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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: LOS CONQUISTADORES

ALTERNATE NAMES:

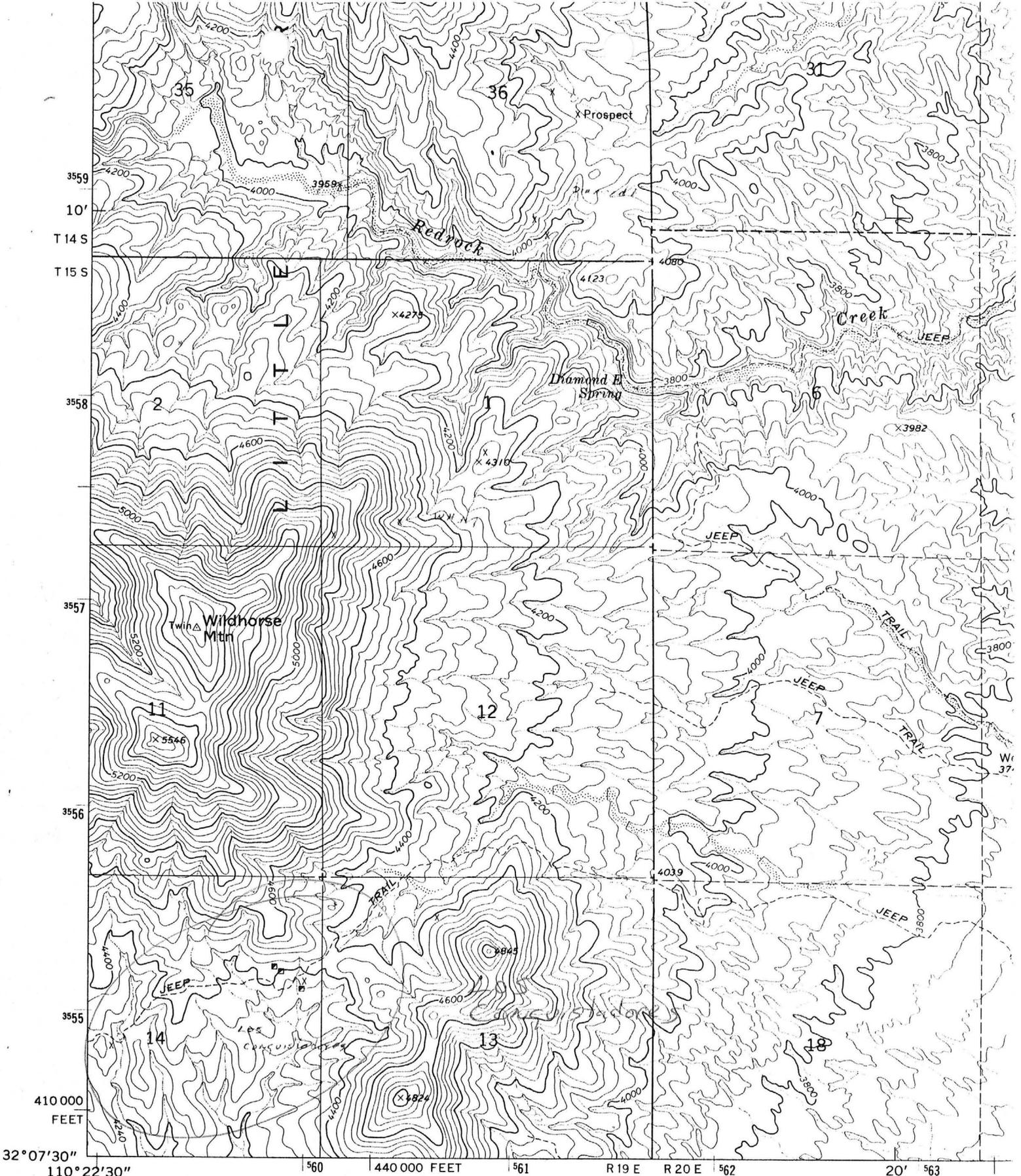
COCHISE COUNTY MILS NUMBER: 871

LOCATION: TOWNSHIP 15 S RANGE 19 E SECTION 14 QUARTER NE
LATITUDE: N 32DEG 08MIN 00SEC LONGITUDE: W 110DEG 21MIN 50SEC
TOPO MAP NAME: WILDHORSE MOUNTAIN - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
GOLD

BIBLIOGRAPHY:
ADMMR LOS CONQUISTADORES FILE
WEED W H, 1920 MINES HANDBOOK P 174
DREWES H, 1974 USGS MAP I 832



Mapped, edited, and published by the Geological Survey

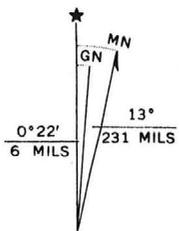
Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial photographs taken 1972. Field checked 1973

Projection and 10,000-foot grid ticks: Arizona coordinate system, east zone (transverse Mercator)

1000-metre Universal Transverse Mercator grid ticks, zone 12, shown in blue. 1927 North American datum

Fine red dashed lines indicate selected fence lines



LETA FLAT
WEST
3948 III SW



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ENGINEERS REPORT

**Los Conquistadores Group of Mines,
Little Rincon Mining District,
Near Benson, Arizona.**

July 2, 1918.

