

MULE MOUNTAIN MINE (gold)

Mule Creek District

"Property consists of 1 placer and 11 lode claims. Owned by G. W. Billings and situated on both sides of Rogue river about 3 miles below the mouth of Mule creek. There are 3 principal veins, Mule mountain, Big Devils Stairs creek, and Keystone veins. The country rock of all the veins is greenstone.

"The Mule mountain vein is developed by a 25-foot open cut 12 feet wide, an 86-foot shaft and several smaller cuts. The strike of vein is N. 60° E. and dip 60° SE. The vein is made up of about 1 foot of nearly solid quartz and about 2 feet of vein material heavily impregnated with iron. The 3 feet of quartz and iron bearing material is mined and milled in the 2-stamp mill and cyanide plant on the property. This 3 feet of ore is reported to average by sampling about \$7.25.

omitted

"The Big Devils Stairs creek vein is 500 to 600 feet northwest of Mule mountain vein. This Big Devils Stairs creek vein is from 1 to 4 feet wide in the lower workings which splits up in the upper workings to several veins over a width of 4 feet and still higher up they fan out to 15 feet wide with several 1-foot veins and many smaller ones in between. These are quartz iron-stained veins with some pyrite and chalcopyrite. Separate mill runs recovered \$26.80 and \$18.00. Vein samples over 7 feet 4 inches assayed \$13.37; another one over 9 feet 2 inches assayed \$13.67, according to reports.

"The Keystone vein is a shear zone mineralized from a few feet wide to a maximum width of 20 feet or more. It is similar to Big Devils Stairs creek vein as shown in open cuts and tunnels. Assay values reported to be from \$2.50 up to about \$100.00."

Ref.: Parks & Swartley, 16:159 (quoted)

~~Handy Note sent~~
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In Handbook pp 159

REPORT ON

MULE MOUNTAIN MINE GROUP

for

COUNT GEORGE HAY DU BARRY

by

J. H. Gallagher, Consulting Mining Eng., Portland, Ore.

W. L. Merritt, Consulting Mining Eng., Portland, Ore.

W. F. Hayden, Geologist, Salt Lake City, Utah.

DATA.

The data for this report was gathered from an examination made on the ground in April, 1932, by Mr. J. H. Gallagher of Portland, Oregon, and Mr. W. F. Hayden of Salt Lake City.

Samples for assay were taken on this trip.

Mr. W. L. Merritt was sent into the field with a survey party to make a map of the claims of the Mule Mountain and Keystone sections of the property and to show on the map the location of all the veins and vein intersections known.

Map is made from an accurate field survey.

Public survey maps were obtained from the surveyor general's office.

The forestry department of the U.S.D.A. furnished maps.

Maps and a profile of the Rogue River were secured from the U.S.G.S. of the Department of the Interior.

The samples were taken on this property with moils in the usual manner, carefully sacked and labeled, and delivered to the assayer's office where the rock was broken down to a small size, and the samples dried and quartered. Residue of the original samples have been delivered to the owner for a permanent record.

Photos were made by Mr. Gallagher and Mr. Merritt. The aerial photo was taken by Mr. Brubacher.

-CONCLUSIONS AND RECOMMENDATIONS-

It is our opinion that the Mule Mountain District is a highly mineralized gold area with many parallel and cross veins.

Each intersection exposed and examined, showed a marked increase of gold value.

In these conclusions we wish it understood that we do not subscribe to the popular Southern Oregon, so called "pocket" theory; but rather we are convinced and fully believe that these are true ore shoots that on Mule Mountain will continue to depth. Variation in values and widths may occur, but the shoots will continue. This is the condition which we believe exists where others have described the gold occurrence as a "pocket" formation.

It is our opinion that the Mule Mountain Mine group of claims contains many very rich ore shoots. These shoots occur wherever two veins intersect or wherever a vein was fractured in any other manner prior to the mineralization. As an indication of this we call your attention to the rich ore

that was taken from the intersection of the Milner and Paywell veins, and also the evidence of cross-fractures filled with quartz stringers, where the ore shoot was taken out on the Alva vein.

In the Mule Mountain tunnel two small stringers across the tunnel 60 and 120 feet, respectively, back from the vein, and will strike the vein to the south of the tunnel and form the continuation of the ore shoot, a portion of which has been mined out on the surface. This ore shoot was 80 feet long on the Alva vein on the surface, and we can predict from the dip of the cross-fractures that it is about 120 feet long at the Mule Mountain tunnel level.

What we have termed the big fault, which cuts the south end of the Milner vein in the tunnel near the Keystone cabin must have occurred after the major mineralization, as the fractured end of the Milner vein assays only a little higher than the vein where it is undisturbed.

In the Keystone there is evidence of extensive cross-fracturing along the vein for possibly 200 feet, and further development should show a medium grade ore shoot for that entire length. As the vein along this 200 feet is consistently about 4 feet wide, considerable tonnage of approximately \$10 ore is indicated by the assay values. It is reported that some very high grade specimen ore was found in the Keystone tunnel, which would lead us to expect that at least one rich ore shoot would be developed, probably along or near the small fault at the bend in the tunnel.

The finding of the high grade sample on the Argosy claim would indicate that there is an intersection near the discovery point. An investigation should be made to determine the reason for this enrichment. If an East-west fracture is found, it should be traced to the East to determine if it crosses the Mammoth Curry.

It is recommended that the Mule Mountain tunnel be driven south along the west side of the Alva vein, leaving the quartz in place. When the southern end of the ore shoot has been reached, it shall then be determined whether to follow the vein on out to its outcrop at the level on the west side of the mountain or to cross-cut directly west to the surface. One should bear in mind the details of the transportation of the ore when making this decision.

It is further recommended that work be done to determine the downward continuation of the rich ore shoot at the Paywell-Milner intersection, and a tunnel be driven to cut this ore shoot at an additional depth of 200 feet.

It is further recommended that a careful survey and sampling of the Keystone tunnel and surface croppings be done at once to locate the rich ore shoots that occur in the vein, with the idea of working these out and milling the ore with that from the Alva ore shoot.

It is further recommended that the Paywell vein be traced east over Mule Mountain, and the Alva vein be traced north along the top of Mule Mountain to their intersection, and that the place where they intersect be carefully prospected and sampled.

Owing to the fact that all the known ore shoots occur on the west side of Mule Mountain, and that the most available water power is from Burns and Blossom Bar Creeks, and that the head of navigation is now at Blossom Bar Rapids, and that the most habitable camp site and the only feasible cyanide tailing pond is on Blossom Bar, it is our recommendation that the milling be done near the site of the old stamp mill.

The moving of ore from the tunnels on Mule Mountain to the proposed mill on Blossom Bar can be economically done with a truck road supplemented by cheap tramways. Either aerial or surface trams will be used depending on the volume of supplies required at the tunnels. The Keystone ore can also be brought across the Rogue River in a gravity aerial tramway to the east end of the truck road.

In conclusion we believe that in this Mule Mountain group of claims there are sufficient gold values to warrant, as soon as the Mule Mountain tunnel is run fifty feet south on the Alva vein and the ore shoot is proven, the assembling of the milling equipment now on the ground, on Blossom Bar.

Respectfully submitted,

(signed) J. H. Gallagher (seal)

(signed) W. L. Merritt (seal)

JHG:LG

GEOGRAPHICAL

The Mule Mountain Mining District is situated in the Siskiyou Mountains in the southwestern part of Oregon, and in Curry County, forty-two miles up the Rogue River from the Pacific Ocean.

Gold Beach is the county seat of Curry County and being situated on the Roosevelt Highway at the mouth of the Rogue River it becomes the trading center for the Mule Mountain District.

