

that erosion has removed much more material from the surface at the Musick than at the Champion, which is on the crest of the mountain.

The property has been owned for three years by the Hartford Mining Company, of Chicago, but for a year and a half it has been idle. It is supposed to have good property and is supposed to have 10 feet of ore running 140 in gold to the ton. It is reported that work will be resumed at the mine this year.

The Nooday.

The Nooday mine, formerly known as the Anna, is located on Grouse Mountain, about a mile east of the Champion. A five-stamp mill was run for a number of years. In 1886 the company erected a 20-stamp mill, far below the mine, on Horseheaven Creek. The mill was run less than half a year, and has since been closed.

The Nooday has a large amount of underground workings. The drifts and tunnels are over 200 feet in depth, and are distributed at three levels, each of which is connected directly by a tunnel with the deep slope about the head of Horseheaven Creek. The lowest level, which is the most extensive, reaches a point on the vein about 300 feet beneath the surface. The course of the vein varies from north 35 degrees west to north 55 degrees west, and the farther west it is followed the more it bends to the south, toward the irregular brecciated mass about Knott's original claim on Grouse Hill. In dip it varies from 75 degrees north to 85 degrees near the surface, and at a greater depth the dip varies within these limits. The vein is also very irregular in size, and so faintly outlined through the country rock as to be difficult to follow. There are unexpected evidences of movement along the vein are more distinct in this mine than in any other in Bohemia. On level No. 2 the thickness of the vein ranges usually from 4 to 6 feet, with a rare maximum of 8 feet. It averages perhaps about 5 feet.

The ore is of the same character as that of the Musick and Champion mines. Near the surface it is completely oxidized, and the softened quartzose mass is deeply stained by iron oxide. The ore above level No. 1 has been removed, excepting near the western end. It contains no visible sulphides. The foot wall is smooth and slickensided, and the vein matter is in part brecciated, as if by faulting, but there is much banding, with more or less distinct comb structure of later origin. In the tunnel leading to level No. 2 there is a small vein in line with prominent slickensides on the road, and the vein strikes east and west. Towards the west, on level No. 2, the large vein which is mined narrows into thin plates of slickensides are common. Faulting has undoubtedly played an important role in the history of the vein. The fault plane runs east and west, and the strata on it dip 20 degrees east—just the reverse of those seen on the road near the mine. Another small slipping plane in the same part of the mine runs nearly north and south, and its striations dip towards the south.

At level No. 3 the amount of drift has been greater. The tunnel entering at this level reaches first a small vein, which is followed by a large one before cross-cutting to find the principal vein upon which the upper levels are located. Near the northern end of the cross-cut, between the two veins, which are about 120 feet apart, is a mass especially rich in pyrite. Farther east, on a drift from the same cross-cut, there is a bit of ore, chiefly quartz, in which there are galena, pyrite and chalcocite. Particles of small crystals of quartz are more common at this level than higher up, and at times they are coated on one side by pyrite. The first vein east of the cross-cut, at the third level is well exposed at the western end of the drift. It is whitish, rather soft and tuft-like, with a width of about two and one-half feet, and is mineral, with a strike of north 32 degrees west.

The Nooday is owned by the Nooday Mining Company, of Chicago. Discouragement is the cause of the almost total suspension of work in the past four years. Litigation has also played its part. The mill site, stamp mill, tramway and so much land as the tramway requires will be sold at Ebert's sale at Roseburg, August 11, to satisfy judgments for about \$500 held by J. Frank Watson and others. Notwithstanding the confusion of its affairs, the company has posted notices of intention to apply for patents for seven claims. This is taken to indicate that an effort is being made at reorganization which will shortly be followed by the resumption of work.

Riverside Group.

J. W. Cook, of Cottage Grove, is president of the Riverside Gold Mining Company, which owns a group of seven claims on Horseheaven Creek heading into Grouse Mountain. Very nearly enough work has been done on the group to entitle the owners to a patent. The ore runs high in gold.

