silver mines had, which kept seven smelters busy at the Darwin end of the line in their palmiest days, and everybody knows what the Cerro Gordo was.

S. H. Reynolds of Darwin has secured choice ground adjoining the Villa Real, and others in the district who have good locations are Stewart and Ross. Stringers of lead in the surrounding hills are now more respected than they have been heretofore.

It is not too much to say this is the most important strike that has been made in the lead-silver big ore line in a long time.

Jan. 15, 1911 p. 37

STRIKE IN THE CALZONA.

(Post, Parker, Ariz.)

The big gold strike on the property of the Calzona Mines company in the Riverside mountains, the first news of which was published in last week's issue of the Post, continues to grow in importance as development work proceeds. A number of mining men have visited the property since the monster ledge of gold and copper-bearing ore was uncovered, and they all speak in the highest terms of its richness and apparent permanency of the ore body.

The drift is now in approximately twenty-five feet. At the 16-foot point the vein narrowed slightly, but it has again widened to seven feet, the width of the drift. A shaft is now being sunk to determine its depth. This working is now down approximately eighteen feet, and word from the mine is to the effect that the ore is getting richer as depth is attained. Free gold is plentifully distributed through the rock and visible to the naked eye. The values average about \$200 to the ton in gold, besides carrying a high percentage of copper. Good streaks of the ore body run as high as \$1,000 to the ton in the yellow metal.

Beginning with the new year there will be three regular shippers in the Riverside district. Last week John Sanburn sent out two carloads of ore to the Humboldt smelter and the Calzona Mines company shipped one car to the same works. The Pecca Copper company will join the list of shippers within a short time.

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Jan. 15, 1911 p. 37 (cont.)

The big strike on the Calzona property attracted wide attention, and the indications are that that region will become more active this winter than ever before in its history. Development in the various properties operating there has demonstrated beyond a doubt that the district contains bodies of more than usual value, and the element of chance usually accompanying mining operations in unproven districts has been practically eliminated in the active properties of the Riversides. There is nothing to keep the region from advancing until it occupies a foremost place among the producing camps of the west.

Jan. 15, 1911 p. 26

WHIPPLE WASH DISTRICT.

(Post, Parker, Ariz.)

Recent finds of high-grade ore in quantity in several properties in this region have had a stimulating effect on the mining industry of the Parker country. The hills are full of prospectors and most every day we hear of new and important discoveries.

Especially is this true of the Copper Basin or Whipple Mountain district, where are found some of the very best auriferous showings of gold and copper deposits to be found anywhere. The district is a new one and the activity there is rapidly on the increase.

The Golden State Mining company, owning a fine group of claims in the Whipple Wash, has lately made some very rich and important finds, uncovering well-defined deposits of gold ore that will run into hundreds of dollars in value per ton, and instead of having a number of sacks of rich ore on the dump, there is exposed to view several feet of rich gold-bearing quartz. Development work on the Golden State property is not far advanced, but the prospect bears all the earmarks of a mine, and its abundance of water close at hand, judging by the amount of high and rich grade ore in sight, it would be a profitable proposition for a stamp mill, as the cost of free milling and treatment would be comparatively cheap.

Surrounding the Golden State property are others that have good promise, and rich gold ores are found near the surface.

Copper Mining in Death Valley

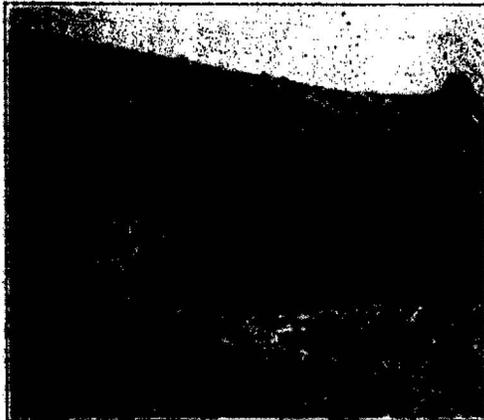
BY G. CHESTER BROWN, M. E.

San Francisco, Jan. 24.—Death Valley, that region that has been so interesting to the miner and the prospector, extends from the northerly portion of San Bernardino, California, through the greater portion of Inyo county, and has a maximum width of twenty miles. It is a sandy depression, void of all vegetation, surrounded by mountains and a land without water. It is indeed a desolate waste, and one is more apt to be affected by the feeling of solitude, than by the intense heat. Some places are said to be 500 feet below sea level. Any water that may be found in this sink is either alkali or contains arsenic to such an extent that it is poisonous, and the bones of many animals are found around these springs.

During the months from December to May snow may fall at any time, and it is extremely cold. The summer season begins in May and one must begin to seek a

ite, the ore-body being malachite and chalcopyrite, carrying good values in gold as well as the copper. The lead was very small, having an average width of twelve inches, but contained values of 15% copper and \$60 per ton in gold. The dip was only 15 degrees, and the deposit had all the characteristics of the so-called blanket veins. The cropping on the surface could only be traced for a distance of 100 feet.

The locators had run a tunnel on the vein for a distance of forty feet when they sold the prospect, and the buyer decided to have the tunnel continued. At first a windless attached to a small ore car was used for hoisting. This was soon replaced by a horse whim, which gave good results. At a distance of sixty feet, from the mouth of the tunnel, a fault was encountered, which had a width, apparently of forty feet, yet after passing through the same, into the country rock, the vein was not ex-



Our Mascot

reliable water supply. During this season cloudbursts occur frequently and large gullies called washes are formed, some of which have a depth of fifty feet. It is not uncommon to see a body of water one-quarter of a mile wide and six feet deep, coming down from the surrounding hills.

The country rock consists of eruptive formations such as granite, rhyolite, phonolite, and also fine schist quartz and a granite and quartz porphyry. The belts of slate that are found do not seem to have any influence on the ore-bodies. Lime, which is generally associated with copper, is not prominent and does not form in large deposits, so that some mining men contend that copper mining will not pay on the desert.

The copper property under my charge was located in 1906, by a laborer who was working on the Tonopah and Tidewater railroad during the construction of this road and was only three miles from the mine. The formation consisted of gran-



The Dump and Whim

posed. After trying every conceivable way to find the lode, but without success, I concluded that this was the end of the ore-shoot and started to take out the ore that was in sight. As I felt from the first that the mine would not pay to operate I endeavored to keep down the expenses as much as possible, and so used one horse for all the work, and it certainly kept him busy, for besides hoisting rock from the tunnel, he had to haul 100 gallons of water per day from the railroad; haul provisions, and also the ore from the dump to the railroad. The ore was hand-sorted and the best grade sacked, the balance being dumped for future use. The best grade ran from 5% copper to 15% and \$25 to \$60 in gold. The rock had to be hauled from the dump to the camp-site, a distance of one-quarter of a mile, by means of a sleigh, which held six sacks at a time. At the camp-site it was loaded on a wagon capable of holding 1,500 pounds. The water we used was hauled by the railroad a distance

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Jan 30, 1911 p 18 (cont.)

of forty-five miles, and delivered into a 250-gallon galvanized tank. At the camp the water was put into two 50-gallon whiskey barrels, and during the summer a cool drink of water was at a premium. South Ardean water bags were used in an attempt to cool the water. In the months of July and August the winds were very violent, and the tents were blown down. Cloudbursts and electrical storms were of daily occurrence.