Gold Beach took its name from the discovery in the fiftys of the gold in the ocean beach, which is believed to have been brought down the Rogue by the flood waters and spread over the ocean sand beach.

It is a distance of forty to forty five miles up the Rogue River to the heart of the mountains where this mineralized area is located.

CLIMATE

The climatic conditions in Curry County and up the Rogue River in the Mule Mountain District are so good that mining operations can be efficiently carried on throughout the entire year.

The summer season is such that this region is selected by many for summer homes. The springs are early and the falls are late. The winter season is one of rains, but no such as to interfere with efficient mining operations. Weather cold enough to freeze is rare.

This district has as near an ideal climate for all year mining as could be found.

TRANSPORTATION.

A new road is being built into this country by the C.C.C. boys and is now nine miles from the property and will reach the mine or near it next summer (1935). (signed) W. L. Merritt.

In all mining operations transportation facilities are very important and for this property there are at present two means of transportation available. First, the U. S. Mail and Parcel Post is brought up the Rogue River from Gold Beach to Agness Post Office by boat and by pack mule to Marial Post Office, located at the foot of Mule Mountain. This service is three times a week. Second, river navigation has been made possible to the property by the fine work of Count du Barry in blasting rocks and clearing the channel of obstructions in many dangerous places. He spent the season of 1931, and considerable money, to accomplish this. A power launch now makes the trip up the Rogue to this property in about six hours running time with a ton of cargo. This achievement of Count du Barry's in opening up to navigation forty-one and one-half miles of the Rogue River from Agness to Blossom, in the face of the difficulties to be overcome deserves commendation,

and shows the indomitable character of the man to overcome obstacles.

This accomplishment also attracted the attention of the U. S. Government to the extent that a bill is now pending in Congress to provide funds for the U. S. Engineers to make a survey and study this part of the Rogue River with a view to further improving the river and maintaining same for navigation.

TRAILS.

This district is in the Siskiyou National Forest, and as such is traversed with the trails built and maintained by the U. S. Department of Forestry for use in fire prevention work. The principal trail extends from the Roosevelt Highway up the north side of the Rogue River to Mule Mountain, and on through to the Pacific Highway in the East. Radiating from this trail, of course, are branch trails as shown on the map of the Forestry Department, herewith attached .

Of some importance to the Mule Mountain district is the fact that there is allotted by the Forestry Department \$25,000.00 for expenditure during 1932 for the improvement of the forest trail West from Mule Mountain to Ruben.

HIGHWAY DEVELOPMENT.

The western part of Oregon has two major North and South highways - the Roosevelt Highway, following the coast line from the California line north to the Columbia River, and the Pacific Highway from the California line north to Portland and through the heart of the Willamette Valley.

South of the Columbia River as each water shed is met there is a highway built from the Pacific Highway to the Ocean. This is also true on the Coquille River just north of Curry County, but when we come to the Rogue River, which has the greatest scenic beauty of any of them, there has not been built a highway, and it is the only one left of the rivers that run from the Pacific Highway to the sea that has not been improved. Without question this will be done.

The political procedure by which this would be done would be to present the request to the Oregon State Highway Commission, who would make a preliminary investigation, and if the project was timely a request would be made of the U. S. Forestry Department that they make the investigation, and under the present law sixty percent of the cost of the improvement would be paid by the Federal Government.

The improvement would be carried on under the direction of the U. S. Bureau of Roads.

The interest of this district in this road project is that the advantage of motor transportation would so lower the operating cost that it would be equivalent to raising the value of every ton of ore in the district a substantial amount. In our opinion this improvement can be brought about as soon as the sentiment of the people in Josephine, Jackson and Curry Counties is such that they will unite in their requests that the improvement be

made, and it should be remembered that the advocates for the improvement have a strong argument during these times of depression that if the money could be found available this improvement could be made at this time at a smaller cost than during normal times. It would also provide useful employment for the unemployed and in turn when it was completed would make it possible to continue the employment of those engaged in the mining industry in this district.

Gold Beach is an easy drive of eight to ten hours from Portland, along a beautiful scenic highway. Bus service provides convenient transportation facilities to Portland.

MEMORANDUMS.

The present population of the immediate district is about forty.

The post office is located at Mariel with Mr. G. W. Billings as postmaster.

The public school is near the post office.

Mr. Chauncey Fry living at Mariel is the local Notary Public.

TELEPHONE & TELEGRAPH.

A telephone system is maintained in the district by the U. S. Forestry Service. This is an extensive system and is connected with the American Bell Company and subsidiaries, east, west, north, and south. The U. S. telephone line map of the district and the letter of the forest supervisor give further details.

HISTORY.

The following general history of the Mule Mountain District was learned from Mr. George W. Billings and others. Mr. Billings is one of the oldest settlers in the district, and at present is postmaster of the Marial Post Office.

The early history of the Rogue River in the vicinity of the Mule Mountain District begins with the advent of the Placer miners in the fifties. Due to the Rogue River being largely confined in box canyons, having few gravel bars, the Placer gold mining was confined to the small creeks. About 1891 Mr. John Billins and his son George did some prospecting for gold carrying quartz.

The real beginning of this district occurred in 1898 when a railroad engineer by the name of Hammond of Portland, Oregon, wrote offering to grubstake his friend George W. Billings to go into Alaska to prospect for Placer gold.

Mr. Billings was undecided as he had always held the belief since he was a boy that there was gold in Mule Mountain. Before replying to Hammond's offer he made a final trip to the top of Mule Mountain and found a piece of rich looking quartz at the foot of the stump shown in the photograph of the discovery point. This picture was taken on the occasion of the writer's visit to the property in April, 1932, and shows Mr. George W. Billings standing at the mouth of the drift at the point of discovery on the Alva vein on Mule Mountain. Mr. Billings said the piece of quartz he found on the surface gave an assay return of \$350.00 per ton.

This discovery caused Mr. Billings to turn down the trip to Alaska. He remained and located the claim which he called the Alva in honor of his friend Mr. Alva Marsters, a druggist and banker of Roseburg, Oregon.

In 1900 a Mr. E. B. Burns of Portland made a trip to Mule Mountain and met Mr. George W. Billings and liked the looks of the Mule Mountain ore.

Mr. Burns and George Billings had packed a shipment of forty-five tons of ore from the Alva stope to the river and took it down the Rogue by boat to Gold Beach. From Gold Beach it was shipped by the steamer "Copper Queen" to the Tacoma smelter in 1900. Thus thirty-two years ago the fire ore was shipped from this district. The returns from the smelter were \$45.00 gold per ton.

Following this Mr. Burns interested some of his friends in Portland to join him and a deal was made with Mr. George W. Billings to buy four claims. These Portland men, Mr. Charlie Ladd of the Ladd Bank, Fred H. Green and E. B. Burns, purchased the Paywell, the Alva, the Milner and Keystone claims. The consideration for this transaction was \$15,000 plus a forty-five percent royalty on all ore mined with an assay value over \$100.00 per ton. No royalty was to be paid on ore under \$100.00 per ton. Mr. Burns provided transportation on the Rogue by using a stern wheel steamer. By this means they brought the equipment for a small saw mill up to Burns Creek (named for E. B. Burns). On one of the trips up the Rogue they found the saw mill much in need of a piece of steel cable.

The Captain robbed his boat of a cable and substituted a manila line for his return trip. As the boat went down the river it reached a piece of bad water known as the "Nail Keg Riffle". The manila rope parted at a critical moment, control of the boat was lost, the stern of the steamer struck the rocks, and tore off the paddle wheel.

In this wreck Mr. Burns was drowned, June 4, 1903. Some time later Mr. Fred Green died, and this group passed out of the picture.

