October 4th, 1940.

Lower Map - Map file

OREGON BONANZA MINE (gold)

~~UPPER~~ LOWER APPLEGATE DISTRICT
JOSEPHINE COUNTY

Owner: Powell Creek Mining Co., Inc.,; Percy V. Long, pres.; Leon C. Osteyee, secretary; Emmet J. Chapman, treas.; 580 Market Street, San Francisco, Calif. An Oregon corporation, dated May 1st, 1939

Location: SE¼ sec. 16, T. 38 S., R. 5 W., at elevations between 2100 and 2300 feet, on the south side of Powell Creek, 19 miles by road southeast of Grants Pass.

Area: 80 acres of patented land.

History: Quoting from Parks & Swartley, 1916 2/

"The Oregon Bonanza mine, 12 miles south of Grants Pass and 3 miles southwest of Provolt, is in the SW¼ (this should be SE¼) sec. 16, T. 38 S R. 5 W., south of Powell creek at an elevation of 2100 feet, as measured by barometer. The country rock is greenstone cut by aplite dikes. All the adits are caved and the mine buildings are in ruins. It is at present under option by Edward Layton of Applegate and J. M. Letherow of Grants Pass."

The property was purchased by R. C. Hanford and associates from Edward Layton in 1936. In 1939 the Powell Creek Mining Company was incorporated, and took charge. There is at least 1000 feet of old workings and a 250 foot shaft, most of which is inaccessible at the present time. There are surface indications of a number of shafts, all of which are caved and inaccessible.

The mine has operated more or less steadily since 1936, and at present is under the management of Mr. A. J. Lindquist. Sizeable amounts of high-grade ore have been removed, some of which ran $17 per pound in gold.

Development: The Bonanza tunnel, portal elevation 2100 feet is 496 feet long. The direction to generally S. 60° W. to station 7.

A shear zone that is parallel to the "lime dike" cuts across the tunnel about 100 feet from the portal and a sizeable stope developed no ore. The north wall is siliceous limestone and the south wall is meta-sediment. At station 7, a north-south shear zone in meta-sediment forms the "hanging wall vein". Several stopes were developed, particularly where cross shears intersect the main north-south shear zone. These stopes are as wide as the tunnel and are directed 50° up to the north. It was reported that a level, 15 feet above the Bonanza tunnel, connected the three stopes in the vicinity of station 7 and 8.

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A short cross-cut extends S. 60° W., from station 7 but the map shows that the face is nowhere near the diorite dike it is reported to have been driven to cut. South of station 12 the tunnel connects with a shaft from the surface. Presumably this is the "Old Shaft", now caved and inaccessible.

A cross-cut through the diorite dike which is about 30 feet wide, cuts a hanging wall shear zone that trends S. 55° E., dips 75° N.E., and contains some quartz. On the south, there is an opening reportedly connecting with a stope from below. At station 13, the tunnel is in the footwall shear zone, trending S. 45° E., dips 68° N. E. The shear zone contains quartz with serpentinoid rock, and quartz, which were well mineralized. A shaft from the surface is reported to intersect the tunnel at this point. At the time of the visit 9/19/40) the winze and lower levels were filled with water, and the tunnel beyond the winze was caved.

The winze and levels off the winze are shown on the map. They were inaccessible at the time of the visit. In 1936, J. E. Morrison reported as follows: "The winze is 115 feet deepo on the incline of 100 feet vertically, and has 3 levels. Layton drift 41 ft., 70 foot level and the 100 ft. depths refer to vertical distance. Layton drift trneds N. 53° W. 62 ft., and S. 35° W. 65 ft. to a bulkhead. The 70 foot level runs N. 48° W. 42 ft. and S. 39° E. 70 ft. 100 ft. level at bottom of winze runs S. E. 10 feet. Very little timbering is required". Since that time the lower level has been developed to a greater extent.

Surface inspections revealed three shafts north of the "Old Shaft". The most southerly is open at the surface; the other two are caved. Still farther north are two cuts, the most northerly being alongside the "lime dike".

The Bonanza tunnel produced most of the gold of the mine's history.

The Eclipse tunnel, portal elev. 1948 feet, was driven into the hill several hundred feet northeast of the Bonanza tunnel. It encounters the hanging wall of a diorite dike; the shear zone trends N. 30° W., and is practically vertical. Some stoping was done on this level.

The Lime Gulch tunnel portal elev. 1841 ft. was driven at a lower level to cut the diorite dike exposed in the Eclipse tunnel, - then cross-cut thru the dike and drifted southwest in the footwall shear zone. The diorite dike is about 25 ft. wide here and the footwall shear zone trends N. 30° W., and is vertical. Siliceous limestone appeared in the tunnel walls in the footwall drift.

Equipment: Gardner-Denver equipment unless otherwise specified; 160 cut. ft. compressor, 1 drifter, 1 stoper, 1 tugger hoist with 150 ft.

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Equipment: (continued)

of ⅝ inch cable; American fan 8 inch, with 950 ft. of 8 inch pipe; 1 Cushman gas engine, 8/10. 4 h.p. to drive fan; 1 one car, 12 cu. ft. capacity; 1500 ft. of 12 lb. rail; 1100 ft. of 1½ inch pipe line; one duplex pump 4 in. x 3 in. x 3½ in.; one Snow duplex pump 4½ in. x 5 in. x 4 in. 200 ft. of pipe line for pump. Compressor house and machine shed.

Topography: The area is mountainous. Elevations range from 1500 ft. at Powell Cr. to over 2500 ft. on the slope southwest of the property. The workings lie between 1841 ft. (Lime Gulch tunnel) and 2250 ft. (Old Shaft). Hillslopes average 30°. Vegetation is dense; the timber is fir and madronna; brush is manzanita over seven ft. high in places, and poison oak profusely scattered to catch the unwary geologist. Weathering and hillside creep extend to depths in excess of five ft. and outcrops are practically non-existent. The exceptions are; the "lime dike" from the portal of the Bonanza tunnel (2100 ft.) to an elev. of 2370 ft.; and along and above the Powell Creek ditch about elev. 1700 ft.

Geology:

Rocks: The rocks are metamorphosed sediments (meta-sediments) that contain lenses of siliceous limestone, and quartz stringers that are associated with shear zones. Diorite dikes cut the structure at right angles. Serpentine is reported but none was found.

The meta-sediments have been intensely altered and silicified so that in places they resemble impure quartzites. Toward the southwest, the slaty character becomes more prominent. The siliceous limestone is gray and may contain masses that are more nearly calcareous quartzite than limestone. The diorite is medium fine-grained with altered phenocrysts. Saussuritization is suggested. In the Bonanza tunnel, amphibole needles form an interlocking network in the diorite rock, similar to what the U.S.G.S. term a spessartite in their Grants Pass quadrangle. Specimens of diorite dike rock from other areas do not show this development of hornblende needles to such a marked extent.

"Slickentite" is developed in some of the shear zones. Apparently some of the quartz was injected forcefully and the meta-sediments were intensely sheared. The result is a mass of quartz pods that are surround by a slick greenish rock, consisting of chlorite, epidote, etc. Some of the meta-sediments into which no quartz was injected, also develop "slickentite". This "slickentite" markedly resembles serpentine, which it is not.

Geology (continued)

Mineralization: The gangue minerals of the veins are principally quartz with subordinate calcite. The ore minerals are free gold, pyrite, and a small amount of galena. The pyrite may carry some gold.

Apparently quartz was injected in at least two epochs. The first was accompanied by considerable stress, developing "slickenite"; the second deposited pure quartz and the metals either accompanied this epoch or are later. The second epoch quqrtz usually occurs nearer the center of the vein. Some sulfides are found in the "slickenitied" portion of the quartz vein - the pyrite frequently occurs as distinct, small crystals, - and these portions are not, as a rule, good ore.

Some of the sulfides are fine-grained and massive, and may occur in narrow veinlets. Some of the sulfides consist of small crystals. All galena observed was in the quartz. Little, if any, metallization occurred in the wall rocks.

Gold is usually free. It is reported as occurring in thin sheets where the quartz splits along sulfide veinlets. Laboratory specimens of some of the $34,000 ore shows free gold in such fine grained quartz that the quartz looks like chalcedony. Some of the gold is in the pyrite, particularly when it occurs in the non-slickenitied portion of the vein.

The ore is hand sorted - the high grade is shipped and the low grade is sent to the mill at the Humdinger mine.

There is evidence of re-silicification, and re-crystallization as a result of mineralizing solutions, and dynamic stresses.

Structure: The structural trend of the rocks is generally N. 50° E., varying from N. 40° E., to N. 60° E. There has been shearing parallel to the major structure, as evidenced by the shear zone in the Bonanza tunnel where the meta-sediments that contact the "lime dike" have been sheared and laminated. Along the Powell Cr. ditch, the meta-sediments show considerable evidence of shearing parallel to the general structure (N. 50° E.) although joint planes give a suggestion of a structure at right angles.

The diorite dikes roughly cut across the major structure at right angles. Both dikes, in the Bonanza and Lime Gulch tunnels have been sheared on footwall and hanging wall, and these shear zones have been mineralized to varying degrees. Bulldozer cuts to the northwest of the Bonanza tunnel, and at the upper end of the Powell Cr. ditch traverse rocks that appear to be granular, and approximate diorite in composition. However, they do not have the hornblende needles characteristic of the Bonanza dike

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Geology: (continued)

Structure (continued):
There is a strong north-south shear zone that shows in the Bonanza tunnel between stations 7 and 12, and metallization is more concentrated where it is cut by cross-shears. Whether this particular zone cuts the "lime dike" is not known.

Another group of shear zones may be generalized as N.E. - S.W. trending zones.

The "lime dike" strikes about N. 57° E., and dips 67° S.E. The surface outcrop is on a hillside with a 20° - 30° slope and the trend of the outcrop is N. 67° E. The dip is such that 100 ft. difference in elevation produces a 42 ft. offset in the horizontal projection of the lens. The outcrops extend from the portal of the Bonanza tunnel, elev. 2100 ft. along the N. 67° E. trend to an elev. of 2370 ft. where it can no longer be traced. Outcrops do not show downhill from the Bonanza portal. The outcrops are so prominent, and so easily distinguished, that the lack of outcrops leads to the conclusion that the "lime dike" is in reality a small lens, that it has little more lateral extension than shown by the outcrops.

The amount of displacement along any one shear zone appears to be small. Intersecting shear zones show little evidence of displacement. The conclusion is that any one shear zone produces little displacement; - the total displacement resulting from a great number of shear zones may be great. Thus, if no one shear zone produced pronounced displacement, it is doubtful if the two diorite dikes, as exposed in the Bonanza and Lime Gulch tunnels, represent one dike that is faulted.

Ore Shoots: High grade lenses of ore are found in the quartz of the sub levels of the winze in the Bonanza tunnel. These lenses have a maximum width of 12 inches are are about 20-25 ft. in their greatest dimension. They rake about 45° to the northwest, according to J. E. Morrison. Mr. Lindquist confirmed this information, but stated that in his opinion the individual lenses did pitch toward the northwest, but that the lenses seemed to be en echelon to the southeast.

The stopes in the north-south shear zone between stations 7 & 12, Bonanza level, rake downward to the south at a 50° angle. However, the cross-shear zones have their dip in the same direction, and if concentration is more pronounced at the intersection of these shear zones, this would account for the alignment of ore shoots at this point.

There is no report of cross fractures for the hanging or footwall veins of the diorite dike.

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REFERENCES:

1/ Morrison, J. E., Mining geologist for State Dept.

2/ Parks, Henry and Swartley, Arthur, "Handbook of the mining industry of Oregon": Oregon Bureau of Mines & Geology, Mineral Resources of Oregon, vol. 2, no. 4, p. 170, December, 1916.

3/ Shenon, Phillip J., "Geology of the Robertson, Bunding [illegible], and Robert E. gold mines, southwestern Oregon": U. S. Geol. Survey, Bull. 830-B pp. 46-51, plate VIII, 1933.

4/ Wells, Francis G., U. S. Geological Survey, personal communication.

5/ Lindquist, A. J., operator of Oregon Bonanza Mine.