By James C. Hubbard,
Mining Engineer.

Tucson, Arizona.

July 2, 1918.

The Director of Los Conquistadores Mining Company,
Benson, Arizona.

Gentlemen:

According to the request of Messrs. Frank Masseletti
and Henry Valenzuela, directors of your company, I have made
an examination of the group of mines owned by your company
and herewith submit to you my report.

Respectfully submitted,

James H. Hubbard,

Mining Engineer.

LOCAT.

Los Conquistadores Group of mines consisting of ten mining claims named the Goldfield and Carolina Nos. 1 to 9 inclusive, lodes, are located in the Little Rincon Mining District about 14 miles northerly from the town of Benson, Arizona, and westerly three miles from the San Pedro river. These mining claims occupy a portion of the eastern flank of the Little Rincon mountains.

A fairly good road connects the mines with the town of Benson, a station on the mainline of the Southern Pacific Railway. Two miles of this road in the vicinity of the mines is rather hilly and rough, but is not bad for a mountainous country.

GEOLOGY

The country rock of the region is granite. This is an eruptive plutonic rock which in one portion of the district to the west of your mines shows a coarsely crystalline granitoid texture. From that point easterly across and beyond your property, the texture of the granite is finer grained, in places being a granodiorite.

These granites and granodiorites were at one time covered with the series of sedimentary rocks which are now eroded. The sedimentaries are now found in contact with the granites in the eastern portion of this mineralized belt, a mile or more easterly from your property.

A great number of pegmatite dikes outcrop through the granite. A number of these seem to radiate in all directions from a hill on the Carolina No. 8 lode. Some of these and most of the other pegmatite dikes on your property have a strike varying from $S 45^{\circ} E$ to $S 65^{\circ} E$. The thickness of these dikes vary from a few inches to several feet.

The origin of the pegmatite dikes is as follows:
When the molten granite was forced up toward the surface of the earth, it cooled. In cooling the granite shrunk and cracks were formed. Material, still molten, was forced up through these cracks forming dikes.

Gold and other rare minerals are often carried in pegmatites and the occurrence of gold in your property is probably associated with these pegmatite dikes.

On the top of the hill above mentioned on the Carolina No. 8 lode there outcrops a dike of diorite which strikes southerly across the Goldfield and Caroline No. 4 lodes. About the center of the Goldfield lode this diorite dike has been faulted N 65° W, a distance of 135 feet, from which point it continues its strike south throughout the length of the Carolina No. 4 lode. This diorite dike has a width which varies from a foot or more up to twenty or thirty feet. Other diorite dikes occur in the region. They were forced up through the granite after the pegmatites as they cut the pegmatite dikes.

Summarizing the geological condition, we have a ground mass of granite cut by many pegmatite dikes through which is intruded a large dike of diorite.

VEINS

In some of the pegmatite dikes and in places as developed along the diorite-granite contact are veins of quartz. These veins vary in thickness from less than an inch to a foot or more. Development has not determined the length of these veins but they are probably short. Some of these veins carry gold. The gold was originally laid down with pyrite or iron sulphide. The pyrite has been oxidized to iron oxide leaving the gold free.

None of the development work done has been below the zone of oxidation so none of the original sulphide ores

are in evidence.

As these mineralized dikes were eroded the easily soluble minerals were removed in solution while the freed gold, not being soluble, remained. Some of this gold next to the surface may have been carried away mechanically by the action of torrential rain storms. However most of the gold settled in the dike. Such an action over a long period of time results in a concentration of the gold values in the oxidized portion of the vein. The depth to which oxidation extends varies greatly in different regions and as a rule extend to depths of at least 100 to 150 feet. The depth of oxidation reaches to or somewhat below ground water level. Your deepest shaft has not reached this depth at 115 feet.

Not yet having reached the zone of sulphide ore, no comparison can be made of the relation of the oxidized to the sulphide ore. Therefore it cannot be determined to just what extent the oxidized ores have been secondarily enriched, but it seems that this must have occurred to some extent.

The most notable vein on your property which present development has exposed is that occupying the fault fissure on the Goldfield lode. This is the fault which displaces the diorite dike. This fault has a strike of N 65° W and has displaced the dike a distance of 135 feet. The fault pitches to the south east with dips varying from 42° to 50°. Much material dragged from the diorite dike is found in the fault. The fault filling is quartz, talc and other decomposed material from the granite. The better gold values are found in the quartz.

DEVELOPMENT

An incline shaft has been sunk in this fault to the depth of 55 feet. To the south east at a distance of 75 feet a vertical shaft has been sunk to the depth of 115 feet, where it intersects the fault. A level connects the vertical

and incline shafts at the depth of 55 feet. On this level the vein has been opened up by drifts for a length of 35 feet. Some stoping on the vein has been done. An open cut on the surface east and adjacent to the incline shaft has been driven on the vein for a distance of 12 feet. This exposes the faulted end of the diorite dike. In this open cut and in the upper 15 feet of the incline shaft the vein filling has a width of from four to five feet thick.

