IS RIDDLED WITH GOLD MINES

Precious Metals Found Everywhere in Eastern Oregon. Placer Deposits Along Snake River Good for Many Years.

IN a discussion of the mines and mining industry of Baker County, it hardly seems necessary to go into particulars as to formation, character of ores, etc. In a great edition of The Oregonian in July, 1897, I gave a detailed description of the many districts adjacent to Baker City, with particulars as to the formations in each, and the extent of development work, and general progress of the industry. To the average reader, such an article would not prove of especial interest, but to the experienced miner it is otherwise. It is quite as important to reach the general reader as the expert miner, since the one can profitably interest himself in mines as well as the other.

Our mineral area is simply vast. Its width exceeds 100 miles and its length 200 miles. Every road in Baker County goes to a mining camp, or to several. While we have a grand feeding range and valuable agricultural lands in high state of cultivation, yet the mountain ranges are sufficiently extensive to afford a vast field for the tireless prospector, the pioneer of the Nation's wealth.

Our minerals consist of gold principally, and also of silver and copper. Coal has not been found in profitable quantities, but it may be soon. Attention is being given it. Silver is not especially sought for, but is found in the gold mines to some extent. We have a few properties that are almost exclusively silver, and they will pay in the end. Assays show them to be of extraordinary value, running into hundreds of dollars. But we are a gold community and but little attention is given silver prospects.

The output of our mines is very hard to determine. It is shipped to the mints in other states and credited largely to them. Our Congressional push has proven inadequate thus far to the task of securing to Oregon a United States Government assay office. The trouble is and has been that whenever the mineral sections have moved our representatives in that direction, the bill provides for such office at Portland and another at Baker City, and both are doomed. The southern half of the state will then come forward and urge the introduction of a bill in Congress to recognize their needs, and such bill is born, with the map of Portland upon its face and of Southern Oregon on some other portion of its anatomy, but all you can see is Portland. Portland is a good town—too good a town to insist upon preventing other portions of the state from being assisted in any and every legitimate way, hence this nervousness on the part of our representatives at Washington is quite unnecessary. This should be corrected, and until it is, Oregon will never get credit for her mineral output, nor for even half of it.

Oregon Gets Little Credit for Its Gold

The last statement given out by Mint Director Roberts places Oregon's gold product for 1900 at something over $1,000,000, Baker County alone produced that much in 1900, and Southern Oregon was not asleep all the time. Of course, it will be readily understood that mining companies do not like to give out details of their own business. They are like other people. We can usually infer what their conditions are from what they are doing. If they are increasing their capacity, adding machinery to that already in use, increasing the force of men, and sending in bullion month after month, it is a reasonable supposition that they are producing gold. Whenever owners of a property are offered a fabulous sum for their mine and laughingly refuse it, it is reasonable to suppose that they know they have something of greater value than the price offered. This is a common occurrence in this vicinity. Some of our mines frequently produce over $100,000 in one month. The monthly output of at least one mine in this section has exceeded $150,000.

It is impossible to say how many mines are operating. Many things have been done to extend knowledge of our conditions in the minerals. Our local Chamber of Commerce has spent thousands of dollars for the purpose of doing good to the outer world by advising them of the splendid opportunities here; the papers of the state have been generous. We have bent our knees to the itinerant worker with his "write-up" of "prominent citizens" with their photographs, at so much per head; we supposed every one in the Nation knew that Oregon is now striving for a leading position in the procession of gold states, and yet the other day a man from California expressed surprise when told that Baker County contains mines. We are riddled with mines. Yet some people do not know it. This statement can be made with perfect assurance of its exact truthfulness. Any man who wants a good mine and knows one when he sees it, can get it in Baker County for what it is worth. He will find conditions favorable to its operation, access easy, plenty of timber when needed, water galore, merchants anxious to trust him, and no taxes until he gets his patent. There is no country more favorable to mining operations than Oregon, and no place where the people are more hospitable and generous.

Fine Climate for Mining.

The elevation of our valley is about 3400 feet. The tops of our highest mountain peaks reach to a height of 8000 feet. We neither burn up in Summer nor freeze up in Winter. This is evidenced by the fact that our county is one of the greatest fruit growers on earth. We took the first prize at the World's Fair in 1893 for fruits and vegetables, and we made inroads upon the same recently at Buffalo. If we did not get first prize there, too, we should have. Things do not always go just right even in this country. But we could not raise this class of fruit and vegetables unless we were favored by the climate. We have no Klondike weather. We have no blizzards, and Summer never brings us cyclones. Blizzards, cyclones and sunstrike are to the miners of Eastern Oregon entirely unknown. The advent of any of them would cause as much astonishment as a burst of melancholy sympathy from Herr Most. Yet our atmosphere is invigorating in the extreme. One always feels like living, and it is a fine place to talk about the strenuous life. Our people are energetic. They are alive to the situation and keep going. They know they have something ahead of them.