INFORMANT

Mr. A. J. Lindquist; J. E. Morrison; and Ray C. Treasher,

REPORT BY

Ray C. Treasher, 10/4/40

6/46

Oregon Bonanza — NAME
OLD NAMES
Gold — PRINCIPAL ORE
MINOR MINERALS

38 South (T) 5 West (R) 16 (S)

Josephine ..... COUNTY

~~Powell Creek~~ Lower Applegate ..... AREA

2100 feet ..... ELEVATION

..... ROAD OR HIGHWAY

19 miles S.E. of Grants Pass DISTANCE TO SHIPPING POINT

PUBLISHED REFERENCES

Ore. M. M. Hdbk. 14-C Vol. II Sec.1

Petrology and Min. Resources of Jose. & Jack. Counties, Ore.; A. N. Winchell

MISCELLANEOUS RECORDS

Maps, and geological discriptions of deposit in Grants Pass office file

PRESENT LEGAL OWNER (S) Powell Creek Mining Co., Inc, Address 580 Market Street, San Francisco,

California

OPERATOR A. H. Linguist, Manager

Name of claims	Area	Pat.	Unpat.
80 acres of patented land			

Name of claims	Area	Pat.	Unpat.

EQUIPMENT ON PROPERTY

Mining equipment only

May have been sold

MI-21

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STATE ASSAY LABORATORY
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GRANTS PASS, OREGON

CONFIDENTIAL

Upper

OREGON BONANZA MINE (gold) ~~LOWER~~ APPLEGATE DISTRICT

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SUMMARY

1. Paucity of surface outcrops makes it difficult to predict underground conditions, or to permit reasonably accurate projection of shear zones, veins, and dikes by a study of surface conditions.

2. The shearing may be the result of adjustment of stresses during deformation and it is characterized by crushing under heavy compression with little lateral movement.

3. Displacement by any one shear zone is small. While the total displacement produced by a series of shear zones might be great, it is doubtful if, within the limits of the property, faulting has effected any appreciable displacement of veins.

4. The diorite dikes of the Bonanza and Lime Gulch levels represent two distinct dikes rather than one dike that is faulted.

5. Westward extension of the Bonanza level diorite dike is suggested by granular rock found at the "bulldozer cuts" and by talus along the Powell Creek ditch. However, a projection of the N. 40° W. trend of the Bonanza dike falls north of the bulldozer cut, and farther north of the Powell Creek ditch.

6. Therefore, there is a good possibilility that these outcrops express the presence of two more, roughly parallel diorite dikes. Further evidence in support of this hypothesis is the texture and mineral content. The Bonanza dike is characterized by presence of hornblende needles, so that the rock resembles a spessartite. The diorite of the bulldozer cut and on Powell Creek lacks these needles.

7. Data on the rake of ore shoots is conflicting. One view is that the ore lenses rake northwest, and the other is that they rake southeast. It is not feasible to confirm or disprove either of these, on the basis of information available at this time.

8. No evidence was found to prove the continuity of the "lime dike" below the Bonanza portal or above elev. 2570 ft. Field study suggests that it does not continue and that it was not faulted off. Therefore it may represent a local lens.

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Considering the field evidence, with data supplied by Albert Burch and A. J. Lindquist it is-----

RECOMMENDED:

1. Future development be attempted along the levels from the winzw in the Bonanza level, where ore is reported still to be in place.

2. As both the "hanging wall vein" of the Bonanza level (the north-south shear zone) and the hangine wall vein of the diorite dike made some ore, the intersection of these two should be prospected.

3. Lindquist reports that the 100 level to the northwest did not show ore. However, this may be a lean shoot between ore shoots, and drill holes to the northwest in the vein might pick up additional ore shoots.

4. Until suffient ore is blocked out to justify lower drainage tunnels, work should be confined to de-watering the winze, improving hoisting equipment, and ore removed via the ~~[illegible]~~ winze.

5. If sufficient ore is blocked out, a lower level might be driven from the northeast to cut the winze, to drain the workings and permit pulling ore by gravity rather than by hoisting. The Oregon Beauty to the southeast is reported to have the continuation of the Bonanza diorite dike and vein. Their lower elevation might make an advantageous place to start a lower level, in the vein, if suitable arrangements could be make with the Oregon Beauty.

6. An assay map should be prepared, showing accurate location of all assays. This would assist in attempts to determine the rake of ore shoots.

7. Surface trenching, to the northwest along the trend of the diorite dike should be attempted, to prove or disprove the continuity of this particular dike.

Ray C. Treasher,
Field Geologist,
October 6th, 1940.

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
ASSAY LABORATORIES

Baker, Oregon
Grants Pass, Oregon

SAMPLE INFORMATION REQUESTED

The law passed by the Legislature, governing the free assaying and analyzing of samples sent to a State Assay Laboratory, provides that certain information be furnished to the Laboratory regarding samples sent for assays, etc. A copy of the law will be found on the back of this blank. Please read the law carefully. Will you please fill in the information called for in the following blank, as far as possible, and return the same to the nearest State Assay Laboratory, along with your sample. If you have made out a blank, this copy is for your future use. Keep a copy of the information on each sample for your own reference.

Your name in full . . J. E. Morrison

Postoffice address. . . . . .

Are you a citizen of Oregon?. . . . . Date on which sample is sent. 3/2/29.

Name (or names) of owners of the property . Hanford

Name of particular claim and date of location . Oregon Bonanza

Location of property or source of sample:

(1) County. Josephine (2) Mining District Lower Coffee Creek

(3) Township 37 (4) Range 5 W. (5) Section 16

(6) Quarter Section . . . . . .

How far from passable road? on road

For what do you wish sample tested? Gold

Does your sample represent a new discovery? No

On a newly located claim?. No. Old? Yes

Has any ore from this claim been milled or shipped?. Yes

Width of ore where sample was taken (length of channel cut) . . . . . .

Remarks: The Department would be pleased to have you add to the above, such information as you think would be of interest and value. Use the reverse side of this sheet or a separate sheet. This could best be shown by a pencil sketch, indicating the development on the claim with the widths of vein, expecially the width of ore at the place where this sample was taken.

A sample, to be of value, should be taken in an even channel across the vein from wall to wall. Its position in the workings should be marked and the width measured. Assays of unlocated samples, without widths, are of little value. They create but little interest in the minds of experienced investors and engineers.

(signed) J. E. Morrison

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
ASSAY LABORATORIES

Baker, Oregon
Grants Pass, Oregon

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Your name in full . . . J. E. M. . . . . .

Postoffice address. . . . . .

Are you a citizen of Oregon?. . . . . Date on which sample is sent. 7/10. . .

Name (or names) of owners of the property . . Hanford . . . . . .

Name of particular claim and date of location . Oregon . Bonanza . . . . .

Location of property or source of sample:

(1) County. . Josephine . . . . .(2) Mining District Lower Applegate . . .

(3) Township . . 38 . . . . . .(4) Range . 5 . . .(5) Section . 16 .

(6) Quarter Section . . SE 1/4 . . . . . .

How far from passable road? . . on road . . . . . .

For what do you wish sample tested? . . . gold . . . . . .

Does your sample represent a new discovery? . . . No . . . . . .

On a newly located claim?. . . No . . . . Old? . . yes . . . . . .

Has any ore from this claim been milled or shipped?. . . . yes . . . . . .

Width of ore where sample was taken (length of channel cut) . grab . . . . . .

Remarks: The Department would be pleased to have you add to the above, such information as you think would be of interest and value. Use the reverse side of this sheet or a separate sheet. This could best be shown by a pencil sketch, indicating the development on the claim with the widths of vein, expecially the width of ore at the place where this sample was taken.

A sample, to be of value, should be taken in an <u>even channel across the vein</u> from wall to wall. Its position in the workings should be marked and the width measured. Assays of unlocated samples, without widths, are of little value. They create but little interest in the minds of experienced investors and engineers.

(signed) J. E. Merriam

(Over)

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
ASSAY LABORATORIES

Baker, Oregon
Grants Pass, Oregon

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Your name in full . J. E. Morrison

Postoffice address. —

Are you a citizen of Oregon? . . . . Date on which sample is sent. 9/9/38

Name (or names) of owners of the property . Hanford

Name of particular claim and date of location . Pat ground

Location of property or source of sample:

(1) County. Josephine . (2) Mining District

(3) Township . 38 S. . (4) Range . 5 W. . (5) Section 16 .

(6) Quarter Section . S. 1/2 . S.E. 1/4

How far from passable road? road to property

For what do you wish sample tested? gold & silver

Does your sample represent a new discovery? no

On a newly located claim? . no . . . . Old? . no

Has any ore from this claim been milled or shipped? yes

Width of ore where sample was taken (length of channel cut) . 12 samples

Remarks: The Department would be pleased to have you add to the above, such information as you think would be of interest and value. Use the reverse side of this sheet or a separate sheet. This could best be shown by a pencil sketch, indicating the development on the claim with the widths of vein, expecially the width of ore at the place where this sample was taken.

A sample, to be of value, should be taken in an even channel across the vein from wall to wall. Its position in the workings should be marked and the width measured. Assays of unlocated samples, without widths, are of little value. They create but little interest in the minds of experienced investors and engineers.

(signed) J. E. Morrison

Mail Copy to H. W. Ward
628 Dakota Ave.
Medford

XXXXXXXXXXX

402 East I

September 26, 1938

Mr. J. E. Morrison, Mining Geologist
State Assay Laboratory
Grants Pass, Oregon

Following are the results of assays made on samples from the Bonanza Mine owned by Mr. Hanford:

Office number	Sample number	Gold		Silver		Total value $ per ton
		Oz./ton	$/ton	Oz./ton	$/ton	
1068	1	3.56	124.60	1.2	0.77	125.37
1069	2	11.36	397.60	5.2	3.33	400.93
1070	4	0.18	6.30	Trace		6.30
1071	5	0.02	0.70	Trace		0.70
1072	6	0.10	3.50	Trace		3.50
1073	7	1.01	35.35	0.1	0.06	35.41
1074	8	0.23	8.05	Trace		8.05
1075	9	0.11	3.85	Trace		3.85
1076	10	0.18	6.30	Trace		6.30
1077	11	1.42	49.70	0.1	0.06	49.76
1078	12	0.02	0.70	Trace		0.70
1079	13	27.03	946.05	11.5	7.36	953.41

Gold @ $35.00 per ounce
Silver @ $0.0.64 per ounce

Signed.....
Assayer

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

ASSAY REPORT Office Number 700

Grants Pass, Oregon
Baker, Oregon July 14 1930

Sample submitted by J. E. Morrison Grants Pass, Oregon

Sample description Grab sample taken from Oregon Bonanza

The assay results given below are made without charge as provided by Chapter 176, Section 10, Oregon Laws 1937, the sender having complied with the provisions thereof.

NOTICE: The assay results given below are from a sample furnished by the above named person. This department had no part in the taking of the sample and assumes no responsibility, other than the accuracy of the assay of the material as furnished it by the sender.

Sample Number	GOLD		SILVER						
	Ounces per ton	Value	Ounces per ton	Value	Percent	Value	Percent	Value	Total Value
	Trace		3.0	3.60					$3.60

Market Quotations:

Gold	$	per oz.
Silver	$ 0.70	per oz.
	$	per oz.
	$	per oz.

STATE ASSAY LABORATORY

Assayer

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

ASSAY REPORT Office Number 49

Grants Pass, Oregon
Baker, Oregon January 14, 1939

Sample submitted by J. E. Morrison Grants Pass, Oregon

Sample description Sample of quartz and pyrite from the Bonanza Mine.

The assay results given below are made without charge as provided by Chapter 176, Section 10, Oregon Laws 1937, the sender having complied with the provisions thereof.

NOTICE: The assay results given below are from a sample furnished by the above named person. This department had no part in the taking of the sample and assumes n responsibility, other than the accuracy of the assay of the material as furnish it by the sender.

Sample Number	GOLD		SILVER						Tota Valu
	Ounces per ton	Value	Ounces per ton	Value	Percent	Value	Percent	Value	
	2.58	90.30	1.2	0.77					$91.0

Market Quotations:
Gold $35.00 per oz.
Silver $ 0.64 per oz.
$ per lb.
$ per lb.