O. P. Adams' Claims.

The Ophir group, comprising two claims, the Ophir, the Royal and a fraction, is on the same ledge as the Musick. O. P. Adams has opened two tunnels on the Ophir, the upper of which is 34 feet and the lower 20 feet. This claim has two veins, one five feet wide and the other three feet, with eight feet of country rock between. The smaller vein is below the larger. Considerable pyrite is mixed with the quartz. The region has suffered much from erosion, and the sulphides come near the surface. Assays made from the upper ledge in the Ophir showed from 40 to 80 per cent gold, a little silver and a trace of copper.

Mr. Adams is an old-timer in the Bohemia country and old-placer work with Lyle Miller and Frank Buoy on Sharp Creek in 1886. Forty-one years ago he ascended Fairview Mountain and concluded from the formation of the country that there was an abundance of quartz. He was looking for placer ground then, and did not set his stakes for quartz. In 1881 he returned to the camp and took up the Ophir group.

Big Copper Property.

While many locations show rich values in copper, the most promising from the point of richest ore and best prospect property of the St. Helena Mining Company, composed of Dan Byrne, Fred Byrne, A. Johnson, J. C. Klofenstein, Henry Johnson and G. L. Meadows. G. L. Byrne, father of the Byrne boys, is a London broker, and has succeeded in getting an English syndicate to bond the property. The amount of the bond has not been announced, but is generally supposed to be \$25,000.

The company owns seven claims at the western base of Grizzly Mountain, at the junction of Grizzly and Champion Creeks. The claims are Golden Fleeces, Standard, North Star, Spokane, Grizzly, Olympia and Gem. The development now under way opens the Golden Fleeces, North Star, Olympia and Gem. On the others only the legal assessment work is being done. The tunnel in the Golden Fleeces has been driven 236 feet. It is eight feet wide, and the ledge in the same width. Seven hundred feet west of the tunnel is a prospect shaft 12 feet deep, from which ore of the same character as that found in the tunnel has been taken.

An assay of ore taken from the Golden Fleeces showed the following values per ton: Gold, \$18.50; copper, \$7.50; silver, \$11.15; lead, \$4.85; iron, \$37.84. It should be stated that this result was obtained when the tunnel was in 25 feet and in the richest streak of ore yet uncovered. The average of the ledge, on a smelter test made at Tacoma, is between 75 and 80 gold and 8 per cent copper.

The Byrne boys, who have mined in Colorado and British Columbia, say the surface showings in Bohemia surpass anything they have ever seen. They think, with every one else, that when the free gold runs out, enormous bodies of base ore carrying gold and copper will be encountered, with copper predominant.

The Oregon-Colo Mining, Milling & Development Company's group occupies the Nooday spur of Grouse Mountain near where St. Helena, City and Grouse Creeks unite to form Horseheaven Creek. There are seven claims—Confidence, Watson, Devey, Marie, Sampson, Dora, Schley and a fraction of Holy Smoke. The company has completed the survey and will apply for United States patents. The surface showing on the group is exceptionally strong. A fine fissure vein can be distinctly traced more than 100 yards from the mine. W. W. Gibbs, a practical mining man and assayer, passed over the lead and gathered a number of samples in a length of 800 feet. From these he made one assay which showed, per ton, gold, \$1.20; silver, \$5.75; copper, \$17.50; total, \$27.52. The ore is very pure chalcocite without zinc or arsenic, and shows considerable specular hematite, and resembles large copper and gold ore bodies which Mr. Gibbs has examined in British Columbia. The ledges on these claims are from five to 40 feet wide. There is one 400-foot tunnel, and several shorter cuts. A contract has been let to Oliver Gilbertson for a cross-cut tunnel 130 feet, where the main ledge will be cut at a great depth, and drifting and raising will follow. He is secretary and manager of the company, and owns large interests in it, but owing to his connection with the Oregon Mining Stock Exchange, he has resigned those positions. F. W. Bromley, a San Juan, Colo., mining man, is on the property and in charge. Mr. Bromley says it is going to make a big mine.

