

MINING
IN
JOSEPHINE COUNTY
OREGON

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MINING is no longer regarded as a gamble for the reason that its splendid record for building great fortunes during the last two decades has placed it in its proper sphere and it is today not only deemed one of the most legitimate but also one of the most remunerative vocations in which man can engage. Many who formerly shunned mining investments now seek them. Legitimate mining is now classed with the growing of wheat, the manufacturing of cloth and the refining of sugar. The day of the "wild-catter" and the "fake promoter" is past. Mining districts of established merits or of prospective value are now receiving intelligent attention from men of money. In no other section of this globe can there be found greater inducements for the hardy prospector or for the employment of capital than those afforded in the mining districts of Josephine County, Oregon. Vast expanse of mountains and plains still remains to be explored. Mining men are coming in and making investments in proven mines or in attractive prospects. Experienced prospectors are taking to the hills. Many letters are being received calling for information in regard to the present status and future possibilities of the mining industry in this section. The early history of mining in Josephine County is glorious with great achievements, yet, when we take into consideration the superior facilities with which mining is now prosecuted, the results of the past must by necessity be reduced to the same ratio that a grain of sand bears to the ocean beach. The pick and the shovel with their limited capacity have been superseded by the steel pipe and hydraulic giant capable of freeing and disintegrating three thousand cubic yards of gravel per day. Josephine County not only has unlimited quantities of low grade ores, but within its boundaries can be found mines producing the highest grade ores ever mined in any camp in the world. This statement can be verified by a visit to the Greenback, Higgins, Anderson, Herzinger, Old Glory, Neill, Oriole and other high grade quartz mines in this section.

Geography

Josephine County is situated in the southwestern part of Oregon and its south boundary line is identical with the north boundary line of Siskiyou County, California. It is separated from the Pacific Ocean on the west by Curry County, on the north it adjoins Douglas, and on the east, Jackson County. Its extreme westerly limits are twenty-four miles easterly from the Pacific Ocean.

Topography and Climate

The three principal streams in this county, the Rogue, Applegate and Illinois rivers and their hundreds of tributaries, furnish an almost unlimited supply of water for power and irrigation purposes. A greater portion of the county is mountainous and highly mineralized and it is not unusual to see rich mines, orchards and vineyards within the same inclosure and operated under the same management. The climate here is perhaps the most delightful to be found in all the world. No extremes of heat or cold. The rainfall averages thirty-two inches per annum, the greater portion of which comes in the winter and early spring.

Opportunities for Capital and Labor

There are only a few producing mines that can be bought as the owner of a profitable and going mine is usually reluctant to part with his holdings, but there are many most promising prospects that can be had at fair prices and on very reasonable terms. Prospectors are willing to give bona-fide investors every possible opportunity to ascertain the value of properties before any payment is demanded on the purchase price. The famous Greenback mine near the city of Grants Pass was bought from Browning and Hannum when the shaft on the ledge was down only forty feet. Its purchasers, Moffut and Smith, of Denver, developed and equipped the mine and took out over two million dollars. Last winter L. G. Higgins, a prospector at the head of Rancherie Creek in the western portion of this county, leased his prospect to C. M. Gage and G. S. Ross, of Selma, and in sixty days they took out several thousand dollars in coarse gold from a space on the surface three hundred and fifty feet in length, twenty feet wide and eighteen feet deep. The lease has expired by limitation and the owner is now in possession. T. M. Anderson, a successful prospector, formerly of Idaho, recently discovered a rich quartz ledge near Kerby in this county and in a few days took out twelve thousand dollars in ore that averaged thirty dollars per pound. The First National Bank of Grants Pass has a quantity of this rich rock on exhibition in its banking rooms. Two months ago Henry Brazille discovered a very rich gold property on Illinois river, ten miles from Selma, and, starting to town to tell his good fortune to friends, he met Dr. J. F. Reddy and associates on the trail who immediately secured a bond and lease on the prospect and paid Brazille four hundred dollars for the rich rock that he was packing to town on his back. W. J. Wimer, J. T. Logan, Theo. Cameron, F. H. Osgood and A. E. Reames, the owners of three hydraulic mines at Waldo, are taking out fortunes from their properties. Wm. Neill, of Kerby, while taking a pack train into the mines on Josephine Creek, discovered a rich mine, then sold his outfit in order to raise money with which to open up his new discovery, and after doing a limited amount of development work on the claim sold it to Victor A. Segno, of Los Angeles, for \$80,000.00.

The author of this article could have located the big Yank ledge at Galice a few years ago, but neglected to do so. Others came in and

took it up and sold it to the Almeda Consolidated Mines Company. The great Oriole mine was located by a pioneer prospector who had more claims than he could do assessment work on, and let it go by default. Others relocated it and are today shipping ore to the Tacoma Smelter that averages two hundred dollars per ton in gold. After learning these facts is it any wonder to any sane man that the eyes of the whole mining world are turned toward Josephine County, Oregon?