State Assay Laborato

Assayer

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

ASSAY REPORT Office Number 189

Grants Pass, Oregon
Baker, Oregon March 6 1939

Sample submitted by J. E. Morrison Grants Pass, Oregon

Sample description Sample from the Bonanza Mine owned by Mr. Harford, Oregon

The assay results given below are made without charge as provided by Chapter 176, Section 10, Oregon Laws 1937, the sender having complied with the provisions thereof.

NOTICE: The assay results given below are from a sample furnished by the above named person. This department had no part in the taking of the sample and assumes no responsibility, other than the accuracy of the assay of the material as furnished it by the sender.

Sample Number	GOLD		SILVER						
	Ounces per ton	Value	Ounces per ton	Value	Percent	Value	Percent	Value	Total Value
	0.10	3.50	Trace						$3.50

Market Quotations:
Gold $35.00 per oz.
Silver $ per oz.
$ per oz.
$ per oz.

STATE ASSAY LABORATORY

Assayer

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

ASSAY REPORT Office Number 780

Grants Pass, Oregon
~~Baker, Oregon~~ July 14 1939

Sample submitted by J. E. Morrison Grants Pass, Oregon

Sample description Grab sample taken from Oregon Bonanza

The assay results given below are made without charge as provided by Chapter 176, Section 10, Oregon Laws 1937, the sender having complied with the provisions thereof.

NOTICE: The assay results given below are from a sample furnished by the above named person. This department had no part in the taking of the sample and assumes no responsibility, other than the accuracy of the assay of the material as furnished it by the sender.

Sample Number	GOLD		SILVER						
	Ounces per ton	Value	Ounces per ton	Value	Percent	Value	Percent	Value	Total Value
	Trace		8.0	5.60					$5.60

Market Quotations:
Gold $ per oz.
Silver $ 0.70 per oz.
$ per oz.
$ per oz.

STATE ASSAY LABORATORY

Albert A. Levi
Assayer

STATE ASSAY LABORATORY
802 E. H ST., GRANTS PASS
J. E. MORRISON
MINING GEOLOGIST
ALBERT A. LEWIS
ANALYST

2102 COURT ST., BAKER
JOHN ELIOT ALLEN
FIELD GEOLOGIST
LESLIE L. MOTZ
ANALYST

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

~~802 EAST H STREET~~
GRANTS PASS, OREGON
402 East I

September 26, 1938

Mr. J. E. Morrison, Mining Geologist
State Assay Laboratory
Grants Pass, Oregon

Following are the results of assays made on samples from the Bonanza Mine owned by Mr. Hanford:

Office number	Sample number	Gold Oz./ton	Gold $/ton	Silver Oz./ton	Silver $/ton	Total value $ per ton	
1068	1	3.56	124.60	1.2	0.77	1 — 125.37	125
1069	2	11.36	397.60	5.2	3.33	1 — 400.93	400
1070	4	0.18	6.30	Trace		3 — 6.30	18.
1071	5	0.02	0.70	Trace		1 - 0.70	1.
1072	6	0.10	3.50	Trace		4 - 3.50	14.
1073	7	1.01	35.35	0.1	0.06	3 - 35.41	106.
1074	8	0.23	8.05	Trace		3 — 8.05	24.
1075	9	0.11	3.85	Trace		3 - 3.85	11.
1076	10	0.18	6.30	Trace		2.5 6.30	15.
1077	11	1.42	49.70	0.1	0.06	49.76	
1078	12	0.02	0.70	Trace		2. 0.70	1.
1079	13	27.03	946.05	11.5	7.36	7 953.41	
						1 - 91.00	182.
						2.36 ft.	901.
						11/ 26/40	34.68

Gold @ $35.00 per ounce
Silver @ $0.0.64 per ounce

Signed..Albert A. Lewis
Assayer

CRIB MINERAL RESOURCES FILE 12

RECORD IDENTIFICATION
- RECORD NO..... M061089
- RECORD TYPE..... XIM
- COUNTRY/ORGANIZATION. USGS
- DEPOSIT NO..... ODOMI 100-320
- 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..... OREGON BONANZA MINE
- MINING DISTRICT/AREA/SUBDIST. LOWER APPLEGATE
- COUNTRY CODE..... US
- COUNTRY NAME: UNITED STATES
- STATE CODE..... OR
- STATE NAME: OREGON
- COUNTY..... JOSEPHINE
- DRAINAGE AREA..... 17100309 PACIFIC NORTHWEST
- PHYSIOGRAPHIC PROV..... 13 KLAMATH MOUNTAINS
- LAND CLASSIFICATION..... 01

QUAD SCALE	QUAD NO OR NAME
1: 62500	GRANTS PASS

LATITUDE	LONGITUDE
42-15-41N	123-17-27W

UTM NORTHING	UTM EASTING	UTM ZONE NO
4678622.7	476012.7	+10

- TWP..... 38S
- RANGE.... 05W
- SECTION.. 15
- MERIDIAN. W.M.

LOCATION COMMENTS: SE 1/4

COMMODITY INFORMATION
- COMMODITIES PRESENT..... AU AG PB

OCCURRENCE(S) OR POTENTIAL PRODUCT(S):
POTENTIAL.....
OCCURRENCE..... PB

ORE MATERIALS (MINERALS,ROCKS,ETC.):
FREE GOLD, PYRITE; GALENA

COMMODITY SUBTYPES OR USE CATEGORIES:
3.25 AU:AG

COMMODITY COMMENTS:
QUARTZ IN TWO PERIODS

EXPLORATION AND DEVELOPMENT
STATUS OF EXPLOR. OR DEV. 4
PRESENT/LAST OWNER..... WALLACE OSTEYELL, SAN FRANCISCO CALIFORNIA

DESCRIPTION OF DEPOSIT

DEPOSIT TYPES:
VEIN/SHEAR ZONE *
FORM/SHAPE OF DEPOSIT:

SIZE/DIRECTIONAL DATA
SIZE OF DEPOSIT..... SMALL
MAX WIDTH..... 4 FT
STRIKE OF OREBODY.... NW
DIP OF OREBODY..... 60-70NE

DESCRIPTION OF WORKINGS

COMMENTS(DESCRIP. OF WORKINGS):
1300 FEET OF WORKINGS WITH A 250 FOOT SHAFT

PRODUCTION
YES
SMALL PRODUCTION

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

ITEM		ACC	AMOUNT	THOUS.UNITS	YEAR	GRADE,REMARKS
1	ORE	SML	.596	TONS		
2	AU	SML	.923	OZ	1.599	OZ/T
3	AG	SML	.284	OZ	.477	OZ/T
23	ORE,	EST	.600	TONS	PRE 1939	1.6 AU, 0.5 AG

GEOLOGY AND MINERALOGY

AGE OF HOST ROCKS..... PERM-TRI
HOST ROCK TYPES..... METASEDIMENTS

AGE OF ASSOC. IGNEOUS ROCKS.. LJUR-CRET
IGNEOUS ROCK TYPES..... DIORITE DIKE

PERTINENT MINERALOGY..... QUARTZ, CALCITE; CHLORITE, EPIDOTE

GEOLOGICAL DESCRIPTIVE NOTES. DETAILED DESCRIPTION OF MINE CIRCA 1940 IN OMMH

LOCAL GEOLOGY
NAMES/AGE OF FORMATIONS,UNITS,OR ROCK TYPES
1) NAME: APPLEGATE GROUP
AGE: PERM-TRI

NAMES/AGE OF IGNEOUS UNITS OR IGNEOUS ROCK TYPES
1) NAME: GRAYBACK PLUTON
AGE: LJUR-CRET K/AR 140 - 150 MY

SIGNIFICANT LOCAL STRUCTURES:
SLICKENTITE

COMMENTS (GEOLOGY AND MINERALOGY):
MINERALIZED SHEAR ZONE IN INTENSELY ALTERED AND SILICIFIED METASEDIMENTS.

GENERAL COMMENTS
RECORD NUMBERS (MO13425) AND (MO15200) HAVE BEEN MERGED WITH THIS RECORD AND DELETED FROM THE OREGON FILE.

GENERAL REFERENCES
1) RAMP, L. AND PETERSON, N.V., 1979, GEOLOGY AND MINERAL RESOURCES OF JOSEPHINE COUNTY, OREGON; ODGMI BULL. 100, 45P
2) BROOKS, H.C. AND RAMP, L., 1968, GOLD AND SILVER IN OREGON; ODGMI BULL. 61, P. 261
3) OREGON METAL MINES HANDBOOK, 1942, ODGMI BULL. 14-C, VOL. 2, SEC. 1, P. 167

ERIB MINERAL RESOURCES FILE 12

RECORD IDENTIFICATION
RECORD NO..... M013407
RECORD TYPE..... X1M
COUNTRY/ORGANIZATION. USGS
FILE LINK ID..... CONSV
MAP CODE NO. OF REC..

REPORTER
NAME..... LEE, W
DATE..... 74 01
UPDATED..... 81 03
BY..... FERNS, MARK L. (BROOKS, HOWARD C.)

NAME AND LOCATION
DEPOSIT NAME..... OREGON BONANZA MINE (?)
SYNONYM NAME..... NAME UNKNOWN

MINING DISTRICT/AREA/SUBDIST. LOWER APPLEGATE

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

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

COUNTY..... JOSEPHINE
DRAINAGE AREA..... 17100309 PACIFIC NORTHWEST
PHYSIOGRAPHIC PROV..... 13 KLAMATH MOUNTAINS
LAND CLASSIFICATION..... 00

QUAD SCALE	QUAD NO OR NAME
1: 62500	GRANTS PASS

LATITUDE	LONGITUDE
42-16-50N	123-17-10W

UTM NORTHING	UTM EASTING	UTM ZONE NO
4680750.	476400.	+10

TWP..... 38S
RANGE.... 05W
SECTION.. 10
MERIDIAN. W.M.

POSITION FROM NEAREST PROMINENT LOCALITY: NW1/4 SW1/4

MAIN COMMOD..... AJ

ORE MATERIALS (MINERALS,ROCKS,ETC.):
UNKNOWN

EXPLORATION AND DEVELOPMENT
STATUS OF EXPLOR. OR DEV. 2

DESCRIPTION OF DEPOSIT

DEPOSIT TYPES:
LODE
FORM/SHAPE OF DEPOSIT:

SIZE/DIRECTIONAL DATA
SIZE OF DEPOSIT..... SMALL

DESCRIPTION OF WORKINGS
UNDERGROUND

PRODUCTION
UNDETERMINED

GEOLOGY AND MINERALOGY

AGE OF HOST ROCKS..... PERM-TRI
HOST ROCK TYPES..... METAVOLCANICS

AGE OF ASSOC. IGNEOUS ROCKS.. LJUR-CRET K/AR 140 - 150 MY
IGNEOUS ROCK TYPES..... DIORITE

LOCAL GEOLOGY
NAMES/AGE OF FORMATIONS,UNITS,OR ROCK TYPES
1) NAME: APPLEGATE GROUP
AGE: PERM-TRI

NAMES/AGE OF IGNEOUS UNITS OR IGNEOUS ROCK TYPES
1) NAME: GRAYBACK PLUTON
AGE: LJUR-CRET

GENERAL COMMENTS
LOCATION ONLY. RAMP (1979) SHOWS PROPERTY TO BE ON CONTACT BETWEEN ULTRAMAFICS AND METAVOLCANICS.

GENERAL REFERENCES
1) RAMP, L. AND PETERSON, N.V., 1979, GEOLOGY AND MINERAL RESOURCES OF JOSEPHINE COUNTY, OREGON; ODGMI BULL. 100, 45P

Samples from 75 ft level

20 ft - 50 of shaft.	#1	12 in.
25 " " " "	#2	12 in.
	#3	Out.
30 " " " "	#4	36 in.
35 " " " "	#5	24 in
40 " " " "	#6	48 in
45 " " " "	#7	36 in
50 " " " "	#8	36 in
55 " " " "	#9	36 in.
60 " " " "	#10	30 in.
65 " " " "	#11	Grab. sample
70 " " " "	#12	26 in.
~~65 " " " "~~		

#13 6 in sulphide back of No 1

1/14/39.

