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\$600,000 in Gold Spent Annually in County

BUSINESSMEN DEPENDENT ON MINE INCOME FOR LARGE PART OF TRADE

(By Leslie Shaw)

"... And gold at the root of a tree will be found. . ."
 Such were the words of "Mother Shipton," imaginary English propheteess of five centuries ago, in tipping off the world that gold is "where you find it."

Which brings the thought directly to southern Oregon, where at the roots of thousands of trees gold has been found. High on the mountains, deep in the valleys, and far in the wilderness that borders the myriads of streams the precious metal has been located.

For more than 85 years an army of miners has been taking out an almost steady stream of gold, totaling millions of dollars. Men have scraped, dug, washed and shoveled the metal from its hiding places as they engaged in building up an empire within an empire, southern Oregon.

Added to this wealth have been returns from other mining operations. What with southern Oregon being tagged by United States engineers as a district with deposits of more types of metals than any other section of the nation, various metals are now being mined here. Other deposits are awaiting development.

Scattered as is the industry throughout the vast mountain stretches, the public not directly concerned with mining in itself is wont to ignore the extent to which practically every man, woman, and child in the region is dependent on mining.

Not having a mine in their own back yard, seldom seeing past the nearest mountain top that probably hides from view some extensive placer or hard rock operation, Mr. and Mrs. Public are apt to let go unnoticed the very industry on which their own business may be almost dependent.

On this thought is the basis of the coming "mining display". On January 29 and 30, merchants, business men, and miners who are more or less acquainted with the value of the mining industry to southern Oregon will conduct a display for the purpose of making residents "mining conscious".

And in this connection a community committee, headed by Ward Hammond, has conducted a survey to determine to a considerable extent the amount of

to mining and members of his committee visited store operators and other business men all over the county to learn the amount of business they could lay at the mines' door.

Before considering the survey itself, certain points must be brought to mind:

First: Certain businesses were not considered, such as public utilities, attorneys, lumber mills, hotels and auto camps, restaurants, physicians, and dentists.

Second: There was a great handicap in that business men often did not know when they were dealing with a mine representative, a miner, or a mine owner. This is due to the same principle that a hardware store clerk, for instance, much of the time does not know whether he is selling a bag of nails to a farmer, a visiting banker, a WPA worker, or his own cousin from Oklahoma.

So in estimating the amount of business brought to them by mines during the year 1936, the merchants and business men considered only sales figures which they were positive were due to mines and mining.

When totaled, the survey showed that mining in southern Oregon was alone responsible for well over \$600,000 of the business transacted in Josephine county. Mr. Hammond's tabulations were summed up as follows:

Automotive (sale of cars, parts, repairs, etc.): \$28,200.

Petroleum products: \$64,000.

Hardware and plumbing: \$50,200.

Furniture: \$1,700.

Groceries: \$27,000.

Clothing: \$22,500.

Drugs: \$2,750.

The total of these is \$559,250.

Transactions with the utilities, lumber, professions and other businesses not so far included in the survey would easily put the total over \$600,000.

Then consider the multiple transactions that are the result of money from the mines. Some business men say to multiply the amount of direct mine business by four to get the true picture of business volume due to the mines. Others say multiply by five and six.

That is because many clerks are known to be hired in the stores

due to business brought from the mines. These clerks, and the store owners themselves, make additional transactions with their neighbor business men as a result of their mines income, and the neighbor businessmen in turn perform additional transactions, and so forth.

Many stores in the country are primarily dependent on the mines for income.

Figures in Mr. Hammond's survey were secured from eight automotive dealers, six petroleum companies, eight hardware stores, 28 grocery stores, four furniture stores, 10 clothing stores, and six drug stores.

Still another point to consider are the reports of scores of families in this district that managed to keep off relief rolls during the depression by picking out an existence with shovel and pan along the streams.

HAMMER GOES TO MINERS DIRECTLY WITH MAIL, WARES

To Lew Hammer, Selma store keeper, newly mined gold is as familiar a medium of exchange as coins or currency when the mines in the Oak Flat section are in full operation. A complete line of general merchandise is carried in the store and a late-model panel delivery truck makes weekly trips into the hills back of Selma as far as 21 miles. It carries food, clothing and other items needed in the daily lives of the miners, as well as mail, for Mr. Hammer is also the postmaster of Selma.

The delivery truck makes its trip up the Oak Flat road every Saturday. The gold scales are taken along and the precious metal is weighed right at the scene of operation. When the mining season is at its height the truck often takes back a substantial amount of gold.

Only once in three years has the truck failed to make its weekly round trip to the mines. This was about two years ago when the snow was deep and the truck got stuck six miles from Oak Flat. Other than this there has been no mishaps, although a hold-up was narrowly averted in another instance. The robbery plans leaked out, however, before they could be put into execution.

For the past year or more Robert



E. H. Messenger, Takilma storekeeper and postmaster, is shown, on the right, with C. L. Owen, a miner, demonstrating a gold rocker. The rocker, which was invented and put on the market by a personal friend of Mr. Messenger's is designed for prospecting and working small claims. It may be taken apart and carried on a man's pack. Owen, who has used it in the hills back of Takilma, says it is much faster than the old panning method.

Aiken has driven the truck. Prior to that Hammer made the weekly trips himself, starting at 7 a. m. and returning between 4 or 5 p. m. Some of the miners do not come to town once in six months, depending entirely on the service for their supplies. One miner has remained on his "diggings" for nearly a year.

The Oak flat road was built by the government during the war and has been kept in good condition. The larger mines in the section include the Gold Bond Placer, Eureka and the Lucky Pat. The Gold Bond Placer is a well-equipped hydraulic operation, owned by Owen A. Thomas. Jack Shade owns and operates the Eureka mine. The Lucky Pat was recently purchased by Mr. Schaffer who is installing a large amount of new equipment.

There are innumerable small, independent mines in the region, all of whom are customers of the Hammer store. Before the raise in the

price of gold there was practically no business. With the mining revival, started by \$35 gold, business picked up immediately and now the store has four clerks, counting Mr. Hammer himself.

The average small miner makes from \$5 to \$8 a day in that section. They have made a good living during the time that the relief rolls were supporting many families in other sections of the state. Some are inexperienced at the work but the majority have a background knowledge of mining.

This year there has been very little activity so far owing to the lack of rainfall but Hammer hoped that the season will be extended later than usual into the spring and summer, if late rains and melting snow makes up for the present deficiency.

Amalgam—The compound of mercury (quicksilver) with gold or silver.



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Holland, Kerby Historic Centers of Production

FLOYD COUNTS UP MANY WORKING IN HOLLAND DISTRICT

A fortune in gold dust and nuggets has gone into the gold scales at Harry Floyd's general store and postoffice at Holland during the 36 years they have been in use. The store was established in 1896 by J. M. Smock, Mr. Floyd's father-in-law. The scales were purchased two years later, in 1900, and have been a part of the fixtures ever since. They are still in use and weigh as accurately as they did three decades ago.

Holland is two miles south of the Caves highway, adjacent to the rich mining district around Sucker creek, Althouse and Grass Flat where gold was first discovered in the early fifties. The Althouse brothers, John and Phillip, are credited with first discovering the precious metal on the Althouse. They made their find in 1852 and the district took its name from them.

This was followed quickly by the finding of gold on Sucker creek by two brothers named Fry from Illinois and the name of their native state was given to that locality. Gold discoveries on Canyon creek and Josephine creek were made soon after.

Continuous operations have been carried on since those early days and several large placer mines and a few valuable quartz properties are found there today. There are, in addition, numerous independent miners and "snipers" working the ground. These so-called "snipers" manage to dig enough gold from the rocks and gravel even in the dry season to buy their "beans and bacon." During the winter freeze and dry spell, which has been unusually long this season, the large operators can not work their properties for lack of water.

All of the miners have been waiting for water, Mr. Floyd said, and were all set to go some time ago. With the coming of warmer weather some of the crews are already on the job.

Some of the larger placers in the district include:

The Four Star mine owned by E. Golding, Santa Monica, and operated under a lease by Clark Dix with a party of four. Hydraulic work will start as soon as water and weather conditions permit.

Eugene Keiser, hydrauliclicking with a party of three, using one or two giants.

R. S. Leonard mine, operated by William Von der Hellen, Medford contractor, on a royalty basis, using hydraulic equipment, steam shovel and several trucks. Thirty or forty men worked this property last spring, installing new equipment at a cost of several thousand dollars, including two giants and all new sluice. With the start of operations this year fewer men will be required and only one or two trucks because of the new equipment.

Paul Brandley started hydrauliclicking on the Althouse two years ago. About 15 men were used during the period of development and installation of equipment. Three men were employed on the operating crew last winter and the same number will be used this year.

Earle C. Stevens employed three men last winter on his Althouse creek property and will work the same number of men this year.

Ive Johnson will employ a crew of three men this year on his Althouse placer operation. He worked the same number last year.

Clay Ramsey will use two men this year on his mine on Althouse creek. He worked two or three men last winter.

John Appel in the Grass Flat district will use a crew of five or six men most of the time this season on his hydraulic work, with two large giants being operated.

Bob Fleming will operate his placer near Tiger Town with three men.

Frank Wilcox will employ several men on his placer two miles above the Fleming operation in the Tiger Town district.

Gerald Løben, McMinnville, has four or five men working on his Sucker creek mine on what is known as California Bar. He is using two small drag lines and other equipment.

Martin Brothers will have four men working on their Sucker creek mine again this year, using a drag line. The same number of men worked the property last season.

The two largest quartz mines in the vicinity of Sucker creek are the Little Gem and the Boswell. Clark Brothers own the Little Gem which is said to be one of the richest properties in the vicinity. The two brothers' men have been tied in



Harry Floyd, Holland store keeper and postmaster, has weighed many ounces of gold from the hills in his district. He is shown here with a \$6 nugget on the scales and a much larger quantity of dust and nuggets in the "blower" held in his right hand.



John Wittrock, who operates the general store and postoffice at Kerby, formerly known as Kerbyville, is shown here with \$55 worth of gold in scales, and a "blower." The gold was brought in by miners during a ten-day period the early part of January. Despite the cold weather and lack of water they are still taking out gold, says Mr. Wittrock.

years, have retired and the mine is not being worked at present. It has been six or seven years since the Boswell mine has been operated. It is also rated as a rich gold bearing property.