History of Mining in Josephine County

The first discovery of gold in this section of Oregon was made on Josephine Creek on May 2, 1852. The whole length of the creek was immediately located by the members of an army of "stampedeers." The bed of the stream and the low bars along its banks paid from \$25 to \$100 per day to the man by the crude method of mining in vogue in those pioneer days. Mining was expensive and only very rich diggings would pay to work. Flour was sold at one dollar per pound, sugar at the same price, and miner's boots at fifty dollars per pair. Soon after the first discovery the whole country was flooded with wild accounts of other rich strikes. Farmers in the Willamette valley deserted their valuable ranches, and even the entire crew of a sailing ship in the harbor at Crescent City deserted and came over to Waldo and mined a rich piece of ground that is now known as the "Sailors' Diggings." Everybody was mining mad and everybody had money to spend. Coin was scarce, hence the hotels, saloons, stores, livery barns and even the county officers had gold scales for weighing dust, either on their counters or in their pockets. In a few years the rich diggings that were easy to work by the crude methods became exhausted, then canvas hose was employed delivering water under pressure against the gravel banks. Later steel pipe and hydraulic giants were introduced and other modern devices employed for recovering the gold from the gravel on the higher bars and ancient river channels. Quartz mining never received any serious attention until much later. Surface croppings that contained high grade free milling ores were worked in arrastras or in small mills with great profit, but whenever sulphides replaced the free gold in the rock the mine was immediately abandoned and its owner began the search for a new prospect; this feature of early quartz mining in this section of the state has caused many unthinking people to suppose Josephine County to be a "pocket mining district," but such a conclusion is entirely erroneous. Rich ores come in shoots, chimneys and "blow outs," and a mining district without these characteristics is not a very desirable place in which to invest. Ore shoots may be only a few feet in length or they may extend along on the strike of the vein for a full mile. Development work on some of the best mines in this section clearly demonstrate the fact that rich ore shoots go down to great depths.

Takilma Mining District

The largest property here is the Takilma Mining and Smelting Company's holdings, which consist of thirty lode mining claims, a 200-

ton smelter, bins, a large number of buildings, water rights, etc. The late Charles L. Tutt, of Colorado Springs, Colorado, was the largest stockholder and president of the company. His death has caused active operations on this property to cease for the present. The formation here is diorite and serpentine through which well defined lenticular veins of variable widths occur. The ore carries considerable gold, from six to ten dollars per ton, but the main values are in copper sulphides, bornite and chalcopyrites, which produce from eight to fifteen per cent in copper. The mine and smelter, though handicapped by lack of railroad transportation facilities, proved a profitable investment.

The Elder Mining Company, of which Dr. J. O'B. Gunn, of San Francisco, is principal owner, is now employing forty-eight teams in hauling copper ore to Grants Pass from Takilma, a distance of forty miles, and shipping to the smelter at Kennet, Calif., and is netting about \$50 per ton in copper and gold.

There are numerous copper prospects in this district some of the most attractive of which are owned by E. M. Albright, of Deering; C. L. Mangum, of Grants Pass; George W. Elder and John F. Sanger, of Waldo; L. B. Jamison, Kamiel Koheery, Kiel & Co., Horace Stevens and Dr. James Spence, of Takilma. The owners of undeveloped mines in this district seem to be willing to grant to investors very liberal terms along the lines of working bonds and leases. While Takilma district is most prominent on account of its copper values, yet it possesses much first class dredging ground that is known to be rich in placer gold. A few years ago a river dredge was put to work within ten minutes walk from the center of the town, but soon got into litigation and it is now idle on this account. W. J. Harris, of Spokane, Washington, has recently received a decision from the Supreme Court of Oregon awarding him the property, and it is hoped that the plant will soon resume operations. The gravel is from sixty to eighty feet deep and carries values from one to ten dollars per yard in the stratum that occupies the bed rock. This stratum is from ten to thirty feet thick and the entire overburden produces gold in paying quantities. There are splendid opportunities for the investment of capital in this district in dredge mining with a reasonable assurance of reaping big returns. The Champlin dredge twelve miles east from the city of Grants Pass has been operating night and day during the last ten years with great success.

Althouse and Sucker Creek District

Althouse and Sucker Creeks, by their wonderful production of big gold nuggets in pioneer days, made Southern Oregon famous, and they are still doing much to sustain its claim as being one of the richest gold districts on the Pacific Coast. While there are some patches and small pieces of ground not worked out, yet the most of the auriferous gravel has been worked over and over again. A few hydraulic plants are in operation on these creeks and are earning good dividends.

Many splendid strikes have recently been made and without a single exception every man in the whole district is very optimistic as to the future of the camps on these two creeks. Mr. Henry Siskron, on the divide that separates the two creeks, is operating a very rich quartz property, employing an arrastra for grinding out the values in the rock. Mr. Millard F. Hull, of Grants Pass, owns a splendid group of claims adjoining the Siskron mine and is actively engaged in development work. His ore is free milling and the veins are strong and well defined. George S. Calhoun, of Grants Pass, and C. M. Casad are developing a fine free gold prospect on Bolan Creek. Messrs. Grimmet, Wisecarver, Smock, Spence, Ducommon, Klipple, Gardener and many others own some fine prospects in this district that they are developing into paying mines. This district reaches from Illinois river in Oregon to the summit of the Siskiyou mountains in California. It is highly mineralized, heavily timbered and abundantly watered and in every respect offers an inviting field for the prospector and the capitalist. There are wonderful opportunities here for all.

Kerby District

The town of Kerby is situated on the Crescent City and Grants Pass stage road on Illinois river, thirty miles southwesterly from the latter place, and is on the easterly edge of the best and richest mining districts in the State. A few hydraulic mines are still in operation on Canyon and Josephine creeks, the most prominent of which is Mr. Samuel Bowden's mine. The mine embraces a high bar in the forks of the creeks. It has a splendid water right, a fine dump and a good plant in operation. The gravel is thirty to forty feet deep, and, while somewhat indurated, yet it will yield to modern methods of mining and produces from twenty-five cents to one dollar per cubic yard. The district is alive with prospectors and many rich strikes are being made almost daily. The T. M. Anderson strike produces ore that goes better than thirty dollars a pound. The L. G. Higgins strike, that yielded several thousand dollars in six weeks work of two men; the Brazille strike, which is now yielding spectacular specimen rock; the Chatty strike, and scores of others that have recently been made in the Kerby district have created a sensation in mining circles throughout the entire world. The wonderful strikes made have stimulated old prospectors and "new comers" to renewed activity and this will without question result in making other important discoveries. The most pronounced formations in evidence here are porphyry, granite, serpentine and schistose slate. The contact of the last named with other formations in nearly every instance produces very high grade rock, either in free gold or rich tellurides, some of which go as high as \$10,000 to the ton.