Sample 2 ft. 100 ft level. 10 ft so of shaft. went au 2.58 oz. 1.2 oz.

90.

					N	S	E	W.
A – 2	273°52'	S 43°52' W	68.5	N 46° E ✓		49.39		47.47
2 – 3	169°39	S 33°21' W	33.6	S 37° W ✓		28.06		18.48
3 – 4	188°39'	S 42° 00 W	96.7	S 48° W ✓		74.07		62.18
4 – 5	142°46	S 4° 26' W	23.5	S 3° W ✓		23.43		1.81
5 – 6	177°15'	S 1° 21' W	17.5	S. ✓		17.50		.41
6 – 7	239 20	S 60° 41' W	27.3	S 60 W		13.38		23.70
								23 04
7 – 8	174°	S 54° 41 W	28.3	S 52 W ✓		16.34		
8 – 9	119°25	S 5° 54' E	37.0	S 6 W		36.81	3.81	4.74
9 – 10	194.59'	S 9° 5' W	20.0	S 10 W		29.61		
10 – 11	157°06	S 13° 49' E	32.6	S 14 W		31.65	7.79	
11 – 12	186°41	S 7° 08' E	65.0	S 7° E.		64.48	8.06	
12 – 13	247°47	S 40 39 W	42.1	S 40 W		384.72	19.66	181.98
13 – 14	95°17	S 24° 4' E		S 44° 04 E		31.94		19.66
						15.48	6.8	162.32
						432.14		27.43
								189.75
								6.80
								182.95

384
.0035
1920
1152
1.3440

.349

384
.0001
.00384

384
.0006
24
48
18
.2304

13.44

75¢

75¢

Station	H. ∡	Dist + ∡	Mag Bear	HI	
A – B	0	129.0/0	N52°W	A	
B – A – C	180°37′	137/-0°40′	S54°E	5′ B	center track.
B – A – 2	273°52′	68.5/0			
B – A – 1	273°52	22.54/0°50′			1 – 1 – Portal.
A – 2 – 3	169°29′	33.6/0			Numbers in tunnel
2-3 – 4	188°39′	96.78/-2°7′			2 – 25ft – 3 end of timbers.
3 is end of old stope.					.6 in offset at 3 to left
3-4-5	142°26′	24.0/-12			
4-5-6	177°15′	17.56/0			
5-6-7	239°20′	27.35/0			
6-7-8	174°0′	28.3/0			
6-7-Face	177°37′	8 to face 37 ft.			8 is on vein.
7-8-9	119°25′	37.0/0			9 " " "
8-9-10	194°59′	30/0			
9-10-11	157°06′	32.6/0			10 " " "
10-11-12	186°41′	65/0			11
11-12-13	247°41′	42.1/0			12 " " "
12-13-14	95°17	50/0			11 – Timbered 10 ft each way
					12-13 crosscut.
A-B-Stump.	99°46′	307/0°23′ / x3			14 is cave in
A-B Block	312°54′	281.6/20°05′			C to road junc. 75 ft
Road		117/23°40′			
A-C Block	65°17′	V 4 26°6′			
A-C-D	161°03		187.9/+14°45′		
C D E.	197°31′		70.25/13°30′		
D E F	312°26′		277.3/+5°12′		

Between stations 12 & 13 31 ft east of 13 on main level is a fracture running N 45 W dip 68° E.

Vein runs N 50 W dips 68° E. Sample was taken of hanging wall & foot wall of vein.

At station 11 there is a stope on vein runs N 50 ft. a or stope 15 ft so. of 11

Half way between 8 & 9 Strike of formation N 45 E. dip 75° to south. Stope height 7-8 ft along strike of formation

Face of drift from station 8. the formation Strikes N 50 E and dips 58° South. very hard.

2, 4 & 6 & 13

2 - 1 ft. 13 in back of 2
4 - 3 ft
6 - 4 ft
13 - 6 in sulphide

Strike of limestone S 45 W on hill N 50 E.

contact between lime & diorite runs S 65° dip 65° E.

W from 3. .3 is on the contact 5 ft east of 2 is contact.

3 almost to 4 following fracture at station 5 is a sulp? dike 4½ ft wide strikes N 45 to 53° E dip 55° to 60° E

6, 7, & 8 in serp contact with diorite
about 17 from 8 toward 9 contact
of diorite & serpentine strike S 45° W 85° S.
Stope on this contact vein
Sample lower drift
1 – 12 in, 3 out 5 – 24 in 7 – 36 in
8 – 36 in – 9 – 36, 10 – 30 in, no 11 12 – 26 in.
all 75 ft level.

$12 \times 5 = 60$
$\times 70$

	N	S	E	W
A-C – S 49° 23' E – 137 ft.		89.187	104.098	
C-D – S 68° 20' E – 181.7		67.885	168.863	
D-E – S 51° 17' E – 68.31		42.728	54.033	
E-F – S 81° 09 W – 376.13		42.52	27	272.81
F-G – S 57° 22' W 132.0		71.18		111.16
G-H – S 70° 07' W 107.14		36.44		100.75
H Shore S 3° 09' E 45.0		44.93	2.47	
		394.07	329.46	484.72
				329.46
				155.26

394
10 ft.

162.32
155

Bonnanza Mine Samples

	oz. Gold	oz. Silver
1	3.56	1.2
2	11.36	5.2
4	0.18	Trace
5	0.02	Trace
6	0.10	Trace
7	1.01	0.1
8	0.23	Trace
9	0.11	Trace
10	0.18	Trace
11	1.42	0.1
12	0.02	Trace
13	27.03	11.5

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STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
329 S. W. OAK STREET
PORTLAND, OREGON

Replies should be addressed c/o State Assay Laboratory 400 E. I Street Grants Pass, Oregon

OREGON BONANZA MINE (gold) LOWER APPLEGATE DISTRICT

CONFIDENTIAL

SUMMARY

1. Paupacity of surface outcrops makes it difficult to predict underground conditions, or to permit reasonably accurate projection of shear zones, veins, and dikes by a study of surface conditions.

2. The shearing may be the rexult of adjustment of stresses during deformation and it is characterized by crushing under heavy compression with little lateral movement.

3. Displacement by any one shear zone is small. While the total displacement produced by a series of shear zones might be great, it is doubtful if, within the limits of the property, faulting has effected any appreciable displacement of veins.

4. The diorite dikes of the Bonanza and Lime Gulch levels represent two distinct dikes rather than one dike that is faulted.

5. Westward extension of the Bonanza level diorite dike is suggested by granular rock found at the "bulldozer cuts" and by talus along the Powel Creek ditch. However, a projection of the N. 40° W. trend of the Bonanz dike falls north of the bulldozer cut, and farther north of the Powell Creek ditch.

6. Therefore, there is a good possibilility that these outcrops express the presence of two more, roughly parallel diorite dikes. Further evidence in support of this hypothesis is the texture and mineral content. The Bonanza dike is characterized by presence of hornblende needles, so that the rock resembles a spessartite. The diorite of the bulldozer cut and on Powell Creek lacks these needles.

7. Data on the rake of ore shoots is conflicting. One view is that the ore lenses rake northwest, and the other is that they rake southeast. It is not feasible to confirm or disprove either of these, on the basis of information available at this time.

8. No evidence was found to prove the continuity of the "lime dike" below the Bonanza portal or above elev. 2370 ft. Field study suggests that it does not continue and that it was not faulted off. Therefore it may represent a local lens.

Oregon Bonanza
Confidential

CONFIDENTIAL

(2)

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

329 S. W. OAK STREET
PORTLAND, OREGON

Replies should be addressed c/o State Assay Laboratory 400 E. I Street Grants Pass, Oregon

Considering the field evidence, with data supplied by Albert Burch and A. J. Lindquist it is-----

RECOMMENDED:

1. Future development be attempted along the levels from the winzw in the Bonanza level, where ore is reported still to be in place.

2. As both the "hanging wall vein" of the Bonanza level (the north-south shear zone) and the hangine wall vein of the diorite dike made some ore, the intersection of these two should be prospected.

3. Lindquist reports that the 100 level to the northwest did not show ore. However, this may be a lean shoot between ore shoots, and drill holes to the northwest in the vein might pick up additional ore shoots.

4. Until suffient ore is blocked out to justify lower drainage tunnels work should be confined to de-watering the winze, improving hoisting equipment, and ore removed via the ~~ziwz~~ winze.

5. If sufficient ore is blocked out, a lower level might be driven fro the northeast to cut the winze, to drain the workings and permit pulling or by gravity rather than by hoisting. The Oregon Beauty to the southeawt is reported to have the continuation of the Bonanza diorite dike and vein. Their lower elevation might make an advantageous place to start a lower level, in the vein, if suitable arrangements could be make with the Oregon Beauty.

6. An assay map should be prepared, showing accurate location of all assays. This would assist in attempts to determine the rake of ore shoots.

7. Surface trenching, to the northwest along the trend of the diorite dike should be attempted, to prove or disprove the continuity of this particular dike.

Ray C. Treasher,
Field Geologist,
October 6th, 1940.

ALBERT BURCH
Mining Engineer
Black Oak Ranch, Medford, Oregon

OREGON BONANZA MINE

My first visit to the Oregon Bonanza Mine was on January 10th of this year, (1937), and my conclusions with reference to it were embodied in a letter written to Mr. Robert C. Hanford on the following day. I visited it again on December 11th, and, as a result of that visit, have no reason to change the views stated in my letter of January 11th.

The attractive feature of this prospect is the unusually high grade of the ore, while the unattractive feature is the very limited extent of the quartz lenses within the vein. These are so small and narrow that even with most efficient management, it is doubtful whether ore averaging less than $100.00 per ton would pay all expenses including development work. When I was told that a recent shipment had returned only about $90.00 per ton, I was prepared to say that further work would probably be useless, as a diminution in value with depth would be indicated. I reserved judgment however, pending returns from a sample that I saw taken from sacked ore that came from the bottom level. The sample was properly taken for the purpose of an approximate estimate of the value and I was informed by telephone yesterday evening that it assayed $350.00 per ton. I was also informed yesterday by the man who purchased a small shipment early this month, that a careful sample of that ore assayed $325.00 per ton. The average returns from shipments to the smelter have been $200.00 per ton after deducting freight and treatment charges, and these two lots are therefore higher grade than the average, though not up to the highest grade lot that has been shipped. My conclusion, therefore, is that the mine is as good a prospect as it was a year ago and perhaps better for two reasons: The first being that the single lens exposed in the lowest level, is fully 18" wide as against 8" for the two exposures seen then; and the second one that a new lens, the existence of which was indicated in the north face of the first sub-level, has been shown by drifting two rounds.

With these facts in mind, the question is what should be done next, Mr. Hanford proposes to stope the ore remaining between the bottom level and the next sub-level above it and try in this way to accumulate a fund sufficient for sinking the winze a few feet deeper in order to develop more ore. As I see it, he can hardly hope to ship more than fifteen tons of sorted ore from this source and perhaps as little as eight tons, making it a "hand to mouth" operation, but he should be allowed to try it. He will probably be able to build up a small surplus in this way, but not enough for an economical development campaign as follows:- 1st- Drive the north drift on the first sub-level to explore the ore already exposed there. This should pay its own way after the drift is cleaned out. 2nd- Sink the winze with the present equipment to a further depth of thirty feet; and 3rd- Drive along the vein from the bottom of the winze a distance of fifty feet each way. This will cost about $3500, and I would consider it a good gamble, even though only a small part of it could be provided from the proceeds of the ore in sight. The best lens of ore exposed

in the floor of the first sub-level is in the drift south of the winze, and there has been almost no exploratory work in that direction at any lower level.

The program that was recommended in January was to sink the winze to a further depth of 100 feet and do some drifting from the bottom. Instead, the winze has been deepened not more than 60 feet and there has been performed a total of about 70 feet of drifting on three sub-levels. This work cost about $3500.00 more than I thought it would and I still believe that the cost has been excessive. But, with only a few hours on the ground, during which I had very little opportunity to talk with Mr. Hanford, except in the presence of the workmen, it was very difficult to put my finger on the cause or causes. Some that did occur to me are the following: He appears to have only one good miner at the present time and his other men, when they are working at all, are doing work of doubtful value. His hoisting equipment is inefficient and poorly arranged, as for instance, in the one little item of the trap doors over the winze. They are hinged on the wrong side, so that the hoist man has to go to them and push them down, while, if hinged on the right side, they could be raised by ropes and pulleys within the hoistman's reach and pulleys within the hoistman's reach and lowered by gravity.