One is safe in stating that the ore-bodies in this region are not permanent, but occur in bunches, which is characteristic of desert mines. It would pay any one to visit Death Valley and, as the Tonopah and Tidewater railroad passes through a portion of this territory, you can get some idea of the country from such a trip.

News Items from Parker

SPECIAL CORRESPONDENCE

Parker, Ariz., April 6.—The past week witnessed the addition of a new company to the ranks of the shipping mines in the Parker field, when the lola landed the first consignment of ore from the Western Copper Company's property on the bank of the river near the bridge. The ore is expected to average about 12 per cent copper and carries about \$4 in gold per ton.

The initial shipment from the Western Arizona amounts to about two carloads. The ore was sorted from vein matter removed while driving the new tunnel, which is in about sixty feet at present. The tunnel follows the footwall of the vein, which has been crosscut for about twenty feet without encountering the hanging wall.

General Manager Gordon R. Stuart Tuesday put several additional men to work at the mine and expects to make regular shipments in the future. There is a considerable amount of shipping ore on the dumps at present.

Copper Basin Shaft.

The incline shaft on the Copper Basin has reached a depth of 300 feet and is in better ore than has been encountered on the property before. Sulphide ore was encountered at about ninety feet, the level at which surface water began to filter into the shaft. At the present level about 2,500 gallons of water enters the shaft every twenty-four hours, according to computations of the miners, and it is understood pumps to handle the flow have been ordered.

Lateral work from a station at the 200-foot level will begin this week and the ore body will be extensively explored. Developments on the property are being watched with great interest by local mining men.

Churn Drill for Mammon.

The churn drill outfit ordered for the Mammon property arrived Tuesday and is now on the property. The result of the drilling will determine the location of the three-compartment shaft which will be sunk at as early a date as possible.

The workings of the Mammon are being surveyed and mapped by Fred Crosby, E. M., of Los Angeles, and a general development plan outlined. It is expected ore shipments will begin within the next week or two. There are approximately 20,000 tons of ore on the dumps, a large amount of which is high-grade. Negotiations were begun Tuesday with a contracting concern to handle the transportation of the ore. Preliminary shipments will be undertaken at the rate of about forty tons per day.

West Coast Hoist for Empire.

The big sixty horsepower West Coast hoist and other equipment for the Empire-Arizona Consolidated Copper Company's Eagle's Nest shaft arrived in Parker Friday morning and will be transported to the property at once. With this equipment, the Eagle's Nest shaft is to be sunk 1,000 feet.

The Salt Lake Mining Review
April 15, 1917 p. 41

Dr. L. D. Gottschall, Dan Murphy and others, principal owners of the Copper World mine, located in the Clark mountain district, in this state but not a great distance from Goodsprings, Nevada, are planning extensive development work for the present summer. The property is an old producer. Equipment for a new smelting plant has been ordered. J. F. Kleper will have charge.

May 15, 1917

The recently organized Inyo Metals Company, incorporated by J. E. Nelson and M. Kinney to develop the Emma mine, near Big Pine, has started operations there. This is an old producer of lead-silver ores and is said to have a very promising vein in the old workings. The present owners purchased it from B. McKay and Frank Gordon.

Fire has badly damaged the new plant of the Tungsten Mines Company, in Deep canyon, near Bishop. The crusher room and ore conveyer were wrecked and about a third of the framework burned, but the flames were stopped before they reached the rolls and tables. The plant is to be rebuilt without delay. It cost originally about \$100,000 and has been in operation only since last August, during which time it has turned out tungsten concentrates at the rate of about \$1,000 a day. L. L. Stevens is in charge of operations.

Considerable interest is being attracted to a new gold district, located six miles from Danby station on the Santa Fe railroad, in San Bernardino county and half way between the Providence and Old Woman ranges of mountains. Unusually strong surface indications give promise of commercial ore bodies and it is predicted that the section will develop into one of big low grade gold production. Among companies operating there are the Tom Reed Gold Mines Company of Oatman, Arizona, which is putting down a 500-foot shaft, the Clipper Mountain Gold Mining Company and the Gold Reef Mining Company.

The Salt Lake Mining Review
Sept. 30, 1924 p. 24

K. D. Enterline of Crescent was recently exhibiting in Las Vegas some very fine turquoise which he had just received from the lapidary in Los Angeles to which he sent them for polishing. They are very good in color and take a wonderful polish. They were found near Crescent in ground that is an extension of the Tiffany turquoise mines which were owned by Mr. Horne and the late Mrs. Jordan. Mr. Enterline has also located a ledge twenty feet wide of low grade milling ore which runs from \$8 to \$11 per ton. This property is near Crescent and a prospective customer is waiting to examine the property.

Dec. 15, 1924 p. 14

California Rand Silver.

Your correspondent is informed that the California Rand Silver, Incorporated, at Randsburg, California, has opened up a new stope of ore between the seventh and eighth levels of its mine that is over 250 feet in length, averaging twenty feet in width, and that carries exceptionally high values in its silver content.

This big stope is on the Antimony vein which, in past years, has produced several millions above the seventh level. However, skilfull development has shown that it extends to the eighth with a strong possibility of going to still greater depths on the flat rake of the shoot.

In October, it is stated, the company milled about 10,000 tons of ore, all of which, but a small portion, came from this stope. From this crude the company mill produced about \$250,000 in silver concentrates, about half the values being net profit. The new disclosure has created keen interest and great enthusiasm in the district. Alfred Harrell of Bakersfield is president of the company.

Milling Plant for the Overton.

The Overton Mining & Milling Company of Los Angeles, operating near Vidal, Riverside county, California, recently consigned a carload of ore to the Hayden smelter that brought returns of \$53 to the ton. The company now has ready for shipment a carload of sorted ore that is expected to run over \$100 per ton, according to a statement recently made by J. H. Overton, president and general manager of the company.

Following out its campaign of development and equipment the company has ordered machinery for the first 50-ton unit of a large milling plant, which will embrace a Blake crusher, Wilfley concentrating table and a ball mill of special make and design. This mill will amalgamate as well as grind, the quicksilver being introduced to the pulp under hydraulic pressure. Geo. D. Parkingham is superintendent and mill manager.