George H. Stone says of this group of claims: "The veins are large and well defined. They can be traced over high ridges, which proves they occur deep beneath the surface, like all longer veins of the district."

John S. Madley, attorney at Cottage Grove, says he has examined the title of the claims owned by the Oregon-Colo Mining, Milling & Development Company and finds the possession title thereto good, and that the articles of incorporation of the company and its organization have been done in conformity with and under the laws of the State of Oregon.

Professor Miller refers in this report to the fact that by the recent discovery of a small vein near the mouth of the main vein, the face of the opening shows pyrite and chalcocite in considerable quantities, and by one ounce to gold and 3.50 ounces silver.

Runs High in Lead.

On the left bank of City Creek, north of the Mystery, is the Wall Street claim. Nearly opposite the sawmill is a small vein which carries lead, zinc and dip 55 degrees southwest. It is about five feet wide, and the ore is iron-stained quartz, with some partly altered galena. In the course of a tunnel ranging a little east of north, approximately at right angles to the strike of the veins in that portion of the field, but upon the surface, is a small vein, ranging from one to 15 inches in length of three feet. Being rich in galena, it is called Galena Spur. It contains also much sphalerite and red hematite, with some pyrite and chalcocite, as well as much limonite and nests of quartz crystals. The course of this little vein seems for only a few yards, is north eight degrees east and it is probably an offshoot from one of the larger veins.

the Monto Rico country. A large number of locations have been made in this section. The most prominent is the Henry Clay group of five, owned by Charles Clay, C. A. White and A. T. Gilbert. Three hundred feet of tunnel has been opened. The upper tunnel runs through ore carrying gold, copper and lead. From which assays ranging from \$12 to \$12 1/2 in gold have been obtained. Surface rock has assayed as high as 15 per cent copper. The formation of the country permits of deep mining. A tunnel 200 feet long will give a depth of 180 feet.

Vesuvius Group.

On the southern slope of Fairview Peak, a few hundred yards northwest of the Musick mine, is the Vesuvius group. At the upper opening of this property are two veins of porous quartz, deeply stained and permeated by oxides of iron. A little lower down on the Sharp Creek slope of Fairview another tunnel reaches a vein of iron-stained porous quartz. This vein

is 25 and 34 respectively, in free gold. The ledge is 10 feet wide. Mr. Hoff is working in earnest and expects to patent the claim before snow comes.

Tom Johnson's Tip Top.

On the southeast slope of Fairview, lying partly in Lane county and partly in Douglas County, is the Tip Top, owned by A. E. ("Tom") Johnson. It was originally located at the Anacosta and was until recently known as the Story. Notwithstanding that the property is involved in litigation, Tom is working like the proverbial beaver, confident that he will win out. The upper tunnel is in 35 feet and the lower one 20 feet. A shaft, being sunk to connect with the upper tunnel is down 60 feet. Rich pockets occur with a good average for the rest of the ledge. From a strip 19 inches wide ore that rated up to \$3000 a ton was taken. One lot of 6 1/4 pounds of rock yielded \$27, and another of 70 pounds, \$25.

three claims, on which they have done 200 feet of tunneling. Assays range from \$5 to \$50 in gold.

Alexander Fugh has opened a tunnel 80 feet long on his group of five claims on Elephant Mountain. The ore is free milling and assays from \$40 to \$50 per ton.

The Mayflower.

The Mayflower group, about one and one-half miles east of the Helena, on Horseheaven Creek, is owned by a corporation of which W. F. Ely is secretary and treasurer. Both free and base rock are found. Base rock taken from a 100-foot tunnel runs from \$20 to \$30 per ton in gold and silver. At last reports the company had done much on its free milling lead, but the rock from it appeared to be richer than the base ore that was being worked. Between 500 and 600 feet of tunneling has been done on the group. The company is arranging to put up a five-stamp mill, which

contracts to do all necessary work on his claims and will apply for patents this year. He is a practical miner and mining engineer.