The next group to become interested was composed of Judge Van Zante, John Milner, and Fred King, all of Portland. They organized the Alpine Mining and Development Company. John Milner was the moving figure in this company and did some development. Their efforts stopped with the death of Mr. Milner, for whom the Milner claim was named.

The next activity, about 1911, was a lease made to a Mr. Hammond of Portland, who brought in and erected a two-stamp mill at the mouth of Burns Creek and built an aerial tramway for the Paywell vein. Mr. Hammond's operations were carried on under a lease, and it is reported that he took out from \$50,000 to \$75,000 worth of gold bullion. Then came the war and the property lay inactive for some time.

-LABOR-

Some labor can be secured locally, but no trouble will be had to obtain any additional labor needed. The present rate of wages is from \$2.00 to \$4.00 per day for any kind of work including carpenters, mechanics, etc.

The Oregon laws providing for state accident insurance are very satisfactory to both employer and employee.

SUPPLIES

Portland, Oregon, is the trading center for this district. Auto freight lines give an overnight service from Portland to Gold Beach. The present rates are:

1st class freight per 100#	\$1.42
2nd class freight per 100#	1.26
3rd class freight per 100#	1.18
4th class freight per 100#	1.01

CONSTRUCTION MATERIALS

Concrete: Good sand and gravel is available for concrete work. Cement would be brought from Gold Beach.

Timber: There is sufficient good fir and pine timber available for constructing mining buildings and dwellings. Oak can be obtained for building purposes.

WATER POWER.

There is an abundance of water power available in this District. The Rogue River is the principal source of power, but several of the smaller streams offer sufficient power at less cost of producing.

The Legislature of 1931 enacted a bill withdrawing the waters of the Rogue River in this district from appropriation for water power. Following is the enactment:

47-1601. Subject to such water rights as are existing at the time of the taking effect of this act, the waters flowing in the main channel of the Rogue River from its intersection with the southline of section 27, township 33 south, range 1 east of the Willamette Meridian in Jackson County, Oregon, to its confluence with the Pacific Ocean, hereby are withdrawn from appropriation; provided, that this act shall not prevent the appropriation and use of water for domestic, stock, irrigation and municipal purposes; and provided further, that it shall not prevent the appropriation, diversion and use of the waters of any tributary streams. (1.1929, c.287, Par.1).

47-1062. It shall be unlawful for any person, firm or corporation to build any dam or hydraulic structure in the channel of the Rogue River below its intersection with the south line of Section 27, township 33 south, range 1 east, Willamette meridian, in Jackson county, Oregon, to its confluence with the Pacific Ocean, which will interfere with the free passage, either up or down stream, of migratory fish. (1. 1929, c. 287, Par.2).

This measure was instigated on the part of the sportsmen of the State in their zeal to preserve this region as a recreational area. It is believed this law would be set aside if a test case was taken in the Supreme Court.

The waters of the Rogue River are now, however, as economical a source of power as those of some of the smaller streams, and in this immediate vicinity is Stairs Creek. Following are the findings and report of the U. S. Geological Survey and recommendations concerning this site, also separate report of the U. S. Geological Survey by Harold T. Stearns, Associate-Geologist.

The power available from this site is, undoubtedly, sufficient for the needs of the district.

There are also Burns Creek and Blossom Bar Creek, where small power plants may be cheaply developed.

For the mill on Blossom Bar sufficient power can be obtained from Burns Creek and Blossom Bar Creek. Twenty-one hundred feet north of the old stamp mill there is at present a dam in Burns Creek, the top of which is 163 feet higher than the mill site.

This dam is in good condition and could be used to divert water through a flume and ditch to a point on the ridge between Blossom Bar Creek and Burns Creek. By going approximately the same distance up Blossom Bar Creek and di-

verting water in a ditch along the West side of this ridge it could be brought to the same point where a penstock large enough for the combined flow could be built and conducted to the mill site through about one thousand feet of pipe with an effective head of 150 feet. This would furnish ample power for a 50 ton mill, with sufficient extra to provide electric light for the camp.

UNITED STATES GEOLOGICAL SURVEY.

Excerpt from Water Power in the Rogue River Drainage Basin, Oregon,
by B. E. Jones and Warren Oakey, March 1928.

STAIRS CREEK POWER SITE 12 RD 21. The Stairs Creek dam site is located in the SE $\frac{1}{4}$ Sec. 17 T.33 S., R.10 W. W.M., and the extent of the pond created is shown on Exhibits A and B. The detailed dam site survey is shown on Plate 13 E. (See Plates 53-55). The abutments are composed of massive rock into which the dam could be keyed and the depth to bedrock in the river channel is probably not more than 25 to 30 feet. No difficulty will be experienced in preventing seepage under or around the dam. By constructing a dam at this point to flood to elevation 440 feet a head of 150 feet will be created.

The land to be flooded by this development all lies in the bottom of a narrow canyon and is practically worthless. Aside from the flooding of about three miles of trail and several shacks no actual damage would be done.

Potential Power at undeveloped site 12 RD 21.

	<u>Flow in second-feet</u>		<u>Horsepower</u>	
	<u>For 90 per-</u> <u>cent of</u> <u>time</u>	<u>For 50 per-</u> <u>cent of</u> <u>time</u>	<u>For 90 per</u> ¹ <u>cent of</u> <u>time</u>	<u>For 50 per-</u> <u>cent of</u> <u>time</u>
Natural flow	1,170	3,400	14,000	40,800
Regulated flow	2,550	3,400	30,600	40,800

The maximum flood which may be expected is about 170,000 second-feet and as the crest length of the dam will only be about 320 feet, considerable difficulty will be experienced in passing the water. By constructing the headrace canal along the left bank and designing the outer wall as an overflow section the effective spillway length may be increased to about 450 feet. If the central 200 feet of the dam is constructed as a gate section with the gate sills 20 feet below the crest of the remainder of the dam the flood can be passed with an increase in pond level of about 13 feet. The power house can be built on the left side of the river and on the bench which lies 250 feet below the dam. To prevent possible damage by scour the structure should be placed near the rear of the bench and a substantial wall should be constructed between it and the spillway.

Backwater conditions during heavy floods will be severe and a raise of 40 to 50 feet in the normal tailwater level may be expected. This raise may be somewhat decreased by improving the channel farther downstream, but

as the duration of the flood is normally quite short it is doubtful that added expense would be justified.

The site is an extremely inaccessible region and while it would be possible to construct a railroad down Creek and Rogue River from Leland the cost would be almost prohibitive. A much more economical method, provided the dam at Copper Canyon is first developed, would be to use the construction railroad which must be built to develop that site and to load the material into barges which would carry it on slack water a distance of about 21 miles and practically to the Stairs Creek dam site.

UNITED STATES GEOLOGICAL SURVEY

Excerpt from Geologic examination of reservoir and dam sites in the drainage basins of the Rogue, Umpqua, Siletz and McKenzie Rivers in western Oregon, by Harold T. Stearns, Associate Geologist. December, 1926.

DEVIL'S STAIRS DAMSITE, 12 R D 21

The Devil's Stairs damsite is located in the SE $\frac{1}{4}$, Sec.17, T.33 S., R.10 W., W.M., on Rogue River. (For detailed survey and views of this site see Exhibits A and B, and Pls.13 E., 53, 54 and 55, Jones and Oakey report). A dam 150 feet high is proposed for this site. The site is located in a rugged canyon carved out of massive diorite, an ancient igneous intrusive mass. In places the diorite contains quartz veins and a few joints. The diorite is exposed without soil cover on both abutments, but bedrock in the river at this site may occur as much as 40 feet below the surface of the river. It is an admirable site for a dam, both because of the strength of the rock, its freshness at the surface, and the absence of many joints.

SUMMARIZATION
and
BRIEF GEOLOGICAL OPINION
of the
MULE MOUNTAIN GOLD DEPOSITS.

