

NATIVE SILVER FOUND AT CIMA

Sensational Strike in Eastern San Bernardino County Mine. Bonanza At 100-foot Level. Ore for Shipment

A SENSATIONAL STRIKE has been made at 110 feet depth in the shaft of the Dawson Death Valley Mining and Milling Company near Cima, in eastern San Bernardino county, California. The ore, which was exposed by a round of shots fired in the bottom of the shaft, shows native wire silver in small cavities and carries some galena. It is sugary quartz and well mineralized. This company's holdings in the district cover ten claims on the west slope of New York mountain, and about three miles southeast of Cima on the main line of the Salt Lake railway. The country formation is granite and limestone, with rhyolite and quartzite dikes. The vein to which development has been confined is in a contact fissure between granite and quartzite. The strike is slightly north and east with a southeast dip.

These claims were located in May, 1906, by Mr. B. X. Dawson, of Denver, and because of a discovery of high-grade ore in prominent croppings. It is reported that samples of this ore assayed from 100 to 300 ounces silver with fair gold values. Development was started and has now reached to 110 feet depth on the incline. Drifts have been run out from the 100-foot station east and west for 125 feet and 100 feet respectively. The west drift has passed through the ore shoot, and in the breast of the east drift values are lessening. It is stated by the management that the high grade shoot held for 150 feet in length on this level and that the ore body, which varies considerably in width, averages five feet as exposed in shaft and drifts. A streak, which appears to be persistent, runs very high in silver

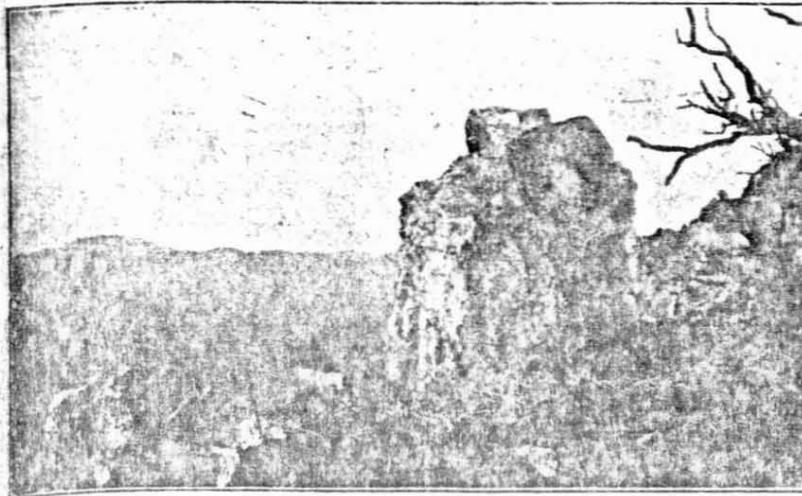
with good gold values. From this the company is sacking ore. The ore body shows values varying from \$40 to \$1000, company sampling.

This property has been equipped with a 25-horsepower Fairbanks, Morse hoist and a gallows frame. Water level was reached at 100 feet. The last round of shots fired in the sump exposed the best ore yet discovered in the claim, specimens of which, exhibited in Los Angeles, are surprisingly rich in silver and with some indications of copper, as might be expected from the location. It is stated that the company proposes to sink to very considerable depths as soon as a suitable pumping plant can be installed.

A second discovery of high grade silver ore carrying gold has been made on what is thought to be the same vein, some 5000 feet southwest of the Dawson shaft. This surface strike is in a bold quartz cropping on the Mollie Gibson claim of the Greenwater Consolidated Mining Company, of Los Angeles, in which some of the chief shareholders of the Dawson Death Valley Company are interested. The Greenwater Consolidated owns a group of ten claims lying between the Greenwater Calumet and Providence, in the Greenwater district of Inyo county; the Queen Copper group of four claims in the same district, and four groups covering nineteen claims and several fractions in the Cima district. Of these latter, the Missouri Girl is on the strike of the Dawson vein to the southwest, with some 1800 feet of wash separating the properties; the Clara Nevada group adjoins the Dawson holdings to the northeast and extends 6000 along the strike of the vein; the other two

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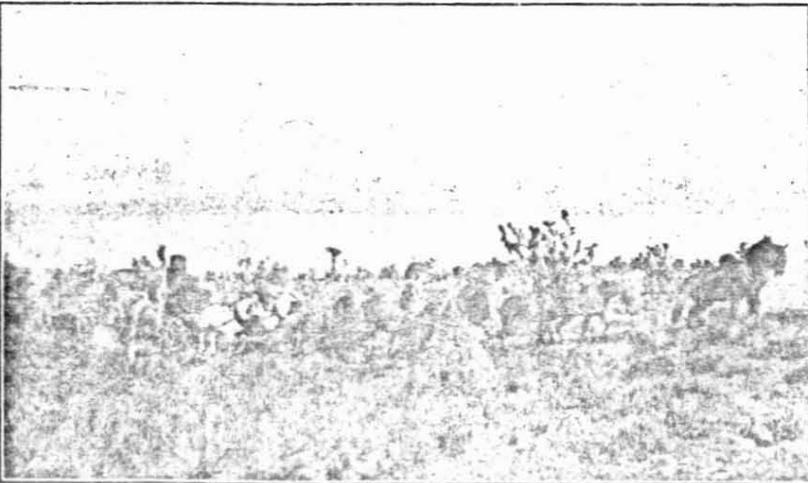


ON THE GREENWATER CONSOLIDATED MINING CO'S. CLAIMS OVERLOOKING CIMA

JAN 12 1907

LOS ANGELES, JANUARY 12, 1907.

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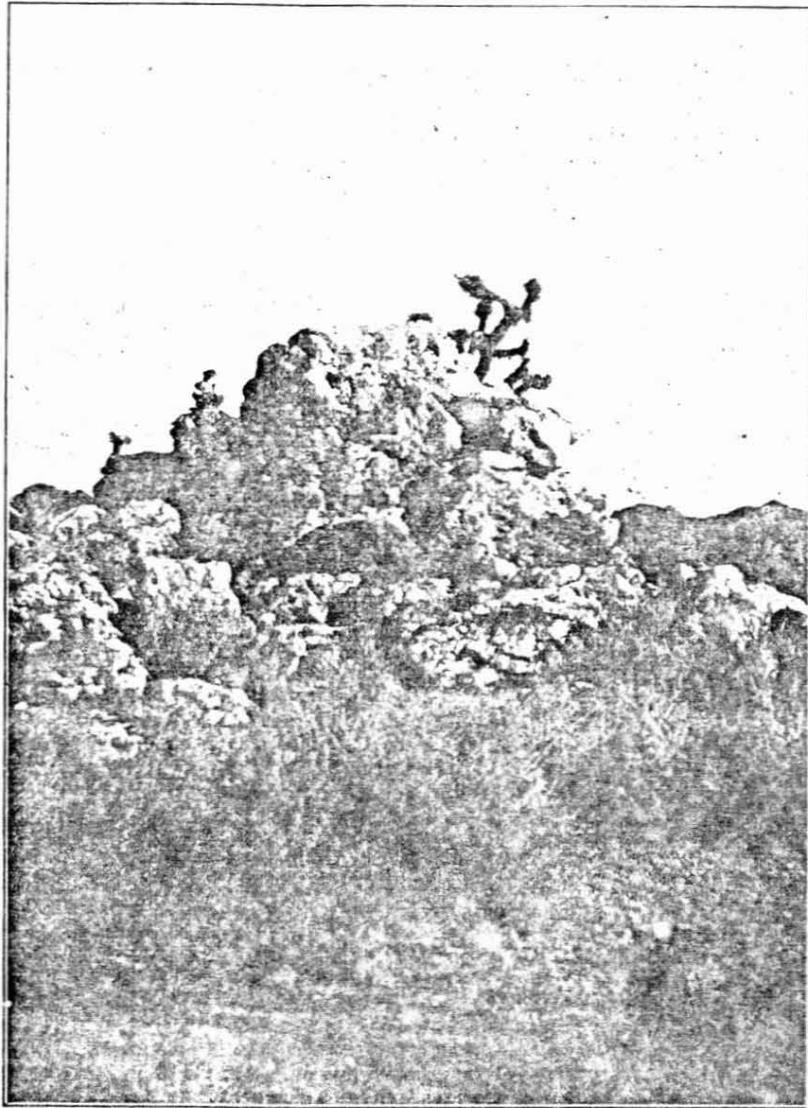


HAULING IN THE BOILER TO THE DAWSON DEATH VALLEY MINE

groups are detached.

The management is now sinking a prospect shaft where high grade ore was discovered on the Mollie Gibson, and has exposed three feet of ore which assays from \$12 to \$204, company sampling. This is of similar character to Dawson ore, and it is

believed that with depth the ore body will likewise widen and increase in value. Several parallel veins crop on this group, and the company proposes to prospect all of these thoroughly before determining the location of a deep working shaft. The surface showing is considered so encouraging



CROPPING OF SILVER GOLD ORE ON THE MOLLIE GIBSON

In view of the Dawson Death Valley Company's experience, that all efforts will be concentrated on the Cima property for the present.

The Greenwater Consolidated Mining Company is capitalized with 3,000,000 shares, \$1 par, of which 2,000,000 shares are in the treasury. Title to all the properties is held by the company. Mr. Way C. West, formerly of Cripple Creek, is president; Mr. D. D. Bleckford, of Los An-

geles, is vice-president, and Mr. D. W. Bonewitz is secretary and treasurer.

The discovery of high grade silver ore so near to New York mountain, on which are several copper properties of great promise, is interesting. North and slightly west is the Standard mine, a most promising copper property which has been tied up by litigation caused by disention among the shareholders. Beyond this again are copper prospects, more or less developed, for which much is predict-

ed by competent engineers. Still beyond are the rich Tecopah mines, silver-lead properties, and finally South Furnace Creek, Greenwater and the Wild Rose district. Southeast of Cima is the Vontrigger district in which the California Gold and Copper Company has a very valuable mine described in a recent issue of the Mining Review. Beyond this is the new Gold-bend district, where the California Hill's Gold Dollar vein is making a sensation. Again to the southeast the Monument Peak copper region is showing big veins and high values.

now opened successfully to over 200 feet depth. Bit by bit, this belt is being connected more closely and continuously. It is for the most part a copper belt, but with high-grade gold or silver-lead veins occurring at intervals. It is a highly mineralized region, and one that is fast gaining recognition from mining men of experience.

Much money is now going into development of prospects in eastern San Bernardino county, which is today one of the most promising mining sections of the Southwest.

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IMPORTANT GREENWATER STRIKE

Oxide and Sulphide Ore Opened at 430 Feet Depth in Copper Blue Shaft. Greenwater Furnace Creek Crosscut Has Penetrated the Vein. New Ore Body in Clark Shaft

THE COPPER BLUE shaft of the Furnace Creek Copper Company has penetrated a body of highly mineralized porphyry, carrying iron plentifully and copper oxide and sulphide.

The shaft is vertical, and passed out of the vein into the granite foot-wall at 152 feet depth. At 430 feet, the new porphyry ore-body was encountered. It appears to be lying flat. If the foot-wall has maintained its dip, the vein should be sixty feet from the present shaft bottom. Though it is too early to draw any definite conclusion from this discovery, its significance is great. It is proven that copper ore exists at very considerable depth—also that the porphyry belt is deep seated.

This development affects the whole Greenwater district. It is considered by engineers most important, as indicating that the surface showings, which are conceded to be remarkable, will not prove misleading.

The Copper Blue shaft is being continued down to water level with all speed possible.

pletion of the upraise, will be continued down as a main working shaft.

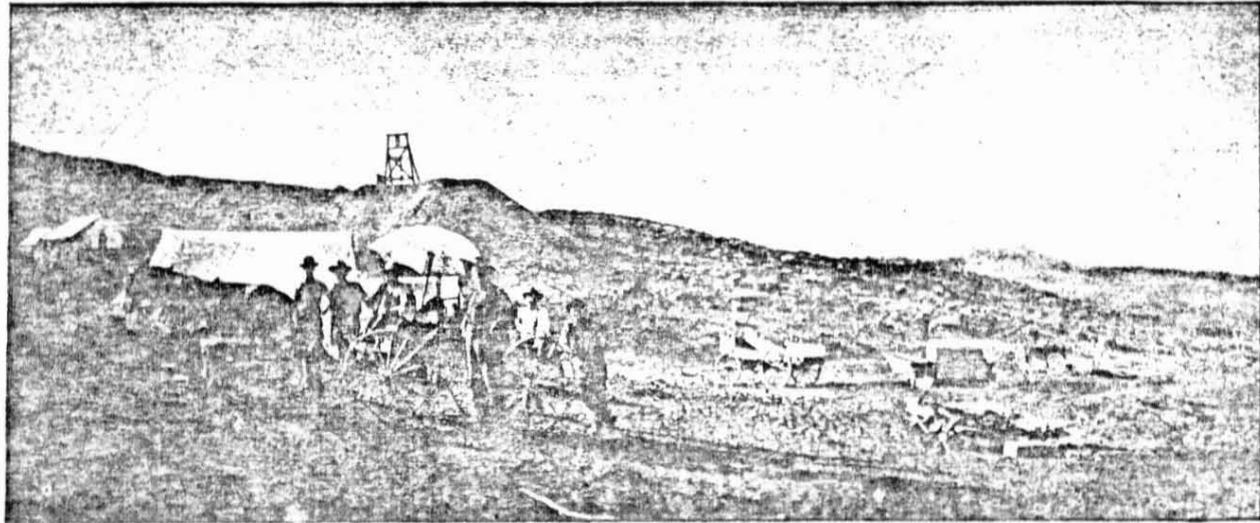
Since breaking into the vein, copper values have been steadily increasing, and it is expected that at any

Mr. John Ritchie, of the Tonopah Mining Company, will be here on Monday next, and will leave almost immediately to take up his new duties as superintendent of the Greenwater Furnace Creek Copper Company. Development is progressing rapidly with three shifts. No timbering has been necessary so far.

The ore body which has held from the surface in the Clark Copper Company's shaft, is dipping out to the

and better, and four feet returned over 5 per cent. Before reaching this ore body, the crosscut had exposed twenty-one feet of leached low grade vein matter. The drift is now being pushed rapidly towards the Clark Copper endline, distant 5200 feet. The crosscut is in the Old Timer claim, where the vein shows a surface width of 150 feet. The greatest width of gossan on this property is 1800 feet at a point about 3500 feet easterly from the crosscut.

The superintendent of the South



LATEST VIEW OF SHAFT AND DUMP OF THE FURNACE CREEK COPPER COMPANY, NOW 430 FEET DEEP

time a high grade ore body will be opened. Development of other properties in the same formation has

east. Simultaneously, a new ore body is coming in from the west. This latter, by latest advices, was as high grade as the one overlying it, and

Furnace Creek Copper Company, Mr. Harry La Clair, has reported that the Bonita vein is improving with every foot of work.

The former ore body is widening.

MINING

JAN 12

Los Angeles Mining Review



ALL OF THE PRINCIPAL Mining Districts OF THE SOUTHWEST REACHED BY THE

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Mr. Jack Salsberry, who has extended mining interests in Greenwater and Tonopah, has just returned to the Nevada camp from a trip to New York city.

Mr. Charles Colcock Jones has returned from a professional visit to eastern San Bernardino county.

Mr. P. L. Griffin, is president; Mr. J. W. Hudson, vice-president, and Mr. J. E. Williamson, secretary of the newly organized Greenwater Ibex Copper and Gold Mining Company, which owns a group of claims in the lower end of the Greenwater district.

OBITUARY.

Dr. Steven Bowers, of Los Angeles, died of paralysis at his home in this city on the morning of January 5, at the age of 74.

Dr. Bowers was a distinguished geologist and a member of many learned societies. He was State Examiner of mines under Governor Gage, and had done much valuable work in the discovery of new fossil forms, several of which bear his name. He was a fellow of the Geological Society of America; corresponding member of the Philadelphia Academy of Sciences, member of the American Cenozoological Society, Academy of Political and Social Science, American Institute of Civics, National Geographical Society, and the Philosophical Society of Great Britain.

At the time of his death Dr. Bowers was president of the Eldorado Consolidated Mines Company, operating in Riverside county, California.

Through Line

To

Searchlight, Nevada,

The Santa Fe is rapidly completing its line from Barnwell to Searchlight and expects to have through trains running by the first of the year.

Searchlight is now reached by train leaving Los Angeles via Santa Fe at 8:00 p. m. daily, arriving at Barnwell at 9:55 next morning, from which point a stage line conveys passengers to Searchlight, arriving there early in the afternoon.

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JAN 12

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Searchlight, Nevada

JAN 26

JAN. 26, 1907

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COPPER GOSSIP

At irregular intervals New York rises to remark that Boston has ceased, or should cease, to be the Copper hub of the Universe. At all of which Boston serenely smiles, and remains silent. New York wants to be the Copper hub of this world and cannot understand why Boston is unwilling to forego the honor. Is not New York several times and more, bigger than Boston! That, therefore, it should intimate its desire to being the Copper hub is, in its opinion, a good and sufficient reason why Boston should let go the copper stock business and turn it over, bag and baggage, to it. New York knows that the business in copper stocks is now the most important branch of the Stock Exchange business, and that it is likely to remain such for an indefinite period. But Boston, on this score, is less amiable than New York could wish. Boston has had a monopoly of the copper stock business since the day, long ago, when it furnished Calumet & Hecla with the means required to open that great mine, and it intends to hold the copper business no matter what New York may think, say, or do. It has, with some few exceptions, brought out all the great copper mines of America; it has since the beginning confessed and recorded its faith in copper, and when Boston puts its stamp of approval upon a new property, one that is to be introduced to the public, it is ducats to dough-nuts that the *debutante* will be received with open arms and that the public will shower its money upon her in exchange for her stock. Boston manifests an indifference to New York's mole-like efforts to wrest from it the copper stock business, confident that New York will not succeed. It knows, moreover, that if the copper stock business were transferred to New York that it would be but a question of time, and of short time, when the business would be degraded from the sound position it has hitherto occupied to that of a riotous, unrestrained, wanton bucket shop; a seething pot filled with every impurity in a constant state of ebullition, conducted by men who want the people's money and who are prepared to give them in exchange for it any old copper stock. No, Boston is going to hold its own as for New York, it may get to a monopoly.

AN UNFORTUNATE LETTER

A letter written by Mr. James Abbott, of Los Angeles, was published last week in the Mining and Scientific Press of San Francisco under the caption, "The Greenwater District." This letter has caused considerable comment, because Mr. Abbott criticized that district severely. We believe that he did so injudiciously certainly by his own statement in the letter and later to his own upon insufficient evidence. He respected but one shallow shaft in the Greenwater district. While not mentioning Mr. Abbott's report showing in that shaft, it shows

...to say that a mining district... to be found in one shaft... feet deep.

On his return to Los Angeles, Mr. Abbott went to Mr. J. Ross Clark, brother and executive of the San Pedro and Salt Lake Railway system, and urged that the railway be extended to Greenwater on the ground that such extension would be justified by the present showing. We know, both from Mr. Abbott and Mr. Clark

To this editor Mr. Abbott said: "If the Clark railway were extended to Greenwater, it would be in the nature of a guarantee that underground showings in that district are such as to insure its success. The Clarks are copper mining people and are closely in touch with the best copper mining engineers in the world. They would not build a road were thorough-goingly justified." What Mr. Clark thinks of the Greenwater district will be found on the opening page of this issue. He has authorized the Mining Review to state that his company will build to Greenwater.

It seemed, in justice to Mr. Abbott, to say that the letter was not intended by him for publication. Its publication was a mistake.

IN STRIKING CONTRAST
 An editorial comment on Mr. Abbott's letter, the Mining and Scientific Press said of Greenwater: "No property has been used so recklessly as irresponsible mine promotions, the most being a two million dollar incorporation, offering shares at half price on a lot of windy talk." This is a large statement, yet a singularly unimpeachable one. Greenwater has been made the excuse for promotions of a most discreditable sort, but no more and no less than any other of the low desert districts that have no equal promise of good mines. Investors do not go, nowadays, to unproductive places for claims. They seek out districts where sensational discoveries are being made and then they explore on ground with little or no surface indications, cheap ground, and so bear to valuable claims as possible. Honey attracts flies no more than rich strikes attract wild speculators. This has been the case with every one of the rich Nevada camps, and it will be the case to the end of time.

The Mining and Scientific Press is in error, not in censuring irresponsible mine promotions but in attempting to discredit the district because of those promotions. There are many who are honestly and earnestly investing their own money and their clients' money into that district, with good promise of success. They are making—and their clients should not be belittled by a mining journal.

The right thing and the courageous thing for legitimate mining papers to do whenever possible, is to name companies that are operating dishonestly. This cannot be done often, because evidence must be conclusive. In lieu

of this, it is possible to give favorable mention to such companies as are operating legitimately and to ignore those that are not. It is altogether unnecessary and unfair to condemn a mining district because swindlers use its name as a bait for ignorant and unwary investors.

In striking contrast to the letter and editorial in last week's Mining and Scientific Press, was the leading article in the January 12 issue of the Engineering and Mining Journal, a careful description of Greenwater and its chief workings by Mr. Edward R. Zalinski, a mining engineer of New York. The author had quite evidently inspected the principal properties. He gave measurements of ore bodies and mentioned particularly that he had seen lumps of chalcocite and malachite, twelve or eighteen inches through. The article is quite comprehensive and should be read extensively.

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(inc.)

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GREENWATER (1)

The announcement was made last week, exclusively in the Mining Review, that the Tonopah and Tidewater Railway Company has definitely determined to build into Greenwater. This is a matter of the first importance from a commercial viewpoint. It is, moreover, very good evidence that the Greenwater district is so far advanced in the matter of ore development that the railway is justified. Mr. Smith is a man of the West, hard headed, and not likely to expend half a million or so of dollars in unwarranted construction.

There has been a disposition in certain quarters, other than that referred to in these columns today, to throw cold water upon this new copper belt of Inyo county—why, we are at a loss to understand. In no case that has come to our notice has adverse comment been based upon even tolerably correct information. That much has been patent from the text.

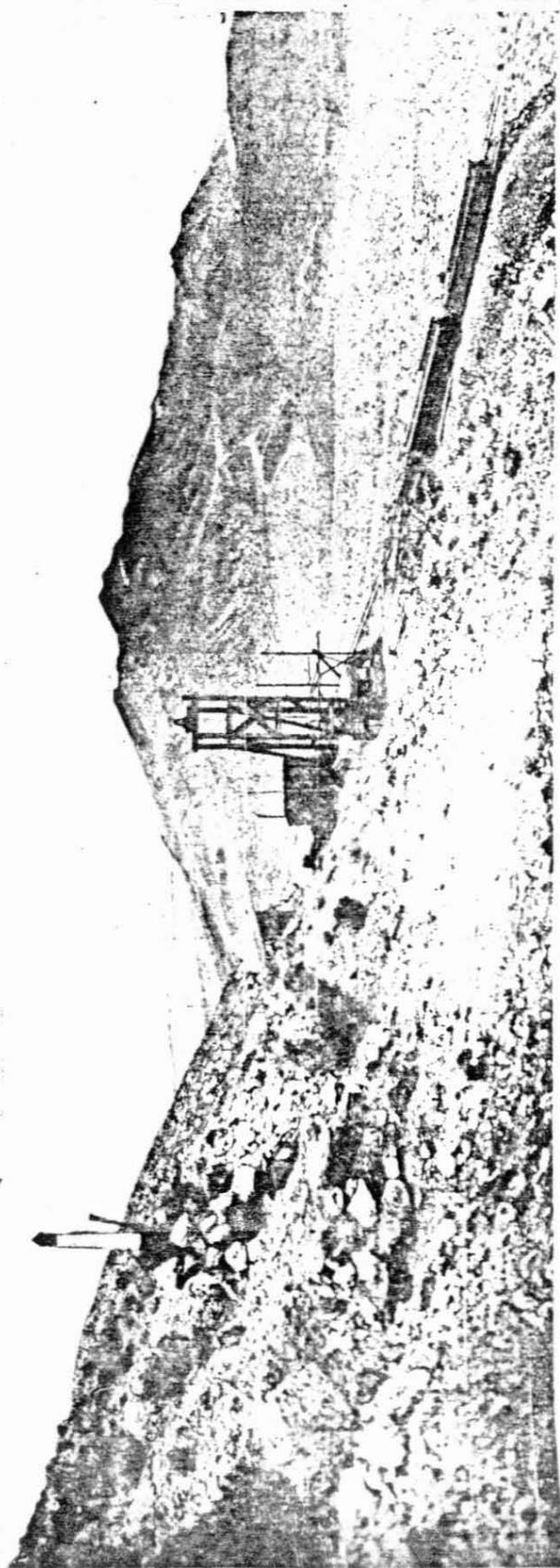
Though extravagant claims have been made for Greenwater by unreliable people, we have found that the men who are actually developing are operating legitimately, and are careful, conservative and definite as to their statements. It is undeniable that many successful mining men, acting on the advice of competent engineers, are investing much money in Greenwater properties, their development and equipment. We can answer directly for several of the more prominent of these, that they are more than satisfied with results so far attained.