The Salt Lake Mining Review
Dec. 30, 1924 p. 13

By Will C. Higgins

Los Angeles, Dec. 23.—Ore shipments have been discontinued by the Overton Mining & Milling Company of Los Angeles, for the reason that it has been found that the output of the company's mine near Vidal, Riverside county, is more valuable than formerly regarded because of its rare metal content. For some time the company has been marketing its ores for the silver-gold-copper values they contained. But when an analysis was made by A. T. Elliott it was found to contain values of 1½ per cent uranium oxide, with a market value of \$3.50 a pound; 1 per cent vanadium oxide, quoted at \$10 per pound, and 6 per cent copper at 14 cents a pound, making a total value of \$321.80 per ton for the values in the ore, not counting its gold and silver content.

The company now is engaged in mill construction at its mine and finds that a small addition to the plant will enable it to recover the uranium and vanadium content of the ore, which is radio-active. The plant, it is stated by President J. H. Overton, should be ready to go into commission within sixty days. He states that the company has approximately 5000 tons of uranium-vanadium ore blocked out in the mine workings. Company officials and stockholders are elated over the new discovery.

Randsburg Associated Developing.

Word has been received from Randsburg that in the sinking of its working shaft No. 1 in the development of its Rand ground the Randsburg Associated Mines, Inc., has reached a depth of 525 feet. At this depth a station is being cut, and cross-cuts are to be run out both east and west.

In shaft-sinking a vein came in at a depth of 385 feet and assumed a vertical dip to the 410-foot level, when it left the shaft, dipping to the east. The east cross-cut from the bottom of the shaft is expected to cut this vein within fifty feet. The vein, it is stated, contained good shipping ore where exposed in the shaft, and it is expected to be larger and richer on the 525-foot level.

The cross-cut from the 1020-foot level of No. 2 shaft is out over eighty-five feet, and it is believed it will open up a known ledge anywhere within 100 feet more. Progress is being made at the rate of from ten to fifteen feet daily, with three shifts. This intensive development work, it is confidently believed, will result in the disclosure of large bodies of pay ore within the environments of company holdings.

INYO COUNTY WILL FINANCE ROAD TO HELP CALIFORNIA PROSPECTORS

Bishop, Calif., March 12.—The board of supervisors of Inyo county have voted to expend \$20,000 in the building of an 11-mile road to make accessible to prospectors and mining operators the mineral resource of Saline Valley, immediately east of Owens Lake, just beyond the Inyo range of mountains. Bids are to be received and the contract awarded by the supervisors at their next meeting on April 6. The proposed road will connect with the Keeler-Darwin road. Important deposits of ore yielding gold, silver and other metals have been discovered in the mountains contiguous to Saline Valley but their development has thus far been impractical by reason of the fact that at present only rugged and forbidding trails lead into the region. The floor of the valley includes a salt deposit approximately 18 by 8 miles in area. Analyses have shown the salt to be 99.7 per cent pure.

Official announcement is made of the recent shipment of a 40-ton carload of silver-lead ore from the Christmas Gift mine, three miles north of Darwin to the Midvale, Utah, smelter. It was made up of ore extracted from a three-foot orebody being followed on the 50-foot level of the Portland shaft of the property, which is now down 100 feet. Two feet of the ore body give returns of \$140 per ton, while the entire face, as broken down, averages \$75, it is stated.

Drifting operations on the 140-foot level of the Pete Smith mine, five miles east of Keeler, are disclosing two feet of ore averaging \$75 a ton in lead and silver, and half of which is solid galena, according to the management. A 40-ton shipment of ore is soon to be made to the Midvale, Utah, smelter. It will bring shipments thus far this year up to 160 tons. A hoist was recently installed on the property and sinking has been resumed in the main shaft to open up the ore bodies at greater depth.

The Commetti Mines Company, a close corporation owned by James Gibson, Boston, Mass., furniture manufacturer, and associates, will shortly start its milling plant on ores from its property about 13 miles south of Big Pine in the foothills of the Sierra Nevada mountains. At a verti-

cal depth of about 400 feet, two gold ore bodies are being mined. One, 28 inches wide, gives average returns of \$38 a ton, and the other, 24 inches, \$16, according to the management.

Excellent results are being obtained by George W. Nicholson, superintendent of the Yellow Aster mine at Randsburg, in the operation, under an option of purchase, of the Cleveland mine, adjoining the Commetti mine. In a short raise above a 500-foot tunnel, an 18-inch ledge, assaying \$125 per ton in gold, has been exposed, according to Joseph Mears, the owner. The property is equipped with a small mill. Walter Wick and James E. Welsh of Los Angeles are associated with Mr. Nicholson in the enterprise.

**LIVE SOUTHWESTERN MINING NEWS
GATHERED IN LOS ANGELES TOWN**

By Will C. Higgins.

The Salt Lake Mining Review
July 30, 1925 p. 12

Showing at Arlington.

It is stated that work is progressing satisfactorily in the development and operation of the property of the Arlington Corporation whose extensive and most promising gold properties are located in Black Horse district, San Bernardino county, near Victorville, where Algeron Del Mar and R. K. Voorhies, of Los Angeles, are making preparations for heavy gold production.

Metallurgical tests are now being made, exhaustively, on ores from the company's property, and these, it is stated, are demonstrating that a high extraction of values can be made in milling operations, it being the intention to add a cyaniding unit to the present milling plant.

The Arlington has been developed by several thousand feet of underground workings, said to expose large tonnages of low-grade ore which can be mined and milled at a profit. All of the principal claims embraced in company holdings have been patented.

Aug. 30, 1925 p. 22

California Hercules Elects Hanby.

In the recent reorganization of the board of directors of the California Hercules Mining Company, of Los Angeles, Judge J. Walter Hanby was elected president, other officials of the company being R. E. Caruthers, vice-president and J. H. Kennedy, prominent in mining and business circles, general manager.

Having obtained its permit from the California corporation commission the company has enlarged the scope of its operations and has doubled the working force at the mine, the intention being to greatly increase the ore tonnage in sight in its extensive and valuable property before completing its proposed 40-ton milling plant.

In the meantime work will be continued in the construction of the 1400-foot gravity aerial tramway being installed to connect the mine with the milling plant.

After having made an exhaustive examination of the mine E. W. Myers, a prominent mining engineer, estimates \$222,924 in ore is in sight and blocked out in the mine workings assaying \$22.40 to the ton in lead, silver and copper, with appreciable values in gold. This report has practically been confirmed by the mining engineer on the staff of the corporation commission.

The property of the company is located on the south fork of Lytle Creek, San Bernardino county, this state.

The Salt Lake Mining Review
Sept. 15, 1925 p. 13

San Francisco Gold.