Three-quarters of a mile north of Musick, Carl Conley has three claims on which he has opened a 40-foot tunnel. The ore assays from \$12 to \$15 in free gold.

White & Higgins are opening five promising claims on Champion Creek trail, two miles from the Musick. They have opened a tunnel 60 feet long from which free milling ore, ranging from \$15 to \$30, has been taken.

The Klondike, owned by Charles F. Mitchell and E. E. Lilly, is on the west side of Bohemia Peak near the Musick. A 20-foot cut on the ledge exposed rock that assayed \$12 in free gold.

Stone Bros., E. Johnson, R. Rhodes and O. O. Land, constituting the Minneapola Mining Company, are developing three claims adjoining the Klondike.

heaven Creek; the Wall Street, managed by I. G. Davidson, of Portland; and the Grouse Mountain Gold Mining & Milling Company's group on Grouse Mountain, managed by George Young, a Farmer, owned by Felix and John Curran on which wire gold an inch long has been found; the Syndicate, owned by Lockwood, Jenks, Colton & Patterson; the Travlers, owned by Morgan, Reed & Nunn; Napanee group, owned by Behr, Cummings & Masterson; the Laura, owned by Leroy Bros.; the Baltimore and Grattan, owned by Ed Jones, Lucky Boy and Luroch, owned by H. Lureh; the Monarch group, owned by the Clontention claim, owned by F. J. Hard and James Duval.

Geology of Bohemia.

The geology of Bohemia district has recently been studied from E. Diller, of the United States Geological Survey; Paul Baumel, the Portland assayer, and George H. Stone, professor of geology at the University of Colorado. They find the district is of volcanic origin and that its rocks are andesite, mixed with porphyry. Professor Stone says: "This is a volcanic district. The volcanic mass takes the form of a crooked main ridge, with subordinate ridges branching in opposite directions, and the latter in some cases subdivided. Numerous peaks rise out above the other parts of the ridges. The larger of these are dikes pushed up through the adjoining parts, and therefore of later age. The lateral slopes of the ridges are steep and are precipitous. In many places the solid lava is covered with a sheet of breccia up to 50 feet in thickness. The scoriaceous layer of lava which formed the original surface of cooling is still found covering a large part of the surface. This proves that erosion has not greatly modified the contour of the country since the close of the active volcanic period.

"The rocks of the region are dark bluish and greenish andesites, varying in mineralogical structure from fine-grained to coarse porphyritic, and are ten hornblende. When the country rock is decomposed, as it usually is along the side of the veins, it is bleached to a grayish or brownish color, modified by a staining of iron, and is locally known as porphyry.

"The volcanic ridges are cut by a series of nearly parallel veins, with some cross veins. These veins can be traced from half a mile up to three miles over high ridges and across deep valleys, proving that the veins occupy deep fissures. The values occur mainly in chutes carrying free gold, pyrite, chalcocite, and some siliceous and probably some other sulphides and sulphates. The ores and vein matter consist largely of coatings. Impregnations and replacements of the country rock, as at Cripple Creek and many other places. The gangue consists of quartz with small quantities of heavy spar and a few other minerals. Down to the bottom of the deepest workings the replacement of the country rock by ore and gangue is more and more complete.

"The mineralization of this camp dates from a late geological period, like that of Cripple Creek, near San Juan region of Colorado, and much of British Columbia.