All our mines are operated under modern methods, and a high percentage of assay values is saved. In some sections—notably east of the city, the ores are free; in others base. Prior to the introduction of the cyanide process here some of our greatest properties lay idle for years at a time, or broke the operators. Now they are great producers and among the best, the process being economical and saving all the values. These mines are distributed over a vast tract of country whose area exceeds that of some of the Eastern States. Wherever we have either mountains or foothills there we have mines. It was to this section the young Irishman had reference when he told his father by mail that the country is so big they had to pile it up in big heaps. It is only recently that we have examined into the copper prospects, and find that we have them in paying quantities. It is also true that the copper mines in the Seven Devils section which are of real value are found on the Oregon side. Perhaps I would better say of greatest value. Heavy operations in sinking and crosscutting are going on all the time in our copper regions. Over in the Quartzburg neighborhood this side of Prairie City, there are some extensive properties that promise well in copper. Eastern Oregon will eventually surprise a sleepy world with her copper alone. Comparatively few people are taking interest in these copper mines, but they who are interested are well pleased. They wish to hold on and will do so.

Gold Values in Snake River.

In addition to our quartz and ordinary placer mines it would be wrong not to mention the deposits of gold on the Snake River. There is enough gold in the gravel bars of that stream to supply our Nation with gold for decades. The old river bed is quite one mile in width on the average. It has but a thin overlay of tillable soil, and under this is found gravel of extraordinarily small stones. It contains no bowlders. The depth to which the gold is deposited in this gravel varies from 8 to 20 feet. The value per cubic yard has been estimated variously at from 11 cents to $1 50. The river has been thoroughly explored for hundreds of miles, and its values are not mythical. The veriest tyro with a pan can show up the gold. It is there. The river always carries a fine volume of water. It never runs dry. It is so swift a stream that the water never rises to a height that would cause cessation of work on its placer deposits. Much difficulty has been experienced in perfecting a process by which the fine gold can be saved. That has been the drawback to successful operations on the Snake. But it has been solved and dredgers are at work there now making lots of money. Burlaps are used, the water flowing over them in sufficient quantities to carry off the sand, but permitting the gold to remain. This gold goes $20 to the ounce, being unusually pure. Men working upon the banks of that stream and using a gasoline engine to raise the water to the beach machines, a distance of 20 feet, and working with plows to loosen up, and scrapers to bring the gravel to their machines, make $10 per day to the man. This gravel deposit carries high values in places for a full mile from the water's edge.

It will take years upon years to work out that vast deposit. It is said that this deposit extends down the river far beyond its junction with the Columbia, and is to be found in the Columbia for miles even below Umatilla. By means of steam dredging plants capable of handling 2000 cubic yards of gravel each day of the value of 15 cents per yard, the cost of handling not exceeding 3½ cents, one may form some estimate of the deposits. In many places acres of deposit exceed $1 per yard in value, but the question of saving the fine gold seems to deter investors. Yet a suitable system must be easy of determination as compared with even the cyanide and the commonest systems in use to separate the gold from its bed in quartz. It would actually appear that such suitable and a wholly satisfactory process has been found, as there are operators now upon the Snake, who are using more than one dredger and have been engaged in this pursuit exclusively for years past. Miners are not wont to play a losing game very long. As these plants on the Snake have been built up out of the proceeds of their own operations, nothing more need be said. Further, during the past 11 years there have been but two times when operations there had to be suspended because of frost. The employes, as a rule, work without gloves the year through.

This is close to the points now being experted for oil. If oil ever should be discovered in this portion of the vineyard the admonition to let the light shine will be duly observed. Oil experts predict success under operations now being carried on. They report conditions on the surface all that could be desired. But oil discoveries are not required to make Malheur County along the Snake great. The gold deposits alone will do that. The only question is, Who will get in? To install an effective plant there will require an outlay of about $50,000. The located land can be bought cheaply even now.

Baker County Always Wins Medals.

Ten years ago the population of Baker City was less than 3000. Today it is over 7000. The increase throughout our county has been in harmony with that of our county seat. During the same time building improvements throughout the county have surpassed all expectation. We have now a fine city in the hills west of here, the noted Sumpter, which has no peer elsewhere in the state. From a babe in swaddling clothes she has grown to be a belle of the finest quality, and her breath is perfumed with the yellow stuff. She is built on a placer mine, clothed with evergreen, drinks mountain water flowing through her front yard, and smiles on all comers. She is a peach—Chimmie Fadden would say. In Baker City as well as in Sumpter there is a noticeable increase in first-class fireproof buildings. Numerous new banks, fine hotels, elegant residences attest the presence of paying mines in a country where the price of wheat is never mentioned.