An experienced operator who recently examined the property of the San Francisco Gold Mines Company, comprising the old King Solomon gold mine in Randsburg district, Kern county, this state, estimates the company has all of \$900,000 in ore blocked out in its workings. With such a satisfactory showing the company is now getting ready for the treatment of an increased tonnage at its milling plant.

The ore now being treated, as shown by mill heads, runs better than \$30 to the ton in its gold content. Some of the ore mined goes much higher, and it is said that mine samples have run as high as \$350 per ton.

The main working shaft at the mine has attained a depth of over 460 feet from the surface, the last few rounds of shots indicating the entrance of the workings into the sulphide zone which should show in solid formation at depths of from 700 to 800 feet. This is important as here, it is believed, re-enrichment will be in evidence.

This is a Los Angeles company and its stock is listed on the local stock exchange. Because of the encouraging reports received almost daily from the mine the stock of the company has been an active trader at gradually advancing figures. It is believed the mine will eventually take rank as being one of the largest and richest producers of the district.

Sept. 30, 1925 p.

King Solomon in Sulphide Zone.

Word has been received from Randsburg district, Kern county, this state, that in the development of the King Solomon mine of the San Francisco Gold Mines Company, the winze from the tunnel level has reached a depth of 475 feet below the surface.

At this level, according to Clyde E. Miller, of Los Angeles, secretary and treasurer of the company, three and a half feet of ore is exposed, half of which is free-milling gold, while the rest is a gold-bearing sulphide which exceeds the quartz in its gold content. Two assays from the sulphide ore, it is stated, disclosed values of \$70 and \$160 to the ton, respectively.

It is expected another hundred feet will take the bottom of the shaft below permanent water level, where the free-milling ore will disappear, and where the ore will change entirely into a sulphide, with accompanying re-enrichment.

A few days ago a cleanup of a thirty-day run of the five-stamp mill, running two shifts, returned 434 ounces of gold bullion, valued at about \$7,500.

The Salt Lake Mining Review
Sept. 30, 1925

RESUME OF MINING ACTIVITIES
BOTH IN NEVADA AND CALIFORNIA

By Al H. Martin.

Gold discoveries in Nevada and rich silver-lead developments in Inyo county, Cal., just across the Nevada line, form twin harbingers of the anticipated mining boom for which the West has waited since the palmy days of Goldfield. Five miles south of the famous Betty O'Neal silver mine, near Battle Mountain, Jesse Workman, discoverer of National, Vontrigger and other famed camps, has located a new gold district that is attracting widespread attention. An ore body several feet wide has been demonstrated for a length of over 600 feet, with numerous samples of the ore averaging \$100 per ton in gold. More than twenty distinct veins have been uncovered. Prospectors and operators are swarming into the district, located in Horse Canyon, and the country has been staked for five to six miles in every direction from the original strike.

The old camp of National, which produced over \$10,000,000 a few years ago from shallow workings, is staging a comeback following new discoveries in virgin ground. A rush has started to the Golconda field following reported discovery of the long-lost Layton mine by a shepherd, rich gold developments on the Golden Crescent mine are reviving interest in the Reservation Hill field near Yerington, the old camps of Round Mountain and Manhattan are again coming to the front, and the new gold-silver camp of Gilbert is showing steady improvement as workings gain fair depths.

The powerful New York interests headed by Thomas T. Cole of the Cole-Ryan syndicate have acquired the Amalgamated group at Manhattan, and formed the Nevada Gold Development Company, which has taken over the extensive

Wilson placer adjoining the hydraulic mines in the Round Mountain district. Cole and associates are also arranging to consolidate the Montana-Tonopah and Gipsy Queen companies at Tonopah, according to advices received by Tonopah operators, preparatory to sending the Gipsy Queen shaft to a vertical depth of 220 feet and prosecuting an extensive campaign of lateral developments.

Late developments on the great Inyo silver-lead belt indicate this region is destined to become a worthy rival of the famed Coeur d'Alenes of Idaho, according to many mining engineers who have examined the deposits. For a length of fully 150 miles and a width of five to twenty miles development of extensive silver-lead deposits is proceeding with powerful Chicago and California corporations interested. At Keeler and Darwin several companies backed by interests affiliated with the Armour and Cudahy packing enterprises are developing the great vein-systems at depth and producing heavily, while in the Blind Springs Hill field, about fifty miles north of Bishop, the Commanche Mining & Reduction Company, controlled by Los Angeles financiers, has inaugurated comprehensive operations.

cont...

The Salt Lake Mining Review

Sept. 30, 1925 (cont.)

The old Montezuma group has been rejuvenated by Peter Buol, Nevada capitalist, and is producing steadily. From the southern end of the belt rich ore is going to Utah smelters from the La Moine, Engineers Exploration and other properties, with the Belcher Extension, Thorndyke and several others preparing for steady production. New roads are under construction and with the arrival of cooler weather activities will be largely increased by many operators.

The Ophir mine of the Engineers Exploration, located nine miles from Trona, continues the sensation of the field. The rich vein at a depth of 150 feet is reported twenty feet wide, with the north workings on the lower level showing three feet of high-grade lead carbonate. The company is installing equipment and preparing to treble its output, now averaging around \$5000 per month. Seven months ago this property, a mere prospect, was acquired by John Kelly, Miss Edith Kuntz and other Randsburg people for \$75,000. The management reports value of ore already blocked out exceeds \$250,000.

The Belcher Extension Consolidated Mines Company has practically completed a new road to its holdings, adjacent to the Ophir group, established a camp, developed a water supply, and commenced production. Several veins of rich silver-lead ore have been developed, with ore-shoots on the Lead King claim ranging in value from \$100 to \$230 per ton. The silver content is increasing and occurs as bromides and chlorides. The ore resembles lime spar and much of the material was discarded as waste before its rich nature was discovered.

The Thorndyke Mining Company has completed a new road at a cost of \$25,000 and has arranged for a shipment of 1000 tons of rich ore. Many old producers are in course of rejuvenation, while scores of prospects are receiving attention of hardy "desert rats." Despite one of the hottest summers ever recorded in this section mining has been vigorously carried forward, with trucks traversing Death Valley regularly, under temperatures varying from 120 to 140 degrees in the shade. The motor truck and automobile have wrested from the desert its worst terrors, and for the first time permitted profitable shipments from inaccessible regions long known to contain vast stores of mineral wealth.

The Salt Lake Mining Review

Oct. 30, 1925 p.13

Milling Plant for Catalina.

The Black Jack mine on Catalina Island, California, it is stated on good authority, is to be equipped with a milling plant. The mine is owned by the Santa Catalina Island Company, said to be controlled by William Wrigley, Jr., of chewing gum fame and noted as being an all-around sportsman.

The mine is under the direct supervision of D. M. Renyon, general manager for the company, who has placed an order with the Southwestern Engineering Corporation, of Los Angeles, for a 100-ton daily capacity oil flotation mill, to be installed at the mine, and which is expected to be turning out lead-zinc concentrates before the close of the year.