Mr. Floyd has a private telephone system which extends to some of the large mines in the district. Several operations have been tied in

with the system during the past year or so.

In addition to the large operators, Mr. Floyd estimated there were approximately 75 men out with pick and shovel and small pack equipment in his district at the present time, all of whom are making a living. They average from \$2 to \$3 a day.

WITTROCK KNOWS NUGGET'S SOURCE BY LOOKS OF IT

The town of Kerby, formerly called Kerbyville, has a colorful history and at one time was the county seat of Josephine county. The townsite was laid out in 1855 and the place was named for one of the early pioneers. The county seat was moved from Kerby to Grants Pass in 1886.

The general store operated by John Wittrock marks the place where much of Josephine county's history was written into the records. In the early days there were hotels, stores, dance halls, gambling places and saloons which were frequented by the thousands of miners and prospectors who flocked there from California and elsewhere. There were numerous mining camps along Canyon creek and Josephine creek, all of which yielded good returns.

There are several placer operations in the locality today and 35 or 40 small, independent miners are making a living from the gold they find on small claims along the streams.

Among the larger placers in the section are the Golden Princess, owned and operated by R. W. Dudley and the mine operated by Phillip Seutter on Josephine creek near Day's Gulch.

Approximately 40 men were employed on the Dudley property last summer, according to Mr. Wittrock, in development work and installation of new equipment. Fifteen men will be employed at the mine this year in hydrauliclicking operations.

Mr. Seutter will employ three or four men at his mine, using two giants in hydraulic work.

Mr. Wittrock, when interviewed recently, said that he had taken in about \$52 worth of gold during the past week from three miners working on Canyon creek. The miners, "Rusty Mathews, George Bour and William Mokus, have adjoining claims.

Mr. Wittrock is shown in the accompanying photograph weighing a gold nugget taken from one of the Canyon creek claims. It is worth \$5.50. In the "blower", shown on the left, are some of the grains and nuggets.

Both the scales and the "blower" have a history behind them. The "blower", according to Mr. Wittrock, is 80 years old and was first used by a chinaman who mined along the creeks in the early days. The instrument is called a "blower" because the miners used to put the dry gold into it and blow the lighter materials mixed with the metal, such as sand and dirt, out of the pan, leaving the gold. The scales are what is known as "pulp" scales but have been used to weigh much gold while in Mr. Wittrock's possession.

One of the oldest set of scales to be found in the district is owned by John G. Gilmore. They are about 80 years old, having been used by Mr. Gilmore's father, Dave Gilmore, who is now dead. Dave Gilmore came to Josephine county in 1852 and prospected several mines, including the old "Number 7", near Browntown.

The oldest miner still living in the district is John Bour, who is 73 years old and still active.

Mr. Wittrock, by long practice, can appraise a nugget of gold and tell the approximate locality from which it was taken. Some of the gold shown in the photograph was taken from the upper reaches of Canyon creek while some of it was found farther down the stream. That found farther up the stream is coarser than the gold taken from between the rocks down stream. The metal also differs in weight and color, according to the locality in which it is discovered, explained Mr. Wittrock.

Mr. Wittrock has a number of interesting specimens of ore in his possession. He displayed two pieces of rock containing a high percentage of nickel, a mineral that is found in small quantities in the Kerby district along Josephine creek.

Hanging-wall—The upper wall of a lode.

Ore—The substance specially containing metal.

Placer—Name given to gold diggings or hydraulic mines.

Quartz—Dure silica in a crystallized form.

Canal Five Miles Long Brings Water to Mine

DEVELOPMENT OF LARGE GOLD BOND PLACERS LISTED

An undertaking that has now reached a stage of major importance among the placer mines of Southern Oregon, is that of the Gold Bond Placers, situated in the Briggs Creek Division of the Illinois River mining district, where approximately 1200 acres of placer ground has been acquired by the corporation together with an appropriation of 50 second feet of water for mining purposes, taken from Soldier creek, a tributary of Briggs.

A large crew of men have been employed on the project during the past three years, in the development and the installation of equipment. The water is conveyed through a canal and flume system a distance of five miles, then by pipe line to site of operation. The pipe-line is 30 inches in diameter, with two branches of 20 inch lines leading to the monitors. It has two number 3 giants with 4 inch nozzles. The head of water developed will furnish 100 pounds pressure at the nozzles with a 24 hour capacity of approximately 3000 cubic yards of gravel delivered to the sluiceways. The lay of the ground offers most ideal situation for disposal of the tailings with unlimited dumping area.

A sum approaching \$80,000 has already been expended in the development and equipping of this the first unit of installation, and extensive improvements are planned for the coming season.

A crew of 16 men are now engaged on the final construction necessary for the commencement of operation on or about the first of February depending of course on the weather condition which so far this season has retarded greatly the regular flow.

The Gold Bond Placers is organized and incorporated under the laws of Oregon with its head office at Grants Pass. J. G. Riggs is president, O. A. Thomas vice-president and general manager.

Cross-cut—A level or tunnel driven towards a lode at right angles to its course.

Survey to determine to a one-foot point of accuracy.



Part of the newly constructed ditch on the Old Channel property which is being developed for large scale operation. Several "giants" will be operated this year. Another picture is on page 12.

The illustration on the front page of this section shows a man with a "giant" at Gold Bond Placer, one of the big placer operations found in Josephine county in which the hydraulic method of extracting gold is used. The terrific force of water, which is forced out of the large nozzle under high pressure, may be plainly seen in the picture. Hydraulicking is used where gold is found in gravel deposits, washing the material into sluice boxes and over "riffles" where the values are extracted.

MODERN CAMP, EQUIPMENT AT BENTON MINE

An extensive development program costing many thousands of dollars is now nearing completion at the Benton mine, one of the larger quartz properties in Josephine county, and another six weeks will see the start of operations, according to W. Earl Greenough, resident manager. It is located on Whisky creek, two miles from the Rogue river by the Glendale road.

The development started in the fall of 1935 under Mr. Greenough's direction, assisted by Albert Burch, registered engineer of Medford, with a crew of between 25 and 30 men. When construction work is completed the property will be one of the best equipped and most modern of any in the entire northwest.

A dozen buildings comprise the camp. The bunkhouses, with four men to each house, will afford accommodations for 30 workmen. They will have shower baths and other modern conveniences. The mess hall and cookhouse are also strictly modern in every detail.

The machine shops are fully equipped for making repairs to the mining machinery. The big, 40x80 foot warehouse provides storage space for supplies and provisions to last several months. Since last September more than 200 truckloads of supplies, including 15,000 gallons of fuel oil, were trucked in to the camp. This is a precautionary measure taken because the road from Glendale sometimes is closed during unusually severe winter. The road is kept



View of newly constructed flume at Gold Bond Placer, carrying water from the creek to be used in hydraulicking. The rugged country at this point gives the water considerable "fall."

open the year around some winters, however.

A modern electric plant has been installed to develop power, with a large Diesel engine operating the plant. The plant may be operated the year around even when shut in by snows and winter weather. A large quantity of powder, fuses and other supplies, in addition to fuel oil for operating several months, is kept in the big warehouse.

During the past year from 20 to 30 men have been employed in development work on the property. About 25 men will be given employment the year around when operations start. Work on the new mill, with facilities for crushing and cyanide treatment, started last September and is now nearing completion.

An adit tunnel has been driven 1800 feet into the mountain beneath the older tunnels which were already on the property. This work was started in November, 1935, and has been completed up to the point of contact with the ore bodies.

The Benton mine differs from some of the others in this district, in that it is being developed and will be operated by the owners of the property, the Lewis investment company, Portland. Allen & Lewis, formerly in the wholesale grocery

business, are the principal officers in the company.

The Benton mine has been operated for some 35 years and much gold has been taken out of the property during that time, although it has been worked only on a small scale during the greater part of that time. Prior to the present development program some 200 feet of tunnels had been driven.

Whip—A bucket drawn up by means of a rope over a pulley, the rope being attached to a horse which moves straight forward.

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Association Formed Here to Promote Industry

STATE BUREAU IS SOUGHT TO HELP WITH PROJECTS

In an effort to present a unified front in fighting legislative battles and working out their common industrial problems, miners and small mine investors of southern Oregon have formed the Southwestern Oregon Miners' association.

Now in its infancy the organization was completed October 19, 1936, when a constitution was adopted and officers elected. R. E. Kelly, principal promoter of the organization itself, was made president; J. R. Elder was elected vice-president, Pat Dineen, secretary, and Harold Locke, treasurer.

"The mining industry has been subject to unwise provisions in law that have retarded its development," said Mr. Elder. "Sound suggestions for improvement have been made but without the necessary force to put them into operation."

"Shoestring and fraudulent promoters have left unpaid bills and indulged in unfair practices that have injured the industry. Also, no adequate method of financing mine development for the community has been worked out, although the industry is a most vital element in community life."

The first objective of the organization will be to acquaint each miner with the other miner's problems, said Mr. Elder, and then to acquaint the community itself with the problems and with the ways in which the community can aid in solving the problems.

The association actively supports the formation of a state department of geology and mineral research, suggested and sponsored by Governor Martin. The purpose is to learn uses for many of the heretofore unused minerals and to learn new and additional uses for those now in use. The measure would include provision for a mine inspector who would give attention to adoption of safety measures in mines, visit and study properties and advise proper procedure in development.

The group is attacking the state mine lien law, which it believes to be inequitable and imposing unnecessary burdens on the owner, greatly retarding mine development.

Another law to be sought by the association is the one requiring the employment of a registered engineer in mines where four or more men are employed.

At present there are about 175 active members and 100 associate members.

Stope—The workings of a mine between the levels assume the appearance of steps or stopes, and the miners working at these are sloping or stepping. When they are overhead, like the underside pair of stairs, they are overhead stopes; when below the miner's feet they are underhand stopes.

Lode—To lead a vein of mineral different from the enclosing rock, a fissure or crack filled with matter which may or may not be charged with metallic ore.

Gad — A wedge for splitting rocks.