At the Pan-American Exposition silver medals alone were awarded to the mineral exhibits. But three were awarded, and of these Baker County received two, and Nevada the other one, which was not a very good one, either. Had all of them been gold there is not a man or woman in Baker County who does not know we would have gotten all of them. Under the circumstances we could not be so particular, of course. At the World's Fair in 1893 our mines took the highest medal for the excellent ore exhibit, and I may as well mention here that the exhibit of school work made by the Baker City High School was similarly recognized. It surpassed all competitors, and was awarded the gold medal of supreme excellence.

How people can remain in the East when such opportunities lie at hand to the firstcomer is one of the inexplicable things we have to consider. Eastern Oregon alone can support the population of the entire Coast even if we do live high and are not up on the rules of economy. The area of the state exceeds that of all New England, with New Jersey and Maryland thrown in, yet we have a population of about one-half million. It is true that occasionally some one commits suicide in this neighborhood, but it is generally because he did not come to this country sooner. There can be no particularly noticeable change in his surroundings after the commission of the act if he uses good judgment when he starts on his post mortem route.

From the fact that we thus make our own conditions it follows that we are much less affected by panics and other political diseases than in agricultural communities. There is always money here and a reasonable quantity of it. We get it out of our mines, too. We have the best market for farm produce in the land. Butter sells for not less than 25 cents per pound, and eggs at the same price per dozen the year round. We ship in butter from California and eggs from Kansas. The latter place is where we usually get our Thanksgiving turkeys, the large quantity furnished by the local ranchers being wholly inadequate to supply the demand. The market for the ordinary farm product is always high, while fuel is reasonably cheap. Good cordwood is worth about $3 50. This is a great country, but it is evident that the sleepy East will not find it out for another century or two. It is a fact that every one who has come into Oregon and made careful investigation prior to investing, and has used good judgment in his ordinary affairs, comes to the conclusion that he would not take one of the Eastern states as a gift if he had to live in it. Opportunities to make large returns on investments there are few, and there are many who await them. Here it is otherwise. That, of course, is not the greatest desideratum. To live a pleasant life and be free from care and anxiety, to be able to educate the children in first-class schools, and to attend churches where eloquence and real religion abound, and to be able to contribute to their support—these are the chief end of man. Oregon has them all for all.

WILLIAM SMITH.

Baker City, Or.

DOUGLAS COUNTY ORES.

Mountain of Nickel Near Riddles, on the Southern Pacific.

Douglas County is abundantly supplied with a great variety of mineral. The early miner confined his search for gold to the gulches, creeks and river channels, working over the gravel by primitive methods, while now the same channels, including the adjacent hillsides and tablelands, are dotted with great hydraulic plants, washing out thousands of dollars to the individual's few ounces of gold dust, under primitive methods. Extensive quartz reefs, extending the width of the county, from south to north, and covering a strip 40 miles wide, are being opened up at many points. Large companies have been established and extensive mills have been erected in many places, with all modern appliances for saving free gold. Others are getting out base ores, containing gold, silver and copper, ranging in value from a few dollars per ton on the surface, as they get deeper running into hundreds in many cases. Their further development is dependent upon the advent of more capital to erect smelters, of which there is none in Douglas County yet.

Copper ores of high grade exist in paying quantity in many districts. Rich cinnibar in paying quantities extends over a great area of the county. It has been smelted during the past 20 years in the northern end of the county, and quite recently found near the southern boundary, in Cow Creek Canyon, on the line of the Southern Pacific Railroad. There is a mountain of nickel ore in silicate form near Riddle, on the Southern Pacific Railroad. Its extent and value have been thoroughly tested by United States Government experts and others. California persons have United States patent to 1000 acres. Recently croppings of the same metal have been discovered in adjacent territory. Chrome, iron and limestone in great abundance are found near the nickel ore.

Near Roseburg there are extensive beds of marble, which for durability and variety of beautiful coloring rival the best marbles of Vermont and Tennessee. Several specimens took first prize at the Chicago Exposition in 1893.

The Umpqua Coal Oil Company has been formed here, with a capital of $400,000, to bore for oil. The surface indications and the geological strata are as favorable as in any of the California districts. The Umpqua Valley Oil Company has a first-class boring plant in course of erection at Myrtle Creek, 20 miles south of Roseburg. There is every reason to believe that coal oil in paying quantities can be found in several districts adjacent to Roseburg and railroad transportation.

