

TELLURIDE OF GOLD.

Some Facts About This Rare Combination.

As it is claimed to be an absolute fact that tellurium has been discovered in Malheur county, and there is no reason to doubt that this rare metal exists in other sections of the state of Oregon. THE MINER gives the following facts concerning this substance which may be of use to prospectors and others.

Tellurium was first discovered by Muller von Reichenstein in 1782. It is a silver-white resplendent metal of markedly crystalline structure, the crystals being rhombohedra. From the date of its first discovery until about the year 1870, tellurium was considered a rare metal. In the year mentioned a number of deposits were found in Boulder county, Colorado, or, to put it more clearly, it was in that year when science determined that a peculiar ore found by prospectors in the section named was in reality tellurium.

Its discovery came about in a peculiar manner. For a long time it puzzled assayers and others, and for a while even the territorial geologist was in a quandary how to determine what it was. It had long been the custom of prospectors, while traveling from the plains to the Snowy range, near the summit of the Rockies, to camp on what was afterwards known as the Boulder county telluride belt. Often their camp fires would be kindled alongside the outcrop of a telluride vein. Frequently it would be noticed that gold blistered out of the rock, occasioned by the heat of the fire. Samples of this rock when tested by an assayer failed to show a trace of gold. Neither could the territorial geologist at first secure any results, but, occupying the position he did, it was necessary for him to solve the problem. The result was that a hitherto uncommon compound was found to exist—telluride of gold.

Previous to this time it was presumed that in nature, gold, no matter what metals or minerals it may have been associated with, was always there in metallic form, and to this day gold is not known to exist as a compound with any other metal or mineral except tellurium. When this fact was demonstrated, other problems arose. Telluride ores could not be assayed by the fire process like ordinary ores. Experiments finally demonstrated that tellurium was a very volatile metal; when combined with gold, in the process of assaying it would volatilize and carry the noble metal with it. The assayer may have had a sample very rich in gold, but his cupel would not show a trace. These obstacles were finally overcome, however, and any assayer should be able to make as accurate a test for gold combined with tellurium as he would of any ordinary ore, where the yellow metal is associated with other metals or minerals.

During the telluride excitement in Boulder county, over a quarter of a century ago, the writer has seen many prospectors lay a small piece of telluride ore on a stove, with but a moderate heat, and in a few moments the gold would blister out on the surface of the rock. Should any of our readers desire to make this simple test, it is well for them to remember not to use an excessive heat, as that may evaporate the tellurium too rapidly and thus carry away the gold. In smelting such ores great care must be exercised or the same loss will occur from the smelter furnace that did from the assayer's crucible when little was known of this element.

There are three kinds of telluride ores

—sylvanite, alavanite and petaito; the latter generally carries silver as well as gold.

New Machinery for the Belcher.

President George W. Daines, of the Daines Mining and Milling company, of Spokane, who has just left here for that city, stated to a reporter that his company would this fall erect new machinery on their property in the Greenhorn district, known as the Belcher. A stamp mill of sufficient capacity to take care of the ore will be installed. It has been the policy of the company to develop its property and block out plenty of ore for running through the mill before putting up machinery. Seventeen hundred feet of tunnel work has been done on the Belcher and some very fine ore shoots opened up. The value of the ore is sufficient to justify the hope of reasonable profit, and for this reason the machinery will now be installed. The Belcher is owned by a close corporation composed of the members of the Daines Mining and Milling company, and Mr. Daines will return here early in October to look after affairs.—Democrat.

Southern Oregon Mining Notes.

Reports come of a number of important gold discoveries being made on Mule creek and in the lower Rogue river country. This section is highly mineralized and has never been prospected to any extent. A better field in this respect is not offered the prospector anywhere. The river bars and banks are being washed down and cradled through

rockers or over sluices in the old fashioned way. While this is a primeval method of doing things, it is about as far along as most of that section has got, and those who are in there and at work are making money. A postoffice has been established at the Greenback mine, and will be known as Greenback. The new mill being built at this mine will be ready for work in about six weeks.

Sixteen Pounds of Gold.

Charles Akins, manager of the Huntington Mining company, accompanied by his son, John, came up from the mine last week, bringing with him about sixteen pounds of nuggets to ship to the United States assay office, being the result of their quarterly cleanup. This reliable old mine has been a steady producer for nearly thirty years, and promises to remain so for thirty or forty more. It is located below the famous Connor Creek quartz mine, from which it receives its supply of gold.—Baker City Herald.

"Now is the Appointed Time."

The O. R. & N. Co. has just issued a handsomely illustrated pamphlet entitled, "Oregon, Washington and Idaho and their resources." People in the east are anxious for information about the Pacific northwest. If you will give the O. R. & N. company agent at Baker City a list of names of eastern people, who are likely to be interested, the booklet will be mailed free to such persons. Yours truly, A. L. Craig, General Passenger Agent.

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