'Mining In My Blood,' Says Native

(By Helen Turner Sparlin)

Perhaps no other woman in Josephine county is a more faithful follower of the mining industry than Mrs. Grace Willmarth, who has been a resident of southern Oregon for many years. "Mining is in my blood," said Mrs. Willmarth in a recent interview at her home at 241 West H street. "It is not surprising that I should love it considering that my father and brothers were all mining men and I married a man who also followed mining practically all his life as a means of livelihood."

Mrs. Willmarth, who before her marriage was Emma Grace Castles, is a native daughter of Illinois, coming west with her parents, brothers and sisters in 1885. Her father and brothers were actively engaged in mining in Colorado and New Mexico. One brother, the only one now living, now makes his home in Grass Valley, Calif., where he still follows the mining industry.

"Although I was only a child when we moved to New Mexico I can remember the hardships of those first few years", Mrs. Willmarth said. "My parents had ox teams and mules, as they were the principal means of transportation. Of course in those days there were no rail roads. Another feature of our early life in the state was the great scarcity of water."

Following her marriage in New Mexico 45 years ago, Mrs. Willmarth took a keen interest in all her husband's mining activities. During their residence in New Mexico, part of that time being before that state was admitted to the union, Mr. Willmarth worked in the copper, gold and silver mines of Santa Fe county. It was not his first experience in the mining game, however, as he had been extensively engaged in mining in Colorado when he first came west from Wisconsin, his native state.

After spending 14 years in New Mexico, the Willmarths came to Oregon, living first in Medford and Gold Hill, after which they made their home on Grave creek at the Greenback mine. From there they went to Galice in the year 1915, and until his death nearly two years ago, Mr. Willmarth mined almost constantly. At one time he owned what was known as the Carleton mine, four miles from Galice on the south fork of Galice creek, now called the Antlers mine. He also mined at the Oriole and Golden Wedge mines, as well as the Alameda.

Mrs. Willmarth owns the Gold Plate mine, which is located four and one half miles from Galice on the north fork of Galice creek. It is leased at present to William Robertson and John Hampshire, Mrs. Willmarth stated. It has, in past years, been a very productive quartz property.

For eight or ten years Mrs. Willmarth cooked for miners who worked for Harry Sordy at the Oriole and Golden Wedge mines. "I had from five to 11 men to cook for most of the time and I really enjoyed it. I always loved to hear

the miners tell of their findings and their expectations."

In 1922 the Willmarths bought the home in Grants Pass in which Mrs. Willmarth now lives alone. Part of their time was spent in town but most of the time they devoted to their loved mining. During all kinds of weather and under all conditions Mr. Willmarth, always encouraged by Mrs. Willmarth, carried on his vocation. The winter of 1915 was a "bad one", according to Mrs. Willmarth's recollections. They were at the Golden Wedge mine that year when 15 feet of snow fell.

"Another fact which might prove of interest to the readers", said Mrs. Willmarth, "Is that my mother crossed the plains seven times in a covered wagon from Baraboo, Wisconsin, to Central City, Colorado, which lies in the mountains above Denver, and is the center of silver and gold mining activities. When my mother first arrived at the spot where Denver now stands there was one house there. I remember hearing Mother tell many times of the narrow escapes she and her family and companions had while crossing the plains. Due to the fact that there were too many wagons, 100 in all, in the caravan, the Indians would never attack their party, but mother and her party would often pass wagon trains which had fallen under the attacks of the savages."

"But to get back to our subject", Mrs. Willmarth smiled, "I will say that I have enjoyed every phase of my life connected with the mining industry. I have prospected a little myself, though never extensively, and I always followed my husband's activities in that field with the keenest interest."

Zone—Name given to a belt of strata, and to groups of strata distinguished by similarity of organic remains or mineral characteristics.

Sluice—A long trough with a loose riffled bottom, or bottoms with holes for the purpose of catching gold.

Splintery—Rocks that break into splinters or long sharp fragments are called splintery.

\$40,000 SPENT IN DEVELOPING "PLATAURICA"

Approximately \$40,000 was spent during 1936 in development work on the Plataurica mine, according to Fred Galino, resident manager. An average of 15 men were employed operating the two "giants" and installing additional equipment at the well known placer located near O'Brien.

The mine is now owned and operated by the Waldo Placer company which has installed new sluice boxes and ditches during the past year and is still adding new equipment.

The gold is caught in a concentrating plant instead of using riffles, the most common method in use on placer properties. The concentrating plant system has been used by dredges for many years but is something in the way of an experiment where placers are concerned. Mr. Galino stated. A 62-foot hydraulic elevator is used to elevate the material to the plant after it is washed down from the bank by the large "giants."

Two "giants" are operated in the pits and work will be started with a crew of 12 or 14 men as soon as weather conditions permit. There has not been sufficient water so far this year. The new mill is now set up and ready to go.

The Plataurica mine is one of the older mines in the country and has been a big producer in past years under various owners. The new plant and added equipment will make possible operating on a larger scale this year than in former years.

Eruptive—The name given to rocks that have burst through other rocks in a molten state, or that have been thrust up bodily.

Dyke — A band of hard rock, usually igneous.

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ALIENS WORKED IN GROUPS AND NOT ALONE AT MINES

No picture of early day mining in Josephine county would be quite complete without mention of the part the Chinese played in the mines around Waldo and Kerby. At one time there were as many as 3500 Chinamen working in the bed-rock of the river basins and along the creeks, according to George Lewis, former Josephine county sheriff, who came here from Albany in 1872. They were especially numerous on Althouse creek.

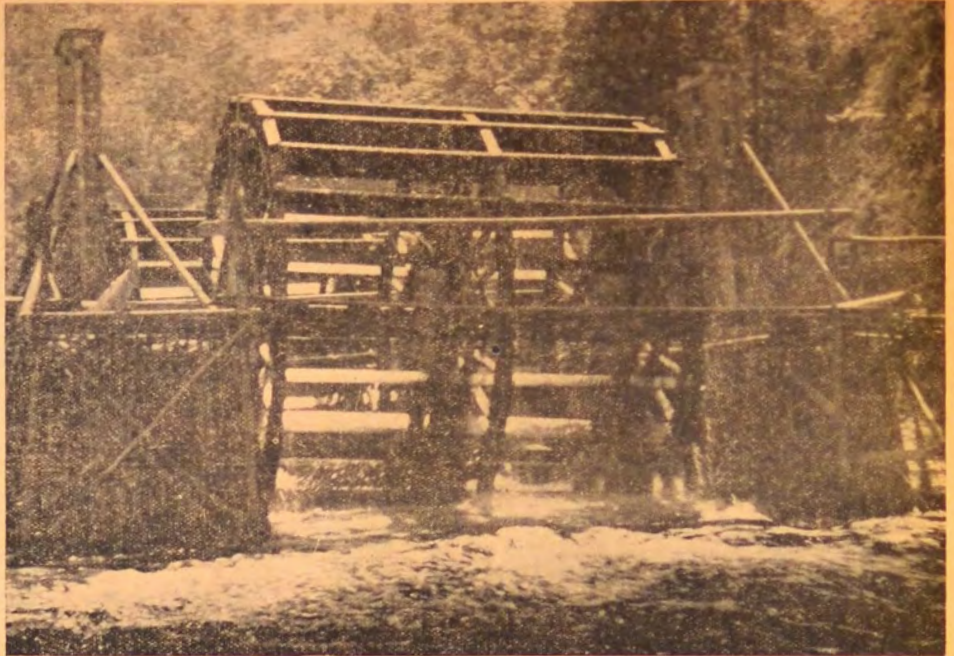
Everyone had to pay a poll tax of \$4 in those days, Mr. Lewis recalled, so it was an easy matter to check on the number of Chinese in the county at the time. Most of them were engaged in mining. They formed companies and worked in groups of from six to as many as 12 never working alone or in pairs as did the white men.

Many present day miners find Chinese coins from time to time in the old diggings around Waldo which was the favorite gathering place for the Chinese on state occasions.

Mr. Lewis' earliest recollection on this subject is in the fall of 1872 when he visited Waldo during Chinese New Year. Not far from where the old Waldo store, built by A. B. McIlwain, still stands in a state of decay, were a row of Chinese huts built wall-to-wall and extending some 250 feet. Fire crackers were being fired in countless strings dangling from the roofs of the huts in celebration of the New Year. It was something of a spectacle to the white miners who stood about in groups watching the proceedings. The Chinamen had gathered at Waldo from all the camps in the vicinity for the big event, which included feasting and drinking as well as noise making.

In his dealings with the Chinese Mr. Lewis found them honest and hard working. He declares that they would take out quantities of gold from places that had been abandoned by the white men for richer and easier diggings. Mr. Lewis used to pack supplies to the miners over the rugged mountain trails and the Orientals were among his best customers, buying chickens, bacon, pork and other foodstuffs in large quantities.

Few of the Chinese remained long in any locality, and while they to determine their number, they would add work for a



Ancient water wheel used back in the seventies by the Chinese miners. Many Chinese mining companies had equipment of this type on the old Althouse and other streams in the Kerbyville and Waldo districts.

time and then quietly disappear to be replaced by other Chinamen. It was presumed that they took their gold and returned to China to live a life of ease. This was true of the leaders of the groups as well as the common workers. The Chinese bosses, who did not work themselves, took a generous portion of the gold each gang member produced.

Some of the white miners were antagonistic to the Chinese and took delight in making trouble for them. Dissolute whites frequently robbed the Chinamen's sluice boxes and otherwise abused them, though they had equal rights and were entitled to the law's protection the same as the other settlers.

A case is on record where in 1860 Le Hang, a Chinaman who was acting as assistant Chinese tax collector under Sheriff James Hendershot, was scouted by two unknown persons while on his way from Althouse creek to the sheriff's residence. The two men whipped him, cut off his cue, and robbed him of 17 ounces of gold dust belonging to the county, valued at about \$280. Hendershot paid the amount to the

county and though he later filed a bill in an effort to have it refunded to him, he was never reimbursed, according to the records. The letter Hendershot wrote to the county commissioners, after his term of sheriff expired, is still on record. It reads as follows:

"You will take notice that the undersigned designs taking appeal from their (the county commissioners) erroneous decision in regard to the bill presented to them December 4, 1860, praying to be reimbursed for moneys paid by him to the county, which bill is on file in the archives of the fast decaying county of Josephine. (Signed) James Hendershot."