The plant is designed for the preferential flotation of the mine product, and the process involves a rather unusual problem, inasmuch as salt water will be used in ore treatment. When in commission the mill output will be consigned to the Selby smelter near San Francisco.

Porter's Great Gold Discovery.

Writing from Ballarat, Inyo county, California, Fred W. Gray, one of the leading mining operators of the Panamint range, states that Harry C. Porter, the "Hermit of the Range," and one of the most popular prospectors of the desert, has made a gold discovery near the head of Happy Canyon, at an elevation of 8000 feet, that carries such sensational values as to greatly discount and throw into the discard the rich ore specimens displayed by Death Valley Scotty during the Goldfield excitement, when he would ride into that camp on his big grey mule with his saddle bags filled with high grade ore—and rattlesnakes.

The new discovery, made by Porter after twenty years of prospecting, consists of a shoot of ore said to range up to eight inches in width, and running about half of its content in almost pure gold, and it would require but a few tons of this rich rock to place him on Easy Street for the balance of his life. The news of the discovery has resulted in a rush of prospectors, mining men and investors, into the Panamint range.

The Salt Lake Mining Review

Nov. 30, 1925 p. 11

Early History of Bonanza King.

The duel to the death, recently fought by William Robertson and Matt Burts of Government Holes in San Bernardino county, this state, brings forcibly to the minds of the "old timers" of that section the discovery, sale, operation and resale of the Bonanza King mine which, in its early history of development and operation, obtained its water supply from the scene of the recent tragedy.

It is somewhat ancient history, but it is chronicled that the Bonanza King was discovered by four prospectors. Before much work had been performed in the development of this rich prospect Thomas Edwin, mining scout for George Hearst of San Francisco, father of W. R. Hearst, owner of the Hearst publications, attracted by the rich promise of the new discovery, asked if it was for sale, and at what price.

"There are four of us," was the reply, "and we want \$50,000 each." "It's a sale," said Ewing, as quick as a flash and, securing a piece of rough wrapping paper, he immediately drew a draft for the amount. It read: "George Hearst, San Francisco; pay to bearer \$200,000." Within forty-eight hours the draft was paid through Wells Fargo.

The mine, according to the story, later produced millions in gold for Hearst, who finally sold it to an English syndicate for several millions more.

The Bonanza King now is owned by the Bonanza King Mines Company, of Los Angeles, and is in regular operation, according to latest reports. Dr. O. B. Bachman is manager. Mine address, Box 7, Blake (Goffs), California.

Jan 15, 1926 p. 21

St. Elmo Mine in the Limelight.

In the operation and development of its newly acquired St. Elmo gold mine in the Randsburg district of Kern county, California, the Nevada Rand Gold Corporation, of Tonopah, Nevada, is planning systematic and extensive work, and with future prospects so alluring as to attract the attention of experienced mining operators familiar with the history of this famous old gold producer, from which a fortune has already been taken at shallow depths.

Preparatory to carrying on an active campaign of operation the main working shaft and laterals have been cleaned out to the 250-foot level and surveys of the underground workings of the mine made and maps prepared in order that the necessary data may be available for intelligent exploratory work.

This will probably result in the further development of the two principal veins of the group, in whose workings, it is stated, there now is a fair tonnage of a good grade of commercial gold ore in sight, while there is an additional important tonnage on the mine dumps, ready for milling. For the treatment of this ore, and the mill rock to be developed as work progresses, arrangements are being made with reduction works in the near vicinity of the mine. And, it is believed, the revenue from this source will greatly assist in the carrying on of the development program.

The Salt Lake Mining Review
Jan. 15, 1926 p. 21

Estelle Corporation Mining Rich Ore.

Never before in its history, according to Roy C. Troeger of Los Angeles, secretary and treasurer of the Estelle Mines Corporation, with holdings near Keeler, Inyo county, California, has the Estelle mine looked better or more promising than at the present time.

From the heading of the 660-foot upraise from the main tunnel level, and at a depth of 1930 feet below the surface, north and south drifts are being run on the fissure at a point where mineral indications lead to shoots of ore and lenses in the lime formation in the bedding planes, and it is believed it will not be long before bodies of high grade lead ore will be uncovered on that level.

The company is now shipping a carload of ore monthly that averages about \$60 to the ton and, as two shifts will be employed, it is believed the regular output will soon be materially increased.

The Estelle adjoins the noted Cerro Gordo mine in which a most sensational strike of heavy lead ore was reported a few weeks ago.

March 15, 1926 p. 17

The only consolation to be derived from the fact that mine has been robbed of valuable ore is that the property ally has an established and intrinsic value; a condition at is accentuated by the theft.

It was discovered, a few days ago, that elusive high-headers, during the absence of the watchman, had stolen out fifty tons of rich ore from the Santa Paula group of mines of the Tilley Rand Mining Company, located in the rugged mountains of San Bernardino county, this state; and search is now being made for the thieves.

The ore, according to President R. I. Schirmer, 249 North Grand Avenue, Los Angeles, was taken from a two-foot shoot running from \$50 to \$1000 to the ton, principally its gold content. The high-grade was carried away in two trucks, the robbers leaving ten 100-pound sacks in the tunnel when frightened away. Even at that, however, they made a good haul.

The Santa Paula mine is located three miles from Angler station on the Trona railroad, and Mr. Schirmer states he has about 30,000 tons of ore practically in sight in its workings averaging about \$17 per ton. This will doubtless be treated at a custom mill in course of construction not far from the mine; it being the intention to mine out fifty tons of ore daily, providing satisfactory arrangements are made for its treatment at the new plant. Otherwise the company may put in reduction works of its own.

The company expects to put in additional mine equipment, including hoist, air compressor and drills.

The Salt Lake Mining Review
March 15, 1926 p. 17

Consolidation for Randsburg.

While no official announcement has been made, it is stated on good authority that a deal is now pending involving the taking over of several of the most promising properties in the Randsburg district, Kern county, California, including the famous King Solomon mine owned by the San Francisco Gold Mines Company, 1039 Merchants National Bank Building, Los Angeles; the holdings of the Consolidated Mines Company, and the domain of the Grannis Land Company, making a total area of about 900 acres.

Chicago interests, associated with Boston capitalists, it is claimed, are behind the proposition and their engineers, after making exhaustive examinations of the properties under consideration, recommend the immediate sinking of a 1200-foot main working shaft, if the deal is closed, probably on King Solomon ground, and the development of the consolidated properties through that avenue. They also favor the building of the first 100-ton daily capacity unit of a large milling plant, pointing out that sufficient payable ore is on the dumps of the properties of the proposed consolidation to fully finance all development and equipment.

It is also stated that the company to be organized is to have at least \$250,000 in cash in its treasury. Several adjoining mines of established merit may also be invited to join in the enterprise.