Concerning the ore bodies exposed, their dimensions and average value, it is probable that the Mining Review is more accurately informed than any other publication, technical or otherwise. By the courtesy of several mine managements, our news is direct and generally exclusive. We are therefore in a position to state that in several properties high grade carbonate ore bodies ranging from two feet to six feet wide have been exposed, and that there is much to indicate that these will lead to important bodies of sulphide ore. Though no stopes have been started and few drifts have been run, it is stated by careful mine managers that very considerable tonnage of shipping ore are known to exist, and can be available by the time the railroad is completed.

For mining journals to speak in sighting general terms of the Greenwater district in its present stage of development, and of its chances for permanent success, is to lift an eyebrow at the business acumen of Messrs. Patrick Clark, John W. Gates, H. H. Clark, Charles M. Schwab, J. Ross Clark, F. Augustus Heinze and their engineers. It should be needless to point out that such an attitude is rather absurd, and that if any acumen is lacking it is editorial acumen.

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THE GIBCOA SHAFT AT DARWIN

(14) 10-52-1

TO OPEN GREENWATER AND ELY

Salt Lake Route Will Build Branch Lines to Copper Camps. Company Satisfied as to Greenwater's Future. Great Importance to Los Angeles

THE SALT LAKE railway system is to be extended to Greenwater. Mr. J. Ross Clark, vice-president and general manager of the San Pedro and Salt Lake railway, and president of the Las Vegas and Tonopah Railway has authorized this statement in the Mining Review.

For publication Mr. Clark said: "We have kept pretty close tab on the Greenwater district and have determined to build in there. It is a good country. I have seen many copper camps but I can say, after personal inspection, that I have never seen surface showings so favorable or good copper mines. That these indications hold with development, I am reliably informed. We are now satisfied that the district has a future and we are going to build in a branch from the Las Vegas and Tonopah road."

Though this announcement has not been unexpected, the decision is of the first importance. The future of Greenwater means much to Los Angeles, both because a great deal of local money has been invested in mining enterprises of that district and because of the trade opportunities it offers. The two railroads, now assured, will give excellent service. The Salt Lake Route will afford direct access to the custom smelters of Utah; and the Tonopah & Tidewater, through a Santa Fe, will give equally direct access to Arizona smelters. This is a highly desirable situation for any mining copper camp.

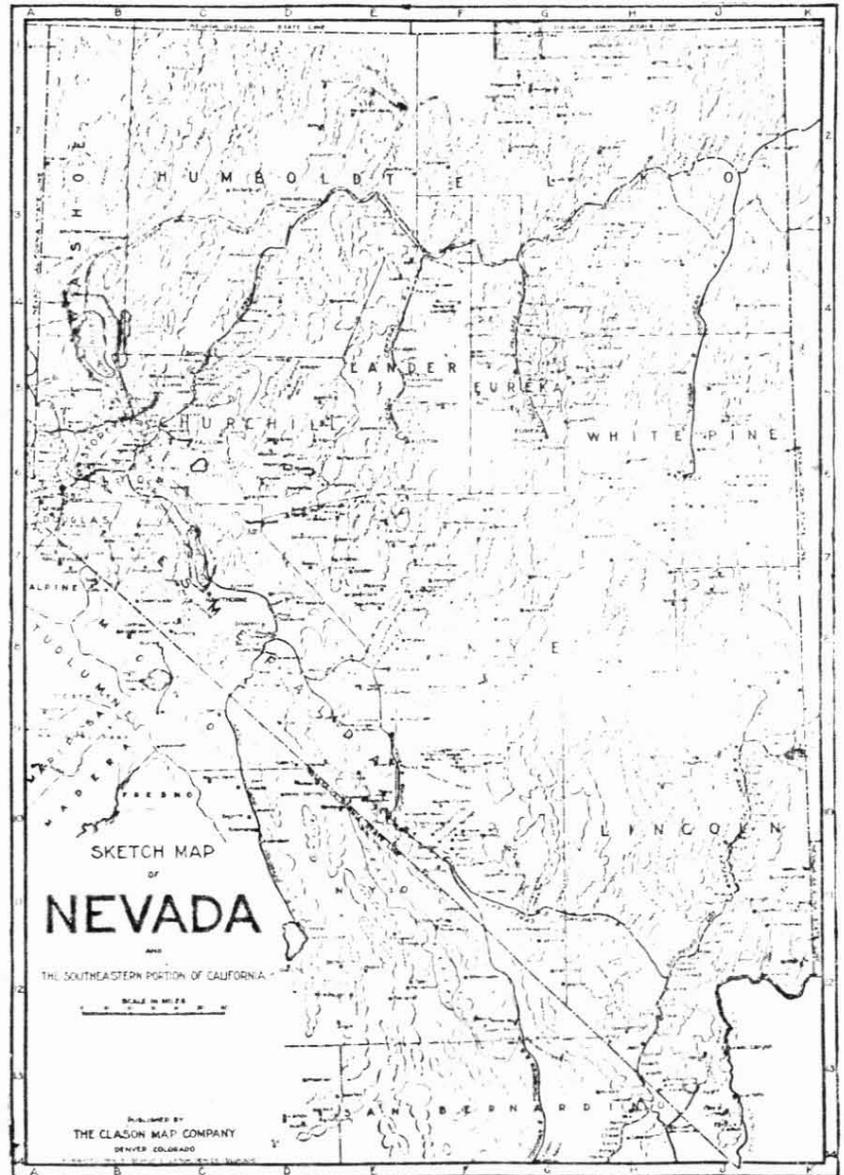
If, with deeper development, the Greenwater district makes good its present promise, at least two large smelting plants will be established, not at the camp but at points where efficient water can be secured. These plants will require large and constant supplies of fuel, which could be best furnished from coke ovens established at San Pedro. Mine timbers will also be needed in great quantity at Greenwater.

The fact that, after a few months only of development, two railway companies have undertaken to build branches to this copper district, involving a total expenditure of probably a million dollars, is very good evidence that the work accomplished is shown payable ore in considerable quantity and that indications point strongly to a continuance of favorable conditions.

Mr. Clark made the almost equally important announcement that his com-

pany will build a railroad into Ely. Whether this will be from Tintic Junction, Utah, or Pioche, Nevada, has not yet been decided. Each route offers advantages from a railway point of view. A line built from Pioche would be the shorter, with practically no engineering difficulties. Moreover, it would bring Ely into closer rail com-

mining possibilities. In any event, Ely will have two railroads—a matter of almost vital importance to several mining companies, now operating. Chief among these is the Giroux Consolidated Mines Company, which has been dependent for supplies upon the Nevada Northern Railway, a Guggenheim property and controlled directly by the Nevada Consolidated and Cumberland-Ely Copper Companies. The requirements of these latter, after completion of the proposed 10,000 ton smelter, will be likely to tax the capacity of the Nevada Northern to its



MAP SHOWING GREENWATER, ELY AND PIOCHE
(Published by courtesy of the Clason Map Company)

munication with Los Angeles than with Salt Lake City. The advantages of this route were pointed out in the January 5 issue of the Mining Review.

A line from Tintic Junction would pass through two mining sections before reaching Ely. There would, however, be several ranges of hills to cross and, it is thought, quite heavy expense. The question will probably be decided by an investigation of the country between Pioche and Ely as to

utmost, involving a possible situation which the new railway from the south will entirely relieve.

Ely will not have much, if any, ore to export as local smelters of very large capacity are already determined upon. It will, however, ship a great amount of copper, either metal or matte, and requirements for fuel, lumber, provisions and general merchandise will be heavy. If the Tintic route is finally decided upon, Los Angeles will be definitely cut out from

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Los Angeles Mining Review

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THE PICACHO DISTRICT.

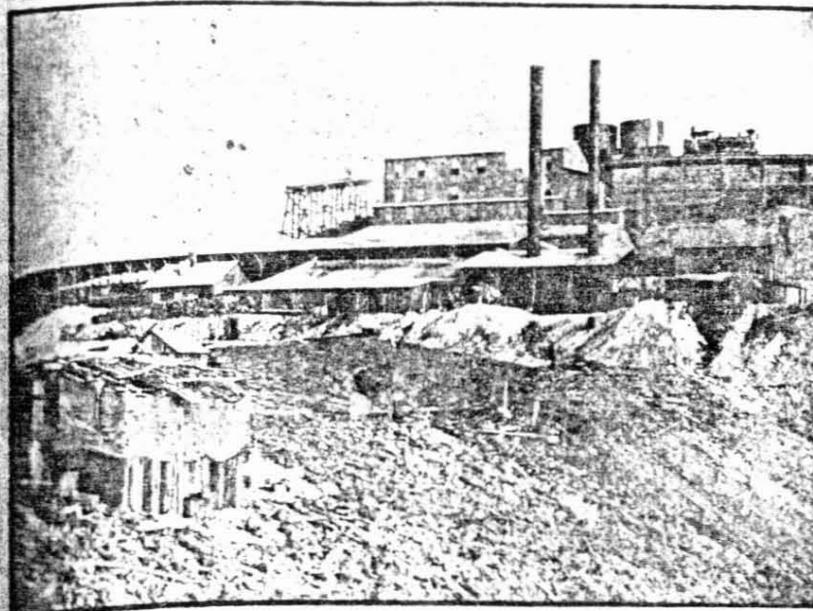
Much Activity in Southeastern San Diego County. Railway Repaired. Mines to Resume Production.

Work is in progress on the properties of the Picacho Basin Mining Company and within a short time the plant again will be producing. The railroad from mill to river is being

re-blasted and otherwise prepared for an early resumption of traffic; the milling plant is being overhauled and put in working order; the mines have been un-watered and development work is proceeding favorably. Drifting is in progress on the 200-foot level and a large tonnage of ore will have been blocked out by the time the company is ready for active mining operations. Thirty men are employed.

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JAN 26



MILL AT THE CALIFORNIA KING MINE, PICACHO (CALIFORNIA)

1-26-07
(7)

THE NIPPENO MINE, NEVADA

Condensed Geological Report. Considerable Development Shows Good Ore. Company to Build Ten Stamp Mill

IN SOUTHERN LINCOLN county, Nevada, a few miles west of Searchlight, the Nippeno Mining Company, of Los Angeles, has been developing, during the past two years, one of the most promising gold properties of that attractive district. From a report recently made by Professor James Stirling to the company the following interesting facts relative to the property are gleaned.

The principal group of eleven claims is situated at an altitude of 4500 to 5000 feet above sea level on the western slope of Mount Crossman. Another group of claims is situated nearly 1000 feet higher up the slope of the mountain. On these latter claims several springs of good water occur which are incidentally being developed.

It is a region of metamorphic rocks—granitoid gneisses and schists, predominating. These rocks are intersected by numerous dikes of acid type—chiefly aplite and its more silicious type, Alaskite. Other dikes of more basic character occur, but are found much altered, which has made their determination somewhat difficult, but their general appearance, and a study of numerous slides, under the microscope indicate that they may be safely referred to diabase.

The auriferous quartz veins range from six inches to two feet in width, and their development has resulted in the discovery of a number of pockets of rich ore, beside more uniform value in gold. The veins accompany the dikes, or occur in close proximity to them. Occasionally a lens-like mass of quartz (vein) is found on both sides of a dike, extending for some distance. In other cases the vein is found on one side of the dike only. The dikes are older than the veins, which occupy fissures resulting from rock movements, occurring after the intrusion of the diabase. Cross veins also occur. Free pyrite is visible without the aid of the microscope. A siliceous lens is not uncommonly found and in many instances it appears to occupy cellular spaces resulting from the oxidation of pyrite,

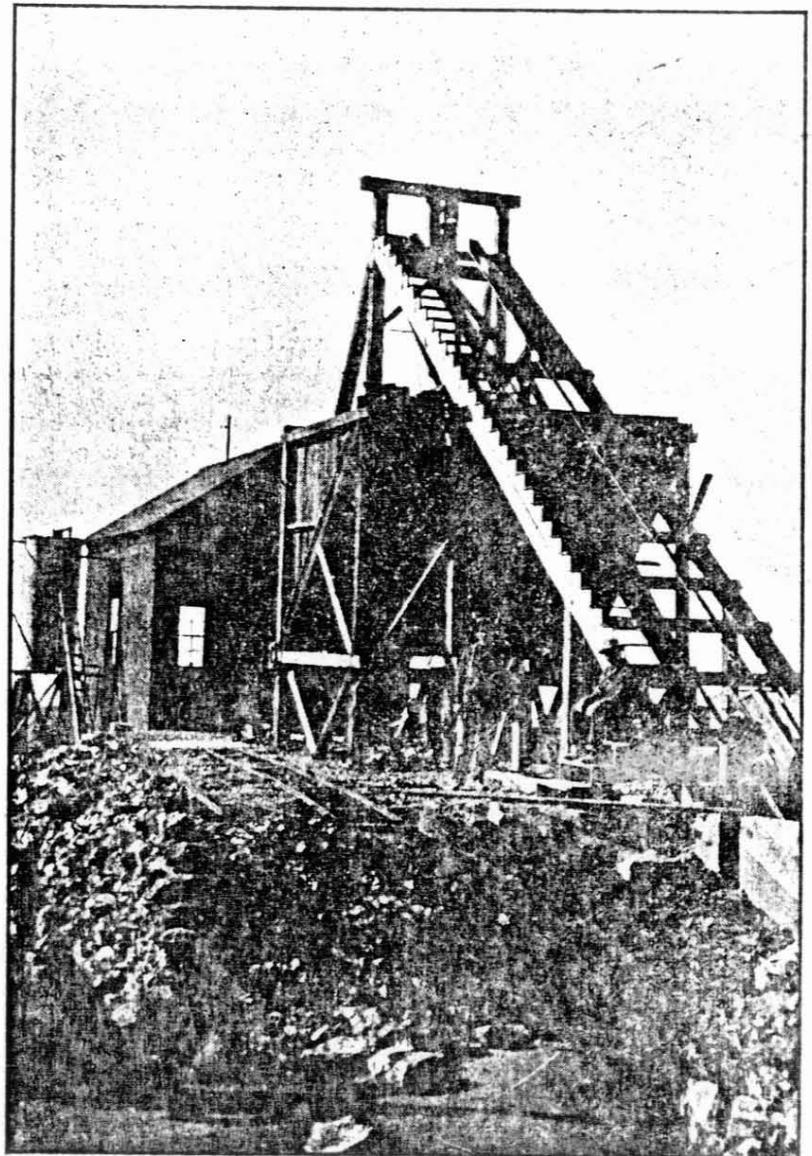
which may be taken as a safe indication that the pyrite, when found below the zone of oxidation, is normally auriferous.

The development of the mines consists of a number of shafts from which levels have been turned off, and hundreds of feet of drifting and cross-cutting done, developing numerous shoots of payable gold ore. In places small amounts of galena and copper carbonate are observed, which has

been found usually to indicate a higher grade of ore than is generally found. The richest gold is found in the fracture planes of the veins, in pockets.

The property is so extensive in area that its possibilities have not been wholly determined, as yet, but it is known that there are several veins in addition to those upon which development work has been done, which promise from superficial development to open up as well as those already explored to the depth of several hundred feet.

Professor Stirling ventures the opinion that the zone of oxidation will be found to extend to a depth



2-23-07 (7) NIPPENO MINING COMPANY'S HOIST, CRESCENT, NEVADA

MAR 2 1907.

Los Angeles Mining Review ^(Times) MARCH 2, 1907 (6)

SILVER LEAD ORE AT CIMA

Bonanza Opened by Denver Company. Shipments Going to Salt Lake. Other Prospects Show Great Promise

A STRIKE OF importance is reported as having been made this week in the main shaft of the Death Valley Gold Mining and Milling company three miles southeast of Cima, San Bernardino county, California.

At 135 feet depth on the incline, high grade silver lead ore was broken into. This filled the shaft and a letter from the superintendent states that subsequent work towards the foot wall has shown the ore body to be eight feet wide. The ore carries much ga-

lena and free silver. No assays have, as yet, been heard from.

From near the surface this shaft has been in ore averaging about \$40 to the ton. Six carloads, taken from the shaft and a short drift, have been shipped to Salt Lake City. A seventh car is now being loaded.

On the extension of the Death Valley vein, in the Sterling Silver Claim, the Greenwater Consolidated Mining Company has struck high-grade silver-lead ore in two shafts, 150 feet apart. One of these is a prospect hole

merely. The other is now thirty-two feet deep and is to be sunk vertically to water level. The vein as exposed is forty inches wide.

The Arcalvada Mining Company of Denver holds twenty-six claims in the same section. Recent prospecting has uncovered two veins reported to carry silver lead ore of shipping grade. Extensive development is planned.

A new camp is rapidly growing up at this place, which as been named Camp Dawson. Forty-five men are now employed. The three companies operating are energetically managed. There is said to be good promise of an important shipping district.

Gold dredges are operating profitably on ground that yields only eight cents a cubic yard.



CROPPING IN THE STEEL CAMP DA



HAULING MACHINERY TO CAMP DAWSON NEAR CIMA



CAMP DAWSON, SAN BERNARDINO COUNTY

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MAR 2, 07

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FROM EASTERN SAN BERNARDINO

3-2-07(16)

Mining News from Vontrigger, the New Gold and Copper Camp South of New York Mountains

(SPECIAL CORRESPONDENCE OF THE MINING REVIEW)

Work on the Highbinder group is progressing satisfactorily. The new shaft is down 75 feet and crosscuts are being run to the vein. Meanwhile a shipment of high-grade ore has been taken from the original workings and the management is highly pleased with the condition of the property.

A sale of the McGaugh group of ten claims, northeast of the California Gold & Copper Company's property and on the strike of that company's veins, is reported at \$60,000. This group has an excellent surface showing and gives promise of becoming a large and valuable property with proper development.

Messrs. McCarthy, Fritelle and Pierce are getting excellent showings from the Copper Bonanza group and also from the Big Hill group, both of which have prominent croppings and well-defined veins for nearly a mile. Your Correspondent visited these properties recently and believes that with limited development both groups will improve.

Messrs. Steidel and Burton have located several water-bearing claims a short distance west from Vontrigger spring and at twenty feet have developed a flow of water.

The X-Ray Company is pushing work on the Red Cloud claim and has a vertical shaft down 50 feet. The entire shaft is in vein material and picked samples show 3 per cent. copper with some silver. The management proposes to sink to 75 feet and cross-cut the vein which appears on the surface to be 50 feet wide.

Mr. A. H. Cram, largest stockholder and superintendent of the California Gold & Copper Company, recently closed deals securing valuable water-bearing veins in the vicinity of Hackberry springs. Some water had al-

ready been developed by the former owner, Mr. Greening, and the new owner is running tunnels to increase the flow. The water will be piped to reservoirs to be built on the property preparatory to installing reduction works. The 300-foot level has been reached in the main shaft; a station will be cut and sinking resumed. Scarcely a bucket of rock has been hoisted from the last 100 feet that has not shown sulphides and yet the largest ore bodies (as indicated by surface croppings) have not been reached. All the workings show good values. In the way of surface improvements, a large barn has been recently built and a commodious store building is nearing completion. A good sized stock of general merchandise will be carried.

Twenty years ago the sturdy old German, Von Trigger, discovered the spring that bears his name, erected a stone cabin whose walls still stand and built a rude forge on the croppings of this copper butte, which is situated in the great copper belt of eastern San Bernardino county, and which promises soon to take rank among producers of the red metal.

A. K. WRIGHT.

Vontrigger, Cal.

MAR 2 1907

MARCH 2, 1907 (16)

3-207

Directory of M

Company.	Capitalization.	Shares Outstanding
Amalgamated	\$155,000,000	1,538,880
Anaconda	30,000,000	1,200,000
Arizona Commercial	2,500,000	90,000
Batopilas	9,000,000	450,000
Balaklala	1,000,000	400,000
Bingham Central	2,000,000	400,000
Bingham Consolidated	10,000,000	150,000
Bingham Copper Boy	1,500,000	1,282,471
Black Mountain	2,000,000	400,000
Boston Consolidated	£ 625,000	500,000
Boston & Montana	\$3,750,000	150,000
Bully Hill	2,500,000	100,000
Butte Coalition	15,000,000	1,000,000
Butte Copper Exp.	500,000	100,000
Butte & London	5,000,000	1,000,000
Cal. & Arizona	2,500,000	200,000
Cal. & Bisbee	400,000	15,000
Cal. & Hecla	2,500,000	100,000
California Hills	1,000,000	650,000
Cananea Central	10,000,000	600,000
Choix Consolidated	5,000,000	3,006,100
Cieneguilla Copper	10,000,000	670,000
Clark Copper	1,250,000	1,100,000
Copper Queen	2,000,000	200,000
Cumberland Ely	5,000,000	720,000
Daly-West	3,600,000	180,000
Davis-Daly Estates		670,000
Detroit	1,000,000	40,000
El Dorado Can. M. & M. Co.	1,000,000	620,000
Ely Central	12,000,000	1,020,000
Furnace Creek	1,250,000	1,250,000
Furnace Valley	1,250,000	1,132,000
Giroux Con.	5,000,000	930,000
Gold Coin	1,000,000	600,000
Golden Cons. Mines	5,000,000	3,200,000
Greene Con.	10,000,000	1,000,000
Greene-Cananea	50,000,000	2,500,000
Hecla Con. Mines Co.	3,000,000	265,000
Helvetia	5,000,000	125,000
Johnnie Cons. Mines	3,000,000	1,905,000
Kempland Copper	6,250,000	1,050,000
Lake Sup. & Arizona	200,000	83,000
Mitchell Min.	5,000,000	463,600
Newhouse M. & S.		600,000
Nevada Con.	6,500,000	1,300,000
Nevada Douglas	1,000,000	650,000
Nevada Searchlight	1,000,000	120,000
Nevada Utah	15,000,000	750,000
Old Dominion	8,750,000	280,521
Searchlight M. & M. Co.	1,000,000	115,000
Searchlight Parallel	800,000	635,000
Searchlight Western	1,000,000	125,000
Shannon	3,000,000	300,000
South Furnace Cr.	1,250,000	752,000
Superior & Pittsburg	20,000,000	1,500,000
Troy-Manhattan	3,000,000	250,000
Trinity	6,000,000	240,000
United Verde	3,000,000	299,927
Utah Con.	1,500,000	300,000

MAR 9
 MAR 9
 MARCH 9, 1907 (p. 5) (partial) MAR 9 1907

TRAVELING ON THE DESERT

Some of the Perils to Which Prospectors are Exposed Who Venture Into the Barren Wastes of the Southwest

NO ONE SHOULD venture on desert without a companion, and it is perilous to go without a guide familiar with the landmarks, and particularly with the location of the springs. Those unfamiliar with the desert little know how easily one may pass within a few yards of a living spring of pure water and perish for lack of it.

The accompanying illustration is that of Cottonwood Spring, situated about twenty-three miles northeast of Walter's station on the Southern Pacific railroad, in the heart of the Colorado desert, and on the road leading to the Eagle Mountain mining district.

The traveler leaves the railroad at Walter's station and driving slowly through heavy sand, steadily ascends as the first range of hills is approached. At a distance of about six miles from the station the ancient shore line of the Salton basin is passed. It presents all the characteristic features of a lake shore. Here is found a high wall of boulders piled up like a breakwater. It is what is known as a barrier reef and was formed by the accumulation of thousands of boulders which were washed down from the canyon just beyond, the waves of the old lake beating them back until they became a reef behind which was formed a lagoon of quiet water in which the fine sand and silt settled making a shallow water pond. All this is as plainly to be seen as though the water of the lake had receded, but a month ago, instead of many thousands of years since.

Entering the Box Canyon the grade becomes steeper, and the sand and gravel more coarse, rendering wheeling tedious and difficult. Occasional stops must be made that the horses may rest. When passing through the eight tiresome miles of this canyon keep an eye upon the northern sky, for at times cloud-bursts occur in this region and a single glance at the "wash" of the canyon suggests the danger that menaces the traveler at such a time. Never make camp in the bottom of the canyon. Get on an elevation, no matter how promising the weather.

When nearly two-thirds through the canyon, one may observe on the right a monument of rocks piled on the summit of a projecting spur of sandstone, and beyond it a trail winding its sinuous course over the adjacent

hill. Only the initiated know that this trail leads to a small spring. Following the trail about 3000 feet, the traveler comes unexpectedly upon a spring dug in the sandstone, at the base of a vertical cliff. It might easily be passed unobserved. Near at hand stands a lone palm tree and some grass can be had in the gulch for stock.