William F. Hayden,
Engineer,
Continental Bank Bldg.,
Salt Lake City, Utah.

SUMMARIZATION
and
BRIEF GEOLOGICAL OPINION
of the
MULE MOUNTAIN GOLD DEPOSITS.

The writer, because of limited time given him to examine the deposits of Mule Mountain, located in the Mule Mountain Mining District, Curry County, Oregon, can offer only a brief opinion effecting the geology of these areas since he^s without maps and all data, as he expected to return to the property for the purpose of making a complete examination. Therefore, I am without definite facts except some information given in the Mineral Resources of Oregon published by the Oregon Bureau of Mines and Geology where G.M. Butler and G.J. Mitchell record some geological facts after a brief visit to this property.

I will also include the topography and geology of a report made upon this property by W. B. Hancock, E.M., in 1928.

TOPOGRAPHY:

Curry County is decidedly mountainous, in fact is completely covered with mountain ridges and peaks, all of irregular contour. These mountains form a portion of the Coast Range and although the altitude of the higher peaks seldom runs much above 3,000 feet, the bases of the mountains are often but a few hundred feet above sea level, and this makes the scenery quite bold and impressive.

Although the mountains are perhaps the most striking topographic feature in the county, the river valleys are decidedly interesting. As a rule they are narrow and show quite precipitous slopes near their bottom, and in some cases where the rock structures are favorable, the streams flow through picturesque canyons or gorges. This is especially true of the Rogue River and Mule Creek, which flow for several miles through narrow, vertical walled gorges.

Most of the mountain slopes are heavily timbered, being within the Siskiyou National Forest Reserve.

The climate is mild, the day time temperatures in the summer varying from 60 to 85 degrees, and in the winter from freezing to 16 degrees above zero. The annual rainfall is about 50 inches. In the lower altitudes snow rarely accumulates to any great depth in winter, while in the higher altitudes it may reach 3 or 4 feet and stay on for a few weeks.

PROPERTY:

Mule Mountain Group: Great Western No. 1, Great Western Extension, Paywell, Milner, Milner Extension, Alva, Vincent No.1, Vincent No.2, Mammoth Curry, and Mammoth Curry Extension. These claims are situated on both slopes of Mule Mountain extending from the ridge down each side. They are approximately 3 miles in a southerly direction down the Rogue River from Marial P.O.

This was the only group contained in the district which was examined by the writer.

GEOLOGY:

The rocks comprising the formation in that part of the district in which is located the Company's property belong to the Jurassic period and are called the Dothan formation, consisting, so far as observed, of shale, sandstone and chert. In general, the shale seems subordinated to the sandstone as far as quantity is concerned, but in some places the former outcrops prominently. This is true on the east side of the bridge over Mule Creek and elsewhere. In this locality, in contact with the igneous intrusive rock greenstone, the shale has a pronounced slaty structure, and similar effects were noted in other areas where rock now serpentine or greenstone has intruded into the shale. In places, the rock has been so hardened as to form almost an argillite.

The Dothan sandstone is encountered on the Marial trail two miles east of Mule Creek where it occurs in fairly thick beds from which the large pieces now standing close to the trail have been broken.

The Dothan chert is a very hard, compact, fine grained, flinty rock, of red, white, green, yellow or intermediate tints, and is composed almost entirely of quartz.

The Dothan formation is believed to lie at about the same horizon as do the Mariposa slates of the California Mother Lode region.

The igneous rocks occurring as intrusive masses in this district are greenstone, peridotite, dacite-porphry, and diorite. Of the Metamorphic rocks, serpentine is one of the commonest. This rock is formed as a result of the alteration of peridotites and pyroxenites, and all gradations are encountered from the unaltered igneous rocks to homogeneous serpentine.

The weathered slopes of the hills composed of serpentine have a brick-red color due to the oxidation of the iron in the decomposing material. Vegetation is scanty on these slopes and is confined to scrub pines and short brush.

ORE DEPOSITS:

In general, it may be said that two classes of lode deposits occur in this district. One of these takes the form of somewhat faulted, high-grade quartz veins containing considerable free gold, and the ore contained therein is sometimes so rich that most of the development work up to the present time has been confined to them, and no doubt will be in the future regardless of the difficulties of getting in machinery. Important examples of these mines are the Alva, Great Western and Keystone veins.

The second type of deposit found in this area consists of mineralized shear zones of considerable widths, and constituting enormous bodies of medium grade ore. There are much wider than the deposits first mentioned, and having not been subject to much faulting, will be decidedly easier to mine.

Owing to the ore being comparatively of medium grade, and much of it in the form of sulphides, these shear zones have not as yet received the attention that has been accorded to the smaller but richer quartz veins. It is believed, however, that if mined on a sufficiently large scale, they will prove very remunerative, and they are certainly deserving of careful investigation. Typical examples of this class of deposit are the Backbone claims and the Mammoth Curry.

SOURCE OF THE GOLD:

It appears highly probable that the gold now contained in the types of ore-bodies above given, was deposited in its present position from mineralized solutions that have worked their way upward from unknown, though doubtless great depths. The frequent association of igneous rocks with such veins suggest that they may be genetically related. It is indeed likely, that both the mineralized solutions and the molten magma (which formed igneous rocks after solidification) came from a common source, and that the former are either the result of differentiation, or else they represent gases and vapors expelled from magma during solidification.

The features exhibited by the fissure quartz veins on this property are such as lead to the belief that they were formed at considerable depths, and the outcrops now found were originally covered by hundreds of feet of earth material subsequently removed by erosion. Such deposits are apt to be persistent with depth, that is, that there is no reason to expect that the ore shoots will become less numerous or valuable with deep development than they are near the surface, but below the ground water level. That there has been abundant time for the removal of enormous quantities of rocks containing the original upper portions of the veins by erosion will be appreciated when it is known that these fissure veins were probably formed at the close of the Jurassic or the beginning of the Cretaceous period.

DEVELOPMENT:

Mule Mountain Group: On the Alva claim of this group a crosscut tunnel is being driven to intersect the vein found on the ridge above. This tunnel is now in a distance of 301 feet and has passed through three small quartz veins 12 inches, 11 inches and 7 inches wide respectively.

On the same claim and on the ridge of the mountain, a very rich vein of quartz striking northeast and southwest and dipping southeast at an angle of 70 degrees, has been opened up for a length of 220 feet. This vein has been worked by underhand stoping to a depth of about 25 feet, and approximately 300 tons of high grade gold ore taken out and milled. This vein is from $3\frac{1}{2}$ feet to 6 feet in width with quartz seams 12 to 18 inches wide carrying high values in gold and silver. A shaft has also been sunk on the vein to a depth of 82 feet with the same conditions prevailing all the way down.

The country rock is greenstone and is so coarse grained as to constitute a typical diorite. Elsewhere it is decidedly porphyritic. The country rock is more or less sheared and iron stained for a distance of 15 feet northwest of the main quartz vein, and the 2 feet nearest the quartz is so homogeneous

and impregnated with iron as to constitute a separate streak. The average values for the whole width of this vein run to about \$16.00 per ton, but hand sorting brings them up to yield about \$75.00 per ton.

Another vein 15 feet to the northwest parallels the above vein, and has been exposed in a number of opencuts. It averages about $2\frac{1}{2}$ feet in width and has similar characteristics to the one mentioned above. Both of these veins can be traced on the surface for a distance of over 3,000 feet. The workings on this claim are connected by an aerial wire-rope tramway 700 feet in length with a small ore-bin at each terminal. At the lower terminal of this tramway the ore is conveyed 500 feet northwest over a pack-trail to the Paywell aerial tramway which is 2,000 feet long and delivers it at the mill site on the north bank of the Rogue River.