"The andesites have in many places been found to contain many of the largest and richest mineral deposits. The kind of rock of Bohemia, also, was traced from half a mile up to three miles over high ridges and across deep valleys, proving that the veins occupy deep fissures. The values occur mainly in chutes carrying free gold, pyrite, chalcocite, and some siliceous and probably some other sulphides and sulphates. The ores and vein matter consist largely of coatings. Impregnations and replacements of the country rock, as at Cripple Creek and many other places. The gangue consists of quartz with small quantities of heavy spar and a few other minerals. Down to the bottom of the deepest workings the replacement of the country rock by ore and gangue is more and more complete.

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Deposit Investigations.

Mr. Diller made a reconnaissance of the district in a series of trips to the Bohemia district, throughout their whole extent, as composed of lavas like those of the Cascade Range. They are arranged in sheets radiating from the volcanoes. These sheets are usually piled up to a great thickness. The walls of the canyons along the middle fork of the Willamette towards its source illustrate this feature at a number of points, and it may be seen also in the summits of some of the more prominent peaks. Generally the sheets of lava are very irregular and no parallel arrangement on a large scale is visible. The larger sheets, however, are once active volcano may make a prominent peak, as in Cedar Rock, or may stand on end with conspicuous columnar structure, as in Bear Bones Rock, a short distance east of the Bohemia Mining district. The region has lost much by erosion. Its streams have eroded the material away and cut deep, narrow valleys, almost narrow enough to be called canyons. These deep rocks to a depth of over 2000 feet—lava, vein matter, and stratified fragmental volcanic material.

The composition and structure of Bohemia region are essentially those of the Cascade Mountains, as a whole. Upon the northern slope of the divide within the district, the lava sheets incline northward, and upon the opposite side they incline southward, apparently, but in Grouse Mountain, as well as in many of the upper course of Horseheaven Creek, they swing around and dip eastward, as if they emanated from a volcanic center about the head of City Creek. Such a volcanic center, having the distribution of the fragmental volcanic material, Mr. Diller thinks, is opposed to this view. It is possible that this divergent dip is due to uplifting by mountain-building forces.

The age of the Calapoia Mountains has not been positively determined, because no fossils have yet been found in the fossils of the rocks. It is, however, supposed, however, that being a spur of the Cascade Range, and being composed of similar volcanic rock, it is of essentially the same age. As to the age of the Cascade Mountains, as a whole, upon the plant remains that the tufts on the Columbia River, near the middle of the range, and on Coal Creek near the summit of the range in Laine County, as well as the tufts on the north side of Bohemia range near Ashland, are of Miocene age. The stratified tufts containing the fossil plants were evidently laid down in lakes developed among the lava flows, and show that during the Miocene there was extensive volcanic activity in the Cascade Range. Evidence of earlier igneous eruptions has not been observed in the Cascade Range, but from the records of volcanic action found in the Eocene of the Coast Range at a number of points, and also at points between the Coast and Cascade Ranges, it is suspected that the volcanoes of the Cascade Range may have been active in Eocene time. The same may be true also of the volcanoes in which much of the lavas of the Calapoia Mountains originated.

Coal Creek, about 30 miles east of Oakland, is a branch upon the north side of the middle fork of the Willamette, near its head, in the western slope of the Cascades. It is about 20 miles southeast of Bohemia district, and lies in a depression between the Bohemia Mountains and the crest of the Cascades.

The middle fork of the Willamette cuts a deep and narrow canyon-like valley in the western slope of the Cascade Range. Much of its course is bordered by a small flood plain. Occasional ledges of rock appear in the stream bed, but generally the bed is of coarse gravel, protecting the underlying rock from abrasion. Cutting upon the slopes in places, at least 2000 feet of nearly horizontal sheets of lava and beds of fragmental volcanic material are well exposed. The bottom beds, where the sheets are exposed, are most common form just below the mouth of Coal Creek is diabase, very closely re-

On the northwest slope of Fairview are five claims owned by R. McMurry, P. E. Hawley and others. They have done about 200 feet of development.