One thing that has added to the ordinary cost of winze sinking and was entirely unavoidable, was that ore was encountered in the winze itself, and had to be broken separately.

I have been asked to give my opinion regarding the manager's work and, so far as I am able to judge from very brief contacts, I can put it in a few words. He appears to work hard himself when he is on the ground and knows how to drill and blast and break rock. Good miners are scarce in Southern Oregon, but, by using diligence, he should have been able to find a good crew for this small operation. He appears to have no mechanical ingenuity or knowledge and should have the advice and help of someone who has.

Coming now to the question of handling the ore upon the surface, this appears to me to be very inefficient. Briefly, the ore is dumped into a shallow box and then sorted, the rejects being shoveled to the second class dump and the shipping ore to another shallow box where it is broken by hammers to minus two inch size for sacking.

I believe, though, I do not know, that a sample of the rejects which consist mostly of quartz, would show that they contain enough gold to pay for freight and treatment and therefore should not be sorted out at an expense of a few dollars per ton.

If the trucking concern will accept bulk ore for shipment the sacking is not necessary, but even if sacked, it need not be broken smallerthan minus four inches, and this can be done with a heavy hammer by a man standing up instead of sitting.

Finally, it is manifest that a small power driven rock breaker would be more economical, but its cost, which I estimate at $500.00, installed, is not warranted by the tonnage of ore now in sight.

Customer milling of run-of-mine rock should be considered if reasonable rates can be obtained.

If and when the mine has enough ore in sight to justify them, certain changes should be made for economical operation. They include the rock breaker mentioned above, an enlargement of the station at the top of the winze, a larger hoist, self-dumping skip and rails and a Diesel driven compressor, altogether meaning an investment (not a gamble) of as much as $7,000.

(Signed) Albert Burch
Mining Engineer

Medford, Oregon
Dec. 14th, 1937

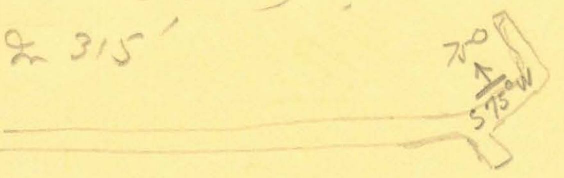
This is a copy of
a copy by,

Ruth Terry
Sec.

Oregon Bonanza

	Station	Hor ∡ Rt.	Dist. & V∡	H & V Dis.	Sep 7 193
A - El 2100	A - B	0	129.0/0	129.0	Mag Bearing N52W Vars. A near portal of tunnel B - dump.
C - 2103.2	B - A - C	180°37'	137.0/0°45'		H.I. = 5'
	B - A - 1	273°52 S43°52'W	22.54/2°30'		1 = Nail in header at port. Number indicate stat. in the tunnel.
	B - A - 2	"	68.5/0	68.5	
	A - 2 - 3	169°29'	33.6/0		25 ft from 2 is end of tim
	2 - 3 - 4	188°39'	96.78/-2°7'	96.7	H.I. = 5' 3 is end of old stope.
	3 - 4 - 5	142°26'	24.0/-12°	23.48	H.I = 5'
	4 - 5 - 6	177°15'	17.5/0		
	5 - 6 - 7	239°20'	27.35/0	27.35	
	6 - 7 - 8	174°0'	28.3/0	28.3	
	6 - 7 - (F)	174°37	65/0		(F) = face of drift.
	7 - 8 - 9	119°25'	37.0/0		8, 9, 10, 11 & 12 on vein.
	8 - 9 - 10	194°59'	30/0		
	9 - 10 - 11	157°06	32.6/0		
S34W 360 230 / 90	10 - 11 - 12	186°41'	65/0		Timbered 10 ft. each way
	11 - 12 - 13	277°47	42.1/0		from station 10
568 ft	12 - 13 - 14	95°17'	50/0		12 - 13 cross cut.
					13 - 14 along strike of v.
	A - B - Stump	99°46'	307/+31°23'	V 160 H 262	Stump of pine tree. Ref.
El. 2000	A - B - Block.	312°54' (47 06 / 359 60)	281.6/-20°54'	V 100.5 H 263	Block - part of old mill.
El. 2050	Road.		117/-23°45'	V 47 H 107	
	A - C - Block	65°17'	-26°06'	V 105 H 215	
D - El 2156	A - C - D	161°03	187.9/14°45	V 47.84 H 181.70	C to road junction 75
E - El 2177.4	C - D - E	197°3'	70.25/+13°30'	V 16.40 H 68.31	
F - El 2207.4	D - E - F	312°26'	277.3/+5°12'	V 25.38 H 276.13	El - 2274 G - H - Tree. - Ref. p
G - El 2223	E - F - G.	156°13'	132.5/+5°	V 11.55 H 132.0	207°30' 103/+18
H - El 2241	F - G - H.	192°45'	108/+7°17'	V 13.63 H 107.14	V - 33.10 H 97.5
	G - H - Shaft.	106°44'	45/0		Old shaft.
	debressions.	292°05'	40/0		On strike of vein.

Lime Dolak tunnel.
In 315'



Old Bonanza adit.

Sta. 3 end of timber, ls. on rt, ms on left. well jammed coal shear zone against ls. strike S.57°W, dip 67°SE, laminated, + forms rt tunnel wall.

Sta 3+17' narrow stope goes up about 16,' drill holes in back indicating former work.

Sta 4 - 45' Joint planes E-W dip 60°N layers 8" thick

Sta 5 - S 20°W. dip 68°SE. crosses at Sta 5. 6' wide. Rock heavily sheared + fractures are coated with a shiny black "skin". No quartz.

Sta 6 to fork of drift (Sta 8), adit parallels the S57°W. shear

At Sta 8, stope to right was a hot spot & the old report is that it was particularly g at the lime dike. Stope does not cross the dike.

Sta 8 on is N-S, strong shear that pinches & swells

Sta 9 - 15' stope that slopes up at N. 50° 25'. At 15' is an intermediate level that connects with stope at #8 + also extends S about 15'. A poorly defined shear on S side Trend N. 45°E dip 55°SE. Crosses adit

Sta 9 + 15' very small stope

Sta 10 + 15' small stope Cross fracture N 20°E dip 45°SE crosses drift + is slightly caved on rt.

Sta 11 worked stopes of some size

Sta 12 - 55' N 45°E dip 65°SE strong shear comes in from left. Does not cross drift

Sta 12 - 25' a stope about 25' high, timbered over drift.

Sta 12 +12' S. 55°E. dip 75° N.E. shear zone with qtz contact of slate on N. + on south. ~~crosscut~~ A stope coming from a lower level on the shaft breaks into the crosscut at this point. This vein is probably the "true" hanging wall vein.

Sta 13 + back to Sta 15 etc. S. 45°E. dip 68° N.E., footwall vein.

Eclipse Adit

N. 30° W, practically vertical, W. side diorite E side in sl.

Lime Gulch

45' - door.

130' - end of oxidized zone.

~~250' - receive~~

285' N. 65° E dip 75° SE. narrow, poorly defined shear zone.

or -25' from forks of adit

at forks N. 25° W dip 85° N.E. hanging wall

Footwall vein N. 30° W. vertical

~~and~~ + road & ditch X'ing 190' lower than Lime Gulch tunnel portal

ALBERT BURCH
Mining Engineer
Black Oak Ranch, Medford, Oregon

OREGON BONANZA MINE

My first visit to the Oregon Bonanza Mine was on January 10th of this year, (1937), and my conclusions with reference to it were embodied in a letter written to Mr. Robert C. Hanford on the following day. I visited it again on December 11th, and, as a result of that visit, have no reason to change the views stated in my letter of January 11th.

The attractive feature of this prospect is the unusually high grade of the ore, while the unattractive feature is the very limited extent of the quartz lenses within the vein. These are so small and narrow that even with most efficient management, it is doubtful whether ore averaging less than $100.00 per ton would pay all expenses including development work. When I was told that a recent shipment had returned only about $90.00 per ton, I was prepared to say that further work would probably be useless, as a diminution in value with depth would be indicated. I reserved judgment however, pending returns from a sample that I saw taken from sacked ore that came from the bottom level. The sample was properly taken for the purpose of an approximate estimate of the value and I was informed by telephone yesterday evening that it assayed $350.00 per ton. I was also informed yesterday by the man who purchased a small shipment early this month, that a careful sample of that ore assayed $325.00 per ton. The average returns from shipments to the smelter have been $200.00 per ton after deducting freight and treatment charges, and these two lots are therefore higher grade than the average, though not up to the highest grade lot that has been shipped. My conclusion, therefore, is that the mine is as good a prospect as it was a year ago and perhaps better for two reasons: The first being that the single lens exposed in the lowest level, is fully 18" wide as against 8" for the two exposures seen then; and the second one that a new lens, the existence of which was indicated in the north face of the first sub-level, has been shown by drifting two rounds.

With these facts in mind, the question is what should be done next, Mr. Hanford proposes to stope the ore remaining between the bottom level and the lext sub-level above it and try in this way to accumulate a fund sufficient for sinking the winze a few feet deeper in order to develop more ore. As I see it, he can hardly hope to ship more than fifteen tons of sorted ore from this source and perhaps as little as eight tons, making it a "hand to mouth" operation, but he should be allowed to try it. He will probably be able to build up a small surplus in this way, but not enough for an economical development campaign as follows:- 1st- Drive the north drift on the first sub-level to explore the ore already exposed there. This should pay its own way after the drift is cleaned out. 2nd- Sink the winze with the present equipment to a further depth of thirty feet; and 3rd- Drive along the vein from the bottom of the winze a distance of fifty feet each way. This will cost about $3500, and I would consider it a good gamble, even though only a small part of it could be provided from the proceeds of the ore in sight. The best lens of ore exposed

in the floor of the first sub-level is in the drift south of the winze, and there has been almost no exploratory work in that direction at any lower level.

The program that was recommended in January was to sink the winze to a further depth of 100 feet and do some drifting from the bottom. Instead, the winze has been deepened not more than 60 feet and there has been performed a total of about 70 feet of drifting on three sub-levels. This work cost about $3500.00 more than I thought it would and I still believe that the cost has been excessive. But, with only a few hours on the ground, during which I had very little opportunity to talk with Mr. Hanford, except in the presence of the workmen, it was very difficult to put my finger on the cause or causes. Some that did occur to me are the following: He appears to have only one good miner at the present time and his other men, when they are working at all, are doing work of doubtful value. His hoisting equipment is inefficient and poorly arranged, as for instance, in the one little item of the trap doors over the winze. They are hinged on the wrong side, so that the hoist man has to go to them and push them down, while, if hinged on the right side, they could be raised by ropes and pulleys within the hoistman's reach and pulleys within the hoistman's reach and lowered by gravity.

One thing that has added to the ordinary cost of winze sinking and was entirely unavoidable, was that ore was encountered in the winze itself, and had to be broken separately.

I have been asked to give my opinion regarding the manager's work and, so far as I am able to judge from very brief contacts, I can put it in a few words. He appears to work hard himself when he is on the ground and knows how to drill and blast and break rock. Good miners are scarce in Southern Oregon, but, by using diligence, he should have been able to find a good crew for this small operation. He appears to have no mechanical ingenuity or knowledge and should have the advice and help of someone who has.

Coming now to the question of handling the ore upon the surface, this appears to me to be very inefficient. Briefly, the ore is dumped into a shallow box and then sorted, the rejects being shoveled to the second class cump and the shipping ore to another shallow box where it is broken by hammers to minus two inch size for sacking.

I believe, though, I do not know, that a sample of the rejects which consist mostly of quartz, would show that they contain enough gold to pay for freight and treatment and therefore should not be sorted out at an expense of a few dollars per ton.