Returning to the main road, the well recently dug, is found a short distance up the canyon. The Box Canyon is finally left behind, and the way crosses a broad valley diagonally toward the Cottonwood hills—a rugged range of granite with scarcely a sign of vegetation visible.

To the right rise high distant volcanic peaks and ridges. The valley slopes from the Cottonwood hills toward the sandstone range through which the road passed. Approaching the Cottonwood hills, no opening presents itself until within less than a mile of the base of the mountains. Then a pass slowly swings into sight, and into this the journeyer drives. The road may be plain or it may be wholly obliterated for considerable distances by the rushing torrents of recent cloud bursts. The pass through the Cottonwood hills is wider than that of the Box Canyon, and many side gulches entering the main pass confuse the traveler. Here a guide is necessary or several hours may be lost in retracing steps taken into the wrong gulches.

The pass through the Cottonwood hills is about six miles long. Reaching the northerly side of the range it

is observed that the drainage of the country in that vicinity does not pass around the granite hills, but has cut directly through them, and crossing the valley to the southward, in like manner cuts straight across the sandstone range instead of around it. This strange fact can only be explained on the theory of what is known as "super-induced erosion." That is, the country evidently was at one time completely covered with a later formation—probably Tertiary sandstones and shales and perhaps also volcanic ash. Streams cut their channels in this soft material, eventually wearing down into the underlying crystalline rocks, the soft sands and shales having since been almost wholly removed by erosion.

When the north side of the Cottonwood hills is reached there is no sign of water anywhere, but the guide will turn around a spur of the mountains to the right and driving nearly a mile, will re-enter the granite hills, when suddenly turning the corner of a jutting mass of rock the traveler, without any indication of the proximity of such a place, is driven into the beautiful little cove here illustrated, the Cottonwood spring. Great cottonwood trees grow here, but their tops do not reach the height of the granite cliffs which rise on all sides.

Many years ago some industrious and hardy prospector erected an arastra in this secluded little valley to crush the rich ore from some desert bonanza.

Such an oasis is one of the pleasant surprises of a trip on the desert. They are far from numerous, and few of the springs are as attractive as this one. Many of the so-called springs are mere mud holes from which seeps a small amount of water, but they will save life and for that reason are valuable.

Beyond Cottonwood spring for many miles there is no water on the surface, other than that found in tanks or holes washed in the rocks of canyons, and this after a time becomes stagnant and unfit for use. Several years ago a pipe line was laid from Cottonwood spring to the Eagle Mountain mines, about fifteen miles distant. This spring has become a noted rendezvous for desert prospectors, who with their burros and outfit spend

months in search of the desert.

In recent years have been placed on in the desert region and dispoint and also springs.

SHIPPING FROM GREENWATER

Furnace Creek Mine Sends Out High Grade Ore. Development Progressing Well in Other Properties

FURNACE CREEK Copper Company, according to advices received at the Los Angeles this week, began shipping to Salt Lake City on Monday. Arrangements have been made by freight wagons, returning to Panguitch, will henceforth be

The Copper Blue shaft of the Furnace Creek Copper Company is now down 540 feet. A station was cut at the 500-foot level, whence cross-cuts will later be run to the Copper Blue and Copper Prince veins. It is expected that the latter vein will be cut by the shaft at between 600 and 700 feet vertical depth.

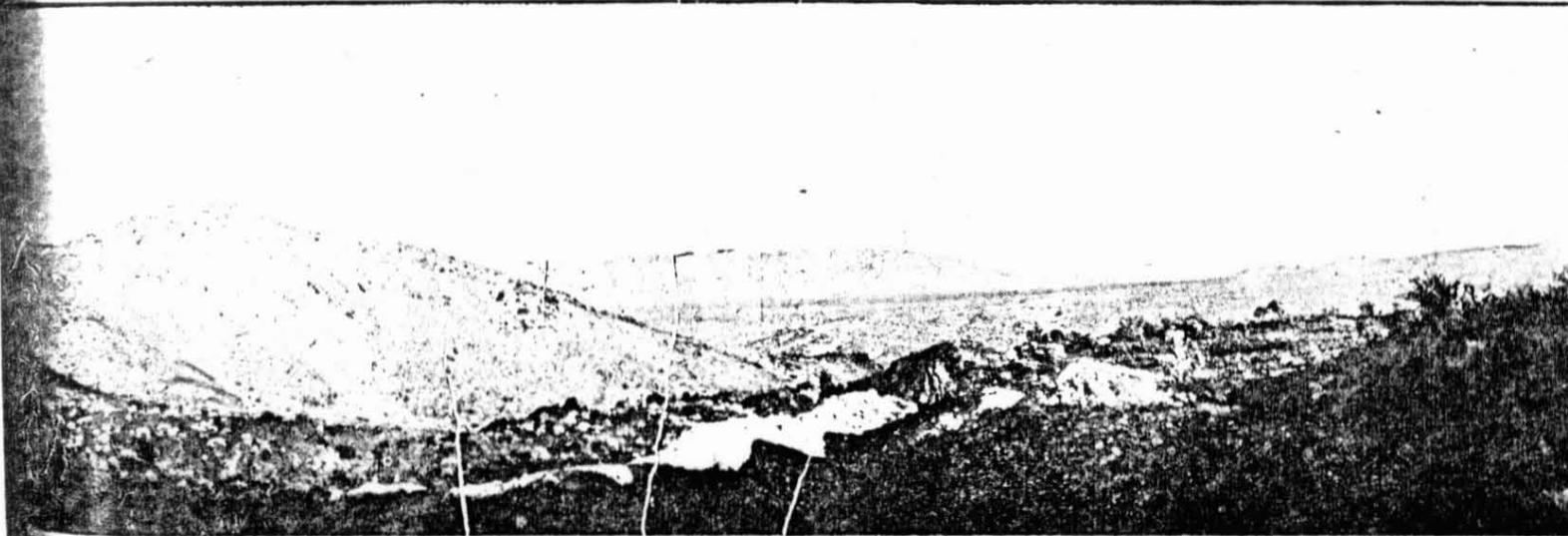
A cross-cut tunnel has been started on the Clark Copper property, and by advices received on Tuesday was in seventy-five feet. This is approaching the vein from the hanging wall side, and should cut it at a depth of 220 feet with 275 feet of driving. Work has been stopped on the Clark Copper shaft.

The Greenwater Furnace Creek Copper Company's tunnel is now in over 250 feet. It is expected that the vein will be reached within the next fifty feet of driving. A shaft, started re-

cently on the hanging wall side, is down seventy-five feet, having passed through porphyry country rock and iron capping. It is now in vein matter, showing streaks of carbonate ore.

The Kempland drift is being driven towards the Clark Copper end line. A new hoist has been installed at the Furnace Valley shaft.

The mean height of all land is estimated at a little over 2,000 feet, and the mean depth of the ocean at 12,000 to 15,000 feet.



DEEP TRENCHING ON THE GREENWATER FURNACE CREEK MINES

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Los Angeles Mining Review

3-30-07(8)

NEW MILLING PLANT AT CIMA

Development has Exposed Much Ore in Desert Silver Mine. Production to Begin Soon. Activity in New York Mountains

CONSIDERABLE attention has been called lately to the silver, lead and copper district near Cima, a station on the Salt Lake Route in eastern San Bernardino county, California. Ore of shipping grade has been discovered in this region and so far developed that shipments of profitable ore are now going forward.

On the west slope of the New York mountains near Cima, the Garavanza Mining and Milling Company is now building a milling and reduction plant of 100 tons daily capacity, after having exposed a large amount of commercial ore by some 1,200 feet of underground workings.

The formation of the country is massive granite, crossed by a series of quartz-porphry dikes, which cut the granite for miles in an easterly and westerly direction. These dykes are heavily mineralized, in places for their entire width of from three to sixty feet, in shoots ranging over 200 feet in length, which occur frequently. The outcroppings show silver and copper (chlorides and carbonates) assaying from \$5 to \$30 to the ton. Below the

surface, sulphides of iron, copper, lead and zinc containing silver and gold are encountered. The ores have increased in value with depth. Development of the Garavanza property has been chiefly by two adit tunnels, the upper one 300 feet long, the lower 800 feet.

A raise of 100 feet from the lower tunnel reaches the surface at the portal of the upper tunnel. This raise will now be equipped with hoisting machinery and sunk as a main working shaft to considerable depth. All the workings have so far been in ore and it is estimated that some 200,000 tons carrying good values in silver and some lead, copper and gold, are in sight.

The new plant consists of two 50-ton ore bins, one Blake crusher, two automatic ore-feeders; three National ore pulverizers, three feet by eight feet trommels, two Standard concentrating tables, all installed for gravity operation, and to be driven by two 25-horsepower gas engines, units running in tandem.

The ores will be concentrated sufficiently to throw off the gangue and

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will be treated by the hypo-sulphite leaching process in four 10-ton tanks, precipitation in separate tanks for gold, silver, copper and lead, being a part of the working scheme, and for which ample tankage is provided. The plant is so arranged that production may be doubled at a minimum cost. The company will be in the market for custom ores. A complete assay and testing plant has been installed. At the shaft head will be installed a cable tramway 150 feet long connecting with the ore bins. This is an apparatus for hoisting, conveying and dumping the ores automatically. A new cable-way attachment manufactured in Joplin, Missouri, and used extensively in the zinc fields of that district. An automatic traveler which runs on a heavy standing cableway is arranged that the buckets can be lowered to any depth, loaded up to 10 tons or more, hoisted, conveyed and dumped automatically, and returned to the bottom of the shaft—all controlled by the hoist engineer alone. The company is working fifteen men and expects to double the force in the near future. Although this is the first reduction plant to be installed, much successful development of payable ore bodies has been accomplished during the past year. There is every evidence that an



PORTAL OF THE GARAVANZA MINING COMPANY'S MAIN TUNNEL.

important mining district is growing up here.

E. L. KNAPP.

Cima, March 26, 1907.

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APRIL 6 1907 (p. 8)

MINES NEAR THE STATE LINE

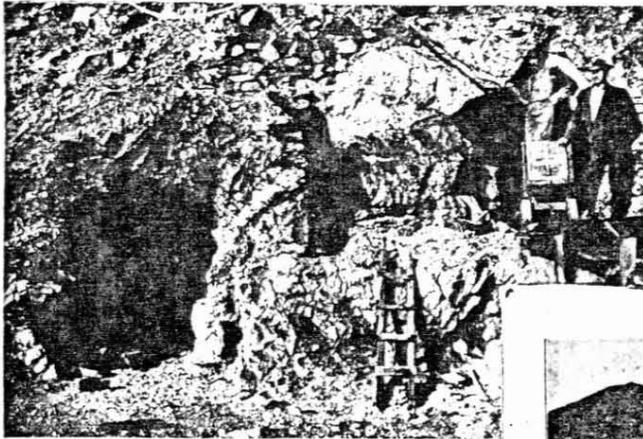
Rejuvenation of Old Camps in Mono and Inyo Counties. Encouraging Results of Recent Developments in that Region

IN NORTHEASTERN Inyo and southeastern Mono county, California, there is at present more activity in mining than in many years. Old districts have been rejuvenated and some of the old mines which were worked years ago until profit was no longer possible because of the exhaustion of high-grade surface ores,

Michigan men, was closed down several years ago and is involved in litigation.

The Black canyon mine controlled by M. T. Stovall, is opening up in a promising way, and is likely soon to attract favorable attention.

The Poleta mine which has already yielded some remarkable ore is being



4-6-07 (4/8)

ENTRANCE TO MONO MINE

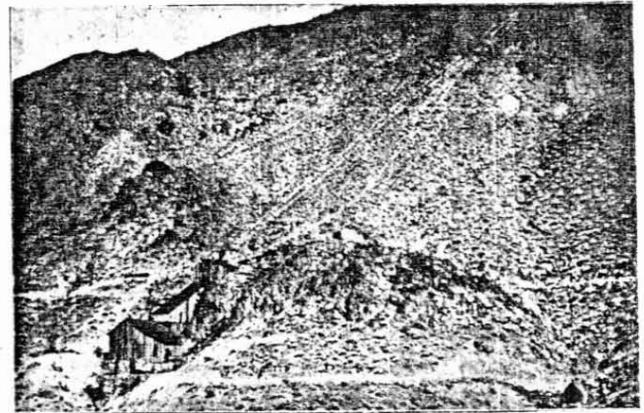
are now found to have come again within the range of profitable operation owing to the decreased cost of transportation, improved mining methods and the great advancement made in metallurgical knowledge during the past three decades, and in the introduction of a better class of machinery generally in both mines and mills.

At the old Cerro Gordo mine, a former noted producer of lead and silver, prospecting is in progress in search of new ore bodies. The smelter at Keeler has been modernized and is ready to blow in. It will treat custom ores, affording a convenient market for small mines, and for those in the early stage of development.

The old Reward mine, a gold property of acknowledged merit, owned by

developed. It is equipped with a ten-stamp mill.

The once noted Southern Belle mine, now owned by San Francisco people, is again operating. It is equipped with a pipe line 13,000 feet long, and electric power. It has an inclined shaft 400 feet deep with levels at every 100 feet. A shoot of ore twenty-seven feet wide, some of which is high-grade, has been opened. The formation is



MILL OF MONO MINING CO.

APR 20 1907

Los Angeles Mining Review

APRIL 20, 1907 (p. 7)

RICH GOLD STRIKE IN SLATE RANGE

Marvelously Rich Gold Rock Brought to Los Angeles from San Bernardino County, North of Barstow

ABOUT half way between Sandy and Ivanpah, in eastern San Bernardino county, Milford group is being operated for the management of C. Clark, who is installing a gasoline hoist. The group is a producer of lead-silver ore and is to be shipped by mule trains to the railroad.

R. Newberry of Los Angeles, has bought the Tam O'Shanter mine, and is driving a tunnel under a 100-foot contract, a good body of ore has been encountered, that assays well in gold and silver.

William Dougherty is opening a new mining prospect. His ore runs well in gold, silver and copper. The owner is preparing to ship ore as soon as arrangements can be made.

Copperfield is the name of the new copper camp in eastern Lizo county, four miles northeast of Horseburg. It is said that copper carbonate is seen in rocks almost anywhere throughout a district about five square miles. Some of the ore is rich in elements of 30 per cent. ore have been made years ago. A few miles distant, Kingston, a new town, is a lively rival of Copperfield for the favor. All who have seen the district predict a prosperous future for it.

The country is full of prospectors who arrive in autos, on horseback and on foot every day, and some good discoveries and developments are expected this summer.

In the early days of mining in the Ivanpah mountains very rich copper-silver ore was discovered several miles southeast of Clark mountain, near the south end of the range. Some of this ore was shipped with large profit, selected ore running over \$2,000 per ton. A custom mill was built and a large amount of ore treated, but the extraction was comparatively small owing to lack of knowledge of metallurgy and to machinery not wholly suited to the ore of the district. With the exhaustion of the rich surface ores of the range that had been discovered, mining practically ceased, until within the past year.

The Copper World is one of the famous mines of the early days, when considerable high-grade ore was shipped. This mine has again been reopened and is shipping. The management of the Copper World has offered a premium to freighters, the one hauling the largest amount of ore to the railroad within a stated time to receive a handsome bonus, in addition to the contract price.

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April 20, 1907 (7)

* *Kingston, Ariz.*

APR 27 1907

Los Angeles Mining Review

APRIL 27, 1907 (p. 6)

APRIL 27, 07 (C)

RICH GOLD STRIKE IN SLATE RANGE

Marvelously Rich Gold Rock Brought to Los Angeles from San Bernardino County, North of Barstow

JUDGING from the richness of the gold-bearing quartz exhibited in the office of the Mining Review, by prospectors from the Slate Range, the past week, San Bernardino is likely to become the scene of such activity as characterized the upbuilding of Goldfield, Nevada.

For six years past John B. Early has been seeking for a vein of rich

developed. The four feet of ore good rock, carrying galena and gold

The Slate Range is a northwest-southeast range of mountains lying east of Searles Borax Lake, and about seventy-five miles north of Barstow

The frequency with which rich gold strikes are reported from San Bernardino county leads to the belief that within a short time this county will



AMITY CAMP, SLATE RANGE, SAN BERNARDINO COUNTY, CALIFORNIA

gold ore from which a piece of float had become detached. This particular piece is more than half gold by weight. Mr. Early interested with him in his quest Frank W. Teagarden and Carroll V. Parrish. Together these men have searched and worked industriously to find the rich vein, and apparently their efforts have been rewarded at last, for a few days ago, I W. Brown, a miner in their employ traced float for more than a mile and discovered a vein four feet wide—a contact vein, between slate and quartz-porphry. On one side is a strip of crushed quartz which in places is from 25 to 50 per cent. gold. Such rock is seldom seen and rarely in large quantity anywhere, but these men have the pay streak and the rock is famously rich. More than this they do not know, as the find is as yet un-

add very materially to the output of gold in California.

A new mining district has been organized in Slate Range and a code of regulations formulated to protect those owning claims there, and these rules will be strictly enforced.

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MAY 4

ORGANIZE UBEHEBE DISTRICT.

Section Secedes From Big Pine and
Forms New District By Itself.
Reasons For Change.

(Special Correspondence).—Ubehebe mining operators have organized and, because of local conditions which make the enforcement of certain rules obtaining in the Big Pine Mining district inadvisable, have decided to form a district of their own. The chief reason for the secession was the ninety day limit for location work. This will be lengthened to 180 days because, as it is explained, the excessive summer heat frequently makes a ninety-day requirement a serious hardship. Apart from this the Nevada State mining laws have been adopted as local regulations. At a meeting held a few days ago a committee was appointed to draft a code of rules which will be submitted at a later meeting, to be held June 1. Practically every operator in the district is supporting the new organization. District boundaries have been established as follows: Commencing at Waucoba Peak, thence southerly along the summit of the Inyo range past Cerro Gordo Peak to Hunter Ranch trail, thence along Cottonwood creek to Lost Valley, thence northerly along the trail to Surveyors' Wells, thence northeasterly along Death Valley dry wash to northeast corner township ten south, range forty-one east, thence westerly on north line township ten to Waucoba Peak. The territory has heretofore been part of Big Pine district.

W. W. Watterson of Bishop is temporary chairman of the organization and George H. Senter, temporary secretary.

Keeler, Cal., April 29. 5-4-07 (17)

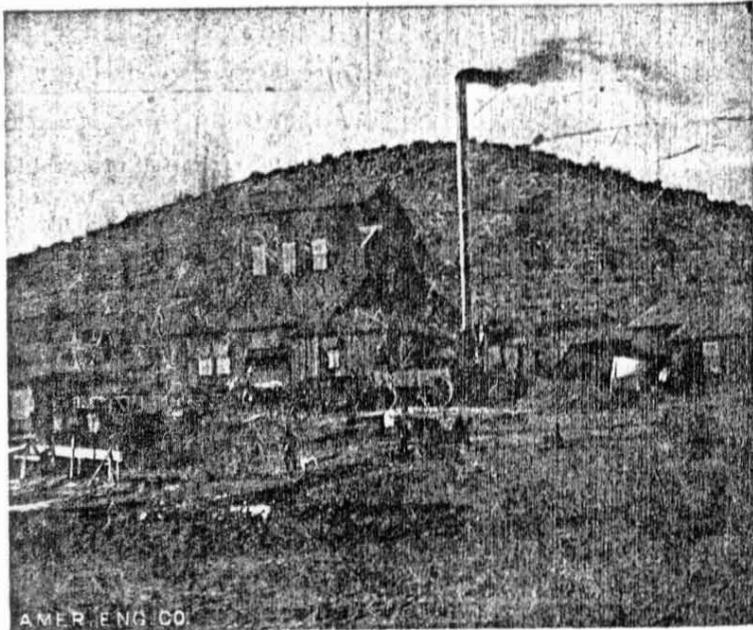
MAY 25, 1907 (5)

STRINGE VEINS IN KERN COUNTY

Mines of the Stringer District Near Randsburg the in the Aggregate Have Produced a Large Amount of Gold

(WRITTEN FOR THE MINING REVIEW)

FROM ONE to three miles south and southwest of Randsburg, in Kern county, California, is a mining area known as the Stringer district. It has been given this name presumably on account of the lack of persistence in its quartz veins. These occur as a series of disconnected lenses and stringers, scattered along a generally east-west direction. These valleys or gulches indicating the troughs of the synclines. The exceptions to this are found certain small ragged gorges, ten thirty feet deep, which are the result of the erosion of the stretched and fractured rocks along the crests some of the anticlines. The formation is chiefly hornblende schist. Occasionally a quartz-porphyry or other acid dike is seen, a few diorite intrusions. The lenses, veins and stringers occur the schists, following their strike and dip approximately. In most of the veins there is neither gouge nor "go," the quartz being frozen to the schist. What these veins lack in continuity and other desirable qualities is compensated for, in some degree, by the richness of the ore, most of which has for years been hauled to custom mills, situated



RED DOG MILL, JOHANNESBURG, CALIFORNIA

stringer leads occur throughout an area a mile or more wide and three miles long, disappearing eastward beneath the desert sand in the neighboring valley.

The topography of the district is not rough. The hills show evidence of erosion, but how much it is impossible to tell. The hills are rather of the low rolling type and a brief inspection tends to the belief that the ridges are, for most part, the result of a succession of sharp anticlinal folds, the

phyry or other acid dike is seen, a few diorite intrusions. The lenses, veins and stringers occur the schists, following their strike and dip approximately. In most of the veins there is neither gouge nor "go," the quartz being frozen to the schist. What these veins lack in continuity and other desirable qualities is compensated for, in some degree, by the richness of the ore, most of which has for years been hauled to custom mills, situated

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Los Angeles Mining Review

Johannesburg, Randsburg and at even more distant points.

There is neither timber nor water in the district, and the mines are worked in a small way by owners or leasers. In the aggregate, these little mines have produced a large amount of gold and incidentally, considerable profit to the operators, although results in a district of this character are necessarily often disappointing. The miners have reduced prospecting to a science and for most part their mining methods are as good as could be expected

under existing conditions, as no one cares to undertake the expense of large installations to work mines so erratic and of such uncertain results.

The head frames are light, easily and cheaply built, but good enough for the purpose. Gasoline or other explosive type of engines are used for power, except in a few cases, where horse whims or windlass are still to be seen. There are two small mills in the district, but most of the ore mined is hauled to the Red Dog mill at Johannesburg.



THE BALTIC MILL, STRINGER DISTRICT, KERN COUNTY, CALIFORNIA



SUNSHINE MINE, STRINGER DISTRICT, KERN COUNTY, CALIFORNIA

MAY 25 1907

MAY 25

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Los Angeles Mining Review

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Are You Going To ORGANIZE?

ADDRESS FOR FREE INFORMATION BLANKS, etc.,
Arizona Incorporating Co., Phoenix, Arizona



Through Sleeping Cars...

TO

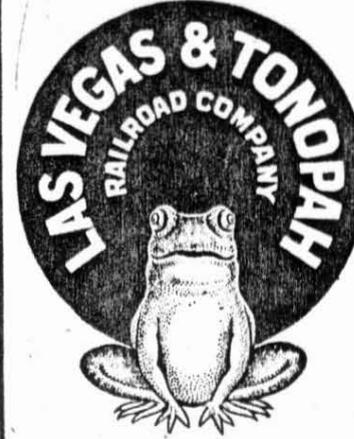
Tonopah Rhyolite **Goldfield & Beatty**
The Heart of Nevada's Gold

Lv. Los Angeles 8:00 p. m.—Salt Lake Route.
Lv. Los Vegas 11:00 a. m.—L. V. & T. R. R.
Ar. Beatty 4:05 p. m.
Ar. Rhyolite 4:45 p. m.
Ar. Goldfield 7:45 p. m.—B-G. R. R.
Ar. Tonopah 9:00 p. m.—T. & G. R. R.

Tickets and information at 601 So. Spring St., and First St. Station, Los Angeles.

MAY 25

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THE BULLFROG ROUTE

— TO —

NEVADA'S GOLD DISTRICT

In connection with the San Pedro, Los Angeles & Salt Lake R. R. A direct line from Salt Lake City and east and from Southern California

THROUGH SLEEPERS

BETWEEN

LOS ANGELES, BEATTY
and RHYOLITE

Excellent service to and from all points in the Bullfrog District, Greenwater, Lee, Echo, Johnnie and Skidoo Camps.

FULL PARTICULARS OF RATES, TRAINS AND NEVADA GOLD LITERATURE UPON APPLICATION TO

E. W. GILLETT

TRAFFIC MANAGER, L. V. & T. R. R., LOS ANGELES, CALIFORNIA

MAY 25
1907

The New Nevada Mining Districts

As well as ALL Mining Centers in California, Arizona, New and Old Mexico reached directly via the

Southern Pacific

Three routes from the East, via New Orleans, Ogden, Portland



Full information at City Ticket Office, 600 South Spring Street, Los Angeles, or from any Agent of the Company.