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SALT LAKE CITY, UTAH, MARCH 30, 1926

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Possibilities of the Leadfield, California, District As Industrially Reported Upon for a Railroad Company

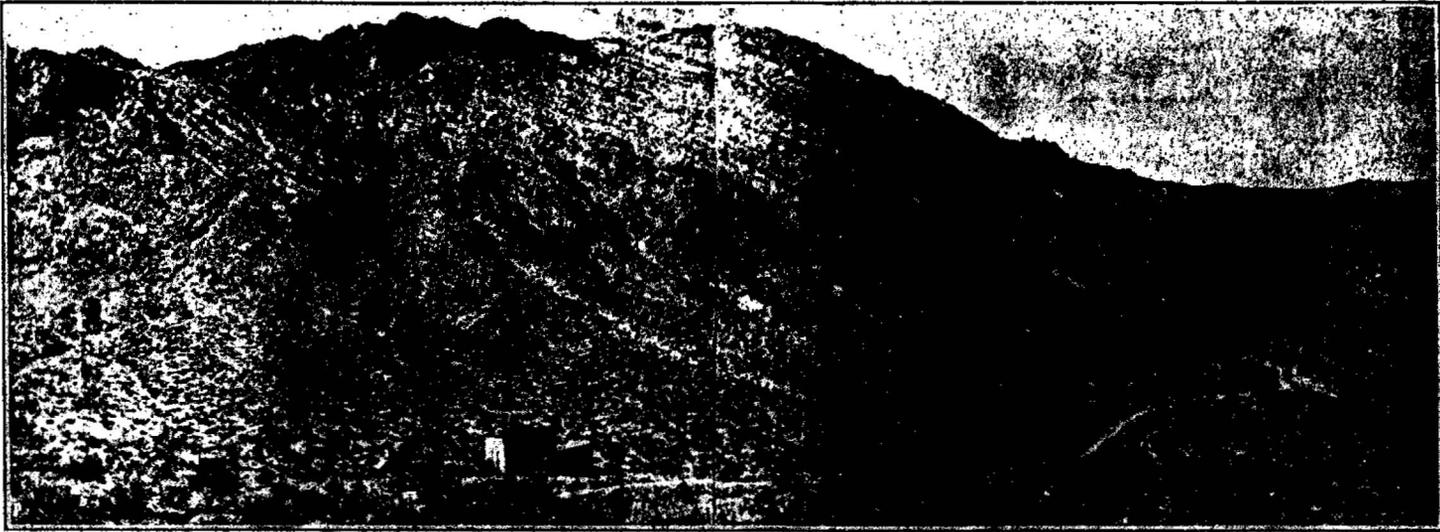
By Letson Balliet.

The following article (with a few deletions for brevity) is an industrial report upon the possibilities of Leadfield, California, as respects the freight and transportation problems of the Tonopah & Tidewater railroad, made by Letson Balliet, consulting engineer. It does not deal definitely with mining details or geology, further than to report to the railroad company what it might expect if Leadfield develops as many engineers expect.—EDITOR.

Beatty is situated at the junction of the Tonopah & Tidewater railroad and the Bullfrog & Goldfield railroad in the Amargosa valley, through which a small stream flows that has been dignified by the name of "Amargosa river." Although there are places where the flow of the river is entirely under the sand, and often but little is visible at the surface, it is possible to obtain an inexhaustible supply of water from shallow wells that have been dug along the river. Literally, the sand is on top and the water under-

imum elevation of but 2000 feet higher than Beatty. The new highway was built with the expectation of hauling heavy machinery and mine supplies into Leadfield from Beatty, and for bringing a big tonnage of ore and concentrates to the railroad at Beatty. The road is rolled macadam and can be easily negotiated by small cars or the most elaborate limousines, or trucks, without the least trouble. This road made the district possible. At the present time there is no water for the twenty-two miles between Leadfield and Beatty, but a well is to be sunk at the foot of the grade fifteen miles from Beatty and seven miles from Leadfield, hence there will be ample water for all purposes at short distances.

A telephone line has already been constructed from Leadfield to Beatty, which is in operation at the present time and the workmen are constructing a link between



Leadfield, California, showing the limestone strata that carries the lead values. Plans are to blast the whole mountain down if the impregnation is general all the way back from the fault face. This view was taken before the rush for town lots and building sites, which extend this side of the lower foreground.

neath. It is from this source that the Tonopah & Tidewater obtains its water, and the town of Beatty obtains its city water supply. Various mines and mills in past years have obtained their requirements from the same sources.

Beatty is situated but twenty-two miles distant from the thriving new mining camp of Leadfield. This distance is the speedometer distance by way of the new highway which has just been completed over the state line to the new California mining camp. This highway is one of the scenic routes across the mountains into the state of California, with a maximum grade of ten per cent and reaching a max-

Beatty and Tonopah, which will connect Leadfield with the outside world by long distance telephone and telegraph.

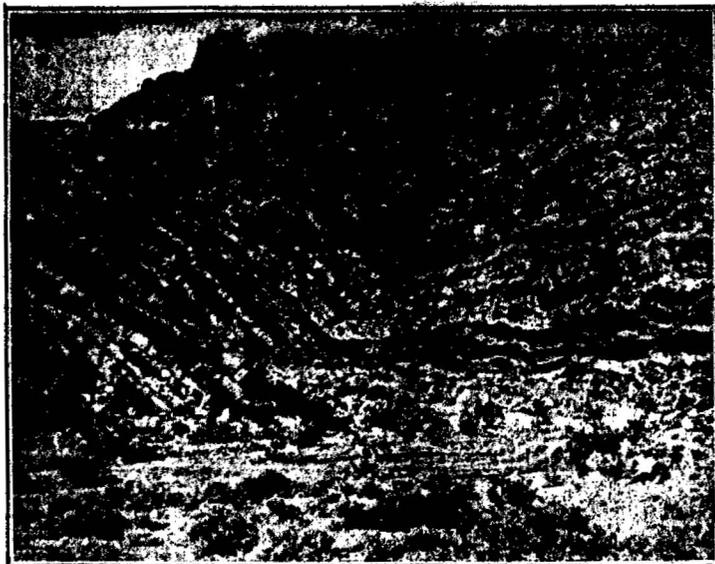
It is already planned to have a postoffice at Leadfield with a mail stage and passenger bus lines running between Beatty and Leadfield, which I am informed will be in operation by the middle of the summer. Two passenger stage lines have already been put in operation.

Los Angeles and Salt Lake to Benefit.