If the trucking concern will accept bulk ore for shipment the sacking is not necessary, but even if sacked, it need not be broken smallerthan minus four inches, and this can be done with a heavy hammer by a man standing up instead of sitting.

Finally, it is manifest that a small power driven rock breaker would be more economical, but its cost, which I estimate at $500.00, installed, is not warranted by the tonnage of ore now in sight.

Customer milling of run-of-mine rock should be considered if reasonable rates can be obtained.

If and when the mine has enough ore in sight to justify them, certain changes should be made for economical operation. They include the rock breaker mentioned above, an enlargement of the station at the top of the winze, a larger hoist, self-dumping skip and rails and a Diesel driven compressor, altogether meaning an investment (not a gamble) of as much as $7,000.

(Signed) Albert Burch
Mining Engineer

Medford, Oregon
Dec. 14th, 1937

This is a copy of
a copy by,

Ruth Terry
Sec.

October 4th, 1940. Return to D.M.

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
329 S. W. OAK STREET
PORTLAND, OREGON

Replies should be addressed c/o State Assay Laboratory 400 E. I Street Grants Pass, Oregon

OREGON BONANZA MINE (gold) — UPPER APPLEGATE DISTRICT JOSEPHINE COUNTY

Owner: Powell Creek Mining Co., Inc.,; Percy V. Long, pres.; Leon C. Osteyee, secretary; Emmet J. Chapman, treas.; 580 Market Street, San Francisco, Calif. An Oregon corporation, dated May 1st, 1939

Location: SE¼ sec. 16, T. 38 S., R. 5 W., at elevations between 2100 and 2300 feet, on the south side of Powell Creek, 19 miles by road southeast of Grants Pass.

Area: 80 acres of patented land.

History: Quoting from Parks & Swartley, 1916 2/

"The Oregon Bonanza mine, 12 miles south of Grants Pass and 3 miles southwest of Provolt, is in the SW¼ (this should be SE¼) sec. 16, T. 38 S R. 5 W., south of Powell creek at an elevation of 2100 feet, as measured by barometer. The country rock is greenstone cut by aplite dikes. All the adits are caved and the mine buildings are in ruins. It is at prese under option by Edward Layton of Applegate and J. M. Letherow of Grants Pass."

The property was purchased by R. C. Hanford and associates from Edward Layton in 1936. In 1939 the Powell Creek Mining Company was incorporated, and took charge. There is at least 1000 feet of old working and a 250 foot shaft, most of which is inaccessible at the present time. There are surface indications of a number of shafts, all of which are caved and inaccessible.

The mine has operated more or less steadily since 1936, and at present is under the management of Mr. A. J. Lindquist. Sizeable amounts o high-grade ore have been removed, some of which ran $17 per pound in gol

Development: The Bonanza tunnel, portal elevation 2100 feet is 496 feet long. The direction to generally S. 60° W. to station 7. A shear zone that is parallel to the "lime dike" cuts acros the tunnel about 100 feet from the portal and a sizeable stope developed no ore. The north wall is siliceous limestone and the south wall is met sediment. At station 7, a north-south shear zone in meta-sediment forms the "hanging wall vein". Several stopes were developed, particularly where cross shears intersect the main north-south shear zone. These sto are as wide as the tunnel and are directed 50° up to the north. It was reported that a level, 15 feet above the Bonanza tunnel, connected the three stopes in the vicinity of station 7 and 8.

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A short cross-cut extends S. 60° W., from station 7 but the map shows that the face is nowhere near the diorite dike it is reported to have been driven to cut. South of station 1 the tunnel connects with a shaft from the surface. Presumably this is t "Old Shaft", now caved and inaccessible.

A cross-cut through the diorite dike which is about 30 feet wide, cuts a hanging wall shear zone that trends S. 55° E., dips 75° N.E., and contains some quartz. On the south, there is an opening reportedly connecting with a stope from below. At station 13, the tunnel is in the footwall shear zone, trending S. 45° E., dips 68° N. E. The shear zone contains quartz with serpentinoid rock, and quartz, which were well mineralized. A shaft from the surface is reported to intersect the tunnel at this point. At the time of the visit 9/19/40) the winze and lower levels were filled with water, and the tunnel beyond the winze was caved.

The winze and levels off the winze are shown on the map. They were inaccessible at the time of the visit. In 1936, J. E. Morrison reported as follows: "The winze is 115 feet deepo on the incline of 100 feet vertically, and has 3 levels. Layton drift 41 ft., 70 foot level and the 100 ft. depths refer to vertical distance. Layton drift trneds N. 53° W. 62 ft., and S. 35° W. 65 ft. to a bulkhead. The 70 foot level runs N. 48° W. 42 ft. and S. 39° E. 70 ft. 100 ft. level at bottom of winze runs S. E. 10 feet. Very little timbering is required". Since that time the lower level has been developed to a greater extent.

Surface inspections revealed three shafts north of the "Old Shaft". The most southerly is open at the surface; the other two are caved. Stil farther north are two cuts, the most northerly being alongside the "lime dike".

The Bonanza tunnel produced most of the gold of the mine's history.

The Eclipse tunnel, portal elev. 1948 feet, was driven into the hil several hundred feet northeast of the Bonanza tunnel. It encounters the hanging wall of a diorite dike; the shear zone trends N. 30° W., and is practically vertical. Some stoping was done on this level.

The Lime Gulch tunnel portal elev. 1841 ft. was driven at a lower level to cut the diorite dike exposed in the Eclipse tunnel, - then cross cut thru the dike and drifted southwest in the footwall shear zone. The diorite dike is about 23 ft. wide here and the footwall shear zone trend N. 30° W., and is vertical. Siliceous limestone appeared in the tunnel walls in the footwall drift.

Equipment: Gardner-Denver equipment unless otherwise specified; 160 cu. ft. compressor, 1 drifter, 1 stoper, 1 tugger hoist with 150 f

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Equipment: (continued)

of ½ inch cable; American fan 8 inch, with 950 ft. of 8 inch pipe; 1 Cushman gas engine, 8/10. 4 h.p. to drive fan; 1 one car, 12 cu. ft. capacity; 1500 ft. of 12 lb. rail; 1100 ft. of 1½ inch pipe line one duplex pump 4 in. x 3 in. x 3½ in.; one Snow duplex pump 4½ in. x 5 in. x 4 in. 200 ft. of pipe line for pump. Compressor house and machine shed.

Topography: The area is mountainous. Elevations range from 1500 ft. at Powell Cr. to over 2500 ft. on the slope southwest of the property. The workings lie between 1841 ft. (Lime Gulch tunnel) and 2230 ft. (Old Shaft). Hillslopes average 30°. Vegetation i dense; the timber is fir and madronna; brush is manzanita over seven ft. high in places, and poison oak profusely scattered to catch the unwary geologist. Weathering and hillside creep extend to depths in excess of five ft. and outcrops are practically non-existent. The exceptions are; the "lime dike" from the portal of the Bonanza tunnel (2100 ft.) to an elev. of 2370 ft.; and along and above the Powell Creek ditch about elev 1700 ft.

Geology:

Rocks: The rocks are metamorphosed sediments (meta-sediments) that contain lenses of siliceous limestone, and quartz stringers that are associated with shear zones. Diorite dikes cut the structure a right angles. Serpentine is reported but none was found.

The meta-sediments have been intensely altered and silicified so th in places they resemble impure quartzites. Toward the southwest, the slaty character ~~per~~ becomes more prominent. The siliceous limestone is gray and may contain masses that are more nearly calcareous quqrtzite th limestone. The diorite is medium fine-grained with altered phenocrysts. Sausseritization is suggested. In the Bonanza tunnel, amphibole needles form an interlocking network in the diorite rock, similar to what the U.S.G.S. term a spessartite in their Grants Pass quadrangle. Specimens of diorite dike rock from other areas do not show this development of hornblende needles to such a marked extent.

"Slickentite" is developed in some of the shear zones. Apparently some of the quartz was injected forcefully and the meta-sediments were intensely sheared. The result is a mass of quartz pods that are surroun by a slick greenish rock, consisting of ~~chl~~ chlorite, epidote, etc. So of the meta-sediments into which no quartz was injected, also develop "slickentite". This "slickentite" markedly resembles serpentine, which it is not.

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Geology (continued)

Mineralization: The gangue minerals of the veins are principally quartz with subordinate calcite. The ore minerals are free gold, pyrite, and a small amount of galena. The pyrite may carry some gold.

Apparently quartz was injected in at least two epochs. The first was accompanied by considerable stress, developing "slickentite"; the second deposited pure quartz and the metals either accompanied this epoch or are later. The second epoch quqrtz usually occurs nearer the center of the vein. Some sulfides are found in the "slickentited" portion of the quqrtz vein - the pyrite frequently occurs as distinct, small crystals, - and these portions are not, as a rule, good ore.

Some of the sulfides are fine-grained and massive, and may occur in narrow veinlets. Some of the sulfides consist of small crystals. All galena observed was in the quartz. Little, if any, metallization occurred in the wall rocks.

Gold is usually free. It is reported as occurring in thin sheets where the quartz splits along sulfide veinlets. Laboratory specimens of some of the $34,000 ore shows free gold in such fine grained quartz that the quartz looks like chalcedony. Some of the gold is in the pyrite, particularly when it occurs in the non-slickentited portion of the vein.

The ore is hand sorted - the high grade is shipped and the low grade is sent to the mill at the Humdinger mine.

There is evidence of re-silicification, and re-crystallization as a result of mineralizing solutions, and dynamic stresses.

Structure: The structural trend of the rocks is generally N. 50° E., varying from N. 40° E., to N. 60° E. There has been shearing parallel to the major structure, as evidenced by the shear zone in the Bonanza tunnel where the meta-sediments that contact the "lime dike" have been sheared and laminated. Along the Powell Cr. ditch, the meta-sediments show considerable evidence of shearing parallel to the general structure (N. 50° E.) although joint planes give a suggestion of a structure at right angles.

The diorite dikes roughly cut across the major structure at right angles. Both dikes, in the Bonanza and Lime Gulch tunnels have been sheared on footwall and hanging wall, and these shear zones have been mineralized to varying degrees. Bulldozer cuts to the northwest of the Bonanza tunnel, and at the upper end of the Powell Cr. ditch traverse rocks that appear to be granular, and approximate diorite in composition. However, they do not have the hornblende needles characteristic of the Bonanza dike

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Geology: (continued)

Structure (continued):
There is a strong north-south shear zone that shows in the Bonanza tunnel between stations 7 and 12, and metallization is more concentrated where it is cut by cross-shears. Whether this particular zone cuts the "lime dike" is not known.

Another group of shear zones may be generalized as N.E. - S.W. trending zones.

The "lime dike" strikes about N. 57° E., and dips 67° S.E. The surface outcrop is on a hillside with a 20° - 30° slope and the trend of the outcrop is N. 67° E. The dip is such that 100 ft. difference in elevation produces a 42 ft. offset in the horizontal projection of the lens. The outcrops extend from the portal of the Bonanza tunnel, elev. 2100 ft. along the N. 67° E. trend to an elev. of 2370 ft. where it can no longer be traced. Outcrops do not show downhill from the Bonanza portal. The outcrops are so prominent, and so easily distinguished, that the lack of outcrops leads to the conclusion that the "lime dike" is in reality a small lens, that it has little more lateral extension than shown by the outcrops.

The amount of displacement along any one shear zone appears to be small. Intersecting shear zones show little evidence of displacement. The conclusion is that any one shear zone produces little displacement; - the total displacement resulting from a great number of shear zones may be great. Thus, if no one shear zone produced pronounced displacement, it is doubtful if the two diorite dikes, as exposed in the Bonanza and Lime Gulch tunnels, represent one dike that is faulted.

Ore Shoots: High grade lenses of ore are found in the quartz of the sub levels of the winze in the Bonanza tunnel. These lenses have a maximum width of 12 inches are are about 20-25 ft. in their greatest dimension. They rake about 45° to the northwest, according to J. E. Morrison. Mr. Lindquist confirmed this information, but stated that in his opinion the individual lenses did pitch toward the northwest, but that the lenses seemed to be en eschelon to the southeast.