In the late eighteen-nineties, when the easy gold along the creeks began to play out, the Chinese began to decrease in numbers rapidly. They were never driven out, however, as some contend they were.

Mr. Lewis declares that about this time road building was under way in many parts of the county and many Chinese of the cooly class took jobs on the road crews, working long and hard for a small amount of money. A number of Chinese were employed in building the road from Gasquet near Crescent City to Waldo, a distance of about 70 miles.

One of the best known Chinese characters of the time was China Eow, an Americanized Oriental who operated a pack train. He wore no cue and thought that mining was beneath him, a pursuit fit only for the cooly class. China Eow contributed to the development of Josephine county mines, however, by packing in the first heavy equipment for hydraulic projects on va-

rious large operations. Several of the first "giants" used in placer mining were brought by muleback from Crescent City via Bows pack train.

Another famous packer was a Mexican named Martinez who also brought in mining equipment and supplies from the coast. Martinez, though small and slight of stature, could lift huge barrels of sugar and flour onto his mules and pack a train as quickly as any expert of the time.

Whim—A drum with a vertical axis, with rope attached, worked by a horse, for hoisting purposes from mines.

Winds or Winze—A small shaft sunk or raised from one level to another underground.

Trace—To follow the ledge on the surface and to lay it open by long pits.

Level—Name given to a drift or adit underground along the course of a lode.

Horse—The dead or barren ground by which a lode is sometimes cut in two.

Wall of a Lode—See "Hanging-wall" and "Foot-wall."

Gang or Gangue—The non-metallic material filling lodes.

Rise—To work from the level upward.

Argillaceous—Clayey.



Showing how the Chinese once worked along the streams and old river channels in Josephine county. Back in 1870 and several years following there were said to be 3500 Chinese in the county. They were "neat" miners and could take out gold in "diggings" which had been abandoned by white men.

The Clean-up

Like other miners, we dig in the dirt for our pay. We use special machinery, tumblers, etc., and what we recover is of great value to our customers.

More seriously speaking, our scientific method of washing clothes is as superior to pioneer hand washing methods as modern mining is to pioneer methods.

The health of your family depends so much upon the positive elimination of Bacteria. Send your washings to the laundry for your cheapest health insurance.

Grants Pass STEAM Laundry
SINCE 1900

5th and H Streets

Phone 37

Wong You, Oriental, Uses Modern Methods

FAMILY ASSISTS IN OPERATION AT FINLEY BEND SITE

Dragging the gold to the sluice is the plan on which southern Oregon's only Chinese miner is operating his property on the gravel bar just below Finley Bend on Rogue river, about nine miles west of Grants Pass.

Where once thousands of Orientals worked along the streams of this district in the gold boom days of half to three-quarters of a century ago, only the one family is now mining here. Until last March, when Wong You, former restaurant operator in Grants Pass, brought his family from California there had been no Chinese miners here for several decades.

Wong, assisted by his two boys, Benson and Frank, installed his "patch-work" drag line outfit in March of 1936 and until three months ago operated at a good profit. For the past three months the mine has been closed while repairs, alterations and improvements are being made.

An eight-cylinder automobile engine powers the huge winch that pulls the gravel from the bar 200 feet away. The gravel is dragged in a V-shaped bucket to the sluices. Pulled up a steep incline to a large hopper directly over the sluices, the gravel is dumped, and the large rocks separated from it.

The rest of the gravel tumbles down into the sluice boxes and is washed in the usual manner, except that like nearly every other miner, Wong You has some ideas of his own in the sluices.

For the first 10 feet the gravel is washed over steel plates. Then for 25 feet there are six layers of different sized screen. The screens are laid over burlap, and under that is a canvas. Next are layers of steel grid.

At the end of the screen portion of the sluices there is a cut-out into another set of sluices built especially to receive and hold the fine gold and black sand. In this set is three layers of fine screen with layers of steel wool between.

Water is supplied by a six-inch centrifugal pump, powered by a six-horse auto engine. This was set on a raft built at the river bank, but the danger of rising water threatening to wash the machinery down stream has caused Wong You to build a sump in the river bank. This is now being done.

When in operation, Wong employs about six men in addition to himself and his two boys. They move an average of about 200 yards per day, he said, and the gravel averages 25 to 30 cents per yard in gold dust.

At the plant, Wong has much necessary equipment such as a buzz saw, tools, forge, and a shop.

Wong himself and all his children were born in his country. One daughter was born in Grants Pass when he operated the Mocha restaurant on G street and the Panama restaurant on Sixth street. The children are Frank, Benson, Carl, Bert, Lilly, Margaret, and Frances. The younger children attend school at Dixie.

Wong's family were pioneer miners in the Yreka district. The company was the Kee Hong company. Wong himself mined there before coming to Grants Pass in 1918. Here he was in the restaurant business until 1925.

MANY MINES IN TAKILMA REGION

The Plataurica and Esterly mines are two of the largest operations in the district around Takilma, where E. H. Messenger has been postmaster and merchant for a number of years. A third hydraulic operation in the vicinity, somewhat smaller, is the W. M. Dillenbeck placer mine, employing a crew of three or four men who hydraulic the material to a quartz mill and run it through.

Some of the giants are working in the Waldo district, about two miles from the Takilma store, but water is still insufficient in most places.

There are about 35 independent miners working in the neighborhood with hand tools. The dry spell and freezing weather kept the miners from doing any real work so far this season, Mr. Messenger re-

ports. Last year was one of the best on record, there being plenty of rainfall and mild weather.

Gold was first discovered in the district at Waldo in 1851. It was then known as Sailor Diggings, so called because sailors first found gold there, leaving their ship to follow the streams inland from the coast.

Josephine county's earliest recorded history starts with this section, the first settlements springing up in this little hollow between low hills and spreading to Browntown and Althouse creek.

The mines in this district are still good producers and the two large operations above mentioned are equipped with the most modern placer mining devices.

Mr. Messenger estimates that the independent miners working in the neighborhood take out from \$2 to \$5 a day. Even these have not worked much this season because of the cold weather and lack of water.

Shown in the picture are Mr. Messenger and C. L. Owen, a miner of the district who is demonstrating a portable placer rocker, designed for the use of small miners and compact enough when dismantled to be packed on a man's back.

It was invented by Carl Oding of Redding, a friend of Mr. Messenger's, who sent him one of the first models to be tried out in the mines of this section. It was patented under the name "Grubstaker" and manufactured recently in Oakland.

Mr. Owen was the first to try it out and reports that it is very useful either in "sniping" or in prospecting new ground. It may be used with very little water in dry sections or places where water must be carried a long distance. The same water may be used over and over and much more gravel may be worked than by the panning method or with ordinary rockers. It uses mercury to separate the gold particles from the other minerals, much in the same manner as does an amalgamator.

Owen says he also has used the device in tracing pockets with good results. It saves small gold that would ordinarily escape. Three or four yards a day may be run through it in ordinary ground, he declares. It weighs just 18 pounds.

TRACTORS USED TO BLAZE TRAIL TO BAKER MINES

Baker, Ore.—(AP)—Gold is still accessible in the high mountains of Eastern Oregon to those with the hardihood to go after it.

Trails ordinarily impossible to modern travel are being conquered by tractors, which plow through, over, around and sometimes under any way to convey the ore pulled on sleds behind to market. This kind of enterprise is what placed Baker county in the lead the past two years in gold production in the state, say mining men.

Among these hardy sons whose optimism in the worth of gold veins transcends transportation handicaps is Clair D. Schlemmer. His operation at the Highland Mine has been a consistent producer for more than a year. Usually two truckloads of ore a day slide down the steep Elkhorn mountain behind the tractor. The loads are transferred from the sled to a truck at the foot of the long mountain, and are shipped to the Tacoma smelter from Haines.

Back in the dark, dripping tunnels of the Highland camp mascots, Jack and Jennie, burros, alternate in pulling out trains of ore to the dump or ore chute.

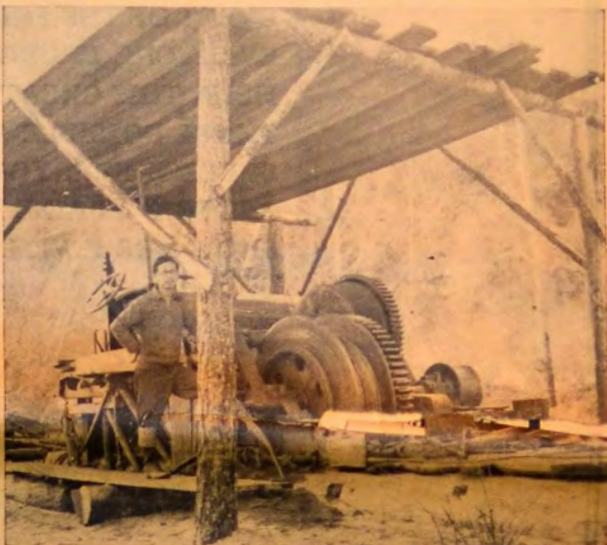
More than a month ago a beautiful vein that "looked like a Christmas tree" was opened up and is understood to still hold enchantment for the boys with Jack-hammers and picks. "Another nice vein was opened up 140 feet above this one," Schlemmer said. They are both on the main Maxwell mine vein. Twenty men are employed at the Highland, but housing accommodations are such that they rarely have to break trails through the three feet of snow there.

The driving of the Coulter tunnel by the Cornucopia Gold Mines at Cornucopia has been a project attracting wide interest largely because its success will reduce operating costs and almost revolutionize mining in that particularly rich section. R. J. Cole, manager of the mine, says that the installation of a Diesel engine allows full operation in the tunnel with 100 men employed.

The mine ships, on the average, 120 tons of concentrates a month. The ore goes by sled, for the



Chinese mining operations may still be found in Josephine county. Wong You and his two sons are getting ready to resume operations on the Rogue river near Finley Bend. Photo shows hopper to which Wong hoists the material, the hoist being operated by an old Packard engine. A smaller engine pumps water from the river, the gravel is washed and passes into the sluice on other side of hopper where a series of different types of riffles extract the fines. Wong's eldest son is shown on top of the elevated hopper, Wong himself below.



View of hoist and automobile engine which operates it at Wong You's mine. Wong's eldest son is shown beside the hoist which pulls the V-shaped bucket with its load of material to the hopper where it is washed, to be passed into the sluices and over the riffles.