Paywell Claim: The main workings on this claim are 500 feet northwest and about 350 feet vertical below the top of the shaft on the Alva claim. The Paywell vein has been developed by means of a tunnel 100 feet in length from which 3 diverging drifts have been driven at the end. The strike of the vein is north 85 degrees east, and the dip 54 to 64 degrees southeast. The vein near the mouth of the tunnel shows 4 feet of quartz which is more or less iron stained and shows some pyrite and chalcopyrite.

Considerable stoping has been carried on in this tunnel and the ore carried over the aerial tramway to the mill where it was treated by crushing, amalgamating and cyaniding. Several faults appear in the first 100 feet of the tunnel and have caused the vein to be somewhat irregular in both strike and dip.

The average value of the ore in the tunnel and stopes was \$26.80 from each ton milled.

On several other claims of this group only sufficient work representing the annual assessment work has been done in the shape of open cuts. This applies to the Great Western No. 1 claim, Great Western Extension claim, Milner Extension claim, and the Vincent No. 1 claim.

On the Mammoth Curry claim some 200 feet west of the mill, there is a large dyke of highly metamorphosed and disintegrated white silicious rock 80 feet wide in which an opening has been driven for a distance of 5 feet. This shows sulphides disseminated all through it and an assay shows gold to the extent of \$17.09 per ton.

ALVA CLAIM ASSAYS:

Four samples taken near the shaft on this property by Mr. Judson C. Hubbard assayed as follows:

Sectional sample through shaft dump	Gold \$ 9.50	Silver 50¢
Average of 12, 14 and 16 inch cross sections of vein near shaft	Gold 11.10	Silver 45¢
20 inches of footwall gouge	Gold 4.00	Silver 30¢
This gives 34 inches of vein matter averaging	Gold 7.28	Silver 40¢

PAYWELL CLAIM ASSAYS:

4 feet of quartz in Paywell vein	Gold \$14.00	Silver 32¢
40 inches of quartz and gouge on east wall	Gold 5.02	Silver 62¢

The above samples average \$10.37 per ton over a width of 7 feet 4 inches.

5 feet of quartz 10 ft. from portal of tunnel	Gold \$ 2.50	Silver 55¢
20 inches of quartz near end of tunnel	Gold 38.00	Silver 1.30
30 inches of quartz and gouge east of tunnel	Gold 3.00	silver 1.17
6 feet of quartz and gouge west of tunnel	Gold 8.00	silver 25¢

The above samples together constitute 9 feet 2 inches of ore which has an average of \$13.67 per ton in value. A sample taken from a sack of ore on dump gave Gold \$42.00, Silver \$1.30 per ton.

SUMMARIZATION:

In summing up the foregoing it would appear that the geology affecting the Mule Mountain and Keystone deposits would be regarded as favorable as to values and depth of ores.

The topography as well as the economic natural resources except possible transportation, would also be regarded as favorable.

In our brief examination of the Mule Mountain deposits several veins were found to traverse this mountain, though not sufficient in amount to class same as a stockwork deposit. Merritt, who recently made a survey of this mountain, claims most of the vein free gold values are found chiefly where the many different veins intersect".

The writer observed considerable shearing paralleling the major deposits where sufficiently exposed, both of the quartz and the adjacent country rock. In a number of the vein deposits some recemented breccias was evidenced, and in the interstices of the material as well as in the quartz free gold was found to be present.

To the southwest of the Paywell fissure a wide belt of quartz diorite is exposed upon the surface.

The Mammoth Curry deposit, described in the Hancock report, we believe, is of sufficient importance so that a reasonable sum of money should be expended to prospect same, looking toward large development of low grade ores.

TREATMENT:

Mill installation should include amalgamation, flotation and possible cyanidization.

OPINION:

Our opinion is that with sufficient capital available together with good management, the Mule Mountain deposits are worthy of development.

Respectfully,

(signed) Wm. F. Hayden

The writer is indebted to Mr. J. H. Gallagher, E.M., and W.L.Merritt, CE., of Portland, Oregon, for much general information, and to G.H.DuBarry for many courtesies extended during our examination. I have included in this report excerpts of considerable length including analysis from the report made upon this property August, 1928, by W. B. Hancock, E.M.

(signed) Wm. F. Hayden

FIELD PROCEDURE.

The object of this transit survey was to trace out and tie together the veins running through Mule Mountain and to determine the boundaries of the claims as laid out by the original locator, and to gather data for the making of a map of the topographical.

Because of the roughness of the country and the innumerable cliffs on the mountain side it was not practical to traverse-survey the property. Therefore a triangulation system was laid out with a base line on Blossom Bar, two points on Mule Mountain, two points on the south side of the Rogue River, one near the Keystone tunnel and the other on the side of Buzzard's Roost. Two other points were placed on the Devil's Backbone, but these last two points were beyond the boundaries of the map. Numerous other flags were set up on important points, such as trails, claim center-end posts, vein outcrops, tunnel portals and corners of public land survey. From these known points either chain or stadia traverse lines were run to other important points and through all workings. Both east and west elongation of Polaris occurred in daylight so it was necessary to determine the meridian as accurately as possible from a reading at culmination. This determined North-south line was permanently established and marked on the ground by driving an iron pipe at each end flush with the ground and protecting them with stakes. This line is about thirty feet east of the present camp on Blossom Bar.

A combination compass survey and level lines were run up both Blossom Bar Creek and Burns Creek to determine the available water-power.

VEINS.

Locations can be found by reference to Map No. 1.

The vein system of the property consists of a number of true fissure veins in quartz diorite. The most persistent of these veins is the one called the Milner. It can be traced from a point on Mule Mountain, near Triangulation Station No. 3, in a generally southerly direction, to the river where it is faulted to the west, and is again found on the south side of the river, and there is called the Keystone Vein near Triangulation Station No. 5, and up the mountain for 800 feet additional its dip is from 10° to 60° to the East.

The Alva vein also found on Mule Mountain bears S. 20° W. and dips slightly to the East. It is found about 500 feet East of the Milner vein on Mule Mountain and is said to intersect it at a point 500 feet south of Triangulation Station No. 4. No evidence of this intersection could be found and, as there are two veins on the south slope of Mule Mountain which are still converging, I do not believe that the vein that crosses the Milner 500 feet south of Triangulation Station No. 4 is the Alva, but another cross fracture.

The Paywell vein which is exposed only where it crosses the Milner at a point 600 feet south of Triangulation Station No. 3, bears N. 85° E. and dips 60° to the south. It forms a large rich ore shoot at this intersection, but has not been traced in either direction.

The East-West vein, on Vincent #1 claim, which gets its name from its strike and which dips 60° North can be traced from the big fault for approximately 500 feet East towards the Quo Vadis vein. It is a strong vein ten feet wide, but is low in value. Careful examination revealed no cross-fractures or intersecting veins along its exposed surface, but further search along its strike may prove profitable.

Further to the West on Vincent #2 Claim the Quo Vadis tunnel follows a stringer that bears approximately North and South and dips like the other veins, slightly to the East but this vein is so narrow and barren that it has no economic importance unless it can be traced to an intersection with some other vein.

On the South side of the river the Keystone vein, which I believe to be a continuation of the Milner, south of the big fault, bears in a general southerly direction, and dips slightly to the east. The vein makes rich ore where it is cut by a minor fault which forms a small cross vein. I traced the Keystone vein about 800 feet up the mountain. I also found on the other side of the mountain what appeared to be a continuation of it on the Hug - gins property. Valuable ore will be developed along the Keystone vein both above and below the present tunnel.

