

HOW ORE IS SAMPLED.

Process Employed at Smelters for Determining Values.

A brief description of how ores are sampled at smelters in order to arrive at their values, may prove of interest to the general reader. In purchasing ore shipments it is necessary to arrive at some basis of settlement between the smelter people and the owners. This is done by means of a process known as sampling, the object of which is to obtain average samples representing an equitable value of the ore. The Sumpter smelter company employs the same method which usually obtains among all smelting companies.

Here the ore is first crushed in a 20x10 Blake crusher. It is then elevated sixty feet and spouted into a Snyder sampler which cuts out twenty per cent. This is done by means of passing the crushed ore against a revolving oval disc with apertures in it so arranged that twenty per cent of the ore passes through into spouts which convey it to a Blake crusher where it is still further reduced. The ore next passes by means of spouts into a second sampler like the first in pattern where ten per cent is cut out, the reject passing into the reject elevator as above. After leaving the second sampler the ore passes through a set of rolls grinding it down still finer and preparing it for a third and smaller sampler which cuts out an additional ten per cent, and passes the sample on to a small Gates crusher which still further reduces it. This is the last step in the process. From the Gates crusher the sample goes to the sampling floor, where it may receive any farther preparations needed if not ground to a sufficient fineness, and quartered as desired.

When this process of averaging and reducing the ore has been completed, the sample, after it has been quartered down as fine as desired, is then ready for the laboratory where it is assayed and its value determined.

MONEY IN LOW GRADE ORE.

Governor Brady, of Alaska, Writes of the Treadwell in His Annual Report.

The average person associates almost any gold mining proposition with marvelous finds and speedy wealth, without stopping to consider that many of the big paying mines of the country produce low grade ores and are not only steady dividend payers through a long period of years, but employ large forces of men thereby making them good distributors of wealth from this point of view. Speaking of the Treadwell mine in Alaska, a low grade proposition, Governor Brady, in his annual report, says:

"The Treadwell mine gets better as it goes deeper. The more we can increase such plants on low grade ores the better it is for the general communities. Most of the product is paid out for labor and material. The total yield of the Alaska Mexican mine to December, 1901, is given as \$2,389,546.27. Out of this sum only \$465,381 was paid as dividends. Low grade properties of this kind are about as good distributors of earnings as are sawmills. The net profit for each ton of ore treated in the Mexican

for 1901 was a little less than 14 cents. The yield per ton was about \$1.90, and the operating cost per ton was \$1.76. This is a wonderful showing in economical and efficient mining and milling, and it is something that every Alaskan feels proud of."

Shipment of High Grade Ore.

Assayer W. W. Robbins of the firm of Robbins & Robbins was at the Golconda Friday for the purpose of sampling a shipment of ore which is to be forwarded at once to the Tacoma smelter. The shipment consists of a car load lot which it is understood carries very high values.

Notice.

The annual meeting of St. Patrick Gold Mining Company will be held at the office of the company in Sumpter April 17, 1903.

F. W. NORTHUP, Pres.
M. M. FLYNN, Sec.

The Mormon Temple.

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