On the east side of Fairview, John Peterson has three claims on which he has opened 110 feet of tunnel. His assays show from \$10 to \$70 a ton in free gold. Adjoining the Peterson property are the Sunrise and Sunrise fraction, owned by Charles F. Mitchell. Mr. Mitchell has opened a tunnel for a length of 20 feet, and made three cuts, each of 20 feet, on the ledge. Assays run from \$5 to \$20. The rock shows free gold to the naked eye.

Elephant and Adams Mountains.

G. W. Long has a claim on Elephant Mountain upon which he built a two stamp mill two years ago. Improvements made, including tunneling, have cost \$1200. One tunnel has been driven 30 feet, another between 70 and 80 feet, and

will not be costly to operate, because of the excellent water power and abundant wood supply.

Other Properties.

The Montana Gold Mining Company, generally known as the Reed & Fletcher properties, has several claims west of the Helena. The upper tunnel is in 23 feet, the second 190 feet, and the lower 200 feet. Reed & Fletcher have passed through much good ore, running high in free gold. They are systematically developing their property and familiarizing themselves with the rock before ordering equipment.

J. L. Jones, of Cottage Grove, has a group two miles northwest of the Helena, between the headwaters of Steamboat Creek and the north fork of the Willamette, known as the Winchester group. Besides good values in free gold, there is a small streak of galena ore running 18 per cent lead.

The Mineral King group on Horse-

They have 15 feet of tunneling, 10 feet of shaft and about 40 feet of surface cutting. Assays average from \$12 to \$40 free gold.

Adjoining the Minneapolis Company on the south side of Bohemia is the White Swan group of four claims, owned by Professor Snapp, of Eugene, and associates. Assays run from \$8 to \$20 in gold.

Assays of ore from a claim owned by William Edwards, which adjoins the White Swan, range from \$5 to \$10 in free gold. Mr. Edwards has opened a 25-foot tunnel.

A Piper located a claim on the east side of Jackass Ridge last year. An assay showed \$20 per ton in free gold.

Andrew Nelson has driven two 15-foot tunnels on his claim on the west side of Jackass Ridge. One opened a pocket containing between \$50 and \$60 in free gold.

G. G. Gilbertson and Walter Cochran have four claims on Jackass Ridge—the Stratton, the Cripple Creek, the Oliver

dips southwest, and overlies the vein on the southern slope by about 30 feet. The Vesuvius group is owned by Albert Zinkler and Graber Bros. The claims are the Vesuvius, German, Wild Hog, William Tell, Hillside and Nightingale. Between 200 and 400 feet of tunnel has been opened on the German; 90 feet on the Vesuvius, and 40 feet each on the Wild Hog and William Tell. The ore carries high values in free-milling gold, and a five-stamp mill will be in operation before another Summer goes by.

Harlow Brooks and Brush adjoin the Vesuvius group on the north, with five claims, on which there has been considerable development. The ore is free-milling, and runs between \$70 and \$50 in gold to the ton. There is a custom five-stamp mill on the group.

The Golden Slipper.

East of Fairview Mountain, about the head of the western branch of Champion Creek, is a small group of claims, of

which the Golden Slipper has been most extensively prospected. The exposed vein is small and the rock is considerably jointed. The strike is north, 60 degrees west, and the dip 80 degrees southwest. The ore is yellow stained quartz rock, containing considerable sphalerite and galena, with some pyrite and chalcocite. The porous quartz contains many cavities, lined with little quartz crystals. Northwest of the Golden Slipper, upon the lower slopes of Fairview, is an opening, possibly upon the same vein, and to the southeast there are several openings, made chiefly by the owners of the Broadway.

Assays of the Golden Slipper rock net free gold and make a good showing in copper. Recently a contract for 100 feet of tunneling was awarded to W. J. Hoff.

Copper and Gold.