On the West end of the property are several large low grade veins. At the camp there is a mineralized dike carrying a value of about \$1.00 per ton, 80 feet wide, called the Mammoth Curry. It bears N. 42° E. and in my opinion will have high values in sections where cut by other fractures.

Just West of Camp another of these mineralized dikes has been traced from the river N. 60° E. for two claim lengths. These claims are known as the Argosy No. 1 and No. 2, and at one place about 500 feet from the river there is a cross-fracture which shows values up to \$40.00 per ton.

Still further West there is a sharp ridge running back from the river called the Devil's Backbone. There are two claims on the ridge taking in a section that is highly copper stained and assays from this section indicate the presence of a large low grade ore body. The assay values were around \$3.00.

Much further exploration is necessary on these large low grades before a definite statement of their economic value can be made.

DEVELOPMENT.

There are two tunnels on the Milner vein, one at the intersection with the Paywell vein, the other at the South end of Milner No. 1 Claim.

The first tunnel runs in on the Paywell vein for 94 feet and then turns and follows the Milner to the North 61 feet. They also raised out on the intersection of these two veins taking out a shoot of very high grade ore. It was milled in the stamp mill near Burns Creek.

The second tunnel started as a cross cut under the Milner vein and encountered a silicified fault bearing North 55° East and dipping 76° to the Southeast. They mistook this for the vein and drifted on it 81 feet. They then continued the cross cut 27 feet but did not reach the vein.

On the Alva vein they winzed down on its intersection with two small East-West veins, taking out an ore shoot for 90 feet in depth and 80 feet in length. They then started on the East side of the mountain down some 200 feet below the outcrop and 400 feet to the East and drove a cross-cut through the mountain, and at the time of our visit had cut the Alva vein 30 feet to the North of the shoot projected down its rake.

The tunnel on the Quo Vadis is about 700 feet long, including cross-cuts and is in my opinion of no value, as it follows no continuous vein.

On the Keystone there is a tunnel about 700 feet up from the river. It is a cross cut to the vein, 29 feet, and a drift on the vein S.10° E. for 50 feet to a fault which bears N. 55° W., then the tunnel runs S.10° W. some 61 feet in the wall beside the vein. The vein is exposed down the hill 200 feet to the Northwest with an open cut. Up the hill 330 feet to the south of the tunnel the vein is an open cut, the width of which is 4 feet. There are two ore bins connected by an aerial tram and a ten ton Straub mill on the Keystone property that will be described in detail under equipment.

The Mammoth Curry has been opened in two places by open cuts; one near the Rogue River, and the other 1400 feet Northeast where it crosses Burns Creek.

The Argosy is exposed only in an open cut at the discovery point 500 feet Northeast of the river, but gives fine value there.

The Devil's Backbone has been opened by several open cuts and a short tunnel. The open cuts assay about \$3.00 a ton.

BUILDINGS AND EQUIPMENT.

CAMP:

The camp building at present consists of a shake house with tent wings. It has a good floor and fire-place which makes it very comfortable.

SAWMILL:

There is a sawmill on Burns Creek that was operated by the former owners, using steam power. It is now being remodeled for gas-engine drive.

It has a DeLoch head-rig, set for a 54" inserted tooth, circular saw.

The carriage is 3' x 18' with run enough to cut 24 foot timbers.

There is a swing arbor for 24" cut-off saw.

A belt driven loghaul and miscellaneous shafting and pulleys.

A horizontal 10 H.P. Chandler & Taylor steam engine.

A six-cylinder Studebaker motor.

An old boiler - not serviceable.

STAMP MILL:

The stampmill buildings have burned, but this has not injured the two-stamp mill which is dismantled and stored on the old mill site.

It is complete and there are six extra stems.

Two Service Concentrating Table head-sections with table irons.

One redwood tank, 5' x 9'.

Six 4"x24" Idler pulleys for Link-Belt conveyor belt.

Miscellaneous shafting pulleys, flat boxes and collars

One 36" pelton wheel with 24 buckets.

One Ruth laboratory flotation machine with 4" bowl.

One gasoline assay furnace, 12"x3 $\frac{1}{2}$ " muffle.

One gasoline assay furnace with 7"x2 $\frac{1}{2}$ " muffle.

One 18" x 24" Portable Air Receiver.

One Ingersoll-Rand Jack Hammer.

One LeRoi 12 H.P. Power unit.

One Braum Pulverizer No. D. 2

AT THE KEYSTONE MILL:

One 8x8 Straub Jaw Rock Crusher.

One 2'x2 $\frac{1}{2}$ ' Straub Little Giant Rib-Cone Ball Mill with inside classification.

One ore feeder

Four 8'x2' Straub Amalgamation plates.

One 10 H.P. two-cylinder Hoffman gasoline engine.

One three-ton chain block.

Ample supply of shafting and pulleys.

TRAMS:

There is an aerial tram with single wire from the mouth of the Milner tunnel to the Keystone mill, which could be used in case it is desired to mill the Milner ore in the Keystone mill. It could be reversed if desired to bring Keystone ore to the North bank of the river.

There is also a two wire balanced tram, approximately 600 feet long from the Keystone tunnel to the Keystone mill with large well-built ore bins at each end.

ASSAY VALUES.

The purpose of these preliminary assays was to discover the relation between the values and the formations. The values shown in the assay sheets are from samples cut across vein at points and by person indicated. It will be noted that the high values in these samples always occur at vein intersections or near them.

The actual intersections have been reported to give values up to \$6,000.00 per ton, but these places were avoided except in samples #1, #4, #6, #11 and possibly #27, although no intersection was known on the Argosy.

The Backbone samples are very interesting as they indicate a large low grade property.

ASSAY VALUES.

No.	Location of Sample	Width in Inches	Taken by	Assayed by	Gold Value
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MILNER PAYWELL VEIN INTERSECTION

1.	Side of Stope at intersection	Grab	Gallagher	Roehl	\$107.00
2.	In Paywell tunnel 60' from intersection	18"	Roehl	Roehl	.80
3.	In Paywell tunnel 10' from intersection	18"	Roehl	Roehl	9.60
4.	In Paywell tunnel Intersection of vein	Grab	Roehl	Roehl	69.00
5.	In Paywell tunnel at face of Milner vein 61' from intersection	24"	Roehl	Roehl	1.40
6.	Grab samples by Merritt from top of stope	Grab	Merritt	Montana	230.00

MILNER VEIN ALONG OUTCROP SOUTH SLOPE MULE MT.

7.	Top of Bluff 850' above river	60"	Billings	Roehl	2.00
8.	Outcrop above tunnel near river	24"	Roehl	Roehl	2.40
9.	Milner Tunnel in Fault Gouge	120"	Roehl	Roehl	.40

No.	Location of Sample	Width in Inches	Taken by	Assayed by	Gold Value
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ALVA VEIN

11.	Grab from ore bin near hoist	Grab	Roehl	Roehl	\$26.40
12.	In Mule Mt. Tunnel from vein 30' N. of shoot	40"	Merritt	Montana	5.40
13.	In Mule Mt. Tunnel 60' from vein. Note cross-fracture	120"	Roehl	Roehl	2.40
14.	In Mule Mt. Tunnel 120' from vein also across cross-fracture	120"	Roehl	Roehl	1.00
15.	In Mule Mt. Tunnel 200' from vein	120"	Roehl	Roehl	2.00
16.	South slope of Mule Mt. near N.E. corner Vincent No. 1	15"	Merritt	Lazell	1.20

KEYSTONE VEIN

17.	Big Fault at Mill level	120"	Roehl	Roehl	.80
18.	Big Fault 50' west mill	Not given	Roehl	Roehl	1.40
19.	Outcrop west of tunnel near Triangulation Sta. #5	12"	Roehl	Roehl	11.00
20.	Outcrop 100' N. of Sample #19	26"	Roehl	Roehl	8.40
21.	In tunnel 64' from portal	26"	Roehl	Roehl	4.40
22.	In tunnel 130' from portal. Not on vein	24"	Roehl	Roehl	3.00
23.	Grab of ore bin at tunnel	Grab	Roehl	Roehl	4.00

EAST-WEST VEIN.