The mines of B. G. Strock, J. A. Winter, Samuel Bowden, McPherson and Mauer on Lightning Gulch, one of the tributaries of Canyon Creek, are yielding this character of ore. Mines on Day's,

Fiddler's, Carpenter's and Tennessee Gulches in this district are making a fine showing. George W. Finch, Eugene Andrews, W. S. Bacon and others on same mineral zone are opening up some high grade properties. The Chatty, Anderson and other prospects on Day's Gulch deserve a more extended notice that we can give in this article. At the mouth of Josephine Creek and including both sides of Illinois river is situated the big hydraulic mine of George E. Anderson, of Kerby, and and W. P. Wilson, of Los Angeles. It is now and has been for the last ten years a steady producer of large profits to its owners and it still has many years of work to be done before its hundreds of acres of auriferous gravel shall have been exhausted.

Still further down the Illinois river there are numerous mines being developed or in active operation.

On the west side of the river, just opposite the point where Six Mile Creek flows into the river, is the group of quartz claims of Messrs. Ayd-lott and Williams. This property consists of a number of small veins carrying very high grade ore and a red porphyry dike which also produces gold in sufficient quantities to justify its owners in working it by ground sluicing methods. A small two-stamp mill is now being operated on this mine with most satisfactory results. Adjoining is the mine recently discovered by Shade and Brazille that is yielding specimen rock and of which mention has already been made in this article. Still further down the river and about two miles up Fall Creek is situated the group of copper claims owned and operated by the United Gold & Copper Mining Company, which, under the able management of Prof. G. C. Westby, is producing fine smelting ores. A few years ago much ore from this property was packed out on mules to Selma, thence by wagons to Grants Pass and then shipped to the Tacoma Smelter to be treated. Even after providing for the expenses incurred in this crude mode of transportation and treatment, the ore netted its owners a satisfactory profit. The formation here is diorite and serpentine. The ore is chalcopyrite, bornite, oxides and copper glance. The latter two frequently produce as much as eight hundred dollars per ton in gold. Native copper is also encountered. The company owns a fine water power, smelter site and other necessary adjuncts for carrying on mining and smelting on a liberal scale.

Three miles westerly from the mouth of Rancherie creek is located the Calumet & Oregon Copper Mines owned by E. M. Albright, of Deering, and Edward Burke, of Selma. This property has considerable development work done on its numerous ledges and is considered as being one of the biggest prospects in the whole district. The ledges are from five to twenty feet in width and produce good smelting ores of the iron and copper sulphide variety, which also carry from five to twenty-five dollars in gold per ton.

Briggs Creek District

A number of small placer mines are operating near the mouth of Briggs Creek, but the most important properties are those owned by

Frakes & Son, McDow & Brother, W. H. Barr, Robert F. Miller and Leroy Currier & Son, of Grants Pass. The last named mine produces very coarse gold. A nugget was recently found in its sluice race that was worth \$132. All these mines are equipped with fair size hydraulic plants and are in active operation. At the head of Briggs Creek are some very large dikes and ledges of base ores carrying gold, silver and copper and are worthy of investigation. Values range from three to twenty dollars per ton. Many of these dikes are yet open for location under the mining laws. R. H. Bailey and associates have recently discovered a very large 100-foot ledge of quartz, carrying gold, silver and copper and are actively engaged in developing same.

Galice Creek District

The big Oriole Mine is proving to be a wonder—a veritable "Lluvia de Oro." The high grade ore in evidence on the surface outcroppings has been encountered by the 900-foot tunnel at a vertical depth of 600 feet, thus proving the fact that its wonderful values are not confined to surface deposits. The big vein, which is from 100 to 200 feet in width, is composed of siliceous quartz strata of generous and variable sizes, ranging from one to twenty feet in width and interlaced with ribbons of metamorphic slate. The hanging wall is an auriferous quartz porphyry. The foot wall, while not clearly defined, is, beyond question, slate. The contact of slate and porphyry in this district is regarded as an infallible indication of permanency and value of quartz and vein filling. The returns from the Tacoma Smelter on several car load lots of the Oriole quartz show that the pay ores goes better than \$200 per ton in gold. The company is actively engaged in opening up the ore bodies in a most systematic and miner-like fashion, employing drills operated by air compressors. Mr. J. C. Mattison, the original owner of the mine and a member of the board of directors, has the general management of the entire property. Dr. B. F. Rowland, of Salem, is president, Mr. O. S. Blanchard is secretary, and Mr. George W. Donnell, of Grants Pass, is treasurer of the company, which is organized under the laws of Oregon and known as the Oriole Gold Mining Company.

The Sugar Pine quartz mine was first located and operated by George and Daniel L. Green, who took out about fifty thousand dollars by crushing the ore in an arrastra. Later the property changed ownership several times and is now owned by Mrs. Mollie Belding, of Grants Pass. The quartz averages about one foot wide and is opened up by 2000 feet of underground works. Values run from \$25 to \$3000 per ton. The high grade concentrates go \$2000 per ton.