MAY 25 1907

MAY 25, 1907 (p. 6)

THE DESERT.

Editor Mining Review:

The summer season is at hand when the tenderfoot goes abroad on a prospecting expedition during his vacation. As the desert is the region at present offering the greatest inducement he naturally strikes in that direction. My experience leads me to refer to those unacquainted with the desert and its peculiar climatic conditions a few words of advice, which I hope will be understood and repeated in the spirit in which they are intended.

In the first place, I would advise staying at home, or going into the mountains in summer. The vast region known as the desert is a land to be dreaded during the months from May to December. No one except those having had experience in those plains of alkali or sand, or in climbing around over the rough, vermillion rocks, that radiate and reflect the sun's heat like a stove, will appreciate this advice, I know, but good advice just the same.

If you are determined to go whether you do, do not venture out without a companion, who knows the desert, its hardships, its dangers, and

above all else the springs and water holes. A man can stand starvation much longer than he can thirst. Even the knowledge that water has given out or is becoming scarce is sufficient to cause a great deal of uneasiness which has its effect, and usually a bad one on the mind of the prospector, unfitting him to endure the real privation that may follow.

Among the food supplies taken onto the desert is usually a quantity of canned goods. These must be used with care, and under no circumstances use the fruit, vegetables or other food in a can that has swelled. The stuff has fermented and is unfit for food.

When a can has been opened, use all of it, or throw what remains away. Particularly should one be careful with such acid fruits as tomatoes and apricots. Tomatoe poison apparently develops quickly in canned food after exposure to the air, if left in the can. The best way is to pour the contents of the can into an enameled or crockery dish, immediately after it is opened.

Several years ago a party from San Diego perished on the Colorado desert near Laguna mountains. When their bodies were found their canteens contained plenty of water, but several tomato cans suggested that the four men came to their death by poisoning due perhaps to the presence of ptomaine in the tomatoes.

Do not stray too far from the main routes of travel without abundance of water. Allow nothing to tempt you to go far from the water keg. If you

have not sufficient water, do not try to make a trip to the water point, return to the point, return to the point, and secure a larger quantity. Failure to provide for the desert prospectors may result disastrous. Look this, the most important thing for the desert prospectors.

OLD I
San Bernardino, Ca

JUN 1

(p. 5)

THE GOOD HOPE MINE

An Interesting Old-Time Producer near Perris, in Riverside County, California. A Typical Fissure in Granite

[WRITTEN FOR THE MINING REVIEW]

ABOUT FOUR and a half miles southwest of the village of Perris, in Riverside county, California, is situated the Good Hope gold mine. It was discovered many years since by Mexicans and worked by them in a superficial manner, the

being crushed in arrastras. Later came into American ownership. It is the most important mine in the Pinnacate district. It has been worked to a depth of about 500 feet, there being several levels about 100 feet apart, from 250 feet downward, the upper portion having been completely worked out years ago. The first levels, at 250 feet and at 400 feet respectively, are each nearly 100 feet in length, the 450-foot level being extended to the length of others above. The formation in which the ore

occurs is a fine, even-grained granodiorite. At the surface there are several veins at distances varying from three to twenty feet. In depth, there are several branching fissures have united to form an irregular vein, having a decided tendency to send off shoots

into the country rock, chiefly into the foot-wall side.

The fissure exhibits many of the structural peculiarities characteristic of fissures in massive granite, in which sheeting is almost wholly absent. In part the vein is ill defined; in other places it is distinctly marked and separated from the granite by clay gouges, resulting from movement of the rock walls and the pulverization of its constituent minerals. In their subsequent alteration to

clay. The quartz of the vein also shows the effect of pressure and movement, the quartz having been brecciated, and the fragments recemented by infiltration of calcium carbonate. The quartz usually crumbles on exposure, owing to streaking of the calcium carbonate.

As a result of the stress two separate fissures seem to have formed, or possibly more properly, a fissured zone resulted. The silica is usually found deposited along the walls of this fissured zone, thus forming two

separate veins, this being particularly observable in the lowest portion of the mine.

Of these the foot-wall streak is the better, often containing high-grade ore. The auriferous iron sulphide is finely disseminated through the quartz. The ore was generally considered as free milling, but the tailings carried sufficient value to make them profitable to cyanide operators who subsequently worked them. One cause for this was, seem-

ingly, the desire to secure large capacity in the mill, regardless of high saving. The ore is one requiring fine crushing and very careful amalgamation and concentration. If these details had been given proper attention there would, in all probability, have remained little profit for the cyanide man.

At one time twenty stamps were dropping when water was scarce and sufficient was unobtainable to do more than supply the batteries with the necessary water. The four concen-

trating machines were also in operation with a very poor separation of sulphides. Under conditions existing at that time it would have been far better to have run but ten stamps, sending the sized pulp to the four machines. The result would then, doubtless, have been low-grade tailings, with a net profit largely increased.

The accompanying illustration was taken near the main shaft, and shows the somewhat unusual type of head-frame, with tramways leading to the mill and waste dump.

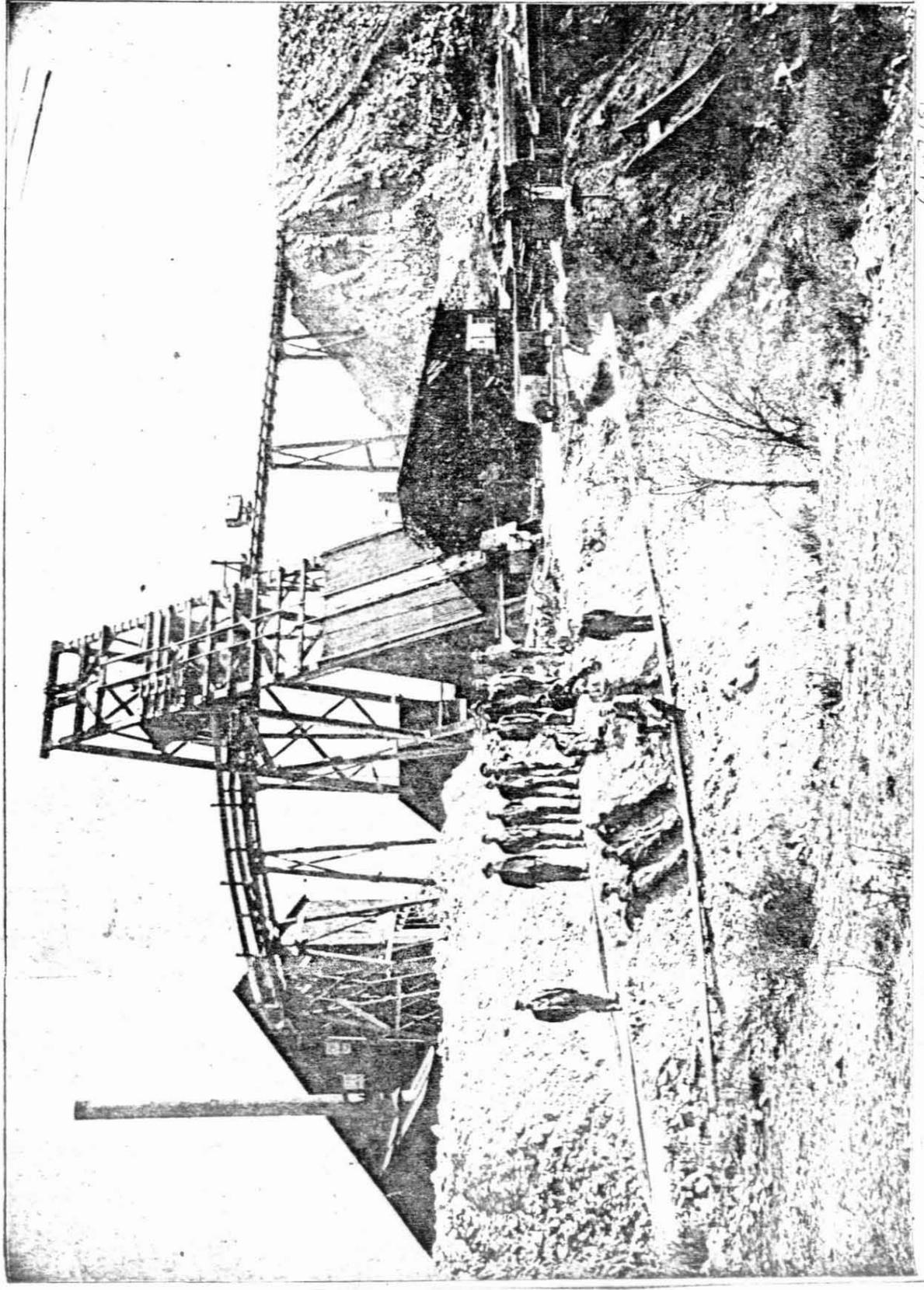
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LOS ANGELES, JUNE 1, 1907.

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6-1-07 (9)

THE GOOD HOPE MINE, BEVERLY HILLS, CALIFORNIA

JUNE 8, 1907 (17)

JUN 8

6-8-07 (17)
THE DAGGETT LEAD MINE

New Proposition Carrying Lead, Silver, Copper, Mercury and Zinc Being Opened on the Desert of California

(WRITTEN FOR THE MINING REVIEW)

ABOUT THIRTY years ago an erratic old German named Lee, while prospecting among the desert hills near the Mojave river and not far from the present town of Barstow, found a large deposit of mineral. The rock was rich red in color and looked to

the ignorant old desert pioneer like the ore he had heard of that carried mercury. He located several claims and on occasion told the ranchers along the river bottom of his quick-silver mine.

Lee had claims over a great part of the desert region from Twenty-Nine Palms to Darwin and from the summit of the Cajon Pass to Old Woman's mountain.

Eventually Ex-Governor Waterman and others came into possession of the property on ascertaining that the ore carried silver and not cinnabar. The mine proved very rich and produced several million dollars in silver. The direct result of the opening of this property which was known as the Grapevine mine, was the discovery of the Calico mines. A great number of prospectors rushed into the district and many mines were developed on the fortunate finds made.

Most of this ore was remarkably free milling, being the rhyolite and rhyolite tuff of the Calico range impregnated with chloride and chlorobromide of silver. A little lead carbonate was occasionally seen and more rarely carbonate of lead. In West Calico one mine the Langtry was discovered in which there was considerable lead carbonate, but it was worked for the silver it contained.

6-8-07

Five miles south of the western end of the Calico hills is another uplift, of essentially similar rocks, chiefly rhyolite and rhyolite tuff. In the early days of the district some one found lead ore outcropping at the surface. The Grapevine district was formed, and several claims were located and a little work done. In the succeeding years this property has had numerous owners, until at last it has come into possession of the present owners, the Daggett Lead Mining Company.

This concern has run a good sized tunnel 1,100 feet into the mountain cutting under the old workings, and raising 225 feet vertically to the surface. This work has partly developed a large mineral zone or lode. On the surface it outcrops from forty to sixty feet wide and runs along the mountain side for 3,000 feet or more. Throughout this great zone are found the pockets or shoots of lead and copper ore, both large and small. At and near the surface the gangue is silicious and contains carbonate of lead, an occasional stain of copper carbonate, some baryta, and as an unusual mineralogical accompaniment, cinnabar. The latter occurs sparingly however, and in this instance is only a curiosity. This class of ore assays from twenty to 200 ounces silver per ton. Selected specimens show horn-silver and are high-grade. The lead content varies from 10 to 50 per cent.

The principal copper prospect is about 1,000 feet distant from the best lead showing thus far made. In the long crosscut tunnel some zinc ore has been found.

It is the present intention of the company of which M. M. Davison of Los Angeles is superintendent, to develop the mine as rapidly as possible and to send out carload shipments to the several smelters seeking the class of ore produced by this mine. I. D. Garinger is in charge at the property, which is situated about four miles in a northwesterly direction from Daggett on the Santa Fe railroad. 6-8-07

JUN 15 1907

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Los Angeles Mining Review

TWENTY-NINE PALMS

A District in the Heart of the Colorado Desert of California in Which There are Rich Mines. Renewed Activity

[WRITTEN FOR THE MINING REVIEW]

OUT MILES from anywhere, across a stretch of barren sand and over rugged vein-ribbed hills, in the heart of the desert of the Colorado, in California, lies Twenty-Nine Palms.

In this wild dreary waste of desert is this oasis—a land where stately palms flourish, waving their graceful plumed tops to a cloudless sky. There are several spots like this on the great desert.

Few who pass through this land of desolation on the transcontinental railroads realize that only a few miles away are places which would be well worth their time to visit. These few favored spots are the more lovely, and the shade of the great palm trees the more grateful because of their isolation, and terrible surroundings.

Not only are these oases delightful resting places in the desert, they are more, for they are situated in a land of gold—strange place for gold mines, but it is nevertheless true. The existence of gold-bearing veins about Twenty-Nine Palms has been known for many years but it is only within the past few years that these mines have become really valuable, owing to changed economic conditions.

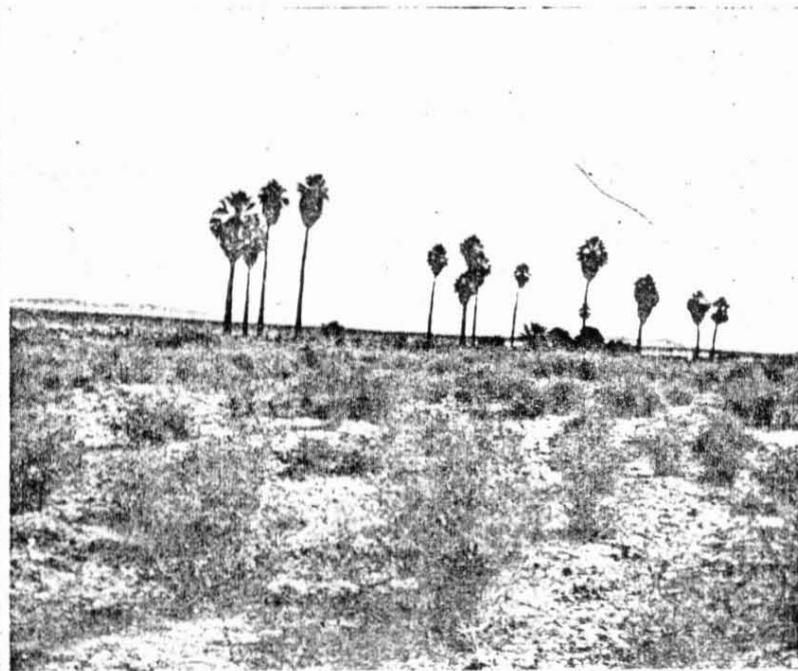
Within recent years a great deal of progress has been made in the development of explosive engines—those in which gasoline, distillate and other hydro-carbons are employed as a means of generating power. In metallurgy too much more is known

fully treat the ores of these desert mines.

A combination of fortunate circumstances has lifted many desert prop-

worth of development work done upon these claims with ore ranging in value over \$20 across a sixteen-foot ledge at the 200-foot level and up in the hundreds of dollars at other workings. It is claimed that they have another ore-body of fifty feet in width carrying gold to the amount of \$10 or over a ton. The company is adding power drills to the mining equipment.

Among old properties being work-



TWENTY-NINE PALMS, SAN BERNARDINO COUNTY, CALIFORNIA

positions which were previously worthless, into the realm of possible commercial success.

In Twenty-Nine Palms district there are at present ten mines, working forces anywhere from three to eighteen men. The latter number being employed at the Gold Park Company's properties, consisting of forty

in the district are the Queen which it is said at one time extracted \$1,000 ore. Today there are five stamps dropping there; the Lost Horse; the "Hexle;" the Eldorado, working eight men, and the Porcupine are among the operating mines.

One of the latest companies to commence work is the Taylor-Sullivan

corporation, organized with two claims in February, 1907. At present they own two separate groups, one of three claims, known as the Desert Lilly group, on which there is a 60-foot shaft with four feet of ore averaging \$15 a ton, and a 135 foot tunnel also now in ore, being run to tap the vein at a depth of 125 feet. The other group, called the Top Notch, consists of seven claims and joins the Gold Park properties on the west. Two shafts have been started on the group, one of which is down twenty feet and the other ten feet. Ore from these shafts averages \$50 in gold. The ore here is very hard quartz which will probably have to be roasted in order to save the gold. Besides these two groups, the Taylor-Sullivan Company owns the water rights in the Forty-Nine Palms canyon from which there is an estimated continuous flow of 4,000 gallons per hour.

Fourteen miles out of Banning, on the road to the Twenty-Nine Palms district, and four and one-half miles from the Whitewater station, on the Southern Pacific railway, has been discovered a large porphyry deposit fifteen to twenty feet wide which can be traced for over 3,000 feet. Crossings assayed from \$3 gold to \$56 gold and a little silver per ton. A company, called the Whitewater Hawk Mining Company comprised of San Bernardino men, was formed May 13 to develop these properties. Men are now developing this interesting find. The Whitewater river runs to the San Gorgonia Pass only 600 feet distant and with the railway so near at hand, the company has an unusually good situation for a desert mining mill test will be made on ore taken from these properties during the present month, or as soon as gold found

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6-29-07
(15) **CAMP DAWSON.** 15

High-Grade Shipping Silver Mines In a New District.

Permanent buildings have been erected to replace the many tents, which have been the only dwellings at Camp Dawson. The Arcaivada Mining and Milling Company has built a shaft-house and engine-house, and a bunk house with forty-one rooms. The Death Valley Gold Mining and Milling Company has the only complete bungalow on the desert in California. It is as complete as any city dwelling, having seven rooms, and is artistically finished. It is used as a dwelling for the superintendent and manager of the Arcaivada and Death Valley properties, and for visitors.

The Death Valley Company has resumed regular shipments of ore. This company ships one or more thirty-ton cars of ore weekly, which assays from \$80 to \$100 a ton. The smallest amount returned to the company by the smelter, after deducting freight and all charges, was \$638, for one car. Silver is the chief metal produced, gold showing only in small quantities, not averaging over \$4 to \$5 to the ton.

The Arcaivada Company recently installed a full equipment of machinery, including engine, hoist, drills, etc., and is rapidly sinking its main shaft in ore.

Camp Dawson has never been boomed, and it is not generally known that there are from six to ten companies operating in the district, some of which are and have been steadily shipping ore. The companies holding property in this district around Cima, California, have kept quiet about the rich veins in the country, and have forestalled a boom until they could secure patents for their various properties.

ARGENTA.

Camp Dawson, June 22.

6-29-07
(14) **GREENWATER MINER.**

Burned Out, But Not Discouraged Spicy Comment by an Editor on His Own Troubles.

The plant of the Death Valley Chino Walla and Greenwater Miner, the property of Mr. Arthur Kunze and his brothers, was destroyed by fire last week. The editor of the Miner published his paper on time nevertheless, though in miniature. He says:

"We arose to this occasion at 10 o'clock this morning and, with the most of our fellow citizens watching our printshop and all it contained toward making pyrotechnic display of the coyotes, rattlesnakes, lizards and chuckwallas. * * * The fact that we are in the middle of the desert getting out the Greenwater Miner at the time as usual, twelve hours after our shop has been completely destroyed may be taken as an indication of what we expect to do. * * * For the present the miner may assume a strange and wonderful form and appearance for a newspaper, but it will be out in spite of hell and its fire. Our manager goes to the coast tomorrow to buy a complete new plant, and as soon as express can bring it here we will be back on our old footing. Watch us grow."

Sympathy is hardly needed by a man of that sort of spirit—but it is extended, and with good wishes.

JUN 29

Lee.

A report from the Lee Gold Grotto is that a streak of high grade ore has been cut by tunnel driven to catch the ore-shoot opened in the shaft and which objective point is still distant about seventy-five feet. The new streak is similar in character to that of the main ledge. Work continues in both shaft and tunnel; the shaft is now down thirty feet and good ore is reported in the bottom.

T. POLE.

Rhyolite, Nevada, June 26.

JUL 13 1907.

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7-13-07(17)

SAN BERNARDINO COUNTY.

Special Correspondence.—There is talk of reopening the silver mines at Calico, six miles north of this place. In the early eighties Calico was at the zenith of its prosperity. The Silver King, Odessa, Waterloo, Garfield, and a score of others poured out wagon loads of silver bullion, but as the great ore bodies were low-grade the demonetization of silver caused the mines to close. The high-grade deposits, so far as discovered, were worked out and for years Calico has been all but deserted. Within the past ten years several old-timers who were familiar with the mines have made good money chloriding. Now it is reported more systematic development is to be undertaken. There still remain large bodies of low-grade ore which it would probably pay to treat by lixiviation, and this, it is said, is to be attempted.

Daggett, July 9. JUL 13

Crackerjack is shipping ore from the Bonanza mine. The ore is sent to Salt Lake smelters.

Ore assaying \$60 is said to have been found at a depth of 80 feet in the Peterson shaft, in Crackerjack.

A. P. Preciado, of Victorville, who is superintendent as well as the largest individual stockholder in the Dry Lake Company, which has a number of properties on the desert, between Victorville and Daggett, says that the Fortuna, on which much work has been done, is a proved mine. Preciado and his brother have sold their other Victorville holdings and expect to devote all their time to this mine.

RIVERSIDE COUNTY.

Special Correspondence.—About twelve miles south of Riverside is the old mining district of Gavilan. For years, in the early days of mining in Southern California, the Gavilan mines were worked vigorously, though in a crude manner, by Mexicans, who packed the ore to neighboring canyons where arrastras were built and the ore crushed. The old arrastra basins may still be seen in the vicinity to the number of 100 or more. In more recent years several efforts were made to reopen and operate these mines, but with little success, chiefly because those interested in the enterprises attempted to go into old workings and get results. Mexicans are too good miners to make any such proposition tempting to those who know them. Still more recently a company was

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organized, known as the Arlington Mining Company. This concern determined to fit up with "two strings to a bow"—to drive a long tunnel to develop a possible water supply with which to irrigate an area of fertile land, and incidentally to develop some of the gold-bearing quartz veins of the old Gavilan district. It is pleasing to announce that both strings worked like a charm, for the company struck water and as the tunnel advanced the flow increased. Then was cut a fissure prospecting in gold. Later several other veins were cut, and drifting commenced. The result was more water and more ore. The tunnel is now in over 2,000 feet and advancing. A well equipped ten-stamp mill is in operation and the enterprise is said to be a financial success, viewed either as an irrigation proposition or as a mining venture.

Riverside, July 8.

July 20, 1907.]

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(p. 16): "Inyo":
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of Rhyolite, Nevada, for \$55,000, a first payment having been made.

The Furnace Creek Copper Company is crosscutting from the 500-foot station to the Copper Prince vein, which should be reached in about two weeks. A crosscut to the Copper Blue vein on the same level has shown the vein to be wider than above but with no ore at that point. Drifts have been started.

Lee.

The Ash Meadows Water Company has purchased all its pipe and has promised that it will deliver water in the Lee district by September 15. The line will reach Greenwater also about the same time.

What promises to be an important discovery has been made near Lee by W. C. Rice, manager of the California Bullfrog mine. The principal showing is in a big quartz cropping eight to twenty feet wide from which samples running high in silver and lead were taken. One sample carried 180 ounces of silver and another ran 251 ounces. The lead samples were also rich.

Skidoo.

A good ledge of gold-bearing quartz has been developed in the Blue Jay claim, where a shaft has been sunk fifty feet by contract. The ore is said to average \$50 per ton. It is said that a further contract will be let at once by the owners, who are residents of Pasadena and St. Louis.

Tecopa.

E. L. Kimball has taken a contract to haul 100 tons of ore per day from the Tecopa Consolidated mine to Tecopa siding, a distance of six miles. A hundred head of horses will be employed. Kimball Bros. will pay \$2.50 a ton for hauling. They will establish a store, boarding house, corral and stock of hay and grain at the siding.

LOS ANGELES COUNTY.

Special Correspondence.—An important strike of rich gold rock in Tejuca Canyon, several miles from here, in the San Gabriel mountains, is reported. It is said that arrastras were successfully used in Tejuca in early days, and it is known that there are gold quartz veins at the head of the Tejuca, which gives some color to the present report.

Burbank, July 15. 7-20-07 (17)

(17) MONO COUNTY. 7-20-07

The miners of Bodie have been given an eight-hour day by the management of the various mines of the district.

The Bunker Hill group, fifty miles from Big Pine, is being developed under the management of Elmer Pfouts, representing Malcolm McDonald. The main work is being done on the Lexington claim, in which the showing three weeks ago was 47 feet of ore averaging better than 20 per cent. lead and \$18 silver. The crosscut has proved the ledge to be at least 67 feet wide. A new tunnel will be started further down the hill to tap the ledge 198 feet deeper.