Cornucopia road is closed to cars as far as Carson. From Carson to Halfway the road is kept open.

C. E. Worthington, superintendent of the Ben Harrison mine in the extremely high mountains above Granite, probably has the most gigantic task of them all in keeping his roads open for shipping ore. A tractor has done the job well the past two winters, with concentrates shipped from the mill which turns out approximately 100 tons a day. Between 35 and 50 men are working there.

W. C. Fellows at the Record mine near Unity is directing 10 men in the sinking of a shaft, for the cold weather and freezing of the water supply necessitated the closing of the mill.

W. H. Cullers, Portland, makes regular trips to his Sumpter Valley gold dredge operation near Sumpter, the largest in the Northwest. Steady operation has been maintained with the exception of minor repair work, since work started June 29, 1935. Twenty-three men operate the dredge.

John A. Arthur, manager of the Balm Creek mine, is shipping both concentrates and crude ore to the Tacoma smelter. About 60 men work there.

They and those who followed organized the first mining district and drew up the first mining code in the territory of Oregon.

It follows: "Know all men by these presents:

"That we, the miners of the Waldo and Althouse in Oregon Territory, being in convention assembled for the purpose of making rules and regulations to govern this camp.

"Resolved, 1st. That 50 cubic yards shall constitute a claim on the bed of the creek extending to high water on each side.

"Resolved, 2nd. That 40 feet shall constitute a bank or bar claim on the face extending back to the hill or mountain.

"Resolved, 3rd. That all claims not worked when workable, after five days be forfeited or jumpable.

"Resolved, 4th. That all disputes arising from mining claims shall be settled by arbitration, and the decision shall be final.

"E. J. NORTHCUTT, Chairman."

Anticlimax—When strata dip away from each other.

Dip—The slope or inclination of a lode or bed from a horizontal line.

Auriferous—Containing gold.

Arrestra—Mill for grinding ore (Spanish term.)

Bedrock—The strata underlying loose or drifted matter.

Drift—A tunnel driven from one part of the mine to another.

First Mining Code Drawn

The first mining district in Oregon was organized at Sailor Diggings, now Waldo, in Josephine county.

Sailors who deserted ship at Cres-

The
So. Oregon Miners' Association

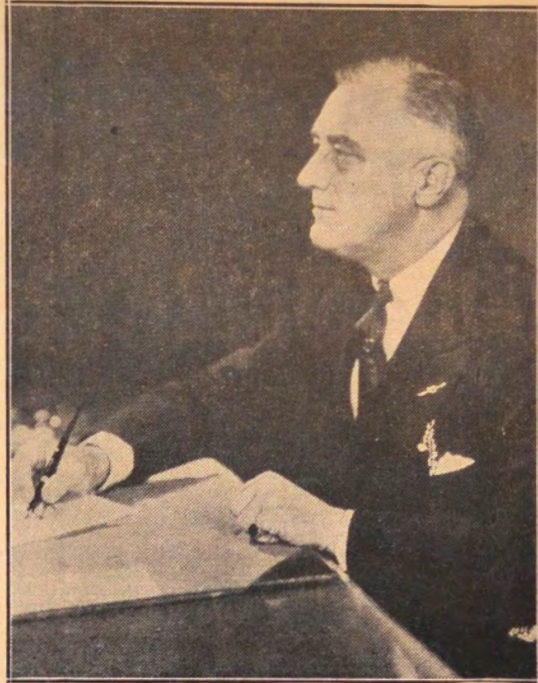
NOT ONLY ENDORSES THIS BIRTHDAY BALL BUT IN ORDER THAT THIS DANCE BE MORE SUCCESSFUL THIS ORGANIZATION HAS CANCELLED THE "MINERS' DANCE," THE CLOSING EVENT OF THE FIRST ANNUAL MINING SHOW. EVERYONE IS URGED TO BUY A TICKET TO HELP THIS GREAT WORK TO DO EVERYTHING POSSIBLE THAT THIS MAY BE THE SUCCESS EVERYONE WISHES IT WILL BE . . . ALL WHO ATTEND THE FIRST ANNUAL MINING SHOW ARE INVITED TO BE PRESENT AT THE

FAIRGROUNDS

Sponsored by the

BE SURE TO

The President's Birthday Ball



*All Proceeds Go to the
Assistance of Those Who
Suffer From the Effects
of Infantile Paralysis.*

Saturday, Jan. 30

ACTIVE CLUB

DO YOUR PART

Local Chrome Being Mined for Practical Test

RESULT TO TELL IF FOREIGN ORE CAN BE REPLACED

Southern Oregon's deposits of chromite—the metal which makes stainless steel and streamlined trains possible—are being tested to determine their availability and cost of production. To make the investigation practical, actual mining is now under way.

Southern Oregon and northern California contain considerable deposits of chromite, usually occurring in small amounts of high grade ore and sometimes in large amounts of low grade chromite.

Domestic ore, however, must surmount the hurdle of foreign production. Gigantic deposits of chromite in Southern Rhodesia and New Caledonia have lowered the price of imported ore so that only the highest grade American ore can compete, while new discoveries have been made in Brazil and the Philippines.

In addition, local chrome faces competition of deposits in eastern Oregon, Washington, central California, Montana, Pennsylvania, Newfoundland and Quebec should war boom the prices by shutting off the foreign deposits and create a new large market by its use in munitions. Central California chrome is now on the market and is being "tested."

The answer to the question of whether local chrome may be profitably mined, probably lies with the Rustless Iron and Steel Corporation of Baltimore, Md., one of the three largest consumers of chromite.

Personal interest taken by C. E. Tuttle, chairman of Rustless Iron and Steel, accounts for the test development now taking place.

In late November, 1936, when the mining was first revealed, five men were then at work on a location described as within 75 miles of Grants Pass, producing ore at the rate of 20 tons a day. Shipping by way of Grants Pass, is to start in the Spring of 1937, and work is planned at two other locations. Tuttle had then purchased 300 tons and taken options on 12,000.

Rustless Iron and Steel is not itself financing or directing the work.

The corporations officers had for years heard of the deposits in the Grants Pass territory. They knew that chrome was mined here during the war when prices were as high as \$50 or \$60 a ton. But they also understood that the deposits could not be profitably mined in competition with foreign ore, which is now laid down a Baltimore for approximately \$18 a ton, far below the war-time boom prices.

Mr. Tuttle, however, on one of his periodic trips to the west coast, heard more about the territory and decided to investigate. He finally became convinced that prospects warranted an actual test to determine cost of mining, shipment, and quality of the ore.

Should investigations show some future for the deposits, he then proposed to turn over his personal holdings to the company at cost.

Various factors will determine the final result.

Costs must include that of actual mining of the ore. That now being taken out occurs in "kidneys," chrome deposits surrounded by other rock. Medium ore, which may be concentrated and is found in greater amounts, is also being tested.

Trucking to railroad increases the cost, and then rail or boat shipment to the plant adds greatly to the overhead. It was estimated shipment east would approximate \$11 or \$12 a ton, a large percentage of the \$18 base.

A final check-up is made in the plant itself. Although ores may test approximately the same, sometimes one proves far different from another in actual use.

Thus the final answer to the question of profitable mining under present conditions will rest in the companies furnaces of Baltimore.

Should the cost be only slightly above that of imported ore, then Rustless Iron and Steel may consider investment and development a practical venture.

Also to be considered are possibilities of finding large deposits of high grade ore instead of the separate "kidneys," improved exits from railroad to mine, lowered transportation costs, and the unknown factor of Bonneville dam power.

The attitude of those making the test which may determine whether another large mining industry will be developed here seems to be, "We're in no hurry, but we want to be ready."

Old Timers Harassed By Indians

Never has the life of the gold seeker been a bed of roses, and history is crammed with tales of hardships, trials and tribulations met by the lusty men who have moved frontiers in search of the yellow metal.

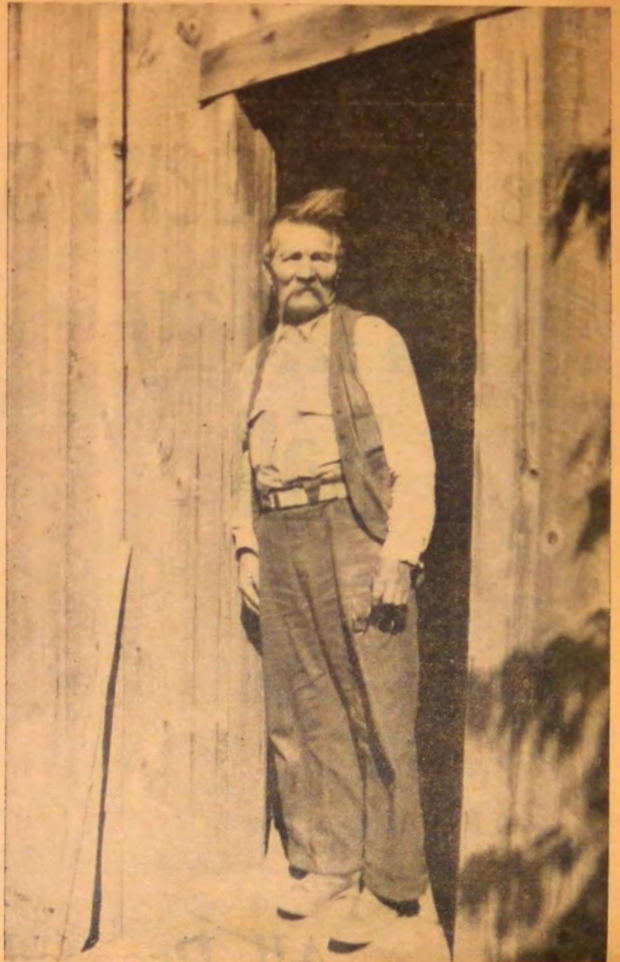
But the miner of today can swing his pick and shovel without fear or worry of an Indian ambush or losing his scalp to a redskin. Early miners in southern Oregon could not be so easy of mind. There were hostile Indians everywhere, and once they went on the warpath causing bloodshed and destruction for two long years.