The Gold Wedge quartz mine is owned and operated by the Gold Roads Mining Company of Pennsylvania. A fourteen stamp quartz mill, cyanide plant, tramway, crushers, compressors and other auxiliary machinery constitute the equipment. The ore averages about fifteen to

eighteen inches in width in the main vein and assays \$40 to \$60 per ton, but owing to the complex nature of the ore the recovery of its values is much less than these figures.

The Black Bear, Spokane, Lost Flat, Bybee, Argo, Friday and many other attractive quartz prospects are being developed with most encouraging results. C. L. Barlow, Edward Friday, Daniel L. Green, P. B. Wickham, John Robertson, James Nesbit and others at Galice are mine operators who are developing very promising prospects.

Mr. John Robertson is equipping a big low grade quartz mine, three miles westerly from the town, with a Chillian mill of thirty tons capacity per day. He is employing a Pelton water wheel for furnishing power with which to operate the mill, crusher, compressor and drills. The value of the quartz is six dollars per ton.

The Cold Springs Copper Mine comprises a group of five claims situated five miles southwestly from the town of Galice. Fully 800 feet of underground work has been done on the group exposing well defined quartz ledges that average from four to six feet in width and carrying values of three to six dollars per ton in gold and three to fifteen per cent in copper. This group is owned by J. W. Reeves and the estate of M. A. Williams.

The Almeda Consolidated Mines Company owns the Big Yank group of quartz mining claims covering several hundred acres, which is equipped with compressors, air drills, hoists, concentrators, rock crushers and a smelter of 100 tons capacity. The company has been actively engaged continuously during the last ten years in developing this gigantic mining proposition and it now has either in sight or immediately available thirty million dollars' worth of smelting ore. The big ledge where the river cuts it in twain measures 280 feet wide, thus proving it to be one of the largest mineralized veins of quartz ever discovered in North America. There is more than a mile of underground works on this ledge, and numerous cross cuts, drifts, winzes and tunnels are still being driven to make available additional tonnage for the smelter which was recently blown in. The ore carries iron pyrites, copper sulphides and galena. Values go from \$2 to \$20 in gold and silver and from 2 to 10 per cent in copper. Selected ores go as high as \$80 per ton in the three metals represented in the assays. One remarkable feature of the ore is that it increases in richness as depth is attained. This fact refutes the claims of a few that the ores of the mines in Oregon do not hold their value with depth. The company is active and progressive, and, realizing the fact that it owns one of the most extensive and valuable mining properties in America, it is now considering the idea of constructing a much larger plant to handle the immense tonnage that is being developed. The officers of the company are O. M. Crouch, president; L. B. M. Simons, vice president; R. C. Kinney, secretary and treasurer; John F. Wickham, manager, and P. B. Wickham, superintendent of the mine.

The Three Lodes Mining Company, of which F. F. Johnson, of Grants Pass, is manager, owns a group of large ledges adjoining the Almeda that is making a fine showing.

The Old Channel Mining Company owns the model hydraulic mine of the Pacific Coast. This property is located one mile westerly from the Galice post office and comprises about 1500 acres, much of which is patented and the remainder is held by possessory title. The gravel banks are from 100 to 250 feet high and occupy a porphyry and slate bedrock 2000 feet wide at an elevation of 1000 feet above Rogue river, through which flows an immense volume of water and thus affords unparalleled facilities for disposing of the debris of the mine. The gravel carries both fine and coarse gold and will average about eight cents per cubic yard. The superior facilities for mining make it possible to handle the gravel on this property for two and one-half cents per cubic yard, and the present plant has a capacity of 4000 cubic yards per day. Three giants employing water under a head pressure of 500 feet are operated day and night for seven to eight months during the year, and if a system of reservoirs were installed, the working season could be extended sixty to ninety days longer. The mine has been successfully operated continuously during the last thirty years and there is enough gravel still on the property to keep the present plant busy one hundred years more.

The Dean & Corliss hydraulic mine two miles down Rogue river is a valuable property worthy of a larger and more modern plant than the one now in use.

The mines on Rum, Whiskey, Howard, Mule and other creeks still further down the river are making most satisfactory showings.

The hydraulic mine at the mouth of Rocky Gulch, near Galice, and owned by L. L. Jewell, of Grants Pass, and H. L. Lewis, of Galice, is a very rich property and during the last quarter of a century has produced several fortunes.

Silver Creek District

This district lies just west of the Galice district, and within its limits are to be found some of the biggest mineralized dikes in the entire state, many of which still remain open for location. Like Galice district, it has hundreds of water power streams flowing through it in every direction thus affording cheap power for operating all kinds of mining machinery. At the head of the creek Peter Cheldelin owns rich gulch diggings that he is working by ground sluice methods with great profit. Further down the creek Leigh & Metz are operating a gravel property with a modern hydraulic plant, and adjoining their mine on the west the Cobel & Henson hydraulic mine is being operated by Mr. J. W. Baker.

Still further down the creek there is a great mining enterprise being undertaken by an eastern company of which Mr. Frank Metz is one of the largest stockholders and also the general manager and local agent. This enterprise consists of driving a tunnel in the face of a 700-foot fall of the creek (river) for the purpose of making an outlet to a vast basin of auriferous gravel, which, above the falls, will average 300 feet deep. In order to make this vast extent of rich gravel avail-

able the big 2000-foot tunnel is being driven. The basin averages 500 feet in width by three miles in length. From the head of the creek to the east line of the Metz property the gravel in former years was exceedingly rich in placer gold, and shafts sunk on the Metz ground show that it contains the continuity of the rich channel that was so productive further up the stream. The owners have expended about \$50,000 on this enterprise and it is estimated that it will require an additional sum of same amount to complete the tunnel and equip the property with a modern mining plant of generous capacity.