The Mono Consolidated Copper Company, of which Ben H. Yandell is president and Frank Carson secretary, is preparing for increased development. Shortage of timber has interfered with operations heretofore. The main shaft is down 75 feet and it will be sunk to water level. The group of twelve claims is situated ten miles north of the Southern Belle. The ledge has been opened on the surface for 2000 feet. The ore is low-grade averaging 4 to 5 per cent. copper and \$4 to \$6 in gold. This includes the barren places as well as the rich chambers encountered. The surface ore is oxidized iron. Water is available, and transportation offers no problem, as the mines are almost at the valley level.

RIVERSIDE COUNTY. (17)

Henry Masten has gone to Twenty-nine Palms, to take charge of the mining property of the Mohawk-Herald Mining Company, a Los Angeles corporation. The mine has been worked on a small scale for some time, the owners saying little about it, quietly proving that it was a paying proposition. A 2-stamp mill has been in operation there for some time. Mr. Masten is to have complete charge of the property under Superintendent C. W. Roach, of Los Angeles, and will decide just what is to be done.

Location notices for sixteen claims and a millsite, in the Ironwood mining district, have been filed in the recorder's office of this county by John D. Shaffer, of Salt Lake City, who also put on record a deed by which the claims were transferred to the Gray Eagle Gold and Copper Company. The mines are known as the Green Diamond, Copper Chief and Shaffer City groups.

SAN BERNARDINO COUNTY.

The San Bernardino Gold, Copper & Lime Company has been incorporated to work a mine seven miles north of the town of San Bernardino, where a 300-foot tunnel and incline have been driven. An ore body, with paying gold, silver and copper, is being developed in Badger canyon just north of the center of Little mountain and in the first canyon to the east of Devil canyon. The hanging wall is white limestone. This ledge measures 100 feet at the point of exposure. The Swarthout brothers have worked the property at intervals for twelve years past, and now the firm of Miller & Stickney has become interested and work in future will be prosecuted vigorously. The incorporators of the new company are F. G. Stickney, president; W. H. Miller, secretary-treasurer, and I. F. Swarthout, Sydney Swarthout and H. M. Swarthout. The company is incorporated under the laws of Arizona.

The Salt Lake road has begun on one of the biggest pieces of work that it has undertaken since the construction of the road. Eight miles of track between Caliente and Moapa are to be raised until it is above the high-water line, while the upper side will be rip-rapped with stone the entire distance, except where steel bridges are required to let the storm water

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SAN BERNARDINO COUNTY.

Special Correspondence.—The White Cross Mining Company has commenced a suit to clear title to certain mining claims in the Vanderbilt mining district. The defendants are George N. Todd, Effie E. Todd, William H. Smith, H. LeClair, the Occidental Investment Company and the Title & Insurance Company, who, it is alleged, claim some interest in the mines in question.

The Midnight Mining Company, of San Diego, is developing promising copper prospects near Kane Springs twenty miles southeast of Daggett.

The width of the vein is not known, neither wall having yet been reached. The more silicious ore carries up to three ounces gold to the ton, but in the porphyry the value is nearly all in copper. Assays show 15 to 25 per cent. copper. The ore all carries a little silver. Development consists of a shaft 100 feet deep, and several open cuts, all in pay ore.

It is the intention to grade the ore to about \$75; all below that value being stacked up for future treatment. The high-grade ore will be sacked and shipped.

A quantity of ore sacks, a new gasoline engine and hoist and ventilating fans have been shipped to the mines. Will Anthony is the general manager, and Prof. C. E. Anthony engineer of the company. Recently while cutting out the footwall side of the shaft to arrange for the installation of the machinery, a vein of ore two feet wide was cut, which will run better than 30 per cent. copper.

Daggett, July 21. 7-27-07 (18)

Special Correspondence.—The Piute Copper mines occur in a belt traversing the northeastern corner of this county. This mineral belt covers a territory of about 110 miles in length by 40 miles in width. The ore-deposits occur mostly along the contact of dolomite and granite. The strike is in general northeast-southwest.

Copper, silver and lead were mined in this belt long before the Salt Lake railroad was built through this country. The Piute mines are fourteen miles northeast of Cima, on a spur of the Clark Mountain, in Bullion district, in Range 14 east, Township 15 north, S.B.M.

This property consists of fourteen full claims and one fraction. From this property was shipped, a few years ago, several carloads of high-grade copper and silver ore, which realized a handsome profit. At present, under the management of the Rockwell Company, energetic preparations for rapid development have been made. A gallows-frame is being built, a new gasoline hoist is on the property and there will be two shifts at work as soon as the hoist is in place. The shaft is at present forty-five feet deep, showing high-grade copper ore, up to 42 per cent., beside thirty-seven ounces silver and \$3 gold per ton. On the Hawkeye claim there is an incline shaft sixty feet deep dipping toward the granite contact. Eighteen tons of ore have been taken from the surface. The average of this ore was 24½ per cent. copper. On the Uncle Tom claim there are two shafts each twenty feet deep. Ore from this mine returned \$74 per ton.

Officers of this company are: F. O. Wood, President; G. F. Marrs, Vice-President; O. C. Carle, Treasurer; W. F. Ford, Secretary; T. M. Graham, Director; A. M. Rockwell, Consulting Engineer; C. L. Merrill, Superintendent.

One mile northerly from the Piute mines are the Mammoth mines, which have been developed to a depth of 125 feet. The shaft is to be deepened by contract to 200 feet.

About three miles northwesterly from the Piute is the Jackrabbit property, where a shaft has been sunk through a body of copper-silver ore 148 feet. Owing to extremely hot weather this property has been shut down for the season. Mr. Greening is owner.

About eight miles to the north is the Copper World, an old and well known property, which had been idle until the forepart of the present year, when title was acquired by parties from Needles who are at present continuing development with good results. About three months ago a big lode of high-grade sulphide ore was discovered. Ten miles in a westerly direction from the Copper World is the recently discovered Copper Bullion group. This property comprises twenty claims and a millsite. The ore is oxide and carbonate of copper, which occurs along the contact of do-

lomite and granite. There is an incline shaft in hematite, both foot and hanging wall being in ore. Beside the shaft there are several tunnels and shafts started, with excellent copper showing. The owners are Mr. John H. Williams, Robert Williams and B. B. Gill of Los Angeles.

To the west of the Piute property the Standard Mining Company, of San Diego, is in litigation. The property has been developed to a depth of 340 feet and some drifting and crosscutting done. From these workings there have been taken during the life of the Standard Company sixty carloads of ore which were shipped and netted above expenses, it is said, about \$1,000 per car. Adjoining this property on the southwest is the Cima Copper Company, owning the Copper King, that has developed its property sufficiently to justify purchasing machinery. This property is developed to a depth of 450 feet. At present there are two shifts at work. Three carloads of good ore were shipped ten days ago.

Adjoining the Piute copper claims on the east are the Alta Crown, Alpha and Gossan mines. The Alta Crown and the Gossan mines have recently been purchased by Spokane parties, who contemplate extensive development. The ore from this group carries copper, silver and gold.

The Alta Crown shaft has been sunk to a depth of 110 feet, the two shafts at the Alpha are eighty and seventy feet deep respectively and the showing in both instances is very good. About four miles south from this group is the Telluride group of claims owned by Messrs. Mython and Meade, of Los Angeles. This group consists of fourteen claims. On the Telluride No. 1 claim is a 60-foot shaft

which shows gold ore assaying three to eleven ounces silver. The shaft will be sunk to 100 feet before crosscutting begins. About two carloads of high-grade ore are ready for shipment.

Piute Copper Mines, July 18.

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DEVELOPMENT OF A LODE

8-3-07 (10)

Contact Extending Many Miles Through Eastern San Bernardino County, California, Being Explored With Good Results

[SPECIAL CORRESPONDENCE AMERICAN MINING REVIEW]

AUG 3

HERE IS CONSIDERABLE mining activity along the great granite-limestone contact which runs northwesterly through eastern San Bernardino county, Cal., from the Dawson Death Valley property, near Cima, to the Tecopah mines at the Inyo county boundary. The very notable success made recently at the Tecopah mines has been widely published. Five miles northwesterly from the Copper World mine, two Colorado prospectors recently discovered a four-foot body of high grade copper ore carrying red and black oxides with some malachite. This ore body has widened to eight feet, with but superficial development. The ore occurs in lime from 60 to 100 feet wide which lies between birdseye-porphry and quartzite, the latter being the hanging wall. This ore is reported to carry from 40 to 63 per cent. copper, 27 ounces silver and \$92 gold. The dike passes through the length of three claims, and in it are found frequent high-grade ore bodies of the same character. These are from 4 feet to 25 feet wide and are connected by narrow stringers of ore. The gold is found chiefly on the porphyry, or foot-wall side. Some turquoise has been discovered in the neighborhood. The locators of this property, which is known as the Black Beauty, are said to be financially able to hold and develop it, at least during the preliminary stages.

At the Copper World, acquired last winter by Monaghan & Murphy of Needles, Cal., a great new ore body has

been discovered in the dolomite. This is said to be the largest ore chamber yet found in that old producer. It is reported that the owners intend to build a smelter about two and one-half miles from the mine, the old smelter having fallen into decay. Fifteen men are now employed.

Several prospects south of the Copper World are to be equipped with machinery in the fall. From one of these, two carloads of ore have recently been shipped.

The Piute Copper Company's property on the contact is an interesting one and was inspected this week by the writer. The contact here is granite in which occur dikes of syenite, with dolomite as the foot-wall. At the contact of these rocks is found lead carbonate carrying Sternbergite. In other similar properties along the contact copper ores have developed in depth. These ores accompany strong outcrops of hematite which occur in the contact. In several places copper carbonate shows in connection with the hematite. The old Uncle Tom shaft, on this property, was started on a stringer at a point 110 feet east of the contact. This stringer widened out to a 4-foot vein from which were stoped 16 tons of lead-silver ore which averaged \$74. A cross-cut was run at 20 feet depth, a distance of 21 feet southwesterly towards the contact and was all in hematite and clay. There are indications here of a large ore body. Judging from the elevation of the several natural springs in this lime belt, water level

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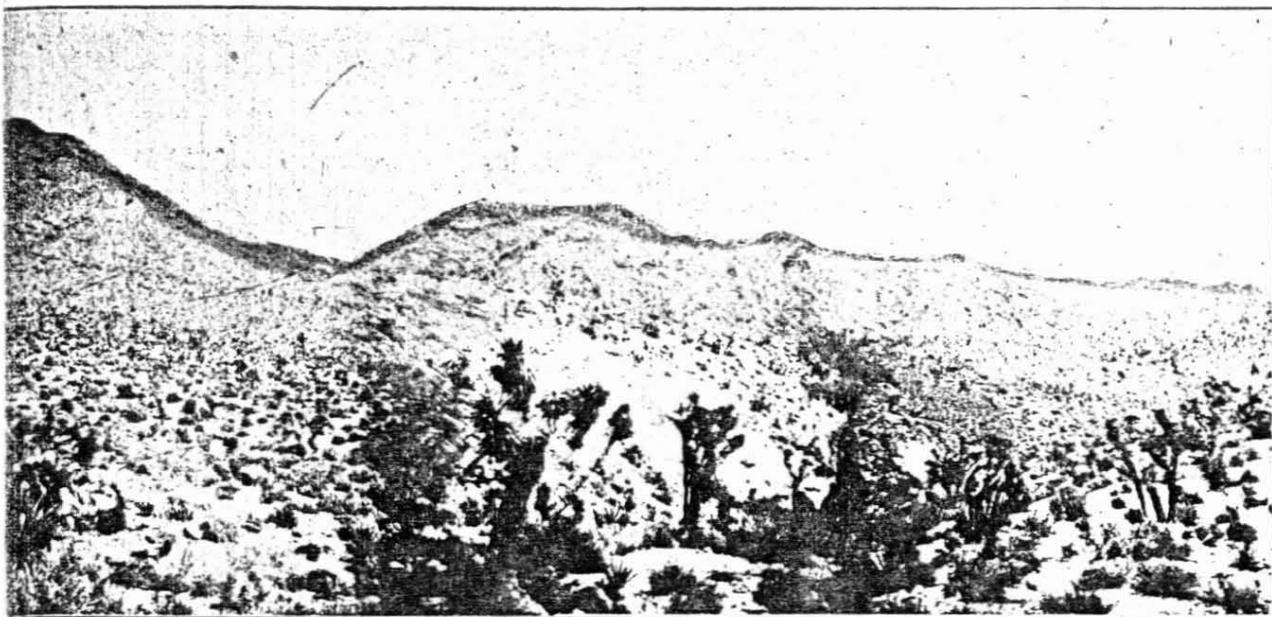
August 3, 1907.]

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should be reached on the Piute property at a depth of about 900 feet. In the dolomite east of the contact occur frequent pockets and stringers of copper carbonate from which several carloads of good grade have been shipped. Though these may lead to large chambers of ore, as has been the case in at least two properties in this belt, they are of small importance as compared to the contact proper, where indications seem favorable for a deep mine. The property is now equipped with a small gasoline hoist, camp buildings etc.

South of the Piute is the Moore property from which \$42,000 silver

was produced. C. A. Hopkins and George Crocker of Boston and Mr. Stone, of Hayden, Stone & Co. are the chief shareholders. The mine is under the direct management of A. B. Hall, with Mr. Wilson as general manager and Prof. T. A. Jagger, Jr., as consulting engineer. Four shafts have been sunk, two in the crystalline lime and two in the contact. The two former have been abandoned at shallow depth. The main shaft is an incline now 600 feet deep following the dip of the contact. Ore has been found in bunches at different levels. A drift run out 300 feet at the third level has shown the vein to be 15 feet



SCENE IN THE PIUTE DISTRICT, SAN BERNARDINO COUNTY, CALIFORNIA

was taken in early days. Silver ore, running as high as 300 ounces per ton, has been found at the surface recently. Development has been started.

The Standard No. 1 property, lying next south and on the east side of the contact has yielded, during the past eighteen months, \$68,000 worth of copper ore. The mine has been stripped of practically all ore that was developed, and is now closed down owing to exceptionally bad management. All the ore shipped was taken from above the 250-foot level and in the lime.

The Copper King mine south of the Standard is being developed by the Clima Copper Company, in which George B. Wilson, manager of the Quartette mine at Searchlight, Ne-

wide. At other places it is 40 feet wide. Chalcopyrite, bornite, tenorite, cuprite, olivenite and some malachite and azurite are found in these workings. The fourth shaft is down 300 feet in the contact, showing copper-stained vein matter 20 feet wide at the 100-foot level and 40 feet wide at the 300 level where low values are found. The property is being vigorously developed.

There are numerous prospects of much promise along this belt, where porphyritic-granite and limestone of several varieties are the chief country rocks. The region has yielded much ore from pockets and chambers in the limestone. Serious development of mines in the contacts has just begun.

Clima, Cal., July 29.

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RIVERSIDE COUNTY. ⁸⁻¹⁰⁻⁰⁷₍₁₈₎

Special Correspondence.—Due to a little liberality on the part of the county supervisors in developing a well in the mountains eighteen miles north from Indio, a section of the Pinon mountain district was opened which up to eight months ago was unknown to the prospector, on account of scarcity in water. A short time after the well was finished, prospectors arrived and made camp. After a few days discoveries were made of free gold on the surface. Today there are fifty claims located, all of them showing free gold on the surface, some as high as \$200 per ton. A 30-foot shaft has ore which assays \$4,000 per ton. This shaft was put down by the Wilkerson brothers. There are six claims in this group. They are locators and owners of six more claims, three and one-half miles west from the well, and were the first on the ground. Later, J. S. Gomber, of Los Angeles, arrived to prospect, and his discoveries have been incorporated under the title of the Golden Hills Mines and Development Company, with six claims. The Quo Vadis Mines & Development Company has five claims of the Wilkerson brothers' group, each has ledges exposed on the surface to the number of six to eight, with average width of three feet, and all carrying gold.

Indio, Aug. 5.

J. Entwistle has been doing work in Millard canyon, six miles northeast of Banning, on claims owned jointly by Entwistle and Faris. On the Lucky Strike claim some of the ore assays 22 per cent. copper, \$8 gold and \$4 silver.

AUG 10

SAN BERNARDINO COUNTY.

Options on a great deal of placer ground in the Coolgardie mining district, north of Barstow, which have been accumulating for the past year and a half, have been closed by a New York company, of which Henry Mountain is at the head. A. R. Gibson has been at work on the options for months. It is estimated that \$140,000 is involved in the deal. Besides Mountain, W. H. Laird, A. S. Clark and others are interested. The new owners plan to develop the placer ground on an extensive scale. They will test a new placer machine which has been invented by Calvin Baker. These placers are dry and it is proposed to concentrate the material.

Burt Osborne is working thirty men at the Ord Mountain copper mines, fifteen miles south of Daggett.

The ore found by prospectors high up on the side of San Antonio Peak (Old Baldy), a few days ago, assays \$16 a ton. The vein will be developed by the fortunate locators.

MONO COUNTY.

A number of miners have gone to Mammoth to begin the re-opening of the Mammoth mines that have been idle many years.

At the Indian Queen, under direction of George H. Hewitt, development

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KERN COUNTY.

Riley Hart, of Amalie and Indian Creek districts, report a rich strike made on Indian Creek, in the Hamilton district, eight miles from Paris. The ledge was first uncovered in June, and assays showed the ore to be rich. The ledge has since been located for five miles. Where the ledge cropped out it carried \$20 in gold. At a depth of eight feet from the surface, samples were obtained that showed an increase in gold and also yielded silver. The rich streak in the ledge is six inches wide, and where it was struck crosses the ledge and then follows along the hanging wall. Strikes have been made along the ledge at various points for miles.

The Pine Tree mine near Tehachapi, a property worked thirty years ago by T. A. Baker, is being developed by a Los Angeles company. There are three pay chutes on the vein and it is proposed to work them from the main shaft, which is down 700 feet and will be continued until the 1000-foot level is reached.

The parties who recently purchased the dump at the Cerro Gordo mine, near Keeler, expect to realize handsomely from the proposition, says the "Walker Lake Bulletin." The mine has been worked off and on for forty years, and some of the richest silver-lead ore ever mined in this country was taken from it. Some of it carried a high percentage of zinc, which caused the smelters to charge a high price for treating the ore, so that it did not pay to ship anything that went under \$100 a ton.

A late Register says that the 18-mile pipe line from Telescope peak, which is to furnish water for Skidoo, has been completed as far as Tuber canyon—six miles, and water is running through it to that point. This completed portion is over the roughest section of the line and general manager, Matt Hoveck, says that laying of pipe will be done more rapidly, reaching Skidoo not later than September, and that he hopes to reach it by the middle of August. Forty-five inches of water is the amount that the Telescope line will convey to Skidoo, which will be sufficient for domestic, power, electric and other purposes.

A rich strike in the Gold Bird claim in Skidoo district is reported. The ore is said to run from \$200 a ton upward into the thousands. The high-grade streak is a honey-combed quartz and hematite, filled with wire and coarse gold.

The Willow Creek mining district was organized recently by a meeting of twenty-four miners and prospectors who are interested in that section of Greenwater district and have their properties in the Willow Creek basin. The meeting was held at Willow Creek, the new town, and the following officers elected: President, J. A. Marshall; Recording Secretary, P. N. Rogers; District Recorder, Mike Henry. The boundaries of the Willow Creek district are south to Sheep creek, east to the Daggett road, north as far as Oddie's wash, and west to Death Valley. It includes the old Willow Creek region and the new goldfields, but does not take in Rhodes Spring, where recent discoveries of gold ore are reported.

A. J. Poulsen, C. L. King and S. A. King, representing the Skidoo Queen Gold Mining Company, are examining the property owned by the company

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preparatory to starting development. The Queens group is situated a mile and a half northeast of Skidoo. Recent work disclosed a 12-foot vein which in places assayed from \$70 to \$500 to the ton.

The gold district near Willow creek, twelve miles south from Greenwater, continues to grow as prospectors are going more thoroughly over the ground. Almost everywhere are they finding gold rock. From the original strike on the top of one hill, the area has expanded until it covers several square miles and takes in a half a dozen hills near Witheral Butte. Recent reports are that the town which has been staked out will be named Ramsay, which is unfortunate as there is a town called Ramsay only a few miles distant over the state line in Nevada. Water in small quantities is obtained from a spring owned by Purdue and Brown. The spring was located last year and flows several gallons per day. The spring will be developed in expectation of increasing the flow. Hidden springs are a mile or two distant on the other side of the mountain.

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^{AUG 10, 07 (17)}
INYO COUNTY.

Special Correspondence.—The recent strike of silver ore at Fairbanks, in the Panamint range, about which there have been some Arabian Nights stories, is now stated to have got down to a business basis with ore that goes \$86 a ton. Not bad ore, even for Panamint. The Panamint district has produced some good mines in the past under the most adverse conditions, and now with these conditions much improved, there are other mines of gold, silver, copper and lead that will become profitable if they fall into good hands.

Greenwater, Aug. 4.

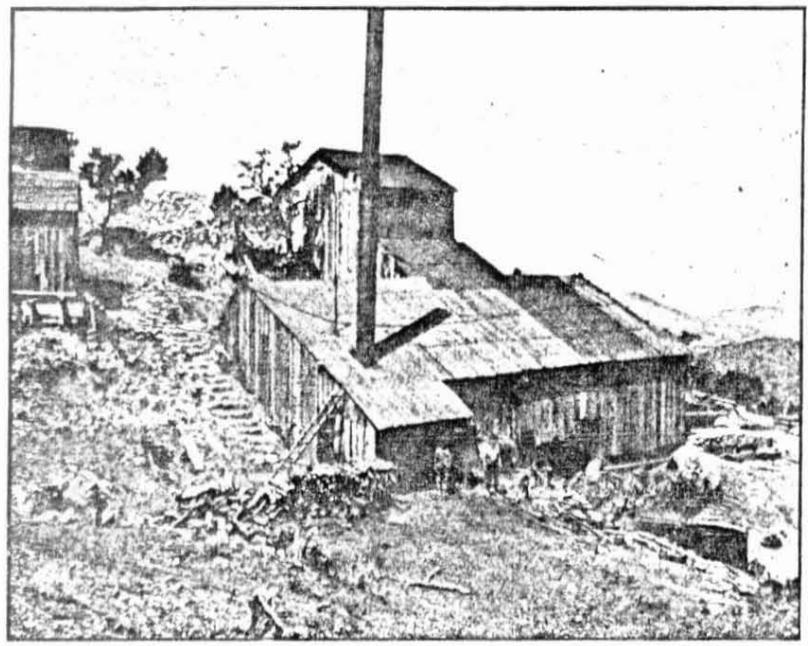
(partial) AUG 17
 AUG. 17, 1907 (10)

Tungsten at the present time, the writer thinks that a brief account of some of its occurrences may be of general interest.

Tungsten, in the United States, occurs in Arizona, California, Colorado, Connecticut, Idaho, Montana, Nevada, New Mexico, North Carolina, Oregon, South Dakota, Texas and Washington. It is also found in Alaska, Australia,

the writer had access.

Surely, to the man seeking tungsten, there can be no better guide than a study of the kinds of rocks and minerals with which the known deposits are associated, and it is with this aim in view that this article is written. The states and countries are taken alphabetically, and not in the order of their importance, as pro-



THE COLUMBIA MILL, PROVIDENCE MOUNTAINS, CALIFORNIA. SEE PAGE 17

Austria-Hungary, Bolivia, Brazil, Burma, England, Germany, New Zealand, Peru and Portugal.

The common ores are wolframite, (tungstate of iron and manganese), hubnerite, (tungstate of manganese), and scheelite, (tungstate of calcium).

The following is by no means comprehensive, being simply a short description of the formations in some tungsten localities, also of some points of special interest in connection therewith, the writer having been guided in his selection by the information at his command. Those desiring further details will, at the end of this article,

ducers of tungsten. Many deposits are dismissed with a few words, or omitted entirely, owing to lack of time and detailed information.

ARIZONA:—Cochise county, 13 miles from Benson and six miles north of Dragoon. Forbes Rickard describes the minerals there as (1st) tungsten ore, principally hubnerite, which occurs in aplite veinlets and crystallized quartz that occupy fissures in the main body of the granite constituting the country-rock; and (2nd), ores consisting of hubnerite and wolframite occurring in the altered wall-rock, and flanking the vein itself, sometimes on

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 CALUMET AND HECLA STAMP MILLS, LAKE LINDEN, MICHIGAN

and limestones of Cambrian age. These rocks have been subjected to intrusion by a central massive core of granite, which later was itself penetrated by dykes of granite and granite-porphry.