As far as can be learned, the first gold was discovered in Josephine county in 1851 by a man named Floyd Rollins, first settler in the Illinois valley. He found the metal on Josephine creek. The next year a crew of sailors abandoned their ship at Crescent City and made their way into southern Oregon, discovered a vast wealth of gold at Sailor Diggins (now Waldo) and started a rush of miners into the district.

Intermittently the miners were harassed by Indian outbreaks. But in 1855 came the uprising that resulted in two years of massacres, ambushes and ambushes, skirmishes, sieges, hanging parties, destruction of property, and open warfare between the Indians and both regular and volunteer soldiers, settlers, and miners. Finally the Indians were controlled and taken to Siletz reservation.

During those years mining became extremely hazardous and many workings were abandoned. Then came word of strikes in British Columbia, so whole settlements along the Rogue and Illinois rivers were deserted in a rush to the north country.

But many miners remained to work their properties and fight the redskins. Among these were E. H. Meservey, ex-officer of the United States navy, and his partner, Barney McClacken who were operating a placer mine on Rogue river at the mouth of Grave creek, near



George Washington Meservey, whose father, Captain Meservey, played a prominent part in the Indian wars. Mr. Meservey's mother belonged to the Chetco Indian tribe. He was born in this section and has been postmaster at Illahe many years.

the site of the new forestry suspension bridge.
Meservey's son, G. W. Meservey, is now the elderly postmaster at Illahe near Agness in Curry (Continued on page 14)

COMING TO THE BIG MINING SHOW?

Then of course you're coming to our store.

Just to make you want to come, and to have you get acquainted with the hundreds and hundreds of things we carry in stock that you can use whether you're a miner, farmer, cattle raiser, woodsman or town dweller, we offer a few

TWO DAY SPECIALS

Friday and Saturday, January 29 and 30 only:

ALUMINUM TEAKETTLE

5 quart, regular 89c value

69c

GRAY GRANITE COFFEYPOT

6-cup size, regular 39c value

29c

STEEL SPIDER

10 1/4 inch, tin covered cool handle

29c

TUMBLERS

9 oz. green or crystal

Each 9c

DINNERPLATES

White, 9-inch

Each 9c

CUPS AND SAUCERS

White—Ovide or St. Dennis shape

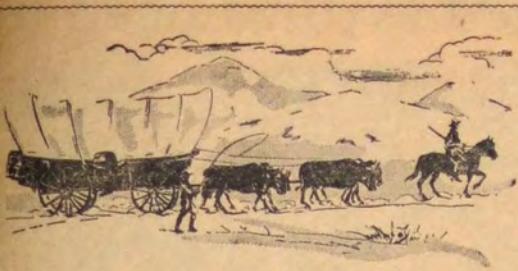
Pair 9c

WORTHMORE STORE

We give S & H Green Stamps

Newell Wright, Owner

Opposite Daily Courier



In business 50 years this store by the very nature of its business has seen the development of the mining industry.

Years ago mining and lumbering were the only industries . . . then years during which "promoters" by their work halted genuine mining progress . . . and now conservative, well managed, sound business methods have again brought to this community a valuable, increasing business, recognized as the outstanding reason for business increase and development. . . . This mining business is the merchants business and we participate most willingly in this First Annual Display.

The Rogue River Hardware Offers a Page of Special Values!

Additional reason for attending the First Annual Mining Display. Grants Pass is a Good Place to Trade and here are a few mighty good reasons:

We carry the most complete assortment and largest stock of pipe and pipe fittings in Southern Oregon. Sizes 1/2 inch to 6 inches. Also valves for steam, air, hot and cold water.

We can save you money on new pipe—made by National Tube Co. (a United States Steel product).

Our price on T Rails is lowest in all the Northwest — junk houses included. Get our quotations before placing any orders.

- DYNAMITE CAPS FUSE
- STANLEY SHOVELS PROSPECTORS' PICKS
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- JOSHUA HENDY MINE CARS GIANTS GASKET LEATHER AND REPAIRS
- WIRE ROPE CABLE CHAIN CROWBARS WRECKING BARS BOLTS
- TRACK SPIKES STEEL BARS ANGLES SHEET STEEL CORRUGATED ROOFING
- SLEDGE HAMMERS STONE HAMMERS NAIL HAMMERS
- GUARANTEED AXES WEDGES ATKINS HAND SAWS SIMMONS CROSSCUT SAWS
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Justrite and Autolite Miners' Lamps

Special to miners during First Annual Display, only

\$1.25 regular . . . Special \$1.10

POCKET WATCHES and ALARM CLOCKS, 98c each
 CARB DE in 2 lb., 10 lb., 25 lb. and 100 lb. cans.
 MINERS' CAPS



CANVAS GLOVES

Regular 10c pair Reduced — Special for this week only. Regular 15c quality Regular 20c value

Special 2 pair 17c Special 2 pair 25c Special pair 16c

We advise everyone to buy a few extra pairs because prices are advancing.

Stock of BELTING to care for every industrial need and emergency.
PUMPS for all purposes. Leathers and Repairs.

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Water systems priced from \$54.50, complete with tank automatic controls.

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Plumbing by efficient men! State and city licensed for your health and protection.

Complete line of supplies for plumbing and heating.

Furnaces

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Fence of all styles.
 American - Galvanized
 Worth More - Costs Same



It will pay you to trade with

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"Where Most People Trade"

SOUTH SIXTH STREET, GRANTS PASS, OREGON

TELEPHONE 38

Galvanized Washtubs

No. 2 89c

Regular \$1.00

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Regular \$1.25



Electric Contracting and Supplies.
 Delta Tools For the Workshop
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GOOD ENOUGH FOR HOME OR CAMP—DISHES THAT WILL NOT CRAZE, AND ARE NOT EASILY BROKEN

Something New in Low Priced Dinnerware

YOU CAN AFFORD TO GET A FEW EXTRA PIECES AT OUR SPECIAL LOW PRICES

WHITE PORCELITE DINNERWARE

Cups 5c each | 2 cups and 2
 Saucers 3c each | saucers for 15c

5-in. Dessert Plates 5c
 9-in. Plates 10c

9-in. Deep vegetable Dishes } 15c each
 6 1/2-in. Deep mixing bowls } 2 for 25c

PORCELITE TABLEWARE WITH RED OR BLUE PINE CONE COLORED DECORATION. COLORS ARE FUSED ACID PROOF. A VARIETY TO SET A COMPLETE TABLE, PRICED AT 10 CENTS AND A FEW PIECES AT 2 FOR 25 CENTS.

Old Channel Among Largest Hydraulic Mines



Showing operations at the Old Channel mine, with two "giants" trained on the base of the gravel bank. This breaks down the bank by undermining it below, allowing the material to wash into the sluice which may be seen in the right foreground. The "fines" are caught by the riffles and the coarse material passes on and down the fall. The elevated pipe line carrying the water to the "giants" may also be seen.

OPERATION HIGH ABOVE RIVER BED

From the standpoint of ditch capacity, the pressure under which the water is used and the size of the deposit, the Old Channel mine in the Galice district, 500 feet above the River level probably ranks as one of the largest hydraulic operations in the United States. A. R. McGuire is the present operator. The mine was formerly owned and operated by J. R. Harvey who still retains an interest in it.

Rehabilitation work was started May 15, 1935, with a peak crew of about 75 men. The average number of men employed on the operating crew is 20. More than \$50,000 has been spent in new equipment and the mine is now ready for operation on a large scale. The property has been worked in a smaller way since 1853 when the first high-line ditch was built.

Past operations have removed gravel from some 60 acres of bedrock and from early times to the present from 10 to 30 men have been able to make a living by "sniping" on old bedrock. When Mr. McGuire took over the property 28 people were taking out small amounts of gold in this fashion.

The property, which covers some 760 acres, is from one-half to one mile wide and about four and one-half miles in length. It is bisected by the north fork of Galice creek. The rim of the bedrock of this ancient river channel was discovered in the early '60s.

In its present rehabilitated state the mine has some ten miles of completely cleaned and widened ditch with all new flumes. The ditch capacity is 125 second feet of water. At the end of the ditch, which is 510 feet above bedrock, are two reservoirs. Two pipe lines serve the three high-pressure, Hendy giants.

Past operations have proven the gravel to be from 400 to 2000 feet in width and from 70 to 225 feet in depth. Most geologists agree that the present deposit is just a remaining fraction of an ancient river channel which at one time extended north and south at least 400 miles and was not less than four miles in width.

From a physical standpoint the property has all the prerequisites of a low cost hydraulic operation. Erosion of later days has provided precipitous cross channels, 200 feet or more in depth, into which the gravel is dumped after the values have been extracted.

The first mining on the property was started about 1860 and not a quarter of it is worked out yet, ac-

Oriole Ready Soon



Miners with air drill one of the tunnels at the Oriole mine, one of the important quartz properties in the Galice district. The mine is owned by Harry Sordy and is being operated under a lease by Charles Benson and Ben Thomas. Several thousand dollars have been spent during the past year in new equipment.

According to the opinion of various mining engineers.

A colorful history surrounds the early working of the mine. The first miners who ventured on the property worked with pick and shovel. This was followed by a

crude form of hydraulic operation with canvas hose, water being used under pressure for the first time. The first hydraulic plant was brought in by pack train from Crescent City over 125 miles of rough mountain trails. The man-

NEW EQUIPMENT AT ORIOLE MINE

The Rocky Gulch Mining company will start operations at the Oriole mine on Rocky Gulch creek near Galice as soon as sufficient water is available, according to Harry Sordy, resident manager. A large amount of new equipment has been installed at the mine during the past year in a program of development which is now nearing completion.

The property is under lease to Charles Benson and Ben Thomas who expect to have the mill ready for operation within a week or ten days, Mr. Sordy stated.

The mine has previously been operated by water power during the season when sufficient water was available. In the future it will be possible to operate continuously. A 125 horse power Diesel engine furnishing the power during the dry season. New equipment also includes a ball mill, flotation plant, classifier, large water tank and a new pumping system.

Twenty-five men were employed during the past year in preparing the property for operation. Water will be delivered to the scene of operation from Rocky Gulch creek by 300 foot pipe line, constructed of 11-inch pipe having a fall of 350 feet. The construction and installation of new equipment started in January, 1935, with a crew of 25 men. When operations start a crew of only 15 will be required.