Very strong salt springs are located near the railroad, which were utilized by pioneer settlers for the manufacture of salt, in the early settlement of this county. Arrangements are now in progress for the installation of a modern plant to make salt for market.

D. S. K. BUICK.

Roseburg.

RICH IN HIDDEN WEALTH.

Jackson Has Gold and Other Metals and Probably Petroleum.

While its agricultural, pastoral, lumbering and horticultural resources are great wealth producers, Jackson County is essentially a mineral district, and since the early days when it was first settled by enterprising, fearless and progressive miners its auriferous gravels and golden veins have yielded to the labor of man over $50,000,000. The industry, as far as the better class of mines is concerned, is only in its infancy, and the future promises far greater returns of wealth than the early miners in their wildest flights of imaginative riches ever dreamed. No county in Oregon is more richly endowed with mineral resources or more favorably situated for their exploitation. It offers exceptionally desirable conditions for mining in its climate, the abundance of wood and water, and the advantages of railroad communication; and presents an unlimited field filled with golden riches, the development of which below the surface has scarcely begun. In mining, as in every other department of human activity, success almost invariably attends the efforts of the diligent, persistent and judicious operator. Scarcely an instance can be cited in the history of this section in which intelligent and persevering prospecting has failed to secure a substantial reward. Men have failed and lost fortunes in Jackson County, as elsewhere, but in many cases subsequent exploration has shown that their work was suspended within a short distance of the looked-for treasure, and others who have followed have reaped the reward of continuity of labor.

Hydraulic Work on a Large Scale.

Jackson County comprises the large area of the Southern Oregon mining district, and here as elsewhere, placer mining provided the early history of the industry, while quartz mining has slowly developed on account of difficulty of transportation and the neglect of capital. Hydraulic mining, or the breaking down of auriferous gravel beds by powerful streams of water directed through nozzles under great pressure and the transportation of the disintegrated material by the same water to the goldsaving apparatus constituting the "sluice" has flourished, for the conditions have been most exceptionally favorable to that kind of work in this district. One hydraulic mine, the Sterling, owned by Messrs. Ankeny & Cook, has cleaned up about $15,000 during the past year, and there are a number of others whose profits have been proportionately large. For hydraulic mining many sections of the county are particularly favored; as during the season of rains and melting snows the streams are torrential, affording abundant water and high pressure, while there are along many of these streams auriferous gravel deposits of enormous extent. At the present time quartz mining is undergoing a most remarkable development, yet that branch of the mining industry is practically in its infancy here.

Development of Quartz Veins.

At no time in the history of the county—since the first quartz vein was worked in a primative way at Farmer's Flat, on the left fork of Jackson Creek, in 1880—has quartz mining been given the intelligent attention it has received during the year that has just closed. The rich quartz propositions existing in the county and the favorable and economic conditions under which they can be worked have attracted capital and investors to a greater extent during the past year than ever before. Representatives of men prominent in the mining world have been giving the county thorough investigation, and as a result there have been a large number of transfers of claims which will be developed by the new owners in a thorough manner. A greatly increased amount of development work has been put in on existing mines and the capacity of a number of quartz mills has been increased—while several new mills have been erected and installed with the most modern machinery. Besides the opening of scores of new and valuable ledges nearly all the old and larger mines have added to their batteries, enlarged their equipment and crews and most thoroughly prepared to enter the prosperous business era of which the new year gives such glowing and abundant promise. The Montreal & Oregon Gold Mines Company, Limited, that operates the well-known Ashland Mine, have one of the best paying properties in the state, as well as the deepest mine in Southern Oregon, they now taking out rich ore at the 700-foot level. All told the gold mining industry has never been so intelligently and systematically operated, and the prospects of large profits for invested capital and an increased output of the yellow metal were never more flattering than at the end of the year 1901.

While Jackson County is famous as a gold-producing district it is particularly rich in other minerals—silver, lead, copper, salt, coal, kaolin, gypsum. Cinnabar, the sulphide of mercury, the ore from whence quicksilver is derived has for years been known to exist in Jackson County and in several localities it has been found in paying quantities.

