A REPORT.

on the property of

TIGER LILY MINING & MILLING CO. GRANITE COLO.

by

Geo. J. Bancroft M. E. Denver, Colo.

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PROPERTIES

The Tiger Lily Mining & Milling Co. owns seven patented claims and nine unpatented claims, embracing in all about 160 acres of ground. A glance at the map will show the various claims and the workings. The workings are sketched in, so their location is more or less approximate. The company owns a good prospecting outfit consisting of a good forge, anvil & tools, a horse whim, steel rope and two buckets, a team of horses, harness & wagon, some steel and other tools, etc. There is a blacksmith shop and a galus frame on the ground but no other buildings.

LOCATION

This property is located four miles S. E. of Granite Colo.

Most of the ground lies on a mesa about 500 ft. above the level of the Arkansas river. A little stream runs down through the property and most of the ground is in the basin of this stream.
Veins and Geological Formation

There are a large number of strong veins in this group. The stronger veins trend N. W. and S. E. There are, however, many cross veins. I did not attempt to trace out and map each vein because none of them of them had been proven of any value and it seemed a waste of time. The veins carry iron and quartz but no gold values to speak of. There are two dikes on the ground, as shown on the map one of them is labeled Rhyolite and it is an unmistakable eruptive belonging to the Rhyolite group. The other dike I am inclined to think is not a true eruptive but is a belt of country rock which has been highly metamorphosed by pressure and movement.

The country rock is archaic shist and granite. This formation is the basal formation of the Rocky Mountain Range and is exposed all along the range from New Mexico to northern Wyoming. It is the oldest and most deep seated rock known. All the limestones and other sedimentary rocks are of younger geological age and lie on top of this formation. They do not lie under it, except where small areas have been turned bottom side up by excessive dynamic activity.

DEVELOPMENTS

The developments are shown on the map. All told there is 517 ft. of tunnel or drifts and 106 ft. of shaft and winzes, not including the work done by Brown & Cary on the east end of the
property. Such work in this locality, considering the fact that it was largely pioneering work, would cost on the average $10.00 per foot for tunnels and drifts and $18.00 per foot for sinking.

At these rates it figures a total of $71,790. If the work has cost you less than this it has been economically done. If it has cost you more than this it has been expensively done.

The work has been well planned and thoughtfully carried out. Personally I would have prospected the surface with pits and trenches and, failing to find an ore shoot, I would never have put a blast into solid rock. I fully recognize however, that the desire to get "underground" is inherent in a great many of our best mining men.

SAMPLING & ASSAYING

I took ten samples from representative parts of the veins and workings. All of them were barren but one, and that one was from picked specimens of quartz from the dump of the discovery work on the D. W. K. claim. This one showed $5.80 in gold. These results confirm the many samples Major Travis has taken.

DISCUSSION.

The presence of eruptive dikes in the Arcbaric formation is a good indication. All the mines in the state, that have been found in this formation, have been found near eruptive dikes. We
must, however, bear in mind that there is about 20,000 square miles
of this same kind of formation exposed in Colorado and that probably
one fourth of it, or 5,000 square miles, is traversed with eruptive
dikes and is seamed with quartz veins carrying iron so that so far
as the formation, the dikes and the veins go can see no more reason
for spending money on this particular patch in the aforementioned
5,000 square miles of similar territory.

Let us see now what direct evidence there is that this
ground carries values. As I understand it the main thing that
attracted attention to this ground was the finding of a boulder
which contained a great deal of gold. This boulder was found in
1902, according to current report, and yielded 250.00 in gold. In
1905 a boulder was found in The Gulch, the next gulch N. W. which
yielded $100.00 in gold. The same year another boulder was found
in Tiger Lily gulch which yielded 4.00 in gold. This year Major
Travis picked up a pebble of jasper quartz on the Measly Shame claim
which assayed $220.00. Now if there is in the Tiger Lily Basin a
large ore shoot of free-gold ore the bed rock channel of the gulch
ought to show some placer gold. So I asked Major Travis to have
some test pits made and he made six of them. We found no gold near
bedrock. We got one or two fine colors from surface sand but not
enough to constitute an "indication". In one of these pits we found
a boulder which the men said was identical in appearance with the famous rich boulders. This was very important information for this boulder that we found was very hard jasper-quartz and was very smooth & water worn. This indicates it had traveled a long way.