Modern living quarters have been constructed at the camp with a housing capacity of 30 men. The group of buildings include a power house, saw mill, machine shop, assay rooms, drafting offices, dining hall and bunk houses.

The property has four levels of underground workings with a total of 3500 feet of tunnels, drifts and chutes, timber chutes, ore chutes, and manways have been extended to facilitate speedy handling of the ore.

Since the first operation of the property it is estimated that approximately \$150,000 has been invested and \$66,000 worth of high-grade ore taken out and shipped to Tacoma for smelting. The property comprises 14 claims.

drel on which the pipe was riveted is still at the property embedded in an oak tree about 36 inches in diameter. The mandrel apparently was stuck into the tree when the big oak was but a sapling.

Indians interfered with operations in those early days and a fort (Continued on page 14)

Boom in Copper Prices to Revive Operations

QUEEN OF BRONZE PLANS ON OPENING OF ITS PROPERTY

Rapid recovery of copper prices in recent months and the high price of gold often found locally with copper are leading to plans for reopening of mines here.

Copper has reached the 12-cent mark, the highest price in over six years, and a point at which production has previously carried on here.

Reorganization plans are now in the preliminary stage for resuming operations at the Queen of Bronze group of copper-gold mines, known individually as the "Queen", "Cowboy" and "East Cowboy", comprising a total of some 1500 acres of ground. The property is located near Taklima, 40 miles southwest of Grants Pass.

Operations were first commenced in 1904 and have since been conducted intermittently by various owners and lessors who concen-

trated on the production of hand-sorted ore from the ore bodies that were easily accessible. No systematic development work was attempted and no equipment installed for treatment of lower grade ores prior to the start of operations by the Queen of Bronze Mining company in 1929. They operated about one year.

The total production from hand-sorted ore by previous operators aggregated approximately \$1,500,000, all of which was mined from a small area to no greater depth than 250 feet at any point of the property. The ore at this depth is entirely in sulphides.

The property has not been worked since 1930 but the officers are contemplating start of operations again at an early date with a development program which will require an expenditure of close to \$75,000.

John Hampshire, Grants Pass, is president of the company; Philip Twohy, Spokane, is vice-president, and E. P. Twohy, Spokane, is secretary and treasurer. Directors are James F. Twohy, Portland; R. H. Clarke, Oakland; J. V. Pohlman, Spokane, and Edward, Pohlman, Spokane. The controlling interest is held by the Twohy brothers.

The company is incorporated under the laws of Washington and the

headquarters are at Spokane. Present equipment consists of adequate buildings, two compressors, blacksmith shops and other mine equipment. During past operations the nearest shipping point was Waters Creek, a distance of 27 miles by the Redwood highway. The ore was shipped to the Tacoma smelter for treatment. Better transportation facilities are contemplated in the new development plan, details of which are not ready for announcement.

since May, 1931, having purchased it soon after coming to Grants Pass from Oklahoma where he had been interested in the oil business for many years.

In the first two years of his ownership the mine was operated by hand using the old panning method. He has gradually installed new equipment and during the past year has completed a pipe-line to deliver water from Brimstone creek some 1500 feet to an elevation of 190 feet, using a 120 horse power Fairbanks Morse engine and a 5-inch Morse centrifugal pump.

Mr. Burns has taken out approximately \$7500 worth of gold from the property which consists of three claims. He purchased it from John and Sam Alderson. Other owners who have operated the mine include Mark DeVall, and Phil Kelly. The latter located the mine about 30 years ago and worked it by hand for several years. Some very large nuggets have been taken from the property from time to time. A picture of one of these large nuggets is shown elsewhere in these pages.

A bull-dozer is now at work on the property breaking down the ground in preparation for hydraulic

licking. Stulls — Timber or staging on which waste is stored in the workings of a mine.

GENE GOFF HAS STOVEPIPE LEASE

Anticipating a most successful year of operation under the management of Gene Goff of Grants Pass, Robert Burns, owner of the Stovepipe mine, says he has installed considerable new equipment and is "ready to go" as soon as water is available.

The Stovepipe mine, a well known producer in past years, is located near Leland on Brimstone creek, a tributary of Grave creek. Mr. Burns has owned the property

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Claims May Be Filed on National Forest Land

MINERS PRAISED FOR ROAD WORK, FIGHTING BLAZES

By G. E. Mitchell
Supervisor, Siskiyou Nat'l. Forest

Prospecting and mining on the national forests is permitted the same as on other unentered government lands. The same mining laws apply, and so far as the miner is concerned, he experiences no difference in administration for legitimate operations.

This is a little different from other land laws of the United States, since no other types of entry may be made on national forest lands. It is recognized by the forest service that the development of minerals, where they may be found in paying quantities, is desirable; for that reason the forest service is anxious to assist in any way it can with the development of mineral resources on national forest lands.

This does not mean that the service is authorized to construct roads or trails, nor to assist financially or direct projects. However, the development of the regular forest road and trail system is of considerable value in opening up the forest lands for prospecting and mineral development. This is especially true where the transportation of heavy equipment is necessary for such development.

There are instances where certain lands valuable for other purposes such as agriculture, business enterprises, or recreational use are entered under the mining law in order to get possession of these lands for the desired purpose. In cases of this kind, it is necessary where the conditions and facts indicate, to investigate and often contest the mining entry. This necessitates the examination of these lands by competent mineral examiners who are working for the government, but may or may not be connected with the forest service. These examinations are made absolutely on a factual basis, and a public hearing is held for the recording of information regarding the validity of the claim. Final decisions on these hearings are made by officers of the land office who have no connection with the forest service whatever. Their decisions are made entirely on the facts as brought out at the hearing.

The only conflict between the forest service and the mining industry is where certain lands are being held under mining laws for purposes other than mining. This seldom occurs with a bona fide

miner, because he is not interested in other values.

Regulation L-18 states: "Whenever the secretary of agriculture shall determine that the use of any portion of the surface of the lands included in a mining location within a national forest is required for the administration, protection, or improvement of the national forest, and may be so used without interfering with the development of the mineral resources of such claim, such lands shall, prior to the allowance of mineral entry, be subject to use by the United States or its permittees for the purpose as named". This might apply to road or trail rights of way, recreation or administration development, or the construction of improvements for protection purposes. This is a condition that applies only to National Forest land, but is seldom used, and, as stated in the regulation, cannot be used when it interferes with the development of the mineral resources of the claim.

Timber may be cut on unperfected mining claims for the purpose of development of the claim, and for the personal use of the claimant while working the claim. Timber may be cut on one claim for the development of another, when that development tends to develop the claim from which the timber was cut. Free timber is not granted mining operations when the operation has passed the development stage and comes into mineral production. The forest service may sell timber from mining claims with the consent of the claimant, or from any claim on which the location was made subsequent to the first publication or notice of sale of the timber. Mining claims which are used for purposes other than that for which the original location was made are contrary to law, and it is the responsibility of the forest service to report on such unauthorized use.

Much of the area of the Siskiyou national forest was opened up for foot and horse travel by the early prospectors long before the creation of a national forest and its administration by the forest service. Many of these trails are still in existence today, and some of them are a part of the forest approved transportation plan. Many of them, however, were built on grades and to standards of construction that they are still difficult to travel, even after years of maintenance and occasional improvement by the forest service. The plan is to re-build all of these trails to standards of perfection laid down for the various uses, as determined by transportation studies. Part of this work is being done by the CCC and other emergency work handled through the Siskiyou national forest.

Chrome roads built into the chrome areas and subsidized by the government have served a very valuable purpose in transportation on the national forest, since their construction. Such roads as the one down the Illinois river, the road in to Swede Basin, the road in to Soldier Wells, in the Smith river drainage are good examples of these roads. With some changes in grade, widening of the tread, and the perfection of drainage, these roads became a part of the established transportation plan of the national forest. Legitimate miners are an asset to the forest service in that most of them are located in the national forests where they would be at the mercy of uncontrollable fires which travel under certain weather conditions. They realize the hazards under such conditions, and are splendid cooperators with the forest service in preventing fires and assisting with their control. Numerous times in the past, before the detection and communication system of the forest were perfected to their present standard, the service depended on miners for information and com-

munication regarding forest activities, prospectors and miners have been the pioneers of the national forest areas, especially in southern Oregon.

INDIANS RAIDED EARLY MINERS

(Continued from page 10)

county, and this old-timer tells a gripping tale of the part his father and McGlacken played in the war that raged along the lower stretches of Rogue river.

As told to A. G. Jackson of the forest service, this story follows:

Hearing of the Indian outbreak in December, 1855, the two men headed down the river (then known as Gold river) to make their way to Port Orford (then known as Fort Orford).

Arriving at Big Bend they found a party of 11 men at the Charles Foster ranch, first settlement of the district. Casting their lot with ranchers they transformed the ranch house into a fort with loopholes upstairs and down. There they were besieged by Indians for several days. When their ammunition ran low they sent a half-breed Canadian Indian, Enos (or Eonis) to Gold Beach (then Ellenburg) at the mouth of the river for supplies.

He failed to return, and the little party slipped through the Indian lines, making their way to Eagnell's ferry near the mouth of the river. They arrived there February 21, 1856, and the next day, Washington's birthday, was written red in blood in southern Oregon history, for the most vicious outbreak of the war occurred with the Indians striking simultaneously at almost a dozen different places in that district. McGlacken was killed there, and later Meservey joined the make-shift fort known as Miners' Fort, across the river from Ellenburg. For days on end the party was besieged there. Foster went for aid to Port Orford but without success.

The siege lasted for 31 days. Then the starved miners and settlers were relieved by the approach of the two companies of soldiers from Fort Humbolt.

The Indians scattered to the woods and hills. After a few battles up Rogue river, again at Big Bend, also known as Big Meadows, the Indians finally surrendered in late May and early June.

But for two years more small bands roamed the hills and in March, 1858, Curry county volunteers were authorized to round up small bands in the mountains. Finally, on July 2, 1858, Captain Meservey, in command then of the Gold Beach volunteers, wrote the adjutant general of Oregon:

"The last of the red men have been captured and shot, only women and children spared, and they are en route for the serve. All further apprehension of danger is at an end, and this portion of Oregon will rest in tranquility."

That is only one series of episodes in which miners took part, for in almost all the volunteer companies were miners who had left their properties to war against the redskins.