With the recent quickening of copper mining prospectors have paid much attention to the search for copper ore with the result that a number of new and rich claims have been located in the Siskiyou Mountains, near the state line, and reliable experts who have given the locality close investigation pronounce the district in all probability one of the richest in copper ore in the United States. At the head of Joe Creek, one of the tributaries of Elliott Creek, an immense lens-shaped body of copper ore was uncovered during the past Summer at what is now known as the McVey Mine. The formation in which the ore has been found is a crystallized schist, and its character is similar to that of the famed Iron Mountain Copper Mine of Shasta County. The ore is a sulphide averaging in copper 7 to 8 per cent. Frank M. Anderson, the field assistant of the California State Mineralogist, recently visited this new copper field and believes it covers an area 60 miles in extent. A few miles south and west of the McVey Mine several important discoveries have also been made not only in copper, but in cinnabar as well. So great is the interest excited by these new copper discoveries that the locality is expected to swarm with prospectors during the coming Spring and Summer season. The district is particularly adapted for the economic operation of a smelting plant, as there is an abundance of wood and water on hand on all sides. The locality is as yet practically a virgin field; a wilderness of mountains, canyons, of creeks and rivers, of cliffs and peaks and forests. It is a most inviting field for the prospector and investor. The greater portion of it is as yet public domain, giving the prospector free scope in his labors. So extensive is the district, and so slightly known is it that the intelligent prospector will find abundant room for energetic and systematic work.

Boring for Oil.

For the first time in the history of Jackson County the search for petroleum has been given much attention during the past year. In no other section of the state are there such abundant evidences of the presence under the earth's crust of mineral or rock oil as in the valleys and foot-hills of the Siskiyou Mountains. Four companies have already been organized and have acquired large holdings and leases of likely oil lands on which they propose to drill for petroleum. Two of these companies have been in active operation for several months past. The Southern Oregon Oil Company, which has been the pioneer company in drilling for oil in Oregon, has dug a well on the hillside, east of Ashland, in which they have encountered all the evidences of rich petroleum sands. Strong oil seepages have been developed, natural gases run across and the suction pump brings up in its work quantities of bitumen. The drillers have every confidence in ultimately tapping rich and permanent oil sands. The oil seepages encountered thus far have been of a light character with a paraffin base. The Ashland Oil Company, a California corporation, has acquired by purchase, several thousand of acres of lands in the foothills of the Siskiyous, and have been engaged in sinking prospecting holes, with the intention of procuring a large plant and drilling at the most likely point. The oil section of the county has been largely prospected by experts from the Texas and California fields and all are confident that petroleum will yet be tapped.

F. D. WAGNER.

Ashland.

MINES OF JOSEPHINE.

Placers the Stand-by, but Quartz Mining Is Well Under Way.

Josephine County is the pioneer mining district of the state, gold having been discovered here in the Spring of 1851. Within two short months there were thousands of gold-seekers swarming the many mountain streams, more especially the Illinois, Applegate, Josephine and Galice. It is estimated that $9,000,000 in coarse gold and nuggets were cradled from those streams and their tributaries betwen the years 1851 and 1855.

Owing to the abundance of the auriferous gravel deposits, placer mining has always led in Josephine County. It has been known since the earlier days that the mountains were full of rich quartz ledges, but the pioneers ignored them because of the embarrassments connected with the work of developing and working quartz veins.

As a hydraulic mining district, Josephine County now leads all other sections of the West, possessing as she does 150 hydraulic mines, more than any other district of like area in America. Josephine offers the natural facilities for the development of ideal hydraulic mines. The number of streams and their accessibility, the good rainfall each Winter to furnish power and pressure for the giants, and the abundance and richness of the placer beds, make Josephine County an easy leader as a hydraulic mining region on the Coast.

Along the streams of Josephine County are located the largest and richest gold-bearing gravel deposits to be found in the state, and there are some placer fields being worked that have yet to find their equal anywhere on the Coast. Beds of ancient channels are found along the rivers and creeks. It is in the gravel of these ancient channels that the rich hydraulic mines of Josephine are located. There seems to be no limit to them. Every stream is becoming a perfect network of ditches and flumes. All parts of the Illinois Valley, in Western Josephine County, contain good colors of gold. The towns in that part of the country are built on pay dirt, and the ground would pay well if subjected to the pipe and giant.

The principal mining districts of Josephine are Waldo, Althouse, Galice and Grave. These four districts occupy the four corners of Josephine County. There are a score of other minor districts and placer mining is carried on in every part of the county, but the four districts named comprise the whole.

The Althouse placers, situated in the southern part of the county, were the first mined in Southern Oregon. They have ever proved marvelously rich. In them were found many large nuggets, and today the hydraulic giants are uncovering many pretty specimens with each passing season. A nugget was picked up in this district in 1856 that weighed $1080; in the following year a still larger one was found in the same claim that weighed $3100. Along Althouse and the many streams of the district are scores of hydraulic mines. The water facilities for each of the properties of the district are good; they belong afforded a run of from four to six months. The mining grounds consist of a loose red or gray gravel, lying from 20 to 75 feet on the bedrock. The dirt of this district, like that in all other parts of Josephine County, is rich in coarse gold, the ground paying from 10 to 60 cents per cubic yard. The cost of working, after a mine is equipped, is 5 cents per cubic yard. There are some mines in the county that work their grounds for less than 5 cents per yard, notably the Old Channel of Galice, they running last year at a cost of but 2 3-8 cents per yard. These, however, are exceptions, in this or any other country.