The mining, for the most part, has been of a superficial kind; in fact much of the tungsten has been obtained from placer deposits in the gulches below the veins.

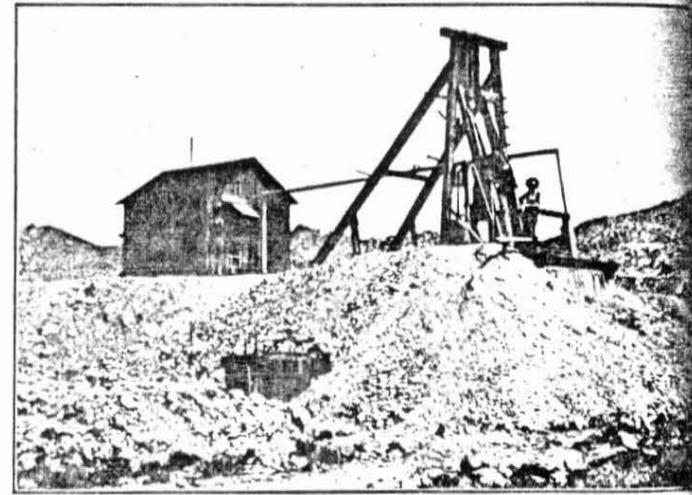
CALIFORNIA:—Scheelite is being mined in the Randsburg district at Etolia, five miles from Randsburg, where the mineral occurs in a pegmatite dike, in mica schist. Among other California localities, tungsten ore is found in the New York Mining district, San Bernardino county, west of Manvel. Here the formation is a fine-grained schist showing small scales of

able to learn. In Boulder times the wolframite is able masses, but ordinarily a cementing material of the vein, or country-rock.

CONNECTICUT:—At the sten mine at Trumbull, Hill, wolframite and scheelite found in quartz on a contact limestone and hornblende mine was opened for copper silver. Some of the scheelite replaced by wolframite.

NEVADA:—In White Pine 12 miles south of Osceola occurs in a quartz vein together some scheelite, the formation porphyritic-granite.

NEW MEXICO:—Paul Leopold, New Mexico, the writer that tungsten ore



STANDARD NO. 2 SHAFT, PIUTE DISTRICT, SAN BERNARDINO COUNTY, CAL.

mica and apparently largely made up of quartzite; the schist, to the west, is overlain by limestone. Two systems of joint-planes, approximately at right angles to each other, cross the schistosity and the vein follows one of these joint-planes. The tungsten ore is hubnerite containing some iron, and occurs in irregular bunches,

near Gage in a quartz vein stone.

OREGON:—At the Cliff m. Virtue district, a few miles Baker City, scheelite occurs with free gold.

SOUTH DAKOTA:—In the Hills, wolframite is found in country in an impure very

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CALIFORNIA

INYO COUNTY.

It is reported that J. Grundy has made a rich silver strike on a group of claims in Wild Rose canyon, owned by Frank Kennedy, Miles Sargent and himself. He has opened a vein 12 feet in width, in which is a pay streak that assays \$1,200 silver per ton. D and S. Fredrickson and Miles Sargent own claims adjoining, on which they have six feet of high-grade silver ore, with some gold.

Report says that miners in the Osborne lease on the Skidoo mine have found rich ore. The ore is said to assay from \$100 to \$1200 per ton. The pay streak is eight inches wide—reddish quartz showing iron, lead and gold. Rock at the side of the rich streak is said to assay \$100 a ton. The higher grade ore is being sacked for shipment.

The Trojan mine at Ballarat, in the Panamint range, is shipping ore to the smelter at Needles. The ore samples about \$50 a ton. Wingfield and Nixon are sinking on a copper claim in the vicinity of Ballarat, and have the hole down 165 feet, making three feet a day. It is said the ore runs six per cent copper.

L. E. Thompson and John Joyner located a group of six claims last fall, at the foot of Sheep mountain, about five miles from Skidoo, says the Skidoo News. Preliminary to doing their annual work they went recently to look over the ground, and found the outcrop of a large copper bearing dike, which they had not before observed. This is 20 feet wide. There is a rich ore shoot running through it, from which samples assayed 9 per cent copper. The ore is a carbonate mixed with iron oxide. The property is located where it is easily accessible by wagon, two miles from the Rhyolite-Skidoo stage road, and if ore of a shipping grade is found, its transportation will be an easy matter.

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SAN BERNARDINO COUNTY. (17)

Special Correspondence.—The Columbia mine is situated in the northern portion of the Providence mountains in eastern San Bernardino county, and was at one time an active and seemingly prosperous property. For some cause, not stated, operations were suspended about four years ago and the mine has remained idle until recently, when Robert Rutledge, of Saint Louis, Mo., took an option on it. A shaft has since been sunk 100 feet and other prospecting work done. It now seems necessary to make tests to determine the proper method of treating the ore, and to this end the mill will be started crushing the accumulated ore. The machinery will be carefully tested and the necessary changes made. At the same time metallurgical experiments will be conducted to determine the unsolved problems of ore treatment, and such changes or additions to the mill made as seem necessary.

The illustration on page 10 is that of the Columbia mill.

There is unusual activity in the Providence mountains this season. Years ago the Bonanza King and Cambria mines were good producers, but after the demonetization of silver, they were closed up and remained idle for years. The Bonanza King resumed operations a year or two ago, but was again closed down pending the adjustment of the internal affairs of the company. The mine was said to be looking well when operations were suspended, and it is now reported that work is to be resumed.

Fenner, Aug. 11.

Special Correspondence.—Despite the heat of midsummer in the Mojave desert region, the development of mines in Eastern San Bernardino county continues with the most encouraging results, and with the promise of increased activity the coming fall.

The Piute district, in which Clark mountain is the dominating peak, continues the development of ore shipping mines, and the outlook for the future is bright.

Adjoining the Copper King mines to the north is the Sextette group, also known as the Standard Mines, No. 2, which is illustrated on page 10. This property was formerly bonded by the General Securities Company of Los Angeles. It is learned that this company transferred the bond to Messrs. Plowman and Jones, who are now in possession. The original owners, Messrs. Gill and Fee, of Los Angeles, granted to the new officers an extension of fifteen months time. Mr. Plowman, President of the company, expects to resume operations very soon. The property consists of eight full claims and five fractions. The ore deposits occur mostly along the contact of dolomite and granite. The strike here is northeasterly and southwesterly. The line is traversed by dikes of diorite. There is usually present a heavy iron capping, showing both the oxides and sulphides of copper. The main shaft is 256 feet deep. At every 50 feet a level has been cut in a westerly direction. Four carloads of ore, of 40 tons each, have been shipped from this shaft, returning \$1.105 per car. There are several other shafts and tunnels started, each making an excellent showing in copper. On the Dixie claim of this property is a 22-foot incline shaft on the contact of blue limestone and dolomite, showing a 2-foot vein of lead and silver running 73 per cent. lead and 46 ounces silver. At present there are 15 tons of ore on the dump. Officers of this company are: A. J. Plowman, president and manager; Albert Fosgate, vice-president; W. E. Jones, secretary and treasurer; J. A. Hodgman and R. V. Dodge, with the above, directors.

On the North side of Clark mountain is the property of the Ivanpah Consolidated Mining Company. This is 20 miles northwesterly from Ivanpah station and is known as the Colosseum mine. Norman W. Parlee is superintendent; W. B. Devereaux, Sr., general manager. Head office 15 William St., New York. At present there are 20 men employed, but as soon as better ventilation is provided in the shaft, two shifts will be worked. The main shaft is 130 feet deep. The tunnel is in 800 feet. The ore contains gold and auriferous pyrite. It is said a 60-foot vein has recently been discovered. The New York parties have owned this property since the first of March, 1907.

18

Adjoining on the west are the old silver mines of Ivanpah, from which extremely rich copper-silver ore was taken in early days. At present on one of these claims, the Stonewall, two old timers are working on a six-inch vein of ore, which runs from 600 to 2500 ounces to the ton. Adjoining

this claim are several other old mines, owned by Mr. Whitfield. An option has been taken on this property by Mr. West, of Los Angeles. During the option, Mr. West will employ ten men on development. The value is chiefly in silver and gold.

About seven miles southeasterly from this is situated the Antimony mine, which was discovered by Mr. Lawrence, a prospector, who is one of the Old Timers. There are three veins from eight to 18 inches wide, which on the surface show stibnite (antimony sulphide), assays running 92 per cent antimony, besides a few ounces in silver. There are 30 tons of ore ready for shipment. Several shafts and open cuts have been started. The veins occur in granite.

South from the Antimony mine, two and a half miles, a promising strike of copper and gold has been made by C. L. Rossberry. The ore occurs here in fissure veins with porphyry foot-wall. The hanging wall has not been determined. Assays run up to 40 per cent copper and \$25 to \$40 gold. The general strike is northeasterly-southwesterly. The veins can be traced through three claims. The group is known as the Last Chance. There are two carloads of ore on the dump. Mr. Rossberry will continue development. The shaft is down 25 feet, showing ore all the way.

From this property six and one-half miles to the westward, is the Fox group, another promising prospect, owned by G. B. Spalding and W. M. Fee, of Los Angeles, and G. G. Ginn, of Chicago. The property consists of 14 full claims. The ore occurs in chambered deposits in the limestone, running eight per cent copper. Croppings of copper ore are widely distributed on this and adjoining properties. The owners are preparing for development.

G. B. Spalding is one of the progressive mining men of this district. About four months ago he sold the Piute copper claim (owned by Scott-Taber and L. F. Marrs), to the Rockwell Company, retaining an interest in the Piute Copper Company.

JOHN H. WILLIAMS.

Cima, Aug. 10, 1907.

The Randsburg Miner says Thomas McCarthy has renewed the excitement in the tungsten fields by a rich strike of almost pure tungsten in his lease at St. Elmo. We have not yet learned full particulars, but it is said to be a rich strike. St. Elmo is about six miles easterly from Johannesburg, and has been considered a gold camp.

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days ago. These mines are now owned by the Great Western Ore Purchasing and Reduction Company, which is employing 30 men. This, in connection with other companies operating near by, makes Cerro Gordo a lively camp again. The Great Western's ore shipments from Keeler are larger than have been made from that station for many years past.

In the double-compartment shaft of the Skidoo Mines Company, at 230 feet, another strike is reported. A short cross-cut to the east has opened a new vein over 6 feet wide.

SAN BERNARDINO COUNTY.

At Silver Lake, the Tungate property at Crackerjack, is under bond to Morris brothers, of Los Angeles. The tunnel is in 120 feet and a shaft has been started to connect with it. Gold and copper are reported in many places.

The Surprise group, which was owned by Haney, Wilson & Beck, has been conveyed to a San Francisco company for \$30,000. It is a gold and copper proposition.

The Annon group near the Tungate, owned by Henry McKeown and Ed Bahten, is under bond for \$40,000. The owners are working two shifts.

The Crackerjack Bonanza is working two shifts sinking on the ore. The shaft is down 30 feet in first-class ore. They are storing the ore. The 25-horsepower gasoline engine for the hoist is waiting for the grade to be finished to be taken to the mine.

The Amos brothers of Five Points have sold the Mockingbird group of claims to Los Angeles people. A Los Angeles company is building houses and sheds at the old government fort on the overland stage road at Soda Lake, getting ready to manufacture soda on a large scale.

Work has progressed rapidly recently on the Crackerjack Gold Company's ground, the new cross-cut to the east having been driven a good distance. Some difficulty has been experienced in securing miners, and all that could be hired have been employed by superintendent Toennies. In the cross-cut, numerous stringers have been encountered. Samples taken show native silver and some copper. It is expected that this cross-cut will cut the ore-body within the next 15 feet. It is the intention of superintendent Toennies to continue shaft No. 2 on the King Solomon claim. 7-7-07

SAN DIEGO COUNTY.

J. M. Rockwood, of the Mesa Grande Consolidated Gold and Gem Mining Company, reports the discovery of a rough beryl crystal five inches in diameter. The mines are at Mesa Grande 50 miles northeast of San Diego.

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SAN BERNARDINO COUNTY.

Considerable development work is being undertaken as cool weather approaches. A shaft is being sunk to 300 feet depth on the Tungate and Caldwell property by Morris brothers, who have installed a 20-horsepower gas hoist. Hargraves, Cook and Fleming, the Copper Prince Mining Company and the Heath brothers are all starting work at Copper Center in the eastern part of the county.

7-14-07 (100)
A depth of 40 feet has been reached in the two-compartment shaft of the Crackerjack Bonanza mine, and a road is being constructed for the purpose of installing the hoist, which has arrived at the mine. The first cross-cut will be run from the 50-foot level, where a station will be cut. It is intended to drift along the vein in both directions from this level. Cross-cuts will be run every 100 feet thereafter. Work has been discontinued in the tunnel for the time being, and no more ore is to be stoped from that point for the present. All the new buildings at the Bonanza have been finished and include a large boarding house.

In the Ord district, 14 miles south of Daggett, a new strike of gold is reported. George L. Hastings says there are hundreds of locators in the field and others are pouring in.

The strike has resulted in renewed activity in the J. B. Osborne copper claims, and miners are searching to discover ledges on the property similar in character to those which have brought a fortune to the Hasson Brothers. Other claim holders are sinking shafts and in several instances night shifts are at work.

RIVERSIDE COUNTY.

A \$100,000 deal was made last week by F. A. Perkins, H. K. Stahl and F. M. Baird of Corona, who, with L. B. Talley of Fullerton, owned a half interest in seven gold claims in the Yucaipa district which they have sold to Boston parties. Of the \$100,000, Mr. Baird reports \$75,000 is to be used to erect a plant and \$25,000 to continue development. It is said 150 tons of ore are taken from the mines daily.

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(17)

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(18)

SEP 21

CALIFORNIA

INYO COUNTY. ⁹⁻²⁷⁻⁰⁷

The new manager of the Black Canyon property, St. John Robinson, made his first report from the mine recently. He says they have reached ore at the contact which is rich in gold and is getting wider and richer every foot penetrated. Mr. Robinson also reports that in the right hand tunnel, which has been in ore all the time, he has a six-foot body of ore that also pans well, leaving a string of gold all around the pan. Distant pastures always appear greener than those near at hand, says the Inyo Register, and it may be that we have here a property; which, when sized up with some of those far away bonanzas, shall be a revelation to those unfamiliar with conditions at the Black Canyon.

The Silver Cliff property lies on Treasure Mountain, a high elevation of the White Mountain range south of the Marble Canyon, plainly visible from Bishop and about 15 miles distant.

This property is controlled by the Inyo Mines Syndicate, and preparations are being made for active development. ^{9-21-07 (17)}

SAN DIEGO COUNTY. ⁹⁻²¹⁻⁰⁷

Preparations are being made to resume prospect work on the Golden Cross property at Hedges, which has laid idle for two years says the Yuma Sun. Under the superintendence of Thomas H. Fuller, who is interested in the property, many of the old workings in the mines will be re-opened, and prospecting prosecuted at other points. As a preliminary step the pipe line from El Rio to the mines will be placed in repair, as also will the big hoist. R. J. Fraijo and a force of men left for Hedges last week to do the necessary repair work, which will require two weeks.

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SAN BERNARDINO COUNTY.

Special Correspondence.—Under the management of A. H. Cram, the California Gold and Copper Company's property is being rapidly pushed forward. The main shaft, fully timbered, is down 350 feet, the last 18 feet being in copper ore that tests better than 20 per cent. copper and carries some gold. A station has been cut and about 200 feet of cross-cutting is done; in the face of the drift a streak of ore has been cut that assays 20 per cent. copper and about \$3 per ton gold. This is supposed to be the foot-wall of the vein that was cut on the 200-foot level.

As abundant supply of water has been piped for six and one-half miles at a cost of more than \$20,000, and with a pressure that carries it to all parts of the camp. Excavations have been made for a reservoir 40 by 50 feet and seven feet deep and a leaching plant is planned with 50 tons daily capacity, with an ore crusher of 200 tons capacity. This plant is expected to be complete before the beginning of the new year.

Under the direction of Charles Coram development is progressing on the McCaugh group of claims that joins the Cram properties on the northeast.

Immediately west of the California Gold and Copper Company's property and north of the X-Ray group are five claims formerly owned by Garner, Frielle and Fred Cram. A company has taken hold of this property and is pushing development under the direction of Garner and LaSuer. They are sinking a vertical shaft, are down 40 feet, and expect to sink to 500 feet. Already they have ore from which picked samples return eight per cent. copper. In addition to this they have uncovered a quartz vein that gave assay returns of \$360 gold at a depth of 10 feet.

Still north of this property, Mr. Page has a shaft down nearly 100 feet and has a remarkably good showing of copper ore.

Charley Pletcher and Mike Smith have interested San Francisco people of means and experience in a group of claims southeast of the California Gold and Copper Company, and have a shaft down 80 feet. This

property has been idle for a few weeks but development on a large scale in the immediate future is expected.

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In Crazy Basin, five miles farther north but in the same mineral zone Mr. Lanfair has a shaft down 100 feet and has installed a hoist. He has what promises to become an excellent property and is pushing development as rapidly as possible.

Wallace and Green own a group of claims near the Lanfair ground and have some ore that runs well in free gold. All the work done so far is encouraging and further work will undoubtedly prove this also to be a valuable property.

John Sallee and Burt Webster have recently acquired the Copper Bonanza group of five claims in Itattle-snake flats seven miles northeast of Vontrigger and will begin sinking a shaft in the near future. This property shows a large vein on the surface that assays in silver and copper and is likely to prove a bonanza with a small amount of development.

The entire Vontrigger district is prosperous in every way and will bear much more careful prospecting than it has ever received.

Good prospects can be bought at reasonable prices and are worthy of careful consideration at the hands of those seeking mining investments that will win out.

Vontrigger, Sept. 16.

Special Correspondence.—The properties throughout the Piute and Clark districts are in good condition and reports of encouraging results come from all sides. Several parties from New York and Goldfield were recently here to inspect the Casa Grande mines and adjoining properties. At present there are 23 mining properties undergoing development. Eleven of these are equipped with power hoists. One of these will operate within the next few days with an air drill. Nearly all of these mines are located on the limestone-granite contact extending through the northeast part of San Bernardino county.

The King Thebaw Mining Company is still piling high-grade ore on the dumps and expects to begin shipment the first of October. A new shaft, started on the Morgenstarne claim, shows a two-foot vein of silver ore running 560 ounces.

At the Copper King Mines, two shifts are sinking the main shaft and driving a drift on the 650-foot level towards the contact. The showing is good.

The Standard Mines No. 1 is working two shifts in the shaft and several miners elsewhere on ore, and expects to resume shipments within the next week. G. Moore is superintendent.

At the Paris mine, owned by Mr. Morgan, of Pasadena, Cal., miners are working on a four-foot vein of gold ore. This vein was high-grade from the grass roots. Mr. Morgan is on the ground and is well pleased with his property.

At the Casa Grande mines a new shaft is being sunk. Shipping is expected to begin within 30 days. G. B. 18

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Wilson, acting manager of the Searchlight Quartette mine, and Mr. Hall, superintendent of the Cima Copper Company, have recently inspected and sampled the property.

The Mammoth mine, one mile northerly from the Piute Copper mines, is down 200 feet. The ore is silver-bearing.

A new strike has been made at Meadville by Robert Williams, an energetic prospector of the district. He has discovered a three-and-one-half-foot vein of gold ore, about half a mile north of the Casa Grande mines. The gold, with some silver, is associated with galena and carbonate of lead. Two shafts have been started on the ore, showing at one place a three and one-half-foot vein with an average assay of \$17 gold, and at the other shaft a five-foot vein running \$32 gold per ton. A lot of ore has already been piled on the dumps.

Cima, Cal., Sept. 16.

A strike of Tungsten ore is reported made near Wild Rose Springs. The vein was opened by two Chinese, who formerly were engaged in mining in Shasta county. Patrick Lane showed the vein to the Chinamen and he has an interest in the claim. It is reported that eastern men have taken an option on the locations.

Thos. McCarthy's tungsten strike at Etolia, near Johannesburg, is proving better with development, so it is reported, says the Randsburg Miner. He struck the ledge 20 feet below the surface and has followed it down 20 feet and it is opening up larger the deeper he goes.

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1907

THE EAGLE MOUNTAIN MINES

Huge Iron Outcrops Which Evidently Cover Copper Deposits. Development of the Mines. Placers and Dry Washing

(WRITTEN FOR THE AMERICAN MINING REVIEW)

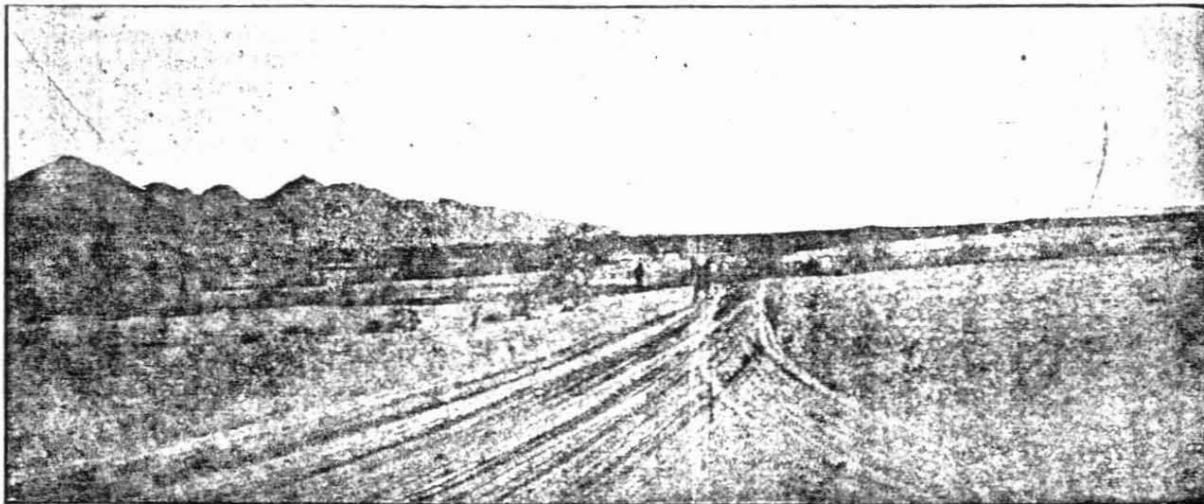
ONE OF THE most attractive mineral regions of California is that in the heart of the Colorado desert, in Riverside county, and embraced within a radius of 25 miles of Eagle Mountain. The region

Los Angeles. In addition to this there are a score or more partnership properties, and these are mostly undergoing development. Along the principal lode there are 110 mining locations.

The Eagle mountain district was

milling operations ceased and the property was idle for several years. Recently the mine was sold to Pittsburg people, who are now reported to be involved in litigation over the proposition.

The Crescent Gold, Silver, and Copper Company, of Los Angeles, recently purchased five lode locations known as the Blackbird group. This property is on a spur extending southeastward from Eagle Mountain, and is on the southeast end of the great iron



THE EAGLE MOUNTAINS, RIVERSIDE COUNTY, CALIFORNIA

is interesting because of the variety of its mineral resources and the richness of its ores. Gold, silver, copper, lead and zinc occur, and besides these are veritable hills of iron oxide, which

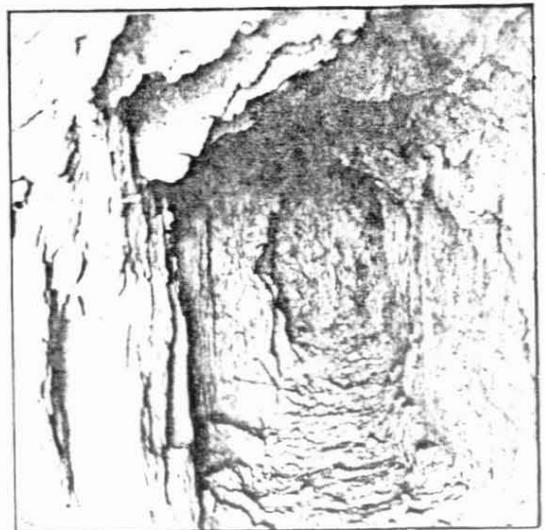
will be of great commercial value when the necessary transportation facilities are provided. As indicating the prospective value of this latter resource, it is significant to say that the Colorado Fuel and Iron Company, one of the largest and most far seeing of the great mining companies of the West, has secured 26 patented claims in the Eagle mountain range. Evidently this company is satisfied to wait until the proper time arrives to operate their extensive property for iron, as the company has performed only sufficient work on it to secure patent to the claims.

In the district there are many other owners than the Colorado Fuel and Iron Company, though as far as known, there is there but one other incorporated concern, the Crescent Gold, Silver and Copper Company of

discovered prior to 1890, but active work of consequence did not begin until 1892, when rich gold placers were discovered, and it is said many thousands of dollars in gold were recovered by the use of dry-washing machines.