OPERATION HIGH ABOVE RIVER BED

(Continued from page 12)

was built nearby on what is known as Gamblers Bar. History and legend are interwoven into a colorful pattern of dramatic incidents dealing with Indian warfare, culminating in a peace effected through an Indian woman known as Indian Mary.

Indian Mary, who died only a few years ago, was the daughter of an old Indian guide, called Joe, who was friendly to the whites. She married a Warm Springs, California, Indian named Peco, who quarreled with Mary's father. The two fought a duel and the shots they exchanged resulted in the death of both. Indian Mary later married another Indian and lived peacefully among the whites until her death.

Fault—A line of disturbance or dislocation in strata.

Flour Gold—The finest drift of gold.

Flume—An artificial water course at hydraulic mines.

Foot-wall—The under wall of a lode.

Galena—Sulphide of lead.

\$26,000 SPENT IN YEAR'S RUN AT OSCAR CREEK

A somewhat different type of placer operation is found in the dry land dredge at the Oscar Creek mine, between Murphy and Provolt, owned and operated by A. M. Sturtevant and E. B. Bishop.

The equipment consists of one one and one-quarter yard Marion electric shovel, a 5 by 24 foot screen, stacking conveyor 55 feet in length and an automatic feeder 24 feet in length. The plant is operated by electric power and can be easily moved from one place to another on its own power.

Taking a 150-foot swath the plant is capable of a run of 75 yards an hour, operating day and night. Large floodlights are installed for night operation. It is planned to operate either two or three shifts a day, employing six to ten men. Four men will be used on a shift if the mine runs only two shifts a day of ten hours each, three men if three shifts a day.

Less water is required for this type of placer mining than in the hydraulic method. The water that is required comes from the natural watershed of the district. About 1000 to 1200 gallons of water a minute are used in running the plant.

The equipment has been in its present location at the Oscar Creek mine about one year, most of the work being merely development operations and test runs. The two operators are now prepared to proceed at high speed and expect to take out considerable gold with the present set-up. Indications are that several years work lies ahead without moving far from the present location.

A large item in overhead in dry land dredging of this character is electric power to operate the machinery and flood lights. The power is purchased from the California Oregon Power company. The plant is designed, however, to handle a large amount of material with great speed.

During the year of operation the owners have spent \$4000 for labor, \$5000 for supplies, \$2000 for freight shipments (rail and truck lines) and \$15,000 for machinery, making a total expenditure of approximately \$26,000.

The above photograph, looking down into the cut, shows a view of the plant from the bank. The office, tool shed and shop, not shown in the pictures, are on top of the bank and some little distance back among a growth of trees.

Mr. Bishop was formerly a contractor and Mr. Sturtevant has followed mining for some years. Both are comparative newcomers to Grants Pass.

Several other operators have worked the Oscar Creek mine in past years although prior to the present development there was no major operation there since the Bolton Brothers worked it with heavy equipment about three years ago. Their equipment included a large steam shovel and plant somewhat similar to that now on the site. The operation continued for about a year.

Between major operations various individuals have taken gold from the property in small quantities.

BIG SILICA MINE UNDER OPERATION

Termed by engineers one of the purest ledges of silica in the United States, a huge deposit is now being mined near Hugo, northwest of Grants Pass about 15 miles.

The property is owned by Charles Snider, Glenn McKy and Jim Havens, and has been leased to W. B. Sullivan.

For some time Mr. Sullivan has been engaged in distributing agricultural lime from the Gold Hill cement plant. Now he has begun installing machinery at the Hugo property to take out quantities of the silica, to be ground on the site and distributed over the state.

The silica is used as chicken grit to harden steel, and the whitest is used in white plaster.

The ledge is about one half mile long, 20 feet wide, and possibly 100 feet deep. Snider and his associates shipped about seven cars a year to Portland to be used in tempering steel and as chicken grit.

Silphide—A combination of a metal with sulphur.

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State School Here Gives Practical Pointers

MANY SUBJECTS TAUGHT, QUERIES GIVEN ANSWERS

Designed to educate Oregonians to the fact that they live in a state of great potential mining development from its natural mineral wealth, the extent of which even those living in the mining region were not fully aware, Governor Martin secured with WPA backing a mining school at Grants Pass in the fall of 1935.

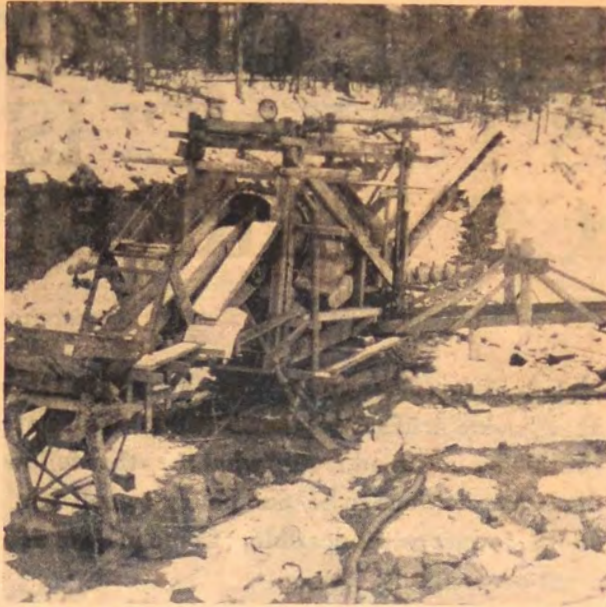
The immediate purposes of the unique project were to provide an agency for supplying information to prospectors and miners; to assist in showing new methods of mineral recovery and, at the same time, to test these methods as well as test contents of ores. These objectives were set up as part of the nationwide drive for increased metal output, especially precious metals.

The first work of the school WPA project was to clear parts of the Josephine county fairgrounds and remodel some of the buildings.

The mines building was remodeled to serve as headquarters for the school and the Agricultural Display building was renovated to accommodate the grange. A blacksmith shop was built in Sourdough Gulch, and several trails and rustic bridges constructed.

Evening instruction was started in a downtown building on January 15, 1936. These classes continued until about March first. In the meantime, day classes were inaugurated at the fairgrounds. These classes continued until May 14, 1936, when the school was closed for the summer.

Instructors and the classes they taught included: Karl Ladewig, superintendent; Fred Green, placer methods and sniping methods; James Smith, mine timbering; Tom Brinkerhoff, mine blacksmithing;



View of "dry land dredge" at Oscar Creek mine, operated by Sturtevant and Bishop, showing feeder which carries material excavated by Marion electric shovel to revolving screens which sort it before it passes over gold saving devices.

W. B. Beckley, simplified geology, and technical geology; A. Thomas, cyanidation; E. Derwent, and Winston Purvine, assistant, chemistry and assaying. Later in the year E. C. Alford was secured to conduct lectures on geology.

The present term of the school opened about the first of October in the fall of 1936, with Winston D. Purvine, former assistant superintendent, as superintendent. Classes were held in the high school on three nights each week, and at the fairgrounds during the day. The classes conducted at the fairgrounds

are on a very informal basis with much of the work being consultation on the problems of individual prospects or mines. Models of mill machinery and devices have been made by students. These models include a model cyanide plant, amalgamation table, jig concentrator, and others.

Subjects that have been discussed or are now in progress at the night classes include ore dressing, the problems of recovery of metals from their ores; geological formations of Josephine county; elementary chemistry; ore testing methods of chemical nature; outline of hard rock mining methods; and a course on gem materials and crystals being given by popular request.

During the present term of the mining school all attendance is voluntary, as the small WPA project is not connected with the class work. An attendance of from 50 to 60 per week indicates considerable interest in the material being presented. The individuals coming to the classes, with the exception of several regular attenders, are persons who come in from mining projects to gain some definite information on a problem. These problems vary from a discussion on mineral possibilities in a given formation to what size mesh to grind certain ores, or how best to operate a small scale placer.

At the end of a year's operation it is apparent that a greatly changed atmosphere is current in the mining picture of southwestern Oregon. Public opinion has become more favorable to the mining industry. In some measure due, it is believed, to the work of the mining school and its officials.



Automobile axles weaken if reheated for straightening. We true axles "Cold" in the car saving labor and doing the work precisely accurate with special tools.



View of equipment set up at fairgrounds by Winston D. Purvine, superintendent of the mining school, for testing riffle efficiency. Center front shows 12-inch tailing sluice. Farther back may be seen feeder bin and trommel screen, with motor and pumphouse on the right.

Tests Made to Show Which Riffles Will Save Most Gold

A test of riffle efficiency is being conducted by the State Mining School at Grants Pass. The tests are particularly concerned as to the relative efficiency in fine gold recovery.

The work of elevating material and operation of the trommel screen is being done by four WPA workers. The bank material is loaded into wheelbarrows, pushed up an incline and dumped into a feeder box. Here the material is fed into a trommel screen, the oversize discarded and the fine material sent through six-inch sluice boxes. A centrifugal pump run by a gasoline motor provides 2800 gallons of water per hour to sluice the sands.

The outfit set up at the end of Sourdough gulch runs about six yards of material per day. At the end of each test the arrangement of the various riffles is changed so that the comparative efficiency may be determined. The concentrates from each riffle are assayed for their gold content and the percentage of the result is noted. The results of the tests have been such that a combination of riffles rather than a single one will likely prove best for the recovery of fine gold. Results of the tests will be published when completed.

The project, which is thought to be the only one of its kind, is at work on all WPA work days and is open to the public.

ACKNOWLEDGEMENT:

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Pen and Ink Sketch; front cover page, section two.

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Interviews with women connected with mining industry.

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Whose photographs of many mining scenes are in this edition.

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Leslie Shaw

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Phil Brainerd

Whose great number of additional hours in the Photo-Engraving department made many of the special engravings possible.

V. Ward Hammond

By whose co-operation it was possible to co-ordinate the vast amount of data used herein.

To the hundreds of residents of Josephine County who so willingly helped with information regarding the actual facts of mining in this section of Oregon.

THIS LIST OF "GOOD THINGS TO EAT" IS FROM MAC'S MARKETS—

Whether you read this in camp . . . as you prepare your "grub stake" or are "just wondering what 'cookie' will set out next" (and this also applies to you folks whose knowledge of mining is gained from "what the other fellow says.")

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