Los Angeles is the nearest supply point from which supplies can be obtained for both Beatty and Leadfield. The demand for lumber and building materials in both towns is

large. Mining machinery and other supplies, amounting to an enormous aggregate, will come from Los Angeles via the Santa Fe to Ludlow, California, or via the Union Pacific to Crucero, at which point it will be transferred to Beatty, Nevada. Through passenger sleepers are operated between Los Angeles and Beatty. Both the Standard Oil Company and the Union Oil Company have erected big supply tanks and established special agents at Beatty. First class accommodations can be obtained at Beatty. Two new hotels are now in process of erection, while preparations are being made for a 40-room hotel with baths, at Leadfield.

Utah smelters have in sight the possibility of obtaining a large tonnage of the much needed lead ores, while Utah coal, mining supplies, machinery, groceries and other merchandise have a direct inlet into the new district via the Union Pacific to Crucero, where freight is transferred to or from the Tonopah & Tidewater road. There is existing now a special tariff on ores from the Tonopah & Tidewater



Folded limestone strata at Leadfield, at upper end of Titus canyon fault.

railroad to Utah smelters, and no doubt a keen competition with equalized freight rates will give Salt Lake City an equal opportunity with Los Angeles for general business, from the entire district.

The Tonopah & Tidewater railroad was built originally to replace the twenty-mule-teams that were hauling borax from the edge of Death valley. It was extended to Beatty for the purpose of hauling metal ores and mineral products, with which this region abounds. The map makers called all this section of California and Nevada, "The Desert." The early immigrants named it "Death Valley." Neither term has been very alluring to prospectors, though it has been said by good authority that there are more varieties of mineral products and ores obtainable tributary to the 250 miles of the Tonopah & Tidewater railroad than there are upon any other 250 miles of railroad in the world. * * * It has been asked what the desert sands and rugged mountains of this region will not contain. Nobody knows, but the opening of supply stations like Leadfield will permit the prospectors to penetrate further into the unexplored recesses of the district.

Aside from colemanite, borax and borax products, lead and lead-silver ores going to the smelters have been a very prominent part of the Tonopah & Tidewater's freight for a number of years. Most of it came from the station of Tecopa, with Beatty second in importance as a lead shipper with the products from Chloride Cliffs and the Lemoine

mines on the edges of Death Valley. With the Leadfield development, Beatty promises to be not only the most important shipping point for lead upon the Tonopah & Tidewater, but will probably become one of the important lead stations of the West.

Geologists, and a few desert prospectors have known for years that the Funeral range, Panamint range, Cottonwood range and Grapevine mountains, were abundantly supplied with lead and lead-silver ores, but with lead at \$3 to \$4 per hundred weight, the investment of huge sums of money for roads, development and machinery, was hardly obtainable. It simply was not an attractive investment, particularly when the promoters were obliged to describe the venture with such forbidding terms as "on the Desert," or "in Death Valley," where the very names of the district would frighten the timid investor; but with lead permanently up to \$9 to \$10 per hundred pounds, with every indication that it might go even higher, the demand for lead has become almost a hysteria.

Why the Demand for Lead.

What is making the demand for lead? Storage batteries are the heaviest users, with relatively low salvage possibilities. When we realize that the weight of a storage battery is largely due to its lead content, and that every automobile, truck, airplane, motorboat, railroad car, Pullman sleeper, submarine and locomotive, carries one or more storage batteries we can realize that more than 50,000,000



Limestone strata (probably silurian) severely broken and upheaved along the Titus canyon fault, Leadfield.

vehicles are carrying around from 50 to 100 pounds of lead each. We realize that every radio set on board every ship that sails the seas, or in every private house, has one or more storage batteries, and this is a demand that has grown since lead was selling at \$4 per hundred weight.

Another great demand is by the telephone, telegraph and electric companies; not only for fuses, but thousands of miles of lead coated cables are being placed underground in almost every city in the world. Mine cables and submarine cables are also lead coated—the use running into millions of pounds of lead. In addition to this, we have lead paints and pigments, and yet we have named but three demands for lead; storage batteries, cable coating and paint and the demand is growing greater every day.

If the Grapevine mountains can produce lead, Leadfield is destined as a possible headquarters or supply base from which prospectors can comb the mountains for fifty miles around for other deposits besides those which are now being

worked at Leadfield, and this may make California an important producer of the world's lead, of which the United States, without the Leadfield deposits, is already producing 62 per cent of the world's supply.

Location of Leadfield District.

The Leadfield district of California is three miles from the Nevada line and has been liberally and widely supplied with galena, carbonates, cerussite, and combinations carrying silver and some gold values. A vast area in this vicinity is prospective. Prospectors who have been over the district say that many square miles show outcroppings and indications of ores. It is hard to believe that an area so wide and so extensive as this would have only a "smear on the surface." As the prospectors say, "It must have come from some place—it didn't rain down"—hence, from the railroad standpoint, it appears likely that a big tonnage of incoming and outgoing freight will result from the new mining town of Leadfield as the base of a much larger district than is now known.

The one question that I have been asked many times by friends and acquaintances since making my preliminary survey of the district is, "Has Leadfield district really got the ore?" The general public do not seem to care much whether the deposit is in silurian limestone, cambrian slates or rhyolite, so long as the lead ore is there, and to the questions so generally asked I am free to say that from all the indications that I saw in three days, I think it really has the ore. It is too early to make any estimate of tonnage or output of the district, and yet from the numerous places where exposures have been made of lead-bearing ore, the indications are that the tonnage will be large.

The exposures that I saw in my brief survey were upon fault planes where the fissuring opened the formations along the plane of fracture and faulting. Tunneling and open cuts have exposed good ores as far as they have proceeded, and to just what depth or extent the lead-bearing ores will be found in each of these places is yet an unsolved problem; but, from the study of the structures, I can see no reason why the formations should not carry their imbedded and impregnated metal contents for much greater distances than are now opened. So far as I was shown, the ores are not "high-grade shipping ores," but they appear to be good-grade of concentrating ores. * * *

Field for Huge Concentrating Mill.

It appears likely, if development opens the ore bodies—as every competent engineer who has seen it expects—that a huge concentrating mill will eventually be erected in the district. Perhaps it will be large enough to handle several thousand tons a day if the deposits develop to justify it. If such a mill should be erected, it will likely handle the ores from a number of mines and prospects in the same district.

In event of this development and equipment being justified, the concentrated values will likely be hauled in an aerial tramway over the mountains for a distance of about five miles to the foot of the mountains on the eastern side, where it would be possible, by merely ditching, to run a spur track from Beatty to the loading bin. From Beatty the concentrates would then go by rail to the smelters, where the ore is turned into pig lead and sold.

Economic Questions Discussed.

I am again asked the question, "Can the production of lead from the region now known as Leadfield, California, be great enough enough to justify the expense of opening the district with a new highway, added to the expense of developing the property and equipping it with mining, mill and transportation machinery?" That is the question

asked by the transportation department of the railroad company. It is the same question that is in the minds of the capitalists, the makers of storage batteries and other users of lead. It is the same question that is in the minds of power companies who are inquiring as to the possibilities of some day running a power line into the district.