Like numerous other dry placer camps of the desert, Eagle mountain attracted prompt attention, and prospectors rushed in from every side. Soon the veins were discovered and many locations made, one of the most important of the early mines being the Iron Chief, which is on the west slope of Eagle mountain. Water was piped 18 miles from Cottonwood Springs. Milling was successfully carried on in a mill of 60 tons daily capacity for several years. A large amount of ore was also shipped to Selby, and this ore was largely profitable. In the mill the ore was crushed dry with rolls and the pulp cyanided. This process was satisfactory until copper began to make its appearance in the ore to the extent of several per cent., when

lode that runs for 10 miles in a north-west-southeast direction over the mountains. On the property, 600 feet of development have been done—tunnels, shafts and drifts, all in ore.



TUNNEL ON THE CRESCENT MINES, EAGLE MOUNTAIN

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The general belief is that this iron lode is the gossan of a copper deposit of great size, as nearly everywhere stringers and bunches of high-grade copper ore may be seen along the outcrop. Some of this ore is of unusual interest, as it contains coarse free gold, the latter occurring both in solid copper ore, and in the iron stone accompanying it.

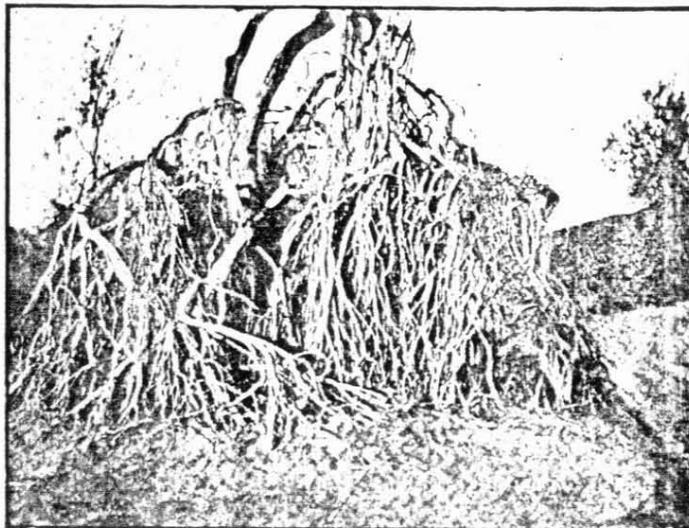
One of the accompanying engravings illustrates a tunnel driven on a three-foot vein of copper ore which contains gold and silver. One assay returned 41 per cent. copper, 12.25 ounces gold and 23 ounces silver.

The Crescent Company has at present no machinery on the property, but will first develop water in the neighboring desert valley, where several wells have already proved an abundance of water is available. It is expected that the coming winter season will see the mine equipped with hoisting and milling plant.

The character of the region is similar to the other mountain districts of the desert—broad sandy valleys between rugged treeless hills. In the valley is a large amount of ironwood, a superior fuel. One of the illustrations herewith shows the peculiar appearance of these trees. This wood is delivered at the mines by Mexicans who sell it by weight, as it has been found by experience that the cord measurement is unsatisfactory.

Another illustration gives a very good idea of the general appearance of the desert near Eagle mountain.

The geology of the region is comparatively simple, being limestone, quartzite and schist, intruded by large dikes. The great iron outcrop occurs along the contact of limestone and porphyry, and the character of the ore deposits is similar to this class of deposits elsewhere. Railroad construction now going on at the Santa Fe "cut-off" in Arizona, will improve existing transportation conditions somewhat for this part of the desert, as the line will come much closer to the district than present lines.



AN IRONWOOD TREE ON THE COLORADO DESERT NEAR EAGLE MOUNTAINS

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CRESCENT CAMP IN EAGLE MOUNTAINS, CALIFORNIA

G STAR MINES**Mine at Old Cerro Gordo, California. Huge Outcrop on Ore**

[AMERICAN MINING REVIEW]

of which, now known as the Union mine, it is said, produced more than \$13,000,000.

Many of the old mines have lost their identity through change in name, and other properties are new. Among the latter is the Morning Star, a group of ten claims, aggregating 190 acres, owned by the Estelle Mining Company, a California corporation.

Cerro Gordo is situated on the western slope of the Inyo mountains, about eight miles east of Keeler, the present railroad terminus, and 32 miles south of Independence, the county seat of Inyo county.

Keeler is reached by railroad, and a tri-weekly stage runs westerly to Mojave, the Southern Pacific and Santa Fe junction in Kern county. Cerro Gordo is at an altitude of 8,300 feet, Keeler being 4,700 feet lower.

As usual, in the early day mining camps of the West, and particularly in the Great Basin region, to which the Cerro Gordo district belongs, extravagance and inexperience were the most notable features. Machinery was expensive at best, and too often entirely unsuited to the work to be performed. Transportation was expensive, methods crude and results far below what they should have been, but notwithstanding this, Cerro Gordo turned out tons of high-grade silver-lead bars—train loads of them.

In addition to these numerous drawbacks, the Indians were frequently hostile and occasionally gave considerable trouble, having a deterrent influence on the more substantial development of the camp.

As previously stated, there are numerous and strong veins in the Cerro Gordo district, but the largest vein of all attracted only passing notice in the early days, for the reason that the ore was too low-grade to afford a profit. This vein, or rather zone, is from 25 to 100 feet wide and outcrops boldly for thousands of feet. The outcrop consists chiefly of ferruginous silica or gossan. In many places it occurs as a huge bunch of boulders or masses of iron ore. Scattered through it may be seen veinlets and bunches of copper carbonate and silicate. The ore assays in both silver and gold—from

a trace to 100 ounces of the former, and from \$1 to \$17 gold. The early miners had little use for ore of this grade. With mines all around them producing ore worth hundreds of dollars per ton, \$17 ore was not even noticed.

Today things are very different.

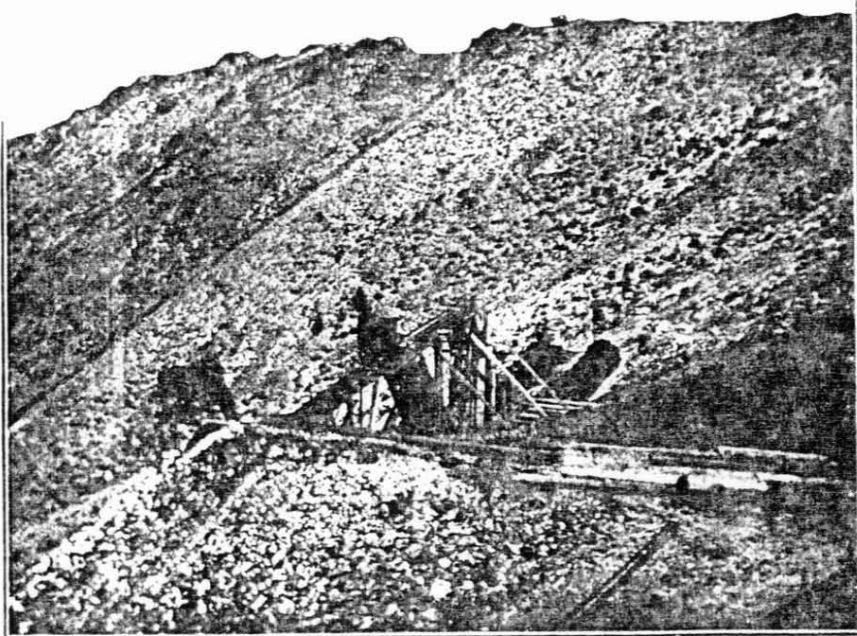
Since the sixties, when the mines of Cerro Gordo were booming, much knowledge has been gained of geology and ore deposits—particularly of deposits like that here described.

The Morning Star vein or zone occurs along the contact of limestone and a dike of intrusive rock. Contact metamorphism is a pronounced feature of the mineralization—huge masses of silica, garnets and other results of alteration of the original

not yet been determined, nor is it important at this time.

There is much in the occurrence of these large ore masses along the contact of limestone with an intrusive rock, that is common elsewhere under similar conditions. A sample taken from 100 tons of ore, and accurate-

ly representing that particular lot of ore, is said to have been analysed by the Selby Lead and Smelting Company with the following result: Gold, 0.3 ounce; silver, 78.42 ounces; copper 2.45 per cent.; iron 45.55 per cent.; the remainder being silica, lime, and other earthy minerals. This ore was unusually high in iron, and contained a small percentage of copper, but this was from or near the outcrop, where little copper would be expected.



CROPPINGS AND DUMP OF MORNING STAR MINE, CERRO GORDO, CALIFORNIA

rocks, owing to heat and the passage of mineralizing solutions, both primary and secondary, the former depositing the ore; the latter from above, decomposing it, together with the accompanying earthy minerals.

This great zone runs at an angle with the Santa Maria vein, noted for its large production of rich silver ores, and going southward, either joins it or one of the veins is intersected by the other. This point has

R. C. Troeger, who has examined the mines at Cerro Gordo, points out the similarity between the occurrences there and those at Ely, Nevada, as described by H. V. Winchell in his address before the Montana School of Mines, last June, in which he said, in speaking of Ely, and describing the probable sequence of the ore deposition and the subsequent alteration of the ore deposits:

(To be continued.)

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VENTURA COUNTY. 9-15-07

Special Correspondence.—In the northeast corner of Ventura, a large and important industry is developing in the mining and marketing of borate minerals. There are at present two concerns carrying on large operations—the Columbus Company and the Fraser Company, each employing 65 men. The mineral is mined and hauled by wagons to Bakersfield. The transportation of the borate mineral gives employment to a number of large teams. The mineral occurs as an intercalated deposit in an ancient lake bed that has been elevated, and now lies well above the valley bottom. The two operating companies are working in the same vicinity, but four miles distant. On the opposite side of the valley is a prospect which on the surface is said to be better than was the surface of either of the operating mines. The mineral mined in the district is principally colemanite (calcium-borate). The industry is now prosperous and gives every promise of growing to much larger proportions.

Bakersfield, Sept. 21. 9-15-07

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until the new blower and engine are installed. The blower is on the ground and is being put on its foundations. The engine has been ordered for some months but has not arrived. In the mean time, the smelter is running continuously and the ore continues to arrive faster than the smelter can handle it. In fact, numerous ore shipments which parties have desired to make to Needles have been refused, as the company cannot buy the ore and stack it in the yards, for lack of space. The company has had on several occasions over a quarter of a million of dollars tied up in ore in the yards and in bullion in shipment. The company is continually increasing the size of the plant and expects to further increase it as the demands require it. The surrounding country is developing ore which promises good shipments to the smelter.

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THE MORNING STAR MINES

[CONCLUDED]

Prospective Bonanza Copper Mine at Cerro Gordo, Inyo County, California, Famed for Its Lead and Silver Mines

(WRITTEN FOR THE AMERICAN MINING REVIEW)

AS STATED in the first paper on the Cerro Gordo district, in the issue of September 28th, little or no attention was given by the early miners to the great iron gossan lying near the lead-silver veins of the district. It was recognized that it carried gold and a little silver, and that copper was present in the ore, was also a well-known fact. Ordinarily the lead-silver miner is not looking for copper in his ore, as he knows that the presence of copper in appreciable amount in lead ore is a detriment rather than an advantage, and with wages at \$4 to \$5 a day, and transportation \$80 a ton, the great lead of copper-gold ore to them was worthless, consequently it remained for miners of a later day to realize its value, and to obtain possession of and develop the lode.

The superficial geological conditions on this lode are similar to those of great copper-bearing lodes on limestone contacts elsewhere. There are the huge outcrops of limonite, hematite and magnetite, showing copper carbonate, oxide and silicate; the usual association of garnet and other minerals resulting from metamorphism, and the very evident leaching of the copper from the outcrop, with the probable consequent enrichment in copper in depth, so commonly found in this class of deposits elsewhere.

R. C. Troeger, who has examined the mines at Cerro Gordo, points out the similarity between the occurrences there and those at Ely, Nevada, as described by H. V. Winchell in his address before the Montana School of Mines, last June, in which he said, in speaking of Ely, and describing the probable sequence of the ore deposition and the subsequent alteration of the ore deposits:

It has long been noticed by the stu-

dents of ore deposits that by far the greater number of mines become exhausted at comparatively shallow depths; that veins, instead of continuing downward uniform in size and composition, like dikes of diabase and porphyry, become smaller and of lower value with depth, and often disappear altogether. It is noticed also that the shape of many ore deposits, and the distribution and paragenesis of the minerals which they contain, can often be better explained on the theory of descending than of ascending mineralizers. Moreover, it is apparent that there are changes constantly in progress in those portions of sulphide ore-bodies lying nearest the surface of the ground. These changes consist in the oxidation of the sulphides and their solution as sulphates. These sulphate solutions percolate downward into the veins or rocks below along the most open channels; and thus, by degrees, the upper zone of the vein is robbed of most or all of its sulphide minerals, and only a gossan or iron cap remains.

The process of oxidizing and leaching of the sulphides in the superficial zone of ore deposits tends, first of all, to disguise the nature of the unaltered ore below. In many instances the ore discovered by the outcroppings is gold ore; and gold mills are often erected and operated for years upon such ore, without a suspicion arising that extensive bodies of copper or lead sulphides occur at greater depths. Such was indeed the history of Leadville, Colorado, of Bingham, Utah, of Ely, Nevada, and of Mount Morgan (Australia). The last is one of the world's greatest gold mines; yet it is now producing copper from its lowest levels; and developments have proved it to be a great copper mine. Immense low-grade deposits of copper ore are found below the gos-

san at Ely and at Bingham, although it is doubtful whether the most experienced geologist or keenest observer of mineralization phenomena would in either place have felt justified in predicting the existence of the wealth below.

In other localities the metals have either all been removed, or else the primary sulphide ore was too poor in gold to leave oxidized ore of any value. In such cases the discovery of the subterranean treasures is purely fortuitous. Butte may be considered the most conspicuous example of this class. The outcrops of its copper veins contain the merest traces of that metal; and there is seldom enough silver or gold in them to justify mining even under the low costs obtaining here today. The zone of oxidization is generally from 100 to 200 ft. deep; and if it had not been for the presence of another system of veins carrying silver, of different age and origin, but closely associated with the copper lodes, this greatest of copper districts might not yet have been discovered. It was in the search for silver ore that copper ore was discovered here, and one cannot help wondering how many more districts equal to Butte may be undiscovered and unsuspected where no outcropping silver or gold lodes attract the prospector. Here is surely an important and unexplored field for the geologist. The study of oxidized vein phenomena may yield results thoroughly satisfactory, from both the material and the scientific point of view.

Below the zone of oxidization the chemical reactions that take place between the descending acid solutions and the unoxidized ores result in the formation of more and richer sulphides, down at least to the level of the lower limit of free circulation, and as far as surface waters penetrate. And as erosion of the surface is con-

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SAN BERNARDINO COUNTY.

Special Correspondence.—A 50-ton dry concentrating and reduction plant has been ordered by the Daggett Lead Mines Company, from the New Century Mill & Reduction Company, of Los Angeles, California. Superintendent George M. Chalmers, of the New Century company, states the plant will be installed about October 15th.

Daggett, Cal., September 30.

Walter C. Fellows is superintendent for the Ferguson group of mines in the Providence mountains. The property was lately purchased by a Lima, Ohio, syndicate and they are doing considerable development work and erecting a mill, laying a pipe line, etc.

Special Correspondence.—The Colosseum mine at Ivanpah, near the California-Nevada state line, is reported developing into a bonanza. The ore occurs in an intrusive mass of rock, variously described as phonolite, rhyolite and quartz-porphry, but so much altered by infiltration of silica and metallic sulphides that its identity is difficult of determination. About three years ago a mining man from Colorado made an examination of this remarkable property for one of the men interested in its development, but despite the more than encouraging prospect at the surface and favorable conditions in the workings, the expert decided it was not "worth while," and condemned it absolutely. The property was then abandoned and remained idle for some time, but eventually Nevada miners who could not see so far in the ground took it under bond and continued the work where it had been abandoned by the Commonwealth Mining Company, despite the urgent advice of E. J. De Lano, who had planned the work. The new company of Nevada men, after doing considerable work near the surface decided to drive the De Lano tunnel, and the first round of holes broke into bonanza ore, which has since developed into a large body of ore. Such is life in the Mojave desert.

Ivanpah, Oct. 1.

The first station in the new Bonanza shaft at Crackerjack was completed last week and cross-cutting is progressing to cut a vein which crops farther south on the mountain. A drift is also being run on the orebody on which the shaft has been sunk. The main ledge has been shown by numerous cuts to be from six to eight feet in width on this level. Assays run from \$60 to \$250 a ton. The ore taken out in this work will be sorted and sacked for shipment, although it is the announced policy of the company not to stope any more ore for shipment at the present time. The Bonanza directors propose to continue development until a sufficient tonnage is blocked out, when a reduction plant will be erected.

Special Correspondence.—An unusual amount of prospecting is being done in the hills about Ord Mountain this fall. The strike on the Hasson property has attracted many to this old district, and now something may be done that will give the district a firm footing in the mining world. There are in the district ores of gold, silver and copper—these are known, and it is not unlikely that other valuable minerals will be found, but prospectors generally discover these by accident as they are not familiar with them. Lead is known in the district but the amount is small thus far.

Daggett, Sept. 30.

OCT 5

SAN DIEGO COUNTY.

Special Correspondence.—At the Donahue mine, at Dul Zura, 25 miles southeast of San Diego, the owners are operating a gold-bearing vein in felsite, the ore occurring in a zone of brecciation. The vein is five feet wide and is composed of silica impregnated with pyrite, mispickel, and gold. The ore is crushed in a Lane mill and it is said the percentage of extraction is high and the operation profitable.

San Diego, Oct. 1.

R. A. Blair, with several others from Los Angeles and San Diego, is preparing to put down an oil well two miles east of La Costa, near Encinitas.

Under the superintendence of T. S. Fuller, who is interested in the property, many of the old workings of the Hedges mines will be reopened and prospecting prosecuted at other points. As a preliminary step, the pipe line from El Rio to the mines will be placed in repair, as will also the big hoist. R. J. Fraijo and a force of men are now making the necessary repairs.

OCT 5

RIVERSIDE COUNTY.

Special Correspondence.—The Golden Hills Mines & Development Company has five men at work with face of tunnel in good ore; all trails and roads are finished.

The Quo Vadis Mines & Development Company, three miles west of the Golden Hill, has three men at work on a good ledge in a tunnel—some quartz, with free gold showing. This district (the Pinon) will be attracting widespread attention in six months. It is 14 miles north of this place.

Indio, Oct. 1.

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American Mining Review

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OCT 12

MONO COUNTY.

Bodie is said to be facing a serious condition owing to a strike which has been inaugurated by the surface hands at the Standard mine. Some months ago the miners went out for an eight-hour day, which was granted. Everything was working harmoniously until the surface men became restless because they were obliged to work two hours longer than the miners. They held a meeting, decided to make a stand for the eight-hour day. This demand the mine-owners refused. Later the surface workers made a compromise offer, offering to work nine hours. In addition to the shorter hours they want an increase of pay ranging from 25 cents to 75 cents a day. The mine owners say they cannot afford to grant the demands and have closed the property, determined to keep it closed until they can get men to work.

There were 135 men employed at the Standard, and all are out. There is said to be a disagreement on between the miners' union and the surface workers' union over the fact that the millmen wanted to work nine or twelve hours under the shorter work-day agreement. The miners contended that in doing this they were shutting out an extra man, which was against the principles of unionism and showed that the surface workers were more selfish than merely desiring to better conditions. The Syndicate mine, employing 35 men, is also closed and the business men of Bodie face conditions that are worse than at any time in the last 20 years.

10-12-07

SAN BERNARDINO COUNTY.

The Nevada and California Consolidated Mines Company, says the Needles Eye owns properties four miles south of Goffs, known as the Turtle Dove group of claims. Considerable development has been done on these properties and the company is nearing readiness to ship ores. Returns on ore shipments to Needles give 20 ounces gold. The general average of the ore is, for four feet in width at the bottom of the shaft, \$29.50 per ton. The ore is free milling. J. P. Randall is president, H. P. Ware, vice-president, and H. H. Steuffer, secretary and treasurer.

The Gold Flat group of mines one and one-half miles southwest of the Turtle Dove group has a 65-foot shaft. The surface assay was \$18. At 40 feet, \$33 and at 60 feet, with a two-foot ledge, \$184 gold. The formation is porphyry, the ledge matter being heavy with hematite. A paralld ledge on this property at a depth of 10 feet returns by assay \$4.80 gold with a width of three and one-half feet. Surface assays gave values of \$4 gold per ton and some of it 4.12 per cent quick-silver. Cinnabar was found to be present in all the ledges. This property is owned by Frank W. Chausse and H. P. Ware.

The California Gold & Copper Company has started the construction of its leaching plant. Water has been piped from South Hackberry springs at a cost of \$20,000.

E. L. Lanfair and partners, owning properties four miles northwest of the California Gold & Copper Company's property struck water at a depth of 26 feet and the vein is rich.

Popham, McFarlane and others, owning a group of claims six and one-half miles northwest of Goffs, have reached 85 feet in depth with a showing of good ore.

The White Syndicate Mines is installing a 15-horsepower gasoline hoist on their property in the Providence mountain country. This is the property that formerly belonged to N. E. Ferguson and John Carr and was sold by them to the present owners through the promoter Thomas Ewing.

10-12-07

Oct. 19, 1907 (17).

OCT 19 1907

INYO COUNTY.

John A. Leidy reports that at the True Fissure Company's mines, 12 miles northeast of Bishop, a cross-cut being run to strike at depth the ledges outcropping above, encountered the first one recently at a point 150 feet from the tunnel mouth and 150 feet below the apex. The surface measurements of the ledge vary between eight and 50 feet. The ore on top runs \$4, while in the tunnel it is estimated to be worth \$6 to \$8 to the ton. Ninety feet further on the tunnel will tap another ledge, and still another lies 60 feet beyond the last. The inclination of these is such as to indicate that the second ledge will join the first at 250 feet depth, and the third will come in at 255 feet.

A local branch of the Western Federation of Miners has been organized in Skidoo, says the News. The first meeting was held Saturday night. The result of this meeting is that a charter has been applied for, from the headquarters of the W. F. M. at Denver, and the following were elected officers: G. W. Paine, president; Peter Blunk, vice-president; J. J. Vance, financial secretary, and Jack Ross, recording secretary.

With the present members and the applications for initiation already handed in, the charter membership will number 35.

Mr. Paine expressed his attitude as follows, which he says will be adhered to closely by the local union. There will be no attempt to dictate the policy of mine owners.

No man shall be eligible for membership who is not a miner, actively engaged in mining work.

The union will encourage the coming into the district of efficient miners who are members of the W. F. M.

Reports which have been circulated through union channels detrimental to Skidoo, will immediately cease.

The Skidoo Contact has struck rich ore. While cross-cutting to catch the main ledge, a blind lead of quartz was broken into last week, which is rich in free gold.

The breast of the tunnel, 100 feet in, has cut the ledge three feet wide. The ore is honeycombed quartz and pans gold freely.

The main ledge of the property, which is on the contact between the granite and lime, is still 80 feet ahead. It has been decided to continue the tunnel to the contact ledge.

RIVERSIDE COUNTY.

It is reported that a deposit of beryl has been found three miles east of Riverside, at the base of Box Springs mountain, the discovery being made by F. D. Mears. A blast put into a ledge for the purpose of getting out building rock it is said revealed a quantity of hexagonal greenish prisms of beryl.

SAN BERNARDINO COUNTY.

Special Correspondence.—In Cima district the camp known as Toeglicity is attracting some attention. In 1896 several claims were located here and some prospecting work done, one shaft being sunk 50 feet, and although good ore was found the prospects were abandoned because of lack of transportation. Chas. Toegl relocated what seemed to be the best of these claims, about two and a half years ago, and called them the Teutonia group. After doing some work on them and finding good ore, he interested S. C. Sampson, of Allegheny City, Pa., in the venture, and the King Thebaw Mining and Development Company was organized to equip and develop the property. Since then there have come into existence several camps in the district, including Meadsville, Camp Peking, Camp Dawson and Toeglicity.

Wagon roads were built to the mines of the King Thebaw Company, and several buildings erected. A general store and a blacksmith shop for the convenience of miners in the surrounding camps are features of the new development. Residences of a better class are also to be built for the officers of the company. When these buildings are completed the president, Mr. Sampson, and the manager, Mr. Toegl, will make their homes at the mines and vigorous development will begin. A 12-horsepower gasoline hoist is to be placed at the main shaft. The property of the King Thebaw Company comprises three groups of claims, the Teutonia consists of nine claims; the Sunday Morning group, of nine claims; the Giant Ledge group of eight claims. The Salt Lake railroad runs through the district, the most distant claims being within six miles of that road.