24.	At discovery of East-west vein	120"	Merritt	Lazell	.40
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MAMMOTH CURRY.

25.	Average of 17 samples over 300' near Rogue River	300'	Roehl	Roehl	.72
26.	Average of samples across 180', 700' N.E. of river	180'	Roehl	Roehl	.49

No. Location of Sample	Width in Inches	Taken by	Assayed by	Gold Value
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ARGOSY.

27. At discovery point 500' NE of river	96"	Merritt	Lazell	40.00
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BACKBONE.

28. Sample from center end between claims	Grab	Merritt	Montana	3.00
29. Sample from near N.E.end	Grab	Merritt	Montana	3.40
30. Sample from forks of Creek	Grab	Merritt	Montana	1.40

MULE MOUNTAIN MINE (gold)

Mule Creek District

"Property consists of 1 placer and 11 lode claims. Owned by G. W. Billings and situated on both sides of Rogue river about 3 miles below the mouth of Mule creek. There are 3 principal veins, Mule mountain, Big Devils Stairs creek, and Keystone veins. The country rock of all the veins is greenstone.

"The Mule mountain vein is developed by a 25-foot open cut 12 feet wide, an 86-foot shaft and several smaller cuts. The strike of vein is N. 60° E. and dip 60° SE. The vein is made up of about 1 foot of nearly solid quartz and about 2 feet of vein material heavily impregnated with iron. The 3 feet of quartz and iron bearing material is mined and milled in the 2-stamp mill and cyanide plant on the property. This 3 feet of ore is reported to average by sampling about \$7.25.

omitted

"The Big Devils Stairs creek vein is 500 to 600 feet northwest of Mule mountain vein. This Big Devils Stairs creek vein is from 1 to 4 feet wide in the lower workings which splits up in the upper workings to several veins over a width of 4 feet and still higher up they fan out to 15 feet wide with several 1-foot veins and many smaller ones in between. These are quartz iron-stained veins with some pyrite and chalcopyrite. Separate mill runs recovered \$26.80 and \$18.00. Vein samples over 7 feet 4 inches assayed \$13.37; another one over 9 feet 2 inches assayed \$13.67, according to reports.

"The Keystone vein is a shear zone mineralized from a few feet wide to a maximum width of 20 feet or more. It is similar to Big Devils Stairs creek vein as shown in open cuts and tunnels. Assay values reported to be from \$2.50 up to about \$100.00."

Ref.: Parks & Swartley, 16:159 (quoted)

RECORD IDENTIFICATION

RECORD NO..... M061499
 RECORD TYPE..... XIM
 COUNTRY/ORGANIZATION. USGS
 MAP CODE NO. OF REC..

REPORTER

NAME..... JOHNSON, MAUREEN G.
 UPDATED..... 81 04
 BY..... FERNS, MARK L. (BROOKS, HOWARD C.)

NAME AND LOCATION

DEPOSIT NAME..... MULE CREEK AREA PLACERS
 SYNONYM NAME..... INCLUDES PAUL JUNIOR, BATTLE BAR, BLOSSOM BAR, RED DOG, RED RIVER, SOLITUDE BAR,
 PARADISE BAR, WINKLE BAR AND GOLD BAR PLACERS

MINING DISTRICT/AREA/SUBDIST. MULE CREEK

COUNTRY CODE..... US
 COUNTRY NAME: UNITED STATES

STATE CODE..... OR
 STATE NAME: OREGON

COUNTY..... CURRY
 PHYSIOGRAPHIC PRDV..... 13 KLAMATH MOUNTAINS
 LAND CLASSIFICATION..... 40

QUAD SCALE QUAD NO OR NAME
 1: 62500 MARIAL

LATITUDE LONGITUDE
 42-43-18N 123-52-37W

UTM NORTHING UTM EASTING UTM ZONE NO
 4730050.0 428200.0 +10

TWP..... 032S 033S
 RANGE..... 009W 010W

POSITION FROM NEAREST PROMINENT LOCALITY: ON MULE CREEK

LOCATION COMMENTS: ON ROGUE RIVER FROM ILLAHEE UPSTREAM TO BATTLE BAR; AND INCLUDING MULE CREEK

COMMODITY INFORMATION

COMMODITIES PRESENT..... AU

PRODUCER(PAST OR PRESENT):

EXPLORATION AND DEVELOPMENT
STATUS OF EXPLOR. OR DEV. 8

DESCRIPTION OF DEPOSIT

DEPOSIT TYPES:

PLACER

FORM/SHAPE OF DEPOSIT:

SIZE/DIRECTIONAL DATA

MAX THICKNESS..... 12 FT

COMMENTS(DESCRIPTION OF DEPOSIT):

STREAM GRAVELS

PRODUCTION

YES

SMALL PRODUCTION

23 AU, EST

SAMPLES

PRE 1940

AU (COARSE)

GEOLOGY AND MINERALOGY

HOST ROCK TYPES..... CREEK GRAVELS

GEOLOGICAL DESCRIPTIVE NOTES. BEDROCK IS SERPENTINE & SLATE

GENERAL COMMENTS

SEPARATE RECORD FOR RED RIVER MINING COMPANY.

GENERAL REFERENCES

- 1) RAMP, L. AND OTHERS, 1977, GEOLOGY, MINERAL RESOURCES AND ROCK MATERIAL OF CURRY COUNTY, OREGON; ODGMI BULL. 93 P. 97
- 2) BROOKS, H.C. AND RAMP, L., 1968, GOLD AND SILVER IN OREGON; ODGMI BULL. 61, P. 189
- 3) OREGON METAL MINES HANDBOOK, 1940, ODGMI BULL. 14-C, VOL. 1, P. 71 - 79
- 4) BUTLER, G.M. AND MITCHELL, G.J., 1916, PRELIMINARY SURVEY OF THE GEOLOGY AND MINERAL DEPOSITS OF CURRY COUNTY, OREGON; OREGON BUR. MINES AND GEOL. VOL. 2, NO. 2, P.121

RECORD IDENTIFICATION

RECORD NO..... M061495
RECORD TYPE..... X1M
COUNTRY/ORGANIZATION. USGS
MAP CODE NO. OF REC..

REPORTER

NAME..... JOHNSON, MAUREEN G.
UPDATED..... 81 03
BY..... FERNS, MARK L. (BROOKS, HOWARD C.)

NAME AND LOCATION

DEPOSIT NAME..... MULE MTN.