Always and always the one thought comes up, "Will it pay?" When an engineer does not answer that question in such a manner that you can understand, you might just as well make a guess at it yourself without the engineer's report. The plea of caveat emptor (let the purchaser be ware) cannot be consistently made by the engineers, so far as the physical possibilities of the property are concerned.

When the engineer is sent to make a report, it is because they want his judgment as to the possibilities for producing a profit. Is the lead there? Is there enough to make it worth while? Can it be produced with a profit over and above all costs of moving it? Answer: In my judgment, with a large enough plant and sufficient development and competent management, I should answer "Yes" to all three questions.

Mining is but a moving job. It is nothing more or less than moving a deposit of metal ores made by nature, from the place where nature deposited them to a place where mankind can use them and benefit by them. It is an engineering job. It is a matter of tools, equipment and men. If nature put a sufficient quantity of metal in the ground somebody can move it and will move it some day, and with the present high price of lead, the growing demand, it is possible to move this deposit at a profit.

Structural Geological Conditions.

The Western Lead Mines Company is the pioneer of this district. It owns about 320 acres of land at the upper end of the Titus fault. During the period of earth formation, the dynamic forces that thrust and folded the earth's strata made numerous smaller faults where the slips have exposed the formations for a height of several hundred feet. In these places the geologist can study the formations and structures of the earth and can theorize and reason as to how it got that way and from whence came the metal deposits.

Although the disturbances have been great and the geology is complex, the student can find plenty of opportunity to theorize on how it was before it was disturbed. The preliminary studies I was able to make in the short time I was in the field caused me to believe that this is a post cambrian deposition. There are three main classifications of rocks exposed on the faulted faces; limestone—from blue to almost black, coarsely stratified—sandstones, quartzite to conglomerate, likewise stratified. All have been violently upheaved with a rhyolytic flow that apparently has been capping.

These disturbances of upheaval and subsidence that fissured and shattered the formations in crushing and moving them, would be called earthquakes if there had been anyone on earth at the time to call them anything. These strains and crushing forces opened up a countless number of little cracks and big crevices in the formation and between the strata, through which the gases and liquids from the magmatic center escaped to the surface, bringing up the metal values where they were deposited, as filling, in the crevices. Probably sulphur fumes and chlorine solution aided greatly in the chemistry of origin but chemistry and catalysis of metallic origin is of less importance to the railroad company and the lead industry than the quantity and quality available, its commercial value and industrial possibilities. As to the quantity, I am unable to make even an intelligent guess, but from what I saw in the district

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THE NEW LEADFIELD BOOM

Evidently the efforts to launch a rip-roaring boom for Leadfield, on the edge of Death Valley, along the Nevada-California line, some twenty-two miles westerly from Beatty, Nevada, are being crowned with success. At least the publicity which is being broadcasted creates the impression that "something must be doing." But when a friend asks for our honest opinion of the new camp—or writes for information concerning its real merits—we have to assume a neutral attitude and reply, "We don't know." Up to date we have heard or read little that could be used as a basis for forming an opinion that would be worth a tinker's d—m. Anybody that can draw a picture of what the new camp is destined to develop into—from what he hears and reads—had better pack up his paraphernalia and "hike for the diggings."

It is realized that every metal mining camp had a beginning—and that more than ninety per cent of them failed to make good. Maybe Leadfield will prove an exception to the rule and surprise the world, just as its enthusiastic boosters are claiming it will do. A new, real, died-in-the-wool lead producing district would prove about the biggest and best thing that could happen to the metal mining industry right now. Let us hope that Leadfield will fill the bill.

However, the fragments of information concerning the minerology of the district seem to indicate that no large deposits of lead or lead-zinc ore have so far been encountered. Of course the camp is only three months old, and in that time, under adverse conditions, too much should not be expected. It seems that what ores have been discovered run low in lead and zinc, with a little silver and some-

times gold. Ores carrying 3 to 7 per cent lead and corresponding percentages of zinc—and these are the percentages usually reported—will require favorable conditions mining and treatment if their extraction proves commercially possible and profitable. We are told in the dispatch that water sells for \$5 a barrel in Leadfield, and that seems to indicate that water is a scarce article. Lots of water will be required when it comes to treating ores in quantity. If it cannot be obtained—and the camp develops as "a low grade proposition"—it is doomed. If high-grade ores developed in quantity—ores worth anywhere from \$35 a ton up—the camp will prosper and grow, as it will deserve to do. Let us hope.

In the meantime we are told in the dispatches that large capital interests are putting money into the district and taking a chance. And that is a good omen. If new camps are to be discovered and new mines are to be opened somebody must take a chance and supply the sinews of war—just as they have done before in all the big mining camps of the world.

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Fine Yellow Dog Showing.

A most promising showing is reported in the property of the Yellow Dog Mining Company of Los Angeles, operating in the noted Mohave district of Kern county, this year, and it is believed that further development work will result in the opening up of large and rich ore bodies at greater depths than heretofore attained in this promising producer.

In the operation of the Yellow Dog, according to one of the heavy stockholders of the company, recently returned from an inspection of the new strike in the mine, the 300-foot drift from the bottom of the 300-foot shaft, is in virgin condition and that looks most promising, the face having followed the breast of ore for fifteen or twenty feet that assays \$12 to \$20 in gold to the ton, independent of a streak of two to six inches in width that runs from \$2000 to \$5000 to the ton in the yellow metal. The drift is on the hanging wall side of the vein, which cross-cuts have shown from ten to twenty feet in width.

During the past year, it is stated, the company cleaned up \$10,000 from its mill ore, treated in a nearby plant. With this income it met all indebtedness, paid for all mining operations, patented two of its claims, and has about \$25,000 in its treasury for future development and equipment. It is expected to include, in all probability, the erection of a new mill plant at or near the mine. Company officials are very pleased over the present physical condition of the property.

King Solomon Development.

R. A. Drain of Randsburg, Kern county, this state, superintendent for the San Francisco Gold Mines Company, 1039 Merchants National Bank building, in his report to the board of directors, expresses himself as being highly pleased over the very promising conditions of the company's King Solomon mine at the present time.

On the 500-foot level of the Magpie vein, he says, drifts have been extended east and west a distance of 120 feet from the shaft, the ledge being from twenty to twenty-five feet between walls, all of which is more or less mineralized, and being heavily sprinkled throughout with sulphides. The drift is being run on the footwall side of the vein, the face showing from four to seven feet of heavily mineralized quartz. The east drift must be driven from fifty to sixty feet further in order to connect with the downward extension of the large body of high grade gold ore exposed on the 400-foot level. When this connection is made it is expected a large measure of rich ore will be uncovered.