The stopes in the north-south shear zone between stations 7 & 12, Bonanza level, rake downward to the south at a 50° angle. However, the cross-shear zones have their dip in the same direction, and if concentration is more pronounced at the intersection of these shear zones, this would account for the alignment of ore shoots at this point.

There is no report of cross fractures for the hanging or footwall veins of the diorite dike.

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3/ Shenon, Phillip J., "Geology of the Robertson, Humdinger, and Robert E. gold mines, southwestern Oregon": U. S. Geol. Survey, Bull. 830-B pp. 48-51, plate VIII, 1933.

4/ Wells, Francis G., U. S. Geological Survey, personal communication.

5/ Lindquist, A. J., operator of Oregon Bonanza Mine.

INFORMANT

Mr. A. J. Lindquist; J. E. Morrison; and Ray C. Treasher,

REPORT BY

Ray C. Treasher, 10/4/40

Josephine County
Lower Applegate District

Name: Oregon Bonanza Mine (gold quartz)

Owner: Edward Layton. Under option to: R. C. Hanford and Associates, Williams, Oregon.

Location: 18 miles by road southeast of Grants Pass on ridge south of Powell Creek in Sec. 16, T. 38 S., R. 5 W.

Area: 80 acres of patented land described as E. 1/2 of S.E. 1/4, Sec. 16, T. 38 S., R. 5 W.

History: This is an old property and described on Page 170 in the Handbook. There is at least a 1000 feet of old workings and a 250 foot shaft, most of which is inaccessible at the present time. At one time it had a five stamp mill. Mr. Hanford purchased the property from Mr. Edward Layton in 1936 and it has been in operation ever since.

Development: The collar of the wintze is reached by a meandering crosscut tunnel which has a general coarse of S. 23° W. 496 feet. The wintze 115 feet deep on the incline or 100 feet vertically has three levels. Layton drift 41 feet, 70 foot level and the 100 foot depths refer to vertical distance. Layton drift runs N. 53° W. 62 feet and S. 35° W. 65 feet to a bulkhead. The 70 foot level runs N. 48° W. 42 feet and S. 39° E. 70 feet. 100 foot level at bottom of wintze runs S.E. 10 feet. Very little timbering is required. A new tunnel is planned to tap the ore body at a greater depth in order to do away with the underground hoisting.

Geology: Greenstone and sedimentary rocks are present at the Oregon Bonanza. The first 79 feet of the crosscut tunnel is in limestone which strikes S. 45° W. A quartz diorite and greenstone (metabasalt) are also cut by the tunnel. There is a granodiorite dyke which is 31 feet wide running through the greenstone where it is cut by the tunnel. The ore is found along the footwall of the granodiorite which strikes N. 45° W. and dips 60 to 70° to the N. E. Vein minerals are quartz, calcite, pyrite, arsenopyrite, and free gold. The vein is 3 to 4 feet in width and is not frozen to the hangwall, and there is a gouge along the footwall. Gouge was noticed at several points along the footwall. High grade lenses of ore are found in the quartz. These lenses have a maximum width of 12 inches and are about 20 to 25 feet in their greatest dimension. They rake about 45° to the northwest.

Equipment: Compressor and necessary small tools for operation of the mine, including a blower and a pump.

Mining: The ore and the wall rock have to be mined separately and hoisted up the wintze by a tugger hoist. The ore is then sent to an ore sorting bin where the high-grade is sorted, sacked and then sent to a smelter. The lower grade material is sent to the Humdinger Mine mill for milling. Three to five men are employed at the mine.

Miscellaneous Information:
Elevation from 2200 to 2700 feet. Steep Mountainous topography. Good road to the mine. Plenty of timber on the property. Maximum two to three feet of snow. Water for milling will have to be developed or pumped from Powell Creek, a vertical distance of approximately 100 to 300 feet depending upon where the mill is located.

Confidentially:

Mr. Hanford had smelter returns in the amount of $6494.47 from 1936 to April 16, 1938. He claims to have mined but not extracted another $6500. I do not know on what he basis this statement. ~~The~~ ten samples were taken on the 70 ft. level and one sample from the 100 ft. level showed an average value of $34.68 for an average width of 2.36 feet.

Informant: J. E. Morrison. 9/6/38.

July 15 1939 Mining Journal.
Powell Cr. Mining Co, Inc. of Grants Pass.
permission from State to sell $25,000 for development.
P. V. Long, Merchants Exchange Bldg. San Francisco
is Pres. R. C. Hanford - V. P.

~~Bon Elev a float 1635 at 11 a.m.~~

Arg Bonanza. Elev. of shaft 2230' (corrected) Dump 90' high. There is a shallow gulch trending N 50° W. from the shaft. This was followed.

At elev. 2370' right on nose of ridge, a quartz stringer outcrops. Outcrop area about 2' square. Major fracture in qtz. trends N 20° W. It cuts a rock that is laminated into ¼" plates, trends N. 20° E (?) + dips about 75° SE. This rock has lenticular solution pits aligned with cleavage that suggests it has a high talc content but cannot be classed as a true ls. Could this be the extension of the lime strata at the portal of Bonanza Adit? Also. - could the qtz be the outcrop of the Bonanza adit "hanging wall vein"? Further study shows that the "lime" is a continuation of the lime at portal Bonanza adit + that the trend is N. 50° E. instead of 20° so there is local slump.

The ridge nose trends E-W. from the pt. Continued W. along it on sort of trail. Occasional pits of cut, 16" stove wood, many, many years old. Then N. down hill toward Powell at elev. 2340. Numerous pits + holes as if some prospect hunter were busy. At elev 2340 is a road-like excavation on hillside, about 200' long. Rock is mainly a meta-sed. but there is a suggestion of a rock that might be a porphyry-d. for at least 1000' west of the "lime dike".

Ditch line. Elev. 2470'

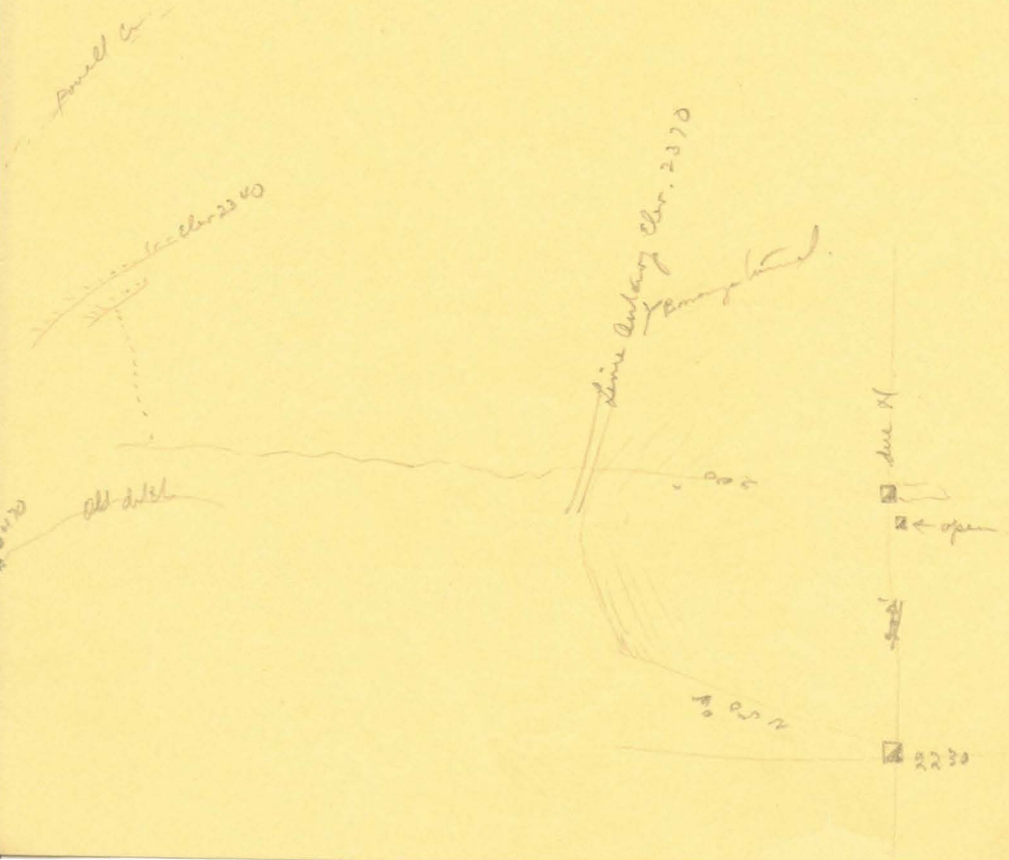
N. 50° E _____ 45 pos.

N. 90° E _____ 28 pos.

here ditch + contour due E.

Elev. 2310 old caved shaft, good right dump.

?200' due S & shaft mentioned at beginning.



Bonanza portal - dump } { N. 40°W. 190'
Sta A } { N. 23°W 80' to big fir tree.

S 57°W 67°SE.

These shafts. N. 70°W. from first stake in road to "Old Shaft", probably first < pt. beyond forks with Huntingdon road.

Sept. 27, 1940
Rain.

Oregon Bonanza Mine.

Traverse from road to dozer-cuts on hillside.

Brunton + tape traverse — Lindquist & Treasher.

Ditch x'ing 1610' at 9 A.M.

Leave road. — elev. 1850' — {4th ⅄ pt. above where road from Lime Gulch comes in}.

1 - 2 - S 64° W — 115' ✓
2 - 3 - S 75° W — 116' ✓
3 - 4 - S 68° W — 140 ✓
4 - 5 - S 86° W — 50' ✓
5 - 6 - S 57° W — 126' ✓
6 - 7 - S 43° W — 119' ✓

Down the hill from # 7 to Tunnel Proj. site. Just above it is outcrop of ms. trend N. 50° E. shows shearing. One bit of porphyroid rock but not dacite.

7 - 8 - S 54° W — 195' ✓
8 - 9 - S 44° W - 128' ✓
9+30' outcrop of ms cut by qtz veinlets
9 - 10 S 16° W - 163' ✓
10 - 11 S 12° W - 130' ✓
11 - 12 S 22° W - 100' ✓

Sta 12 is beginning of cut.
12 - 13 — S 65° W - 124' ✓
13 - 14 — S 17° W — 171' - elev. 2230' at 11^{30}

Sta 14 end of cut.

Powell Cr. Ditch:

Greenstone or mv. around & where flume x-es. Rock is sheared parallel to structure & almost a schist. Ditch looking stuff consists of knots in the schist.

at beginning of flume, ditch in granular rock appears. Above & flume x-ing Powell Cr. must be body of granitoid rock above. Beyond flume x-ing is mv.s.

57 end of rock ditch
67 beginning of wood flume — 335'
140 end of wood flume & cross flume — 700
1035

Powell Cr. Ditch Line 10/1/40

175 paces = 875' first outcrop of mv.

218 to 265 (1090'-1325') S bank of ditch appears mv. up to 15' high around nose of ridge between 1st & 2nd gulches. Mv. is slightly schistose with knots of included light colored masses. Trend is about N. 50° E. & dip is high.

290 paces (1450') second gulch. Powell Cr. Tunnel site is just up the gulch from this point.

320 (1600') up the hill, bold outcrops of mv. with parallel alignment. Grand Trend N 60° E.

480 (2400') third gulch, with flume.

504-526 (2520-2630) ditch in cut thru mv.

555-582 (2775-2940) rock S. wall & ditch, mv. with parallel alignment & slightly coarser grain structure. Trend N 50° E.

615 (3050') beginning of flume. Rock is still ms. or mv. but weathered pieces have a small porphyroid texture like some re-x'tyallization has been undergone. Outcrops overhead are also ms.

680 (3440') first appearance of granular float. Float from here to Powell Cr. is granular & sheared with gneissic ms. No bold outcrops overhead altho rubble is heavy. It would appear as if a different rock type were encountered.

800 (4000') Ditch x'es Powell Cr. Ms. + bold outcrops continue upstream. Has very slaty fracture, trend is N 50°E.