Still further down the creek, three miles below the falls, is situated the property of the Old Glory Gold Mining Company of Grants Pass. This big mine comprises both quartz and placers and is one of the most unique mining propositions that is found in this entire coast country. The rich ledges of quartz cross the deep gorge made by the flowing waters of Silver Creek, 1500 feet below the enclosing walls of the Grand Canyon. Nature has practically developed the mine on a most gigantic scale and has brought into sight an immense tonnage of high grade ore that can be taken out from the numerous exposures just mentioned at a nominal cost. The mine has a fine water power on the ground and is soon to construct a mill and install other necessary machinery for operating the mine on a liberal scale. Mr. C. L. Mangum is president and Mr. William Stock is superintendent at the mine.

Grave Creek District

Near the point where Reuben creek flows into Grave creek is a large hydraulic mine, operating on a high bar known as McNair flat. The water is brought in from Reuben and Poor Man's creeks, several miles distant, and conducted in pipes laid on bridges across Grave creek, where it is employed in hydraulic work under moderate pressure. This property is thoroughly equipped with all modern devices for saving gold and for mining on a liberal scale. The property is owned by the Ideal Gold Mining Company, composed of wealthy Pennsylvania capitalists.

Near Leland, where the Southern Pacific Railroad crosses Grave creek, the Steam Beer and the John C. Lewis hydraulic mines have been in operation for many years.

Still further up the creek, at the junction of Tom East and Grave creeks, is situated the extensive placer ground known as the Columbia Hydraulic Mine and owned by Mr. L. A. Lewis, the wholesale grocer of Portland, Oregon. The Columbia is one of the best equipped mines in this state. It owns some 25 miles of ditches, fine water rights, hydraulic elevators, big pipe lines and miles of sluice ways and flumes. The best gravel banks on the mine are situated on the gulches leading from the famous Greenback quartz mine to the Columbia diggings. It is estimated that the Columbia is yielding from \$100,000 to \$150,000 per season of eight months operation. As nearly all the work can be done by water under great pressure the mine can be operated very cheaply.

At the head of the Tom East creek, a tributary of Grave Creek, is situated the great Greenback mine which has produced about two and one-half million dollars. This famous mine was bought by Moffatt & Smith, of Denver, Colorado, a few years ago, when it was a mere prospect. It was immediately developed and a ten-stamp mill installed on it. Later a new forty-stamp mill with concentrators, rock crushers, tramways, cyanide plant and other modern mining and milling machinery were placed on the property. The mine was developed to a depth of 1400 feet in a diorite and serpentine formation. Moffatt and Smith are both now deceased and Mr. William H. Brevoort, of New York, is owner of the property.

On Browning Gulch, a small tributary of Grave creek, near the town of Placer, Mackin & Bennett own three quartz claims that are producing a good grade of free milling ore. Up to this time only surface ore is being treated, and this is sent down in a wooden trough from the workings to an arrastra one thousand feet down the hill. The arrastra is operated by water power. The method of grinding and treating the ore is slow, but it is effective.

Adjoining this group on the east is another group of several claims owned by Mr. John Hall, of Grants Pass. This group is opened by several shafts and tunnels which expose a good grade of free milling ore. The mine is considered as being one of the best prospects in the district. The Yellow Horn mine, near Placer, is a quartz property of merit and with further development will doubtless prove to be a very desirable mining property. It is a near neighbor to the big Greenback mine. Its owner is Mr. F. Clements, of Placer, Oregon. Still further up the creek George W. Blalock is operating both placer and quartz properties with most satisfactory results. He has been actively engaged in mining in this district during the last twenty years. At the head of the creek, O. M. and E. B. Crouch are operating a most unique quartz mine. They own a group of quartz claims and patented land aggregating 300 acres. The veins are strong and well defined and are opened at several different places, and a tunnel 250 feet in length opens up a quartz ledge averaging fifteen feet wide, carrying good values in gold and copper. Much of the surface on the claims is covered by a vast sheet of gozzan, which is being quarried down and treated by a small three-stamp mill. The entire surface, though covering sulphide ore, carries free gold in safe milling values. The property is known as the Gold Note and the post office address of the owner is Golden, Oregon.

Wolf Creek District

This district is famous for the production of very high grade, free-milling ores containing both metallic gold and tellurides. The Henderson and Scribner mine situated eight miles from the town of Wolf Creek is simply a mountain of weathered diorite through which hundreds of small stringers of white siliceous quartz occur, some of which carry sylvanite ores that go as high as \$5000 to the ton. The owners formerly worked the surface of the claims in an arrastra with profit,

but owing to the death of one of the owners, the mine is now idle. The mine has produced about \$40,000, though operated in a most crude fashion. It is worthy of a better fate. All along Wolf Creek there are numerous small properties that are making their owners rich, though being operated in the most primitive way.

Coyote District

Coyote Creek flows into Wolf Creek near Wolf Creek station or town on the Southern Pacific railroad. The largest mining property in active operation in this district at present is the Ruble Hydraulic mine. The mine comprises about 500 acres of patented land embracing about four miles along the creek. The gravel banks are from six to twenty feet high and easily yield to water under moderate pressure. Two hydraulic plants are employed in operating the mine night and day through the water season and the yield for such period is from \$12,000 to \$20,000.

The mine has been operated continuously for the last thirty years by the late William Ruble, who made a big fortune out of the yearly clean-ups. It is now being operated by his heirs.

The Marshall, Little Anaconda and many other quartz mines in this district are now receiving attention from their owners who are contemplating the introduction of improved methods of mining and new devices for saving the values in the ore. Such should make many low grade ores yield good profits.

Jump-Off Joe District

The first mine on Jump-Off Joe Creek, north of Merlin, is the big hydraulic mine owned by the Swastika Mining Company of Southern Oregon, whose principal stockholders are Boston capitalists. This property comprises over 900 acres of land, most of which is patented and situated on Jump-Off Joe, Horse and Jack's Creeks. The mine is equipped with a very large plant, consisting of several miles of ditches, 3000 feet of hydraulic pipe, giants, sluice boxes, flumes and an electric lighting plant. The gravel is found in numerous old channels along the creeks, and carries placer gold in paying quantities. Mr. A. C. Howland, of Grants Pass, is general manager.

Four miles further up Jump-Off Joe Creek is situated the mining properties of Howland & Cook, of Grants Pass. This mine has a large acreage of wash gravel on which is installed a good hydraulic mining plant. There are several good veins of quartz of proven value, and on the property there is a complete quartz mill and other auxiliary machinery, consisting of air compressor, concentrating tables, air drills, blacksmith shop, tools, etc. This property is known as the Mount Pitt. The property has been under bond to a company who undertook to operate it, but, as its manager did not understand how to recover the values in the ore, the property reverted to the owners. The values run high, from \$40 to \$200 per ton, but, as it is a telluride ore, it requires special treatment by experts to recover its values.

Mr. O. S. Goodnow, of Grants Pass, owns a group of quartz claims at head of the creek and on or in close proximity to Brass Nail gulch, which has a wonderful surface showing, and when depth is attained on his quartz ledges it will certainly expose very rich rock. Brass Nail gulch, which leads from his claims to the creek, is famous for producing some of the richest specimen rock ever found in this state, the source of which was certainly the porphyry mountain on which Mr. Goodnow's quartz claims are located.

The Hammersly Quartz Mine on the high divide that separates Jump-Off Joe from Grave Creek is a very rich property with a most checkered career. Its extreme richness has caused it to get into litigation almost from the day of its discovery. Fortunately it is now free from the entanglements of the law which have so long been a curse to it, and it is hoped that some strong company will get hold of it and operate it along scientific lines. It is equipped with a five-stamp mill, hoist, concentrators, rock crushers, etc. More than 1000 feet of tunnels, drifts, shafts, winzes and upraises on the property expose a siliceous quartz vein from one to three feet in width. The ore near the surface is oxidized and carries only free gold, but on the first and second levels the free gold disappears and sulphides take its place. The ore assays from \$10 to \$50 per ton with occasional bunches of very high grade coming in, that assay from \$500 to \$1000 per ton. The mine is opened to a depth of 300 feet. The formation is porphyry and diorite. Its owner is Robert G. Smith, of Grants Pass, Oregon.

The Lucky Queen Quartz Mine is located at a point near where Jack's and Horse Creeks flow into Jump-Off Joe Creek. The mine is opened to depth of 200 feet and shows a strong vein of quartz carrying free gold and rich sulphides. This is one of the best prospects in the district. The property is worthy of being equipped with a first class milling and mining plant. It is owned by H. A. Corliss and James Rush, of Grants Pass, Oregon.

The Oro Fino Quartz Mine, situated on the divide which separates Louse Creek from Jump-Off Joe, is opened to a depth of 300 feet. The ledge is from two to four feet in width and carries values from \$6 to \$100 per ton. About \$25,000 worth of ore has been shipped. A large quantity of ore is on the dump that will pay handsomely whenever a milling plant is installed. Like many other rich mines it has been in litigation, but at this time it is free from all adverse claims and the owners, A. J. McCorkle & Sons, formerly of Montana, are developing the mine and equipping it with a modern quartz mill of 40 tons capacity per day.

Grants Pass District

At a point eight miles northeasterly from the city of Grants Pass is situated the Granite Hill Quartz and Placer Mines comprising about 500 acres, most of which is patented. The mine is equipped with a complete hydraulic mining plant, a twenty-stamp quartz mill, four flue vanners, rock crushers, air compressors machine drills, steam hoist of large capacity, canvas plant for saving fine concentrates, etc. The mine was formerly owned by Senator R. A. Booth, of Eugene; C. L.

Mangum, of Grants Pass; A. J. Hechtman, of San Francisco, and F. H. Buck, of Vacaville, California, who bonded it to the American Gold Fields Company, of Chicago. The company operated it for a while with great success, but on the 400-foot level an underground current of water was encountered that flowed 3000 gallons per minute, which drowned the mine. Soon after the occurrence of this untoward event the company got into financial troubles from which it has not yet recovered. The mine has more than a mile of underground workings, all of which is on a strong fissure vein of siliceous quartz fourteen feet in width. This big vein strikes north 64 degrees west and dips 45 degrees south, and is situated in granite in close proximity to a diorite contact on the south. The pay ore is found in ribbon strata on the hanging wall of the vein, ranging from one to three feet in width and carrying values from \$25 to \$200 per ton in gold. At the junction of north fork, south fork and main fork of Louse Creek, within a few hundred feet from the quartz mill, are about 30 acres of gravel that will yield fully \$10,000 per acre in heavy placer gold. The property is very accessible and all the machinery on the mine is operated by steam, water and electric power. The Oregon Gold Mines Company of Chicago has recently bought this property and operations are to be resumed at once.

The Homestake Quartz Mine is situated eight miles east from Grants Pass and is owned by Dr. C. R. Ray, of Medford, Oregon. A five-stamp mill, concentrator, Wilfley table, air compressor and machine drills constitute the equipment of the mine. The ledge is small but produces high grade shipping ore. The values come mostly in rich sulphides. A shipping station is one mile distant.

The Jewett is situated on Mount Baldy, five miles south from Grants Pass, and comprises about nine or ten patented quartz claims. A five-stamp mill with a concentrating table and rock crusher constitute the equipment on the property. The mine has been worked spasmodically for the last twenty-five years, during which time it has yielded about \$75,000. Some ten or twelve years ago it was bought by Mr. Benjamin Healy, of San Francisco, who immediately commenced to open up the mine in a most systematic way and had blocked out 10,000 tons of ore and put on the dump many tons more, but before he had an opportunity of realizing on his investment he died. Since this time the mine has been idle and is now on the market for the reason just stated.

The Sunset group of quartz claims is located three miles east from Grants Pass on Jones Creek and is owned and being developed by Frank C. Robertson, of Parish, New York, and Meade estate, of Grants Pass. The mine is equipped with a big air compressor and machine drills. The mine is a large, low grade proposition and the owners are driving a long tunnel to tap the ledge at greater depth for the purpose of ascertaining the value of the ore below the oxidized zone.

The Flannagan Hydraulic Mine is situated on Rogue river, ten miles northwesterly from Grants Pass, and comprises several hundred acres of land on the left bank of the river. The gravel banks average

sixty feet deep. A stratum of ten to fifteen feet thick next to and occupying the bed rock yields from fifty cents to two dollars per cubic yard. The remainder of the gravel yields from ten to twenty-five cents per cubic yard. The mine has a fine water right, good ditches and rich gravel. Its only undesirable feature is its deficiency of dump facilities, but this trouble can be obviated by the expenditure of a reasonable amount of money in the installation of modern hydraulic elevators. Dr. W. H. Flannagan, of Grants Pass, is owner of the mine.

W. R. Whipple and John F. Sanger, of Grants Pass, and Judge Thomas Carroll, of Venice, California, own a large porphyry dike, situated five miles south from Grants Pass, carrying from three to six dollars per ton in free gold, that they will equip with a large mill this season. Mr. W. R. Whipple is local manager.

On Green creek and Hamlin gulch, five miles southeasterly from Grants Pass, are several fine prospects that are being opened by Kingsbury, Marquam, Smith and others.

Murphy District

On Oscar creek, ten miles south from Grants Pass, Ingram and Shrum are developing some fine prospects carrying good values in gold, both free and in sulphides. By recent tests the ledges have been found to carry vanadium ores of considerable percentage, and the owners attach much importance to this feature of their property. Oscar creek is one of the richest small streams in Oregon and has been producing very large nuggets of gold for the last thirty years. Ingram and Shrum, of Grants Pass, believe that their quartz mines have been the feeders of the rich gulch just mentioned. The Oscar Creek Consolidated Mining Company owns 250 acres on Oscar creek through which a very rich channel courses north and south for a distance of 10,000 or 12,000 feet. The mine was at first worked by ground sluicing, later by a small hydraulic plant. The gravel averages ten feet deep and will yield from fifty cents to one dollar per cubic yard, and occasionally a nugget worth from \$100 to \$300 dollars is picked up from the bed rock, which will make the average for the season's run go much higher in value than that shown in pan tests. The mine is deficient in water privileges, but the owners, L. L. Jewell, Charles Burkhalter and Alva H. Gunnell, of Grants Pass, intend to obviate this difficulty in the near future by bringing in water from Applegate river, which stream is only two miles from the main body of the gravel. Still further up the Applegate river is situated the Mountain Lion quartz mine, which has been in operation for the last 25 years. The mine is equipped with a five-stamp mill, concentrators, compressors, cyanide plant and other machinery. Like many other rich mines, it has been handicapped by law suits of a most vexing nature, but fortunately it is now free from litigation and its owner, L. L. Jewell, of Grants Pass, intends to operate it or give some other reliable person an opportunity to do so. The mine is opened to depth of 300 feet on a vein of quartz averaging from one to six feet in width and carrying

from \$5 to \$50 per ton. Much free gold is visible in some of the rock, though the greatest portion of the values is in the sulphides.

Near the Mountain Lion a very rich strike of free gold has recently been made by H. L. Herzinger and Leroy Currier, of Grants Pass. The ledge is composed of pure siliceous quartz, portions of which are highly oxidized and carrying spectacular specimens of free gold. Some of the quartz will yield many thousands of dollars to the ton. In the same neighborhood is located the Homestake quartz mine. The tunnel, which has been driven 200 feet, exposes a six-foot ledge of fine quartz carrying good values in sulphides and free gold. L. L. Jewell and W. S. Bailey, of Grants Pass, are owners. On the south side of the river Mr. John R. Bailey is developing a wonderfully rich quartz property. On the surface the ledge was only one foot wide, but at a depth of 100 feet it has gained width and shows two feet of ore between a porphyry and slate contact and will average \$200 in gold per ton. There is no equipment on the property.

John R. Bailey and W. R. Nipper, of Grants Pass, are the owners of a very large low grade quartz mine in the same district, and expect to open up the same this season. Values, so far as investigated, are low, but the tonnage is very large. Applegate river, which will afford power facilities, is within half a mile of the mine.

Eight miles southeasterly from Grants Pass, The Oregon Strong Ledge Mining Company of Michigan is developing a very promising quartz property, which has all the earmarks of a gold mine which will be a dividend producer. The vein is a strong six-foot ledge, carrying from \$4 to \$10 per ton in gold, though much high grade ore is encountered in all parts of the lower levels. The mine is located within a mile of Applegate river and facilities for conducting mining operations very cheaply are favorable. A modern quartz mill is now being installed on this mine. Adolph Maier, M. E., is superintendent.

Williams Creek District

The largest property in this district is The Layton Hydraulic Mine, which embraces about 1000 acres of land, much of which is patented. The mine owns the best water right in the district, 35 miles of ditches, hydraulic plants, flumes, etc. The mine has been a constant producer of placer gold for the last thirty years and its owner, the late J. T. Layton, accumulated a big fortune from the yield of the mine. The property is now in the hands of his heirs, with Mr. John R. Bailey in charge. The Horse Head Hydraulic Mine in the same district is owned and operated by Mr. Alex Watts, of Murphy, who has made a fortune out of it. This is one of the many properties in Josephine county where one can witness the growing of grain and orchards and mining for gold within the same enclosure and under the same management. In close proximity to the Watts mine are located the Rising Star, Anaconda, Tip Top, Eclipse, Bone of Contention, Fidelity, Eccentric and many other quartz properties deserving a more extended notice than we can give in this brief article. The Exchequer quartz mine located

still further down the Applegate, from which stream it is only half mile distant, is one of the best developed quartz mines in the district. There are about 1000 feet of tunnels, shafts and drills on the property. The ledge is from two to five feet wide. The ore assays from \$4 to \$60 per ton, but owing to the complex nature of the ore, the saving of values has been very unsatisfactory to the owner of the property. Here is a good chance for experts to make a record and a fortune by recovering the assay values in the Exchequer ores. Dr. W. H. Flannagan, of Grants Pass, is the owner of the mine.

Pickett Creek District

This district is located fifteen miles northwesterly from the city of Grants Pass. The mine that is most prominent in this district at present is the Big Four Hydraulic Mine on which a complete hydraulic mining plant is in operation. The mine owns a fine water right, five miles of ditches and a splendid dump. The gravel banks are from forty to sixty feet high and carry about ten cents per cubic yard in gold and considerable values in platinum. This last feature of the mine is to be thoroughly investigated for the purpose of ascertaining the most feasible methods of saving its values. This property is owned by R. W. Clarke, of Grants Pass. The Booth Copper Mine, located on Little Pickett creek in this district, comprises nine lode claims. The ledges are from three to ten feet wide and carry chalcopryite, bornite and iron sulphides, averaging from three to eight per cent in copper and from \$1.75 to \$6 in gold to the ton. Only a limited amount of development work has been done on the mine. The surface showings justify more extensive operation of the ledges at greater depth. Messrs. W. M. Richards, R. H. Bailey and others of Merlin own some big dikes on Pickett creek that they claim carry high values in tin and tungsten. D. L. Johnson, W. W. Hale, Frank F. Johnson and others of Grants Pass, Oregon, also claim to have located some very large ledges in Galice district which carry the same character of ore. Mr. O. H. Griswold, publisher of the Western Miner of Grants Pass, owns the Yellow Jacket Copper Mine, near Merlin, that is producing high grade shipping ores. The United Copper Gold Mines Company, of which Mr. George C. Westby is general manager, owns a group of copper claims at head of Pickett creek. Mr. Wm. H. Ramsay, of Wonder, Oregon, is developing a big twenty-foot vein of quartz carrying free gold and sulphides. The surface croppings are being ground in an arrastra, and the ore from the lower workings is put in the bins to be reserved for treatment by a method not yet decided on. The ore carries values from \$10 to \$50 per ton.

Mt. Rubin District

The Gold Bug, California, Gibson, Lewis, Ajax, Mackin and other quartz mines in this district are being developed on a moderate scale and yielding high grade ore. Koler is the post office.

Platinum

Dr. David T. Day, of the United States Geological Survey, in reporting to the government the results of his investigations for platinum on this coast, says: "Platinum is found in 120 localities. The largest and most profitable field for commercial exploitation is comprised in Coos, Jackson, Curry and Josephine counties, Oregon." The Waldo Consolidated Mines produce a larger quantity of platinum than any other mine in the state. The Big Four Mine on Pickett creek also yields platinum in generous amounts. The high price now prevailing will stimulate miners to greater efforts to save this by-product of their placer mines.

Mining Laws

Any citizen of the United States or one who has declared his intention to become a citizen may locate both placer and lode mining claims. A woman, married or single, may also locate mining claims. No lode mining claim can exceed in size 600x1500 feet and no placer mining claim can contain more than 160 acres. It requires eight persons to take up a placer claim of 160 acres, 20 acres being the size of a claim that one person can locate in a single claim, though he may make as many locations of 20 acres each as may suit his purpose. There must be an actual discovery of mineral before a valid mining claim can be made. In making a lode mining location, the claim must be staked and a discovery shaft put down on the ledge fully 10 feet deep from the lowest part of the rim of the shaft. Six stakes are required to monument the claim, one at each center end and one at each corner. The stakes must stand four feet above the ground and must be not less than four inches in diameter. Location notice must be filed with the county clerk or recorder within sixty days of location.

The Grants Pass Commercial Club will furnish to intending investors and to prospectors such information that it may possess in regard to mining in this section of the state. The Club, however, will not undertake to make scientific investigations of any mining property whatsoever, but will give the names of reputable mining engineers to any person who may desire investigations made. Josephine county is a very large and inviting field for the investment of capital in the mining industry and in every respect is worthy of serious consideration of any who seek investment in this particular line.

Other bulletins on fruit raising, intensified farming, stock raising, etc., in the country tributary to Grants Pass, and fully illustrated booklets of a more general character can be secured by addressing The Commercial Club, Grants Pass, Oregon.