Occupying the southwest corner of Josephine is the Waldo district, in which are found several mammoth hydraulic mines. Some of these plants were built at a cost of $250,000 and more, but they are producing each year from $60,000 to $100,000. The Simmons and Wimer mines of this district operate from two to four giants each night and day during the mining season. The grounds of the Waldo district mines lie deep, and contain gold from the grass roots to the bedrock. The dirt is loose and yields readily to the giants.

The Galice mining district, of Northwestern Josephine, has been the scene of continual mining operations for the past 50 years. This district contains several large hydraulic mines, chief among which is the Old Channel, which is beyond doubt the mammoth hydraulic mine of this section of the Coast. The mine was recently purchased by J. R. Harvey and W. H. Thompson, Chicago men, for $90,000. There are 1500 acres of mining grounds on the property, 18 miles of ditches and flumes, a mammoth reservoir and many thousand feet of piping. Four six-inch giants, with a pressure of 510 feet, are operated day and night for seven or more months in the year. One big gravel bank of this mine that is being worked, is 2850 feet in length, with an average height of 150 feet, towering 210 feet at the highest point. These mines produce from $30,000 to $60,000 each year, and will not be worked out within the next 100 years.

Grave Creek, occupying the northeast-

Thunder

Thunder Mountain, Idaho, is now startling the mining world by the rich discoveries of gold-bearing quartz, together with rich placer diggings. This is a district which has been practically unknown except to a few hardy prospectors, until within the past few years; since which time capital in abundance has been invested in the Thunder Mountain mines.

We believe this district has a brilliant future.

The Bohemia District, lying about 150 miles south of Portland, Oregon, in the Calapooia Mountains, while having been operated in with success for a number of years, is now on the verge of demonstrating conclusively to investors that it is the coming gold-mining district of the State of Oregon.

Base ore of great richness has long been found on the different properties there, but, owing to the heretofore inaccessibility of the district, transportation charges have greatly retarded the marketing of the ore and the development of the district.

Surveys have already been made for a railroad, to be built the coming year, which will make direct connection with the Southern Pacific at Cottage Grove, 35 miles distant.

We have excellent prospects, finely located, in which investors can be placed on the ground floor.

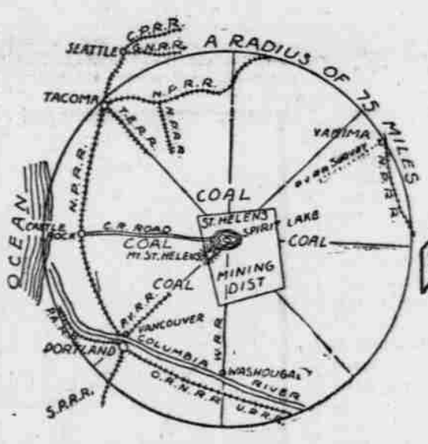
To those interested in developed properties we can submit detailed information.

I. H. Bingham & Co.

110 SHERLOCK BLDG. PORTLAND, OR.

IT is doubtless true that for the producers of these metals, copper at a market price of 12 cents per pound is better than gold at its standard value. At any price above 12 cents copper is, in so much, still better than gold. Seventy-one per cent of the dividends from the mines of the more precious metals last year came from the copper mines, which in themselves, make up but a comparatively small proportion of the total of all the mines reported. At 17 cents per pound all the copper mines in operation can run and make money. At 10 cents per pound, one-third of these must either run at a loss or shut down. Practically all the producing copper mines in the world today belong to three influences—the Rothschilds, the Standard Oil and the Lake Superior people not already in the Amalgamated. Copper brokers are going here and there, always looking for the metal in other hands. These people, if united, by shutting down all their mines for one month, could run copper up to a dollar a pound. At present there is trouble between them. To electrify the railroads now built in the United States would consume all the copper which this hemisphere produces for ten years. To displace the rotten iron wires of the telephone service of America, which is daily growing worse, with copper, would make a perfect wire service good for hundreds of years, but this would require all the copper at present rate of production which could be produced in twenty-two years. The production of copper in this country last year was less than for the year previous. The industries of the country need many times as much copper as they are now using, the prices having been too high to warrant the fuller employment of this metal. A price of $1 per pound would be a great calamity to the world. A steady price of about 12 cents would be a blessing. It would be a good price to most of the mines.

