

inspectors when they go up there to contest his neighbors.)

It is a significant fact that although there has been on the United States statute books for more than five years (since April 28, 1904) a law providing for the sale and patenting of coal lands in Alaska, yet there has not up to the present time been one single claim patented. The development of Alaska is not alone retarded; but the industries of the entire Pacific Coast have been asking for cheaper and better coal, which can come from no other place than Alaska. The Navy of the United States is and has been paying a high price for inferior coal on the Pacific; and the Geological Survey has repeatedly recommended the opening of Alaskan coal mines.

With the policy of conservation I am thoroughly and heartily in accord. That the natural wealth of our country should be so used as to last the longest and serve the greatest number, and that title to those natural resources which are everlasting should not be permanently surrendered to private ownership is only a statement of principle which has found expression on the statute books of most nations. But do not let us wrong ourselves and those who have already in good faith acquired rights based upon the laws in existence by upholding violations of those very laws. Having been reared in a land where respect for the law is in-bred let us not withhold our condemnation of those who seek to bring about reforms by premature distortion and over-riding of its plain provisions.

**In the Hostotipaquillo** district, State of Jalisco, Mexico, the greater part of the ores are found in quartz and contain silver in the form of sulphides, bromides, metallic silver and chlorides, gold, lead, iron (in various forms), and manganese, and in some cases traces of copper. The grade of these ores varies from 400 gm. to 50 kg. of silver per metric ton, some of them containing 3 gm. gold per kilogram of silver, little free-gold being found, as it is usually alloyed with the silver. The treatment of 1000 tons of ore, extracted from various mines, produced on the average \$4 in gold per ton. On trustworthy data one may count upon 2 to 4 gm. of gold per ton of ore, as the average product of all the mines. Up to the present time it has not been considered profitable to treat ores of lower grade than 1 kilo per ton and there are great bodies of ore that have not been touched, which yield from 400 to 600 grams.—*Mexican Mining Journal*.

A delicate qualitative test for zinc is described by Del Campo as follows: Add to an ammoniacal solution containing Zn, 1 c.c. of a 0.5% ether solution of resorcinol. A deep blue coloration develops at the line between the two layers of liquid, either immediately, or in a few minutes. If the proportion of Zn is small (0.005 milligram per cubic centimetre) it will not be perceptible before an hour has elapsed. Cd salts show a green color under these conditions. Cu salts give a black precipitate. In presence of Cu the test may be made for Zn by previously decolorizing by dilute KCy, of which no more than is absolutely necessary must be used.

## BANNOCK, NEVADA.

Written for the MINING AND SCIENTIFIC PRESS  
By CHARLES S. THOMAS.

Bannock is situated in Lander county, Nevada, about 14 miles southwest of Battle Mountain on the main line of the Southern Pacific railroad. Attention was attracted to it in August by discovery of unusually rich free gold in quartz by Alexander Walker, formerly of Cripple Creek, Colorado. Systematic prospecting had been going on in this vicinity in a quiet fashion for some time, but the discovery of the rich gold-bearing quartz apparently in an ore-shoot of some size, together with the prompt sale of the property to responsible Omaha investors, led to a rush to the district. The rich gold ore which was then discovered on the properties of the Nevada-Omaha Mining & Milling Co. occurs as quartz in, or along the walls of, a dike, very probably diabase, intrusive through altered rhyolite porphyry, carrying free gold. Free gold also is present here in the felsitic rock, though the occasional presence of crystalline quartz may be noted.

In the accompanying figure, (2), I have designated these diabase dikes by the letter 'D'. The one at the extreme right of the picture is near the point where the discovery of gold was made. This figure, by the way, is explanatory of the geology of this district: AA shows the overlying basaltic rocks, 50 to 100 ft. in thickness and locally known as 'Malapai' or 'Malpais'. Underlying this is an altered rhyolite, BB, possibly intermixed with andesite or dacite. It is of unknown thickness and through it the later vein structure gave rise to a re-silicification of the fissure walls, forming what appears to be highly silicified or metamorphosed dikes, CC. There is also, a still further evidence of dike action in intrusive diabase (?), DD, along the fractures and walls of which the straight silicious and felsitic gold ores occur. The veins, CC, are composed of 'honeycombed' quartz, the interstices of which are filled with limonite pseudomorphic after pyrite, and containing gold and silver, principally the former, in varying amount. As far as developments have gone the ore rarely exceeds \$100 per ton in value. The 'Buzzard' mine, situated about two miles north by northwest of Bannock, is, I am informed on good authority, developing one of these oxidized veins and has been continuously mining and marketing ore of an average value of \$75 per ton for more than a year. Pan-nings made from the Old Iron mine, now embraced in the properties of the Nevada-Omaha Mining & Milling Co., and about 800 ft. north by northeast of the gold discovery above mentioned would fully bear out what is claimed for the Buzzard mine. The two are oxidized veins identical in character. These veins are well defined, within and along the silicified dikes (see Fig. 3), and traceable for miles, while the clear-cut walls speak volumes for their being the fillings of pre-existing true fissures. The diabase (?) dikes were intruded unquestionably subsequent to the surrounding country. Being eruptive they came from the deep-seated interior of the earth. They could not moreover have been subsequent to the vein quartz found in and along their walls.





Fig. 1. Bannock, Nevada, Looking East, October 15.



Fig. 2. Geology of Bannock.

A A, Basalt; B B, Altered Rhyolite; C C, Silicified Porphyry Dikes With Oxidized Iron Veins; D D, Diabase Dikes—Gold Veins.