At a depth of 15 feet in the incline shaft, a sample across a width of five feet of vein matter gave an assay of \$7.20 gold per ton. A sample confined to the quartz, about a foot thick, would undoubtedly have given a much higher assay. In this part of the shaft the hanging wall is pegmatite and the foot wall granite. Similar ore shows in the open cut. In this the foot wall is diorite.

At the depth of 15 feet in the incline shaft the vein abruptly narrows to a few inches and remains so to the depth of 40 feet where it again widens, reaching a thickness of 20 inches. A sample taken across these 20 inches gave an assay of \$1.80 Gold per ton. The material at this point is a crushed granite cemented with quartz. In the hanging wall is a 6 inch thickness of diorite.

On the 55 foot level the vein filling widens to three feet. Included with this is a foot or more of quartz, with talc and other altered material on either side. The hanging wall is a thickness of a foot of diorite and the foot wall is granite. A sample across three feet of the face of the south west drift gave an assay of \$2.20 gold per ton. Another sample across one foot eight inches, the material being quartz, gave an assay of \$10.10 gold per ton. A sample across a foot of quartz in the face of the north drift gave an assay of \$8.26 gold per ton.

In the quartz and other material of this vein there is considerable iron oxide, and cubical cavities show the

original presence of pyrite.

On the Caroline No. 1 lode a shaft has been sunk to the depth of 28 feet, following a quartz vein. This vein is a fissure in the granite which strike N 15 E. Filling material is crushed granite cemented by quartz. The quartz of the vein has a thickness of from two to four inches. The quartz is vugged and the vugs are filled with hematite. The crushed granite is stained with iron oxide.

Some samples taken from this vein and panned showed the presence of free gold.

Several other shafts and cuts have been sunk in different veins on the property.

A sample taken from the vein in the diorite granite contact on the Carolina No. 8 lode, when panned, showed free gold. Another sample taken from another place on the same vein when panned, showed a few colors of gold as did also a sample of the iron stained diorite taken from this dike.

CHARACTER OF THE ORE

The character of the ore is that of a quartz carrying gold. The vein material on either side of the quartz is for the most part altered wall rock and carries low values in gold and this enrichment is probably derived from the decomposition of the quartz.

The richness of the quartz seems to be proportional to its thickness. Thin seams of quartz less than an inch in thickness I found to often contain gold visible to the naked eye. Thicknesses of quartz, say 20 inches, gave assays of \$10.10 gold per ton.

I could not determine the length of the enriched sheets as development in most places is limited to shallow shafts. The length of 35 feet along the vein in the workings of the incline shaft at 55 ft. depth, exposes the greater length of developed mineral.

The vein in the contact between the granite and the granite dike, if continued, has considerable length, but no definite statement can be made as to its length because it is undeveloped. The vein carries gold but for the same reason its value cannot be determined.

WOOD.

No timber grows on the property. Timbers for stulls to support the hanging wall and other purposes can be obtained at Benson, Ariz.

WATER.

Water sufficient for camp purposes and for a small cyanide leaching plant can be obtained on the property and in its vicinity.

EQUIPMENT.

The vertical shaft on the Goldfield claim is covered by a good head frame. The shaft is timbered down 30 feet from the top. Near this shaft is an assay office, not equipped. Near this is a mill building in which is a good crusher and challenge feeder and some other small equipment. There are other camp buildings on the property.

MILLING.

Enough ore is developed to warrant the installation of the small Gibson Mill, as you have planned, in addition the crusher and other machinery on the ground. To this should be added a couple of small leaching vats, zinc boxes etc necessary for cyanide treatment. The total cost of this additional machinery to complete a small plant of not over 8 tons daily capacity should be not over \$1,500.00 installed. No larger plant than this should be considered at this time.

RECOMMENDATIONS.

In many places where veins outcrop on the surface and the quartz pans gold, some work should be done to determine the

...statement can be made as to the tendency of
the ore to strike it continued use of the
the fact in the company between the Electric and

the size of the veins and their richness. Any bodies of ore thus
thus opened up may then be developed to depth by shafts.

Until the character of the ground and the habit of the
ore are thoroughly learned, all work done should be confined to
the ore and this ore milled in the 8 ton plant. When the values
in the ore quit, work in that place should be stopped and taken
up in some other place on ore.

Respectfully yours,

James H. Hubbard

A. L. PELLEGRIN

(Formerly for 6 years U. S. Assayer)

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Assay and Analysis Certificate

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May 11

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	Gold Oz.	Val. at \$20	Silver Oz.	Val at	Copper	Lead	Zinc	
Pocket #1	4.48							
Socorro "2	11.44							
Pump Average "3	0.76							

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Answers	Answers	Answers	Answers
5 Answers	6 Answers	7 Answers	8 Answers
9 Answers	10 Answers	11 Answers	12 Answers
13 Answers	14 Answers	15 Answers	16 Answers
17 Answers	18 Answers	19 Answers	20 Answers

Answers
Answers
Answers

8

22