The Wolverine Company last year made a net profit, above every expense, including construction, of $395,534 82 upon ores averaging 1.29 per cent copper—less than 26 pounds of copper to the ton. Its ores carry no other values. One ore chute upon which the Bronze Monarch is working, in the St. Helens mining district, carries 360 pounds of copper to the ton. Besides this, the ore carries in gold and silver greater values than that averaged in the great Treadwell. The world must have copper. If copper is high, the St. Helens mines will share in the enormous profits from such prices. If copper is selling at a fair or low price, these and all other high-grade properties will become in great demand on account of the lessened production made necessary by the closing down of many low-grade camps. Neither horn of the situation proceeds from a dilemma so far as the richer ores are concerned.



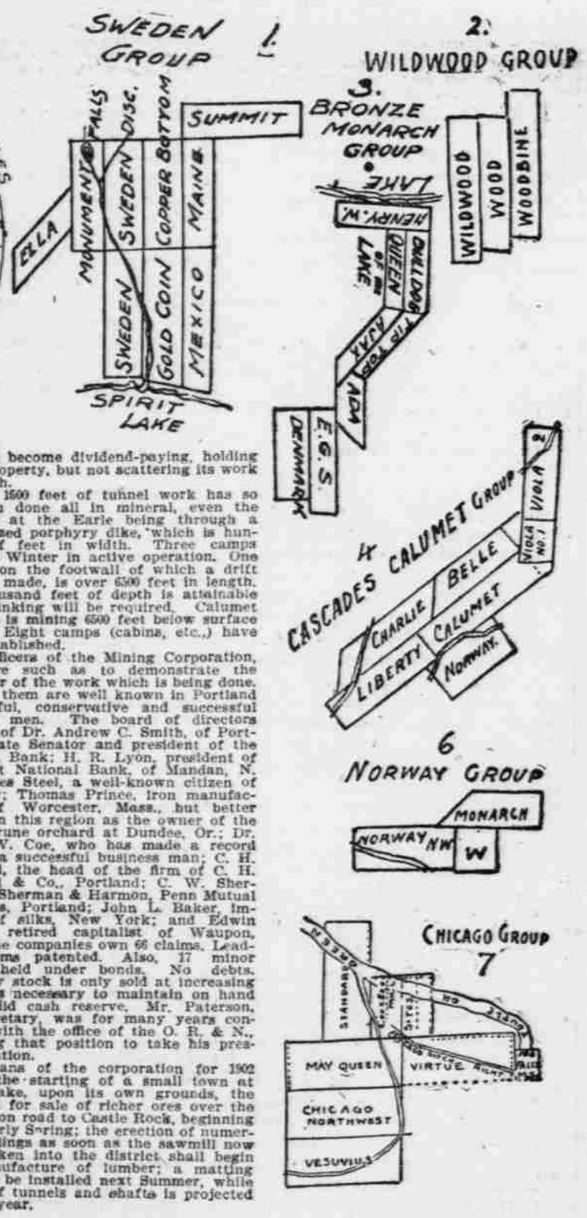
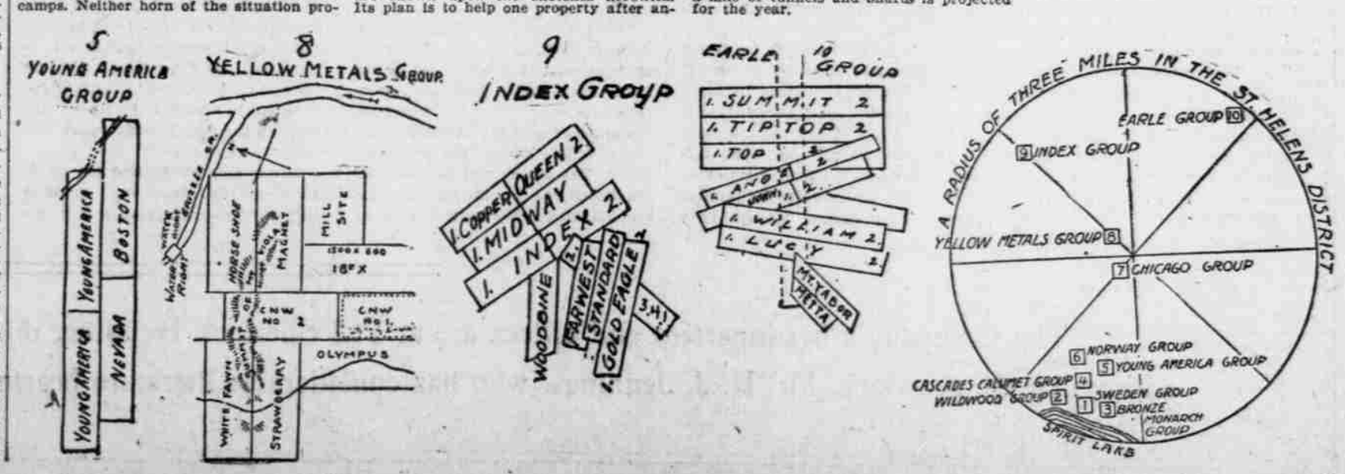
An assay of a 150-pound sample lot from the average dump of a three-foot ore chute in the Norway, which had been drifted upon for 50 feet, made by the Tacoma smelter, showed: Gold, 1.10 ounces ($22); silver, 1.40 ounces, and copper, 184 pounds. These examples show what the St. Helens country will produce.