The geology of the district as a whole is simple, consisting of granite striking north-south, flanked on both sides by limestone, quartzite and other sedimentaries. Both granite, and sedimentary series are cut by intrusive dikes of porphyritic rock. The ore-bodies are associated with the dikes, and are of the fissure-vein type. Quartz is the principal vein material, the upper portions of the veins containing iron oxide, and other secondary products of decomposition. The

ore carries gold, zinc, silver and lead, the greater portion being the last two. Selected samples run high in both gold and silver. The principal vein on the Teutonia is three to five feet wide, there being in the 20-foot shaft a high-grade streak 14 to 18 inches wide on the hanging wall side. There are on the dump 35 tons of shipping ore. Four other veins, similar in character to that described, occur on this property.

Development has only recently begun on the Sunday Morning group, on a four-foot vein of silver ore of good grade. The Giant is a mineralized dike running the length of four claims. It is 40 to 50 feet wide. The company is making preparations to sink the main shaft at least to water level.

A party of Goldfield, Nevada, miners have taken a two years' lease on a portion of the King Thebaw property and will develop the ground as rapidly as possible. They work on 20 per cent. royalty.

Adjoining the King Thebaw property on the northwest is the Silver King mine, located by B. Harper. The vein runs east-west and is on the same vein as the Teutonia No. 3 vein. The ore carries galena and zinc. There are two claims in this group.

Cima, Oct. 23.

A new deposit of merchantable marble is reported 22 miles from Redlands, off the line of the railroad. The deposit is said to be 800 feet thick and a mile long. A company is being organized to quarry and ship the stone.

Dale Mining district in the southern part of this county, says the Tri-State Miner, is beginning to display activity. The work on the construction of the new branch of the Santa Fe railroad has been commenced and is being pushed with vigor. This branch will go to Parker, Arizona, and will open up one of the richest mineral districts in the county, among them being the Whipple mountain, Sunrise mountain, Twenty-Nine-Palms and Dale mining districts, as well as others in the mountains of this region.

The Mayflower Consolidated Mines Company of Los Angeles, will open its new camp during the coming month, after which development on the properties will be constant. By that time the new 10-stamp mill will be in operation. The new railroad will run within three miles of this property, and transportation facilities will be much improved.

The Supply mine in the Dale district is down to the 800-foot level and is reported to be in a fine body of ore.

The old Virginia Dale mine has purchased a new 20-stamp mill and it is

reported that within the past few days they have opened up a fine body of high-grade ore.

A new mining camp, one and one-half miles from Cave Springs, in the Avawatz mountains, in the eastern end of this county has been named Avawatz. All of the business of the district is being concentrated at this place. W. H. Heath, general manager of the Avawatz Mining and Development Company, has been engaged in selecting sites for the buildings of the company, which will consist of hotel, office buildings, etc. The camp is growing, the numerous strikes and recent mining deals in close proximity to the district being responsible for the activity.

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SAN DIEGO COUNTY.

The San Diego News says the 1000-foot tunnel being driven by the Colorado Mining Company, in the Grapevine district in this county, is steadily progressing. It is now in between 500 and 600 feet, and is being pushed toward the hanging wall as fast as three shifts can drive it. The tunnel has been in vein matter all the way and several shoots of pay ore have been encountered, the last one, some 450 feet in, showing values of \$4 to \$17 to the ton. But it is expected that the best values will be found within 200 feet of the hanging wall, or about 800 feet from the mouth of the tunnel. It is expected that this point will be reached before the first of the year. The Colorado people are certainly to be complimented for the energetic and business-like way in which they are developing their big property.

An announcement has been made to the effect that the Encinitas copper mines are to be worked by R. J. Coleman, who was formerly associated with some of the mining properties at Bingham, Utah, and more recently with the Lluvia de Oro gold mine in Mexico, of which he is part owner. It is understood that it is the intention to develop the properties at Encinitas, that the mill will be enlarged and that all necessary facilities will be provided for economical working.

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SAN BERNARDINO COUNTY.

Special Correspondence.—Several good developments of gold and copper ore have been made on the Midnight claims, owned by C. E. Anthony and Company, between Ord Mountain and Kane Springs. In one place a solid rock outcrop was found stained with iron oxide. A blow with a hammer spawled off a piece and exposed rich copper ore immediately beneath the surface. Development at that point has exposed a fine body of ore. Good gold rock—some of it rich—has also been recently found on these claims. The entire district is receiving a more thorough and intelligent exploration than at any time in the past and it is found that the entire district is surprisingly rich in minerals—chiefly copper and gold. Dagget, Oct. 28.

A crosscut has been started from the 100 level in the Tungate shaft of the Montana Company, and is in about 40 feet. The new cross-cut is being run west to cut the vein at this depth. Three shifts are working under the management of H. C. Shinn.

General Manager Kichholtz of the Avawatz Mountain Mining Company has miners at work and has resumed sinking in the Pathfinder shaft. A good-sized vein has been encountered in the shaft and work will be rushed. It is understood that work will shortly be resumed by the company on the Silver Eagle claim.

The 15-horsepower Fairbanks & Morse gasoline hoist of the Whipple Mountain Gold & Copper Company, left Needles Tuesday loaded on several wagons, for the camp of the company, says the Eye. Contractor J. C. DeSpain has the work in hand and as soon as the hoist is in working order, sinking will be commenced upon the properties which have one of the best showings in the country. Some excellent gold and copper ore has been uncovered in the Blue Bird property of the company and there is prospect that it will make a producing mine.

E. M. Wilkins of Von Trigger reports that development work is going forward on a number of properties by five companies, and the ore so far uncovered shows good value in copper and gold. Wilkins has been inspecting a number of claims in which he is in-

terested, and a deal is now negotiating for sale of a group. The claim owners include the Cram boys, who have sunk to a depth of over 140 feet, and opened up wide ledges. The outlook is for a busy winter at Von Trigger.

The Pacific Coast Borax Company is reported to have shut its plant at Borate 12 miles from Daggett where they have employed from 100 to 200 men for about 18 years. They are going to move their plant to Death Valley, where they have a large area of borax ground.

The past week has been one of continued activity around Bonanza Mountain says the Crackerjack News. Each day witnesses the arrival of new residents and visitors at Bonanza well, until that portion of the district contains a good part of the population of Crackerjack, and there seems ground for the assertion that the winter months will see the greatest activity of the Crackerjack district centered about the range in the vicinity of the Crackerjack Bonanza mine.

Regular consignments of ore continue to leave the Bonanza dump for Silver Lake. The ore is going to Salt Lake. A rate of \$1.35 per ton has been obtained by the Bonanza Company from Silver Lake to the smelter.

Cross-cuts at the 100 level in the Bonanza mine have cut five veins, ranging from two to eight feet in width. This showing has been made by cross-cuts running east and west from the main shaft, and at a distance of 30 feet from the shaft. All of the ledges cut carry milling ore, and some of the assays obtained are high. A drift has also been run from this level on the main Arizona vein on which the incline shaft was sunk. The main ledge shows an average width of seven feet

for the 40 feet which the drift has been run.

Other parties are preparing to begin work on their Bonanza Mountain properties, and much material has been freighted in from Silver Lake. George Rose of Silver Lake has a number of men at work on a new find south of the Crackerjack Bonanza and is said to have a fine showing. Gar and Flormann of Crackerjack are interested in a group west of the Bonanza mine, and work is progressing there. Several Los Angeles parties have bonds on claims in the vicinity and are preparing for development work. It is reported a number of Colorado mining men who visited the district last week have made investments there. In addition to this, a number of leasers are prospecting their ground and preparing to begin development as soon as their material arrives on the ground.

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(7) LOS ANGELES, CALIFORNIA, NOVEMBER 9, 1907

11-9-07 (7) **TUNGSTEN NEAR RANDSBURG** 11-9-07

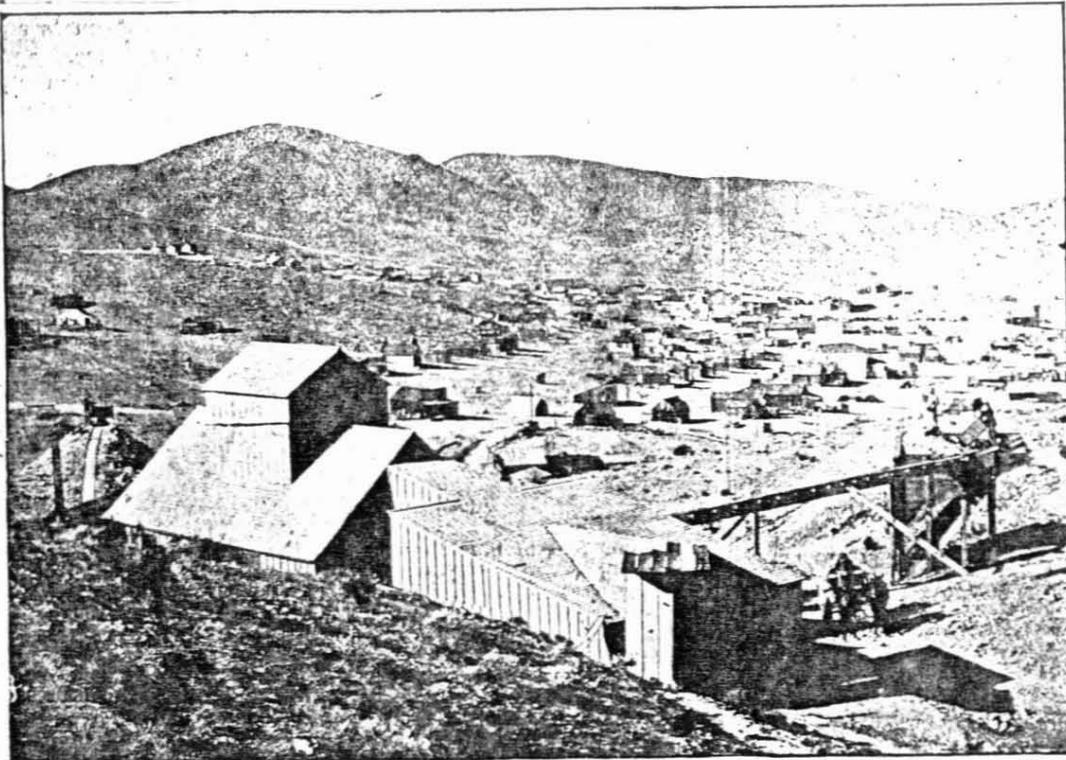
Description of the Scheelite Deposits at Atolia and Other Places in the Vicinity of Randsburg, Kern County, California

[WRITTEN FOR THE AMERICAN MINING REVIEW BY GORDON SURR]

THE WRITER spent a short time in the Randsburg district in September, 1907, and seeing that hitherto little has been written as to the occurrence of tungsten there, a few remarks may be of interest.

The main tungsten workings are at, and near, Atolia, a small settlement which has come into existence since the discovery of tungsten ore. Atolia is on the Santa Fe branch railway, connecting Johannesburg with Kramer, and is about five miles south-

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RANDBURG, CAL., NEAR WHICH TUNGSTEN DEPOSITS ARE BEING MINED

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easterly from Johannesburg. The country rock may be provisionally termed granite, which sometimes in the neighborhood of the veins, has a rusty color owing to the alteration of biotite, and, probably, of some hornblende also. Microscopical examination of thin sections of this rock might show the presence of soda-lime feldspars in addition to the ordinary orthoclase, or potash feldspar of granite; were the former present in notable quantity the rock would be classed as grano-diorite rather than a true granite. The presence of calc-spar in some of the veins lends support to this view as it may be due to the alteration of lime-bearing feldspar. The veins themselves vary in width from mere stringers to upwards of four feet; the gangue materials being quartz, altered country rock, and calcite; the veins have all the appearance of having been formed through the agency of solutions which replaced, and altered, the country rock. A gouge of clay is sometimes seen which often shows striations due to movement. At the time of the writer's visit the main shaft of the Atolia Mining Company was said to be nearly 300 feet in depth, and the company then had about 50 men on the payroll. The veins in the Atolia region are more or less parallel; their strike is easterly, and their dip is generally to the north, from 40 to 80 degrees. As far as could be ascertained no wolframite, or hubnerite, has yet been found in this locality, the ore all being the calcium tungstic trioxide (often mis-called massive), in seams, bunches and shoots in the veins. The writer was informed that all ore which cannot, by sorting, be brought up to 60 per cent. of tungstic trioxide (often mis-called tungstic acid), is sent to the mill, and that the concentrates shipped carry 60 per cent., and the sorted ore sometimes up to 70 per cent. of tungstic trioxide. The plant for milling tungsten ore at Atolia, comprises, it is

said, a six and one-half-foot Huntington mill and Frue Vanners; although the specific gravity of scheelite is from 5.9 to 6.1 the loss in the tailings is large. All the mines in the district are dry, water being delivered by the Santa Fe Railroad at Atolia, at the rate of \$15 per tank, about 10,000 gallons. This water is brought from Hinckley, a station a few miles westerly from Barstow, and is pumped back to the mill and used repeatedly. The surface of the ground in the tungsten district is, for the most part, covered by the products of rock weathering; prospecting usually at first being confined to tracing float and cutting trenches. It is interesting to note that a piece of antimony sulphide was picked up in a gulch northwest of Atolia, in view of the occasional close association of this sulphide with scheelite in New South Wales, where it sometimes has to be broken off the scheelite with hammers. On the other hand, this specimen may have been brought from a distance, as the gulch in which it was found is by no means a place where "the hand of man never set a foot." Scheelite also occurs outside of what may be called the Atolia belt, being found about one and one-half miles north of Atolia in schists and gneissic rocks, and in the Stringer district, three miles southerly from Randsburg. The Winnie mine in this district, which was formerly worked for gold, produces scheelite where it occurs in mica-schist, and in a dark, massive, fine-grained rock resembling diorite to the unaided eye; in places, portions of this rock are partly scheelite, the line between the scheelite and the rock being sometimes most irregular; the main shaft on the Winnie, at the time of the writer's visit, was 80 feet in depth. The Sunshine gold mine adjoins the Winnie and some of the ore carries a little scheelite; on October 26th, a report was published that gold telluride had been discovered in this mine.

The gold ore at White's Camp, seven miles southwesterly from Randsburg, also carries small quantities of scheelite. Northeast of Atolia, Tertiary eruptive rocks are much in evidence; no tungsten has been found in these rocks in this locality, in fact, as a general thing, tungsten occurs in granitic rocks, schists and silicious limestones. The writer, while in the Atolia region, met a gentleman who prospected with the aid of a "divining-rod," consisting of a forked "grease-wood" stick; if seeking tungsten, a small piece of scheelite is attached to the rod; if gold, a five

dollar piece, or a small piece of oil, a small bottle of eum; this, to say the least, is a very convenient individual states that, in prospecting, he never has used a divining-rod, and the writer fully believes in shafts, which had been sunk in this manner, and at depths of 100 feet in depth, and any mineral, or at least a mineral of some value, would be conspicuous by its absence.
San Bernardino,

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SAN BERNARDINO COUNTY.

Special Correspondence.—Numerous strikes in this district continue to attract attention to the Cima district. Many properties have been acquired by Eastern and Denver people. The Death Valley and Arcalvada Mines Company is at present the best shipper and producer of the district. Since the 24th of June 26 carloads of silver-lead ore have been shipped to Salt Lake smelters. The present output is 80 to 120 tons per week. The ore is being sent to the smelter partly without sorting and runs from \$500 to \$2,000 per car.

The mine is opened by a 200-foot incline shaft. Drifts and cross-cuts on the 100 and 200 levels showing good bodies of ore. On the intermediate level, between the 100 and 150 levels of the Death Valley mine miners are stopping several ore bodies and blocking out ore, but on account of lack of hoisting facilities only the best ore goes to the ore bins. The high-grade ore lies usually near the hanging wall and shows wire silver. A large body of \$24 ore is being opened on the 200-foot level. There are about 8,000 tons of ore in sight. The principal difficulty is the incapacity of the boilers to furnish sufficient steam for the hoists and pumps. With two shifts working 50 tons of ore could be taken out, but under the present conditions not over 25 tons can be relied upon.

W. Halm, president of the consolidated mines is at present at the property. There are 52 men employed. The properties are equipped with two steam hoists and pumps. A number of smaller properties are being worked by small forces near these mines.

The Goldfield Teutonia Leasing Company, operating on the Teutonia No. 2 claim of the King Thebaw Mining Company has started work, and is sinking on the extension of the main vein which traverses the property. This shaft is expected to cut the ore-body, before the 50-foot level is reached.

The King Thebaw Mining Company is sinking the main shaft and sacking high-grade ore for shipment.

Cima, Nov. 2.

It is reported that a custom mill will be erected at Bonanza Mountain within the next 90 days, says the Crackerjack News. The parties who are reported to be back of the enterprise are George Rose of Silver Lake and several Colorado men interested in the Rose lease on the Bonanza. According to information, the mill will be erected on the west slope of Bonanza Mountain, below the leaser's shaft and will consist of five stamps arranged to be enlarged when desired.

It is understood that the Bonanza Company has guaranteed a stated daily tonnage for the mill until their own plant is constructed. In addition to this will be the ore from the Rose lease and from several other leases which will soon begin operations.

L. F. Flormann and Ben Garr, of Montana, have 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.

Sacking \$100 ore from the grass-roots is the record of the Rose lease, the first granted by the Bonanza Company, on the Arizona claim. The leasers began work 10 days ago, and the first two days' work resulted in sacked ore below the main company workings. The general average of the ore taken out so far and sacked is said to be \$100 a ton.

Sinking is going on in the shaft, which is down 30 feet. The pay streak is 18 inches in width in the bottom of the shaft. Progress on the Rose lease, on Bonanza Mountain is being watched with great interest by other leasers, who are preparing to begin work.

Several other blocks of ground have been secured by leasers on both sides of the Bonanza Company's shaft and tunnel. J. W. Todd and other Los Angeles parties have secured 300 feet on the Owl claim of the Bonanza, and are preparing to begin operations. Two leases have been granted on the Arizona ground below the Rose lease by Nevada parties, who will begin sinking this week.

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CALIFORNIA.

INYO COUNTY.

The Wane Wonder mill is now in operation and the mine is in good condition. The mill has been running since October 27, handling about 80 tons per day.

The average daily output of the Tecopa Consolidated last week was 96.5 tons. One hundred and fifty head of mules are employed in hauling the ore to the railroad, says the Rhyolite correspondent. The big compressor is ready to start and will be in operation within a few days. The town of Tecopa is settling to be quite a city, all kinds of business houses going in and things lively.

The Tecopa Gunsight Mining company has been organized at Rhyolite. H. Stickney will be president; E. Griffiths, vice-president; B. F. Taylor, secretary and treasurer. Specimens of lead ores taken from the workings assay \$7.65 to \$64.20, principally in lead. The holdings comprise 13 claims, joining the properties of the Tecopa Consolidated Mining company and the surface showings said to be as promising as those of the Tecopa properties, which are already producers. Taylor & Griffiths purchased Sam Phail and Frank Gately a year ago last July, at which time the 13 locations were made. That is previous to the sale of the Tecopa Consolidated properties to the present owners, and there was nothing doing in that section at that time.

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SAN BERNARDINO COUNTY.

Special Correspondence.—The Shoeing Mining Company, operating on the King Leopold and several other properties, has made arrangements to send out a party of men to ship the ore accumulated on the dumps and then develop the mine. It is the intention of the company to put in a concentrator as soon as possible. The ore carries gold and silver running from \$12 to \$40 per ton and is free millable. There are about 1000 tons on the dump. On the King Leopold group, each consists of three claims, is a ledge from two to five feet wide outcropping the full length of the claims. Assays show from \$5 to \$80 per ton. Avawatch, Nov. 17.

The Death Valley Arcalvada Mining Company engaged in developing prospects in the vicinity of Cima, on the Lake road, in this county, has filed articles of incorporation at San Bernardino. The incorporators are: Charles A. Tarbel, I. F. Dawson and William E. Tarbel, of Denver. Paul J. J. of Denver is president of the company.

The company is represented to have money to develop the mines.

A contract has been signed for a mill for the mines of the Daggett Lead Mining Company which owns claims near Daggett, and which will be developed extensively.

The contract is made with the New Century Mill & Reduction Company to furnish, within 30 days, two rock breakers, two intermediates, two concentrating tables, one dust extractor and six screens. This plant is to have a capacity of 50 tons of ore through a 10-mesh screen each 24 hours. The price of the plant is \$4,000. C. C. Davis of Los Angeles, is the president and M. M. Davidson secretary of the Daggett Lead Mining Company.

Crackerjack

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INYO COUNTY.

J. Roark, superintendent of the Teocopa Consolidated mines, says the Miner, is employing 100 men at the property and maintaining daily shipments of 100 tons to the smelters. This ore is coming from the Noonday, on which the work is being concentrated. Owing to the fact that the smelters will not handle a greater amount of ore under present conditions, no effort is being made to increase the output. Recently a promising find was made on the Gunsight, but development there has been temporarily abandoned. When a railroad spur is completed to the property, and other conditions are more favorable the output will be increased. Mr. Roark says that the ore coming from the mine runs 20 per cent. lead and enough silver to bring the average around \$25 per ton.

LOS ANGELES COUNTY.

Special Correspondence.—Walter W. Craig and partner have discovered a mine in the canyon of the San Gabriel river four miles north of Azusa, on the west side of the canyon. The strike is several hundred feet up the steep mountain side on the densely brush-covered slope. The vein is in a dike and shows threads and bunches of galena. It is said the ore carries payable value in gold and silver in addition to the lead. This new find is in an old, but long idle mining district.

Azusa, Dec. 2. 12-7-07 15

SAN BERNARDINO COUNTY.

Special Correspondence.—The California Gold and Copper Company at Von Trigger has laid off all workmen excepting about half a dozen men who are doing surface work. There are about 4,000 feet of development,—three shafts, 100 feet, 150 feet and 260 feet respectively and numerous cross-cuts and drifts. About 20,000 tons of ore are on the dumps, all taken from development work. One tunnel, now in 300 feet, cut three ledges each one of payable copper ore. A. H. Cram, president and principal owner, is figuring on the installation of a leaching plant. The ledges of these properties dip 55 degrees, the trend is northeast-southwest.

Von Trigger, Dec. 2.

J. L. Carder of Los Angeles has sold to the War Eagle Mining and Smelting Company the Alpha Jr. and Lead Queen groups of mining claims and machinery in the Bagdad mining district, says the San Bernardino Sun. A nominal consideration is given. The company in turn has mortgaged the property to W. S. Streeter of Pasadena to secure a loan of \$5,000, which will be used in carrying on development work. There is considerable machinery on the ground, and already sufficient work has been done to indicate that the ledges are promising.

Another strike has been made according to the Crackerjack News, at the Crackerjack Bonanza mine, in the north drift on the first level that has cut the high-grade shoot. The ore is the equal of any that has previously been brought to light in that property. An assay of the ore ran \$1800 gold and silver, and the whole shoot is high-grade. Work is going on at this point, which is 30 feet out from the shaft. A good-sized vein running

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parallel to the main Arizona ledge was being followed in the drift. The ore has shown fair value all the way, but a shot disclosed high-grade ore which is being sacked. A large amount of development work is being done by the Bonanza Company, and a number of miners have been added to the force this week. Sinking is going on steadily in the Arizona shaft, with two shifts, and cross-cutting and drifting are in progress. At present all ore and waste is being taken out of the mine through the Arizona shaft.

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December 14, 1907]

12-14-07 (15)
SAN BERNARDINO COUNTY.

Special Correspondence.—The Coolgardie Mining Company whose property consists of several thousand acres in the Morrow Mining District this county, will begin operations shortly after the first of the year. The company expects to install a system of machinery that will recover gold from placers without the aid of water. Experiments have been going on in connection with this company, and those associated in the prospect believe they have evolved a process that will save 90 per cent. of the gold in material which is a thoroughly disintegrated mass of sand and gravel.
Barstow, Dec. 7.

Special Correspondence.—The Lucile Gold and Copper Mining Company has property in the Providence mountains, 10 miles southeast of Kelso on the Salt Lake Railroad. The company is composed of Los Angeles men. Active operations have commenced and will be pushed as rapidly as possible. The first contract has been finished, consisting of a 100-foot tunnel which has cross-cut the vein 90 feet below the surface and shows good ore. For the present they will ship their ore (which is free milling) to the smelter, but as soon as possible a reduction plant will be established on the property. There is an abundance of water for milling and domestic purposes. The present tunnel is 800 feet above the level of the plain and it is the intention to start another tunnel at a point which will tap the ledge nearly 1000 feet below the surface.

Kelso, Dec. 7.

DEC 14