MINING DISTRICT/AREA/SUBDIST. MULE CREEK

COUNTRY CODE..... US
COUNTRY NAME: UNITED STATES

STATE CODE..... OR
STATE NAME: OREGON

COUNTY..... CURRY
DRAINAGE AREA..... 1710010 PACIFIC NORTHWEST
PHYSIOGRAPHIC PROV..... 13 KLAMATH MOUNTAINS
LAND CLASSIFICATION..... 42

QUAD SCALE QUAD NO OR NAME
1: 62500 MARIAL

LATITUDE LONGITUDE
42-42-07N 123-54-13W

UTM NORTHING UTM EASTING UTM ZONE NO
4727900.0 426000.0 +10

TWP..... 33S
RANGE.... 10W
SECTION.. 17, 20
MERIDIAN. WILLAMETTE

COMMODITY INFORMATION

COMMODITIES PRESENT..... AU CU AG

PRODUCER(PAST OR PRESENT):
MAJOR PRODUCTS.. AJ
MINOR PRODUCTS.. AG

FREE GOLD, PYRITE, CHALCOPYRITE

ANALYTICAL DATA (GENERAL)

ODGMI SAMPLES ASSAYED 0.08 - 0.88 OZ/TON AU; TRACE - 0.30 OZ/TON AG

EXPLORATION AND DEVELOPMENT

STATUS OF EXPLOR. OR DEV. 4

DESCRIPTION OF DEPOSIT

DEPOSIT TYPES:

QUARTZ VEINS/SHEAR ZONE

FORM/SHAPE OF DEPOSIT:

SIZE/DIRECTIONAL DATA

SIZE OF DEPOSIT..... SMALL

MAX WIDTH..... 2 FT

STRIKE OF OREBODY.... NE VARIES

COMMENTS (DESCRIPTION OF DEPOSIT):

TWO PARALLEL VEINS

DESCRIPTION OF WORKINGS

COMMENTS (DESCRIP. OF WORKINGS):

SHAFTS 16', 86'; 620' IN 3 ADITS

PRODUCTION

YES

SMALL PRODUCTION

ANNUAL PRODUCTION (ORE, COMMOD., CONC., OVERBURD.)

ITEM	ACC	AMOUNT	THOUS. UNITS	YEAR	GRADE, REMARKS
1 ORE SML		.015	TONS		
2 AU SML		.004	OZ	3.76	OZ/T

CUMULATIVE PRODUCTION (ORE, COMMOD., CONC., OVERBURD.)

ITEM	ACC	AMOUNT	THOUS. UNITS	YEAR	GRADE, REMARKS
15 AU EST		60.000	DOLLARS	PRE 1920	
23 ORE, EST		60.000	DOLLARS	1896-1920	0.27 AU

PRODUCTION YEARS..... 1931

SOURCE OF INFORMATION (PRODUCTION).. USBM

AGE OF HOST ROCKS..... JUR
 HOST ROCK TYPES..... GREENSTONE
 PERTINENT MINERALOGY..... LIMONITE, MANGANESE OXIDES

LOCAL GEOLOGY

SIGNIFICANT ALTERATION:
 POSSIBLE LIMONITE PYRITE GOSSAN

GENERAL REFERENCES

- 1) RAMP, L. AND OTHERS, 1977, GEOLOGY, MINERAL RESOURCES AND ROCK MATERIAL OF CURRY COUNTY, OREGON; ODGMI BULL. 9 P. 40
- 2) BROOKS, H.C. AND RAMP, L., 1968, GOLD AND SILVER IN OREGON; ODGMI BULL. 61, P. 190
- 3) OREGON METAL MINES HANDBOOK, 1940, ODGMI BULL. 14-C, VOL. 1, P. 77

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DESCRIPTION OF MATERIAL

Mule Mountain Group.
Andy & Huggins Idaho
On mule mt.
Sec 17 T335 R10 W.
5/8 S.W. of Mariaal.

No change Big Devils
stays in Utah now
know as the paywell

Mr. Bellings kept the
property to 1930-31
Sold to Mr M Reber
" Do. H Dubery ^{spring} 31
let go delinquent. 32 H 33
Mr Huggins A.O.P.G.
located 4 claim July 1 1938.
no work since.

QG - 212, 213, 214
Au, Ag

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
PROJECT SAMPLE RECORD

SAMPLES SUBMITTED BY: Len Ramp (DOGAMI) ADDRESS: P.O. Box 417, Grants Pass, Ore. DATE: 7-20-56

<u>Sample No.</u>	<u>Mine or Prospect</u>	<u>Type</u>	<u>District</u>	<u>S.</u>	<u>T.</u>	<u>R.</u>	<u>Assay For</u>
QG-212	Mule Mtn. Mine	2-Ft. chip	Mule Creek	17	33 S.	10 W.	Au, Ag
QG-213	" " "	13" chip	" "	17	33 S.	10 W.	Au, Ag
QG-214	" " "	7" "	" "	17	33 S.	10 W.	Au, Ag

Sample #212 - from back 23 foot drift

Sample #213 - from cut near caved 83' shaft

Sample #214 - from face new cut on lower vein 1800 level

Descriptions:

#1 - iron-stained, sheared metavols and quartz.

#2 - mostly quartz, minor gneissic metavols.

#3 - same as no. 2 with minor clay & limonite.

Results:

		<u>Au</u>		<u>Ag</u>
QG-212	P-19979	0.88 oz.	\$30.80	0.30 Oz. \$0.27
QG-213	P-19980	0.08 oz.	\$2.80	Trace
QG-214	P-19981	0.42 oz.	\$14.70	Trace

QG - 212, 213, 214
Au, Ag

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
PROJECT SAMPLE RECORD

SAMPLES SUBMITTED BY: Len Ramp (DOGAMI) ADDRESS: P.O. Box 417, Grants Pass, Ore. DATE: 7-20-56

<u>Sample No.</u>	<u>Mine or Prospect</u>	<u>Type</u>	<u>District</u>	<u>S.</u>	<u>T.</u>	<u>R.</u>	<u>Assay For</u>
QG-212, P-	Mule Mtn. Mine	2-Ft. chip	Mule Creek	17	33 S.	10 W.	Au, Ag
QG-213, P-	" " "	13" chip	" "	17	33 S.	10 W.	Au, Ag
QG-214, P-	" " "	7" "	" "	17	33 S.	10 W.	Au, Ag

Sample #212 - from back 23 foot drift

Sample #213 - from cut near caved 83' shaft

Sample #214 - from face new cut on lower vein 1800 level

Descriptions:

#1 - iron-stained, sheared metavols and quartz.

#2 - mostly quartz, minor gneissic metavols.

#3 - same as no. 2 with minor clay & limonite.

Results:

		<u>Au</u>	<u>Ag</u>
QG-212	P-19979	0.88 oz. \$30.80	0.30 oz. \$0.27
QG-213	P-19980	0.08 oz. \$2.80	Trace
QG-214	P-19981	0.42 oz. \$14.70	Trace

Mule Creek District
Curry County

Name: Mule Mountain Group (gold quartz)

Owner: Andy L. Huggins, Illahe, Oregon

Location: On Mule Mountain 5/8 of a mile S.W. of Marial by trail.
In Sec. 17, T. 33 S., R. 10 W.

History: This property was owned by Mr. George W. Billings until the fall of 1930 or the spring of 1931. It was sold on bond and lease to Mrs. M. M. Reber, who in turn sold her lease in 1931 to Mr. George Hay Du Barry. No work or exemption was filed and on July 1st of 1933 the property was located by Mr. Huggins. This property was not visited by informant as at the time of my visit Mr. Huggins was entertaining prospective buyers. As a result I had just a few minutes talk with Mr. Huggins.

The description on pages 83 to 90 inclusive of the Preliminary Survey of the Geology and Mineral Resources of Curry County is correct with the following additions: While Mr. Du Barry had the property, a tunnel was run in a westerly direction 300 feet to tap the vein at a little lower level and a little to the north of the bottom of the 86 foot shaft mentioned at the top of page 85. A drift was run to the north but no ore was encountered. Mr. Huggins stated that if the drift had been run to the south it would have been in good ore. The present Mule Mountain Group does not cover the area shown in Fig. 25, Page 34.

The present group consists of 4 lode mining claims known as Alva, Paywell, Milner and Milner Ext. If the East Side and Mule Mountain claims shown in Fig. 25, Page 84 were shifted about 300 feet northwest, they would cover the area claimed by the Alva and Paywell. The Milner starts at the river and runs in a N.W. direction, covering a part of the old Burr Oak placer. The Milner Extension covers the area between the Milner and the Paywell claims.

Informant: J. E. Morrison. July 21, 1939.