MR1897-1
GEOLOGICAL SURVEY OF WYOMING

REPORT ON THE HORSE CREEK PLACER, LARAMIE COUNTY, WYOMING, U.S.A.

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LOCATION. Laramie County, Wyoming, U.S.A., about eight miles west of the line dividing Wyoming and Nebraska, and forty five miles north of the line which divides Wyoming and Colorado.

COMMUNICATION. By waggon road from Thomas's Ranch on Horse Creek to Chugwater Railway Station on the Cheyenne Northern Railroad; which road taps the Union Pacific at Cheyenne 72 miles south.

TOPOGRAPHY. Neither mountains nor flat, consisting of large upland plains of rolling prairie and wide valleys.

ALTITUDES. See accompanying blue print taken from authentic Surveys.

CLIMATE. Beautiful in summer - a perfect Italy. In winter, considerable snow and bleak wind, still very healthy. No malarious or fever elements. Atmosphere very bright and clear.

WATER. An abundance for all purposes; slightly alkaline; very clear. Supply constant at all seasons.

IMPROVEMENTS. Good houses, mostly stone, good farm buildings and corrals, the whole country well fenced, and intersected by good waggon roads.

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SOIL. Very light but not deep, covered mostly, except in the large culvitated enclosures, with the native wild grasses, which carry a small grain very nutritious for cattle; with which the whole tract is covered.

GRAVEL. Underlying the soil at from six inches to three feet depth - is composed principally of a white sand, disintegrated quartz, black sand, Pebbles of Gold Quartz, granite, slate, manganese, and Hematite iron stone; worn round by attrition. Bears all the indications of carrying gold but is very hollow; full of interstices. Whatever gold there is in it long ago has worked its way down by the action of water to more solid ground.

TIMBER. Very sparse - only occurs on the creek and river bottoms and consists of Ash, Oak, Cottonwood, etc., - and is not large or valuable.

The following questions and remarks, quotations from Mr. Smith's letter of instructions, with the replies offset against them, fairly covers the ground.

My Criticisms on the property are as follows:

"In the first place the man seems to "want half or nearly half of the capital "of any Company floated.

"This of course is out of the ques- "tion - you would have to talk reasonable "terms to him."

I do not know, nor does Mr. Sturgis the nature of Mr. O'Conor's proposition. I learnt, however, that he could deliver the lands to O'Conor free from encumbrances (U.S. Patents) Warranty Deeds; at an average of $10. per acre.

"Then about the titles:

"Has he got options?

"If he has not got them right, can "they be got for sufficient time "without outlay or with small outlay?"

Titles are in nearly every case U.S. Patents; the strongest free-hold title, and having been issued, cover all minerals or other deposits found after issue. He has options on most of the lands, which can be renewed by small payments; balance can be secured at reasonable prices if not allowed to drift until the placers are proved to be valuable. One year from commencing operations is quite enough to prove value of placers if the work is prosecuted intelligently. There ought to be no trouble in securing this time.

"To demonstrate the values I "expect it would be necessary to sink "more holes.

Certainly.

"How could this be done and with "what outlay?

By putting down water-tight shafts - ordinary matched lumber. - about 8' x 4" inside measure - Cost, about $2.00 per running foot constructed and in place, plus the labour of excavation say $4.00 per foot all told.

If I was going to do the work I should prefer testing the

ground by Diamond drill first, before going to this expense; thus ascertaining distance to Bed Rock and approximate values all the way down - £1000 would cover cost of drill, small engines and boiler, freight, haulage and wages for 3 men for 3 or 4 months. One months work would prove whether it was worth going on with In case of abandonment the loss should not exceed £500.

"They estimate the depth of the "ground as 50 ft.

"On what principlesdo they get "at it?

Purely guess work.

"What do you estimate it at?

I should think that midway between the higher lands on each side of the deposit it would not be less than 200 ft. at the centre, and shallowing to 10 or 12 ft. at about a mile each side the centre.

"And what the average value?

Nothing short of actual tests could give this.

"What chance is there of it being "made richer at bed rock?

I washed wherever I could get at the gravel for a distance of

several miles and could not get a colour. I should have been surprised if I had; the gravel was so hollow, whatever values there are are sure to be below, but I could not get lower on account of water.

The gravel is the most promising I have ever seen.

"Are there many boulders, and "large ones?

Very few boulders and very small - seldom reaching the size of a football. They will probably be larger below.

"How about water?

Superabundance of it.

"They talk about an underground "river. If it a river how are you "going to get away with the water - "you can't turn it into another chan- "nel as if it was above ground.

I should question this. The whole neighborhood is full of natural springs, the water from which is working its way through the interstices of the gravel and oozes into the creek so freely in some placed as to give rise to this theory. The whole valley is evidently the bed of an ancient river and a very large one - a river certainly not less than a mile in width.

"If this is all rot and there "is no river, is there sufficient "water to wash with?

"They talk about $100,000 "plant to work it.

"Is it a steam shovel & derrick? "Hydraulic Elevator, or what?

"I suppose Steam would have to "be used. To prospect it I suppose "should have pump and steam.

This capital is ample. There is only one way to work it - that is by steam shovel and derrick - Risdon's of San Francisco - Lay's of New York, Bennett's Amalgamator of Denver, or Barlow-Massick's of Prescott, Arizona. To prospect by shafts large pump and steam would be required.

"Is there any water outside this "underground supply?

There is a flow of over 5000 inches in Horse Creek at the Thomas Ranch, which is the best place to commence operations. The Creek is 40 to 50 ft. wide and quite deep. The water is beautifully clear. I visited it at the driest time of the year. 5000 Miner's inches represents a washing capacity of over 15000 cubic yards of gravel per 24 hours.

There is water enough for both the gold washing and irrigation for balance of land not being worked for gold.

One question you have omitted. Supply and resources of Wood for fuel and mining purposes.

The country in the immediate neighborhood is sparsely timbered. Cord wood is consequently dear. Sawn timber would have to be hauled 35 miles from nearest R.R. Station, but there is coal, partially developed within four miles (down stream) of Thomas's Ranch - so there is no trouble about fuel, for Sturgis owns the Coal and fireclay. I examined both and submit samples.

In conclusion. The proposition as a whole I consider - from its agricultural standpoint - especially if applied to sugar Beets - as a safe and lucrative investment, which would rapidly increase in value.

The Gold Proposition I consider as a gamble; with this to be said in its favor. If a win, it is a big one, and means returns for an unlimited time fully equal to those of the Sacramento River and Tributaries in California, where the different Companies at wovk from the beginning of the excitement in the 50s to 1883 (when the Government by Military force stopped the work), actually by official returns paid taxes on gold recovered of $1,100,000,000 - say £200,000,000 Sterling.

If a loss, £500 to £1000 ought to more than cover it.

Yours respectfully,

D. E. Keating, M.E.

Denver, Colorado, Dec. 1st, 1897.