Hillside above & S of ditch at 4000' – Outcrops consist of ms in varying degree of meta. Parallel structure with tiny augen is common. Some definitely schistose. Trend is still N. 50°E. As <u>float</u>, quantities of granular rock was found, but none in place. The hillside is well covered with rubble, or talus, but few outcrops & none of them are granitoid. One piece of vein qtz was found. As this zone is bounded on both sides by boldly outcropping ms. & as the zone trends <u>across</u> the structure, & because of the abundant float it is deemed possible that the diorite dike could extend thru to here.

At. Sta 14 minus 25' is a place where some values were found in the overburden. Most of the rock in the cut is a fine gr. me. or md. with porphyroblasts in some portions. Near the east end of the cut a piece of coarse gr. rock like diorite but it lacks the amphibole network of the dike rock from Bonanza level.

12-15 - S 23° W - 113' to upper cut. #15 is beginning of cut.
15-16 - S 51° W - 60' to end of cut. Elev. 2250'

Powell Co. Mining Co., Inc.; Percy J. Long, pres. owner; Leon C. Ostergle, secry; Emmet J. Chapman, treas.; 580 Market St, San Francisco, Calif., an Oreg. corp. dated May 1st 1939. Property purchased from Edw. Layton.

Equipment: Gardner-Denver 160 ft³ compressor, 1 Gardner-Denver drifter, 1 stoper; G-D tugger hoist with 150' ½" cable; American fan 8" with 950' of 8" pipe; 1 Cushman gas engine 4 h.p. driving fan; 1 ore car 12 ft³; 1500' of 12# rail; 1100' of 1" pipe line; one G-D duplex pump 4" x 3" x 3½"; one Snow duplex pump 4½" x 5" x 4". 300' of pipe line for pump. Compressor house & machine shed.

A. J. Lindquist, informant.

Hammersley Limestone.

At Riddle Sta. take road W. along S. side of track about 100 yds, cross to N. side of track to pt. where road crosses R.R. 2nd time, distance 2.8 miles. Then thru gate & in general N.W. direction 1.75 miles by dirt, unimproved road to Hammersley place.

Barometer elev. 1130' at 10[15] a.m. Low cloudy but sun shining at the moment.

Hillside is a slump area. There is a mixed up mess of pebble cgl., well indurated, serpentine, diorite & some calcareous material that is well x'fied.

Fred Byrne.

ls. strike N. 75°W, dips 75° S 15° W.

a very fine gr. cherty looking ls. white to light pink, streaked with hair line dark streaks & ¼" streaks of translucent calcite. S. wall is a reddish material like bleached red shale but is limy. Country rock on S is a sandy shale that is cherty in part.

Width exposed is 10' and for 20' of length.

$$\begin{array}{r} 417 \\ 12\overline{)5000} \text{ cu. ft.} \\ \underline{48} \\ 20 \\ \underline{12} \\ 80 \end{array}$$

400 tons/ft. of depth

50

20,000 T.

Suggested trenching & estimated 20,000 T. min. if 10' x 500' x 100'

Applegate Rent

CROSS REFERENCE RECORD

FIRM NAME OR SUBJECT OREGON BONANZA MINE , Williams, Oregon **FILE NO.**

DATE	REMARKS
	Reports by Albert Burch, Dec. 14, 1937, and January 11, 1937
	filed under Oregon Bonanza Mine in General Files

SEE **FILE NO.**

DATE

SIGNED

FILE CROSS REFERENCE RECORD UNDER NAME OR SUBJECT LISTED AT TOP OF THIS SHEET, AND IN PROPER DATE ORDER.

PAPERS REFERRED TO SHOULD BE FILED UNDER NAME OR SUBJECT LISTED UNDER "SEE"

YAWMAN AND ERBE MFG. CO.
ROCHESTER, N. Y.

FORM NO. 099CR

ALBERT BURCH
Mining Engineer
Black Oak Ranch, Medford, Oregon

OREGON BONANZA MINE

My first visit to the Oregon Bonanza Mine was on January 10th of this year, (1937), and my conclusions with reference to it were embodied in a letter written to Mr. Robert C. Hanford on the following day.. I visited it again on December 11th, and, as a result of that visit, have no reason to change the views stated in my letter of January 11th.

The attractive feature of this prospect is the unusually high grade of the ore, while the unattractive feature is the very limited extent of the quartz lenses within the vein. These are so small and narrow that even with most efficient management, it is doubtful whether ore averaging less than $100.00 per ton would pay all expenses including development work. When I was told that a recent shipment had returned only about $90.00 per ton, I was prepared to say that further work would probably be useless, as a diminution in value with depth would be indicated. I reserved judgment however, pending returns from a sample that I saw taken from sacked ore that came from the bottom level. The sample was properly taken for the purpose of an approximate estimate of the value and I was informed by telephone yesterday evening that it assayed $350.00 per ton. I was also informed yesterday by the man who purchased a small shipment early this month, that a careful sample of that ore assayed $325.00 per ton. The average returns from shipments to the smelter have been $200.00 per ton after deducting freight and treatment charges, and these two lots are therefore higher grade than the average, though not up to the highest grade lot that has been shipped. My conclusion, therefore, is that the mine is as good a prospect as it was a year ago and perhaps better for two reasons: The first being that the single lens exposed in the lowest level, is fully 18" wide as against 8" for the two exposures seen then; and the second one that a new lens, the existence of which was indicated in the north face of the first sub-level, has been shown by drifting two rounds.

With these facts in mind, the question is what should be done next, Mr. Hanford proposes to stope the ore remaining between the bottom level and the lext sub-level above it and try in this way to accumulate a fund sufficient for sinking the winze a few feet deeper in order to develop more ore. As I see it, he can hardly hope to ship more than fifteen tons of sorted ore from this source and perhaps as little as eight tons, making it a "hand to mouth" operation, but he should be allowed to try it. He will probably be able to build up a small surplus in this way, but not enough for an economical development campaign as follows:- 1st- Drive the north drift on the first sub-level to explore the ore already exposed there. This should pay its own way after the drift is cleaned out. 2nd- Sink the winze with the present equipment to a further depth of thirty feet; and 3rd- Drive along the vein from the bottom of the winze a distance of fifty feet each way. This will cost about $3500, and I would consider it a good gamble, even though only a small part of it could be provided from the proceeds of the ore in sight. The best lens of ore exposed

in the floor of the first sub-level is in the drift south of the winze, and there has been almost no exploratory work in that direction at any lower level.

The program that was recommended in January was to sink the winze to a further depth of 100 feet and do some drifting from the bottom. Instead, the winze has been deepened not more than 60 feet and there has been performed a total of about 70 feet of drifting on three sub-levels. This work cost about $3500.00 more than I thought it would and I still believe that the cost has been excessive. But, with only a few hours on the ground, during which I had very little opportunity to talk with Mr. Hanford, except in the presence of the workmen, it was very difficult to put my finger on the cause or causes. Some that did occur to me are the following: He appears to have only one good miner at the present time and his other men, when they are working at all, are doing work of doubtful value. His hoisting equipment is inefficient and poorly arranged, as for instance, in the one little item of the trap doors over the winze. They are hinged on the wrong side, so that the hoist man has to go to them and push them down, while, if hinged on the right side, they could be raised by ropes and pulleys within the hoistman's reach and pulleys within the hoistman's reach and lowered by gravity.

One thing that has added to the ordinary cost of winze sinking and was entirely unavoidable, was that ore was encountered in the winze itself, and had to be broken separately.

I have been asked to give my opinion regarding the manager's work and, so far as I am able to judge from very brief contacts, I can put it in a few words. He appears to work hard himself when he is on the ground and knows how to drill and blast and break rock. Good miners are scarce in Southern Oregon, but, by using diligence, he should have been able to find a good crew for this small operation. He appears to have no mechanical ingenuity or knowledge and should have the advice and help of someone who has.

Coming now to the question of handling the ore upon the surface, this appears to me to be very inefficient. Briefly, the ore is dumped into a shallow box and then sorted, the rejects being shoveled to the second class cump and the shipping ore to another shallow box where it is broken by hammers to minus two inch size for sacking.

I believe, though, I do not know, that a sample of the rejects which consist mostly of quartz, would show that they contain enough gold to pay for freight and treatment and therefore should not be sorted out at an expense of a few dollars per ton.

If the trucking concern will accept bulk ore for shipment the sacking is not necessary, but even if sacked, it need not be broken smallerthan minus four inches, and this can be done with a heavy hammer by a man standing up instead of sitting.

Finally, it is manifest that a small power driven rock breaker would be more economical, but its cost, which I estimate at $500.00, installed, is not warranted by the tonnage of ore now in sight.

Customer milling of run-of-mine rock should be considered if reasonable rates can be obtained.

If and when the mine has enough ore in sight to justify them, certain changes should be made for economical operation. They include the rock breaker mentioned above, an enlargement of the station at the top of the winze, a larger hoist, self-dumping skip and rails and a Diesel driven compressor, altogether meaning an investment (not a gamble) of as much as $7,000.

(Signed) Albert Burch
Mining Engineer

Medford, Oregon
Dec. 14th, 1937

This is a copy of
a copy by,

Ruth Terry
Sec.

Josephine County
Lower Applegate District

Name: Oregon Bonanza Mine (gold quartz)

Owner: Edward Layton. Under option to: R. C. Hanford and Associates, Williams, Oregon.

Location: 18 miles by road southeast of Grants Pass on ridge south of Powell Creek in Sec. 16, T. 38 S., R. 5 W.

Area: 80 acres of patented land described as E. 1/2 of S.E. 1/4, Sec. 16, T. 38 S., R. 5 W.

History: This is an old property and described on Page 170 in the Handbook. There is at least a 1000 feet of old workings and a 250 foot shaft, most of which is inaccessible at the present time. At one time it had a five stamp mill. Mr. Hanford purchased the property from Mr. Edward Layton in 1936 and it has been in operation ever since.

Development: The collar of the winze is reached by a meandering crosscut tunnel which has a general coarse of S. 23° W. 496 feet. The winze 115 feet deep on the incline or 100 feet vertically has three levels. Layton drift 41 feet, 70 foot level and the 100 foot depths refer to vertical distance. Layton drift runs N. 53° W. 62 feet and S. 35° W. 65 feet to a bulkhead. The 70 foot level runs N. 48° W. 42 feet and S. 39° E. 70 feet. 100 foot level at bottom of winze runs S.E. 10 feet. Very little timber is required. A new tunnel is planned to tap the ore body at a greater depth in order to do away with the underground hoisting.

Geology: Greenstone and sedimentary rocks are present at the Oregon Bonanza. The first 79 feet of the crosscut tunnel is in limestone which strikes S. 45° W. A quartz diorite and greenstone (metabasalt) are also cut by the tunnel. There is a granodiorite dyke which is 31 feet wide running through the greenstone where it is cut by the tunnel. The ore is found along the footwall of the granodiorite which strikes N. 45° W. and dips 60 to 70° to the N. E. Vein minerals are quartz, calcite, pyrite, arsenopyrite, and free gold. The vein is 3 to 4 feet in width and is not frozen to the hangwall, and there is a gouge along the footwall. Gouge was noticed at several points along the footwall. High grade lenses of ore are found in the quartz. These lenses have a maximum width of 12 inches and are about 20 to 25 feet in their greatest dimension. They rake about 45° to the northwest.

Equipment: Compressor and necessary small tools for operation of the mine, including a blower and a pump.

Mining: The ore and the wall rock have to be mined separately and hoisted up the wintze by a tugger hoist. The ore is then sent to an ore sorting bin where the high-grade is sorted, sacked and then sent to a smelter. The lower grade material is sent to the Humdinger Mine mill for milling. Three to five men are employed at the mine.

Miscellaneous Information:
Elevation from 2200 to 2700 feet. Steep Mountainous topography. Good road to the mine. Plenty of timber on the property. Maximum two to three feet of snow. Water for milling will have to be developed or pumped from Powell Creek, a vertical distance of approximately 100 to 300 feet depending upon where the mill is located.

Confidentially:

Mr. Hanford had smelter returns in the amount of $6494.47 from 1936 to April 16, 1938. He claims to have mined but not extracted another $6500. I do not know on what he basis this statement. ~~The~~ Ten samples were taken on the 70 ft. level and one sample from the 100 ft. level showed an average value of $34.68 for an average width of 2.36 feet.

Informant: J. E. Morrison. 9/6/38.

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