It is conceded E. L. Hoff will open a No. 1 copper and gold mine in his property adjoining the St. Helena claims on Champion Creek. He bought the claim from Charles F. Mitchell for \$10 last winter. Two assays made when Mr. Mitchell owned the property gave

there are two shafts, each 25 feet deep. The ore mills about \$10 to the ton in free gold. Free rock and base rock, carrying free gold, are run through the mill and the concentrates saved. If the ore bodies to be opened up continue to be as good as what has been uncovered, Mr. Long will erect a large mill.

R. T. Curry has four claims on Adams Mountain. They are the Spotted Swan, San Diego, Santa Rosa and St. Paul. Free gold is found in the Santa Rosa and the St. Paul.

E. S. Lovelace is president and Frank Jordan secretary of the Adams Mountain Mining Company, which owns seven claims on the southeast slope of Adams Mountain. They are working eight men and pushing development with the object of patenting their claims as early as possible. About 200 feet of tunnel has been opened.

Jenks & Hickey have three claims on the ridge between Elephant and Adams Mountains. They have driven a 40-foot tunnel. Assays from \$10 to \$15 gold. On Elephant Mountain, Charles Giddes, George Knowles and William Brunson own

heaven Creek, three miles from the Helena, is owned by Albert Land and Albert Zinkler. The owners have numbered 23 claims and found ore assaying \$24 in free gold and \$30 in silver to the ton. It is reported that Turley, a Cripple Creek miner, will bond the group for \$15,000.

One from the Hall & Houston claim on the south side of Bohemia carries as high as \$60 in free gold. A tunnel 50 feet long has been opened.

Frank Silsher and Mr. Bastier have two claims on the southern slope of Bohemia. Development consists of a 30-foot tunnel and two surface cuts. Assays average from \$10 to \$25 gold per ton.

Frank Hughes and Hugh Bartritt have been working for several years on three claims on Martin Creek. Over 200 feet of tunnel work has been done. Some of the assays showed \$40 in free gold.

The Seattle Mining Company is developing claims at Glenwood, on the west side of Bohemia Mountains. Assays average about \$20 per ton free gold.

George W. Lloyd, formerly of Cripple Creek, has four claims on the northwest slope of Bohemia. Mr. Lloyd has awarded

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Twist and the Lost Claim. Assays show from \$10 to \$20 per ton free gold.

The east extension of Ely's Excelsior, adjoining the Bohemia and the Nooday, is owned by G. W. Long and Miss Rose Williams. About 150 feet of tunneling, costing \$1500, has been done. Good ore, carrying free gold, has been found.

H. E. Stephens, of Bohemia, owns the larger interest in the Holy Smoke claim on the east side of Grouse Mountain, adjoining the Oregon-Colo Mining group. The ore assays 3 per cent copper, with values in gold and silver. About 40 feet of tunnel work has been done.

The Eugene Mining Company has five claims on Grouse Mountain Ridge. Only assessment work has been done.

James Duval has two claims on the west side of Jackass Ridge. Development consists of four open cuts and one 20-foot tunnel. Assays give from \$10 to \$15 in free gold.

Other properties that are showing up well are: The Bohemia Mining & Milling Company's group on Grouse Mountain; the Bohemia district, and near the mouth of the Bohemia; the Bohemia Mining & Milling Company's claims on the north fork of Horse-

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The east extension of Ely's Excelsior, adjoining the Bohemia and the Nooday, is owned by G. W. Long and Miss Rose Williams. About 150 feet of tunneling, costing \$1500, has been done. Good ore, carrying free gold, has been found.

H. E. Stephens, of Bohemia, owns the larger interest in the Holy Smoke claim on the east side of Grouse Mountain, adjoining the Oregon-Colo Mining group. The ore assays 3 per cent copper, with values in gold and silver. About 40 feet of tunnel work has been done.

The Eugene Mining Company has five claims on Grouse Mountain Ridge. Only assessment work has been done.

James Duval has two claims on the west side of Jackass Ridge. Development consists of four open cuts and one 20-foot tunnel. Assays give from \$10 to \$15 in free gold.

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