Now jasper-quartz is nearly always found in connection with limestone and we know that there is limestone a few miles up the Arkansas valley. We also know that a short time ago, from a geological stand-point, a great glacier filled the Arkansas valley and there are many remnants of lateral moraines in existence on the sides of the valley. No jasper-quartz float has been found on the Tiger Lily ground nor anywhere in the basin of Tiger Lily gulch with the exception of the pieces already mentioned. It seems to me that in view of all of these things it is more reasonable to suppose that these boulders came from a long way off than that they came from close at hand and they cannot be taken as any definite indication of the enrichment of this particular ground.

In addition to the finding of the rich boulders, Major Travis has obtained six assays running from $15.00 to $27.00 from the veins which he has developed. He has taken a great many samples which went nothing. No one of these samples represented any body of ore. They were simply specimen samples. No continuous streak of ore has been found. Taking into the account the occas-
ional mistakes which are made in assay offices and the well known fact that one can get an occasional assay most anywhere in Colorado. I do not think one could call these six assays any very strong indication of the enrichment of this ground.

To refer once more to the test pits. It is known that placer gold is formed from the erosion of veins and that the gold is concentrated by water action on the bedrock channels. By following up the placer gold one can often uncover an ore shoot. So we put down six test pits as shown on the map. The results are nil. This is not conclusive proof that no ore shoot exists, because only a little erosion has taken place since the glacial age and it is quite possible that a good ore-shoot does exist and yet the gold has not had time to work down into the creek beds. Taking all our important information into consideration I can see no more reason for prospecting this ground than in prospecting any other quartz sections in the vast amount of similar country which there is in this state. It is entirely possible that a good ore shoot exists on it but one can find very many mining propositions where the chances of success would be much greater than they are here.

Major Travis thinks that with depth, ore would be found. There is nothing in our knowledge of this formation or this locality to warrant this opinion. Gold veins as a rule are richer right at
the surface than anywhere else. The prominent mines near the Tiger Lily are Washington, the Majenta and the New Year. I am told by the best informed men in Granite that the Majenta and the Washington were the largest producers. That they both had rich ore on the surface and that they both closed down because the ore on the lower levels would not pay to work. In the Majenta the vein got small and tight with depth and in the Washington it got wide and low grade. There is evidently nothing in the experience of these two mines to warrant the idea that a barren vein on the surface will become richer with depth.

In discussing this matter of deep mining we must not fail to draw a sharp distinction between gold mining and mining for copper, silver or lead. Gold is the most inert metal known to chemistry. Copper, silver and lead are not so inert and it often happens that veins very rich in copper, silver or lead are completely leached on the surface.

In copper and silver camps it is only natural to lean toward deep mining and men who have spent a great deal of time in districts such as Arizona where copper is the chief metal naturally carry this inclination with them. I think that this will account for Major Travis predilection to get underground in the first place, and not finding anything there to go deep for it.
It is true that there are one or two rare instances of record where gold veins have been surface leached but exceptions only prove the rule. I should look for increased values in copper and silver at depth in the Tiger Lily veins but as this is a gold district and as there is no indication that the copper and silver values would amount to much I would consider it a very long shot to undertake deep prospecting.

CONCLUSION.

I would shut down the property.

If you are not completely discouraged with mining I would store the tools and put the horses to pasture and look around for a real good proposition. This is a very good time to get hold of a Colorado mine. Nevada has had the center of the stage for several years and things are quiet in Colorado camps. Colorado's mineral output last year was $115,000,000.00. Nevada's was $14,000,000.00. The outside investment in Nevada was about $100,000,000.00. The outside investment in Colorado mines last year was probably less than $2,000,000.00. These figures tell their own story.

As to your unpatented claims:—if taxes are not excessively high in Chaffee County, I would patent them. I judge from the amount of work visible that you have done more than the required $500.00 for each claim so the only additional expense will be the cost of patenting. The reason I advise this is because I believe any Colorado
real estate a good investment. These Colorado mountains are destined
to be the favorite play ground of the nation and a sightly quartz-
section on the Arkansas valley will sell for a cottage site some
day, if for nothing else. Then again one of Colorado's periodical
mining booms is about due and during a boom one can sell most
anything.