A visit to the office of the Mining Corporation, Ltd., room 607 Marquam building, Portland, where Mr. W. L. Paterson, the secretary, will take pleasure in entertaining callers or answering inquiries, and an examination of the ores from some of the properties in which the corporation is interested, will satisfy experts that these ores come from near the surface water level. Nature for thousands of years has been cutting off the tops of these mountains, until, almost from the grass roots, the solid sulphide ores are uncovered, obviating the necessity for deep sinking required in most camps upon lower grounds or less favorably situated.

Among the leading properties in the St. Helens district should be mentioned the Yellow Metals, of which James Steel is president and Gustav Anderson secretary; the Chicago, of which N. W. Rountree is president and W. L. Paterson secretary; the Cascades Calumet, of which W. W. Peaslee is president and W. B. Streeter is secretary; the Bronze Monarch, of which Hugh McGuire is president and E. C. Stark secretary, and the Sweden Copper Company, of which Thomas Prince is president and L. O'Connor is secretary.

A great influence in the district is the Mining Corporation, Ltd. For three years the people behind this corporation have been quietly acquiring properties in that section. A remarkable opportunity, backed by a dozen reasons, has helped to make this opportunity possible—an opportunity with present activity there which will never occur again. The Mining Corporation, Ltd., does not claim to have secured all the good things in the district, but does believe that it has made a careful selection; that it has scattered its investments so as not to be carrying its eggs all in one basket, although everything it now has bears promise of success. It owns properties outright, holds a controlling interest in the other companies referred to, and has properties under bond. A portion of its interests are shown upon the sketches herewith. Its plan is to help one property after another to become dividend-paying, holding much property, but not scattering its work too much.

About 1500 feet of tunnel work has so far been done all in mineral, even the crosscut at the Earle being through a mineralized porphyry dike, which is hundreds of feet in width. Three camps are this Winter in active operation. One vein, upon the footwall of which a drift is being made, is over 6500 feet in length. One thousand feet of depth is attainable before sinking will be required. Calumet & Hecla is mining 6500 feet below surface levels. Eight camps (cabins, etc.) have been established.

The officers of the Mining Corporation, Ltd., are such as to demonstrate the character of the work which is being done. Most of them are well known in Portland as careful, conservative and successful business men. The board of directors consists of Dr. Andrew C. Smith, of Portland, State Senator and president of the Hibernia Bank; H. R. Lyon, president of the First National Bank, of Mandan, N. D.; James Steel, a well-known citizen of this city; Thomas Prince, iron manufacturer of Worcester, Mass., but better known in this region as the owner of the model prune orchard at Dundee, Or.; Dr. Henry W. Coe, who has made a record here as a successful business man; C. H. Woodard, the head of the firm of C. H. Woodard & Co., Portland; C. W. Sherman, of Sherman & Harmon, Penn Mutual managers, Portland; John L. Baker, importer of silks, New York; and Edwin Hillyer, retired capitalist of Waupon, Wis. The companies own 66 claims, 14 leading claims patented. Also, 17 minor claims, held under bonds. No debts. Treasury stock in only sold at increasing prices as necessary to maintain on hand a splendid cash reserve. Mr. Paterson, the secretary, was for many years connected with the office of the O. R. & N., resigning that position to take his present situation.

The plans of the corporation for 1902 include the starting of a small town at Spirit Lake, upon its own grounds, the shipment for sale of richer ores over the new wagon road to Castle Rock, beginning in the early Spring; the erection of numerous buildings as soon as the sawmill now being taken into the district shall begin the manufacture of lumber; a matting plant, to be installed next Summer, while a mile of tunnels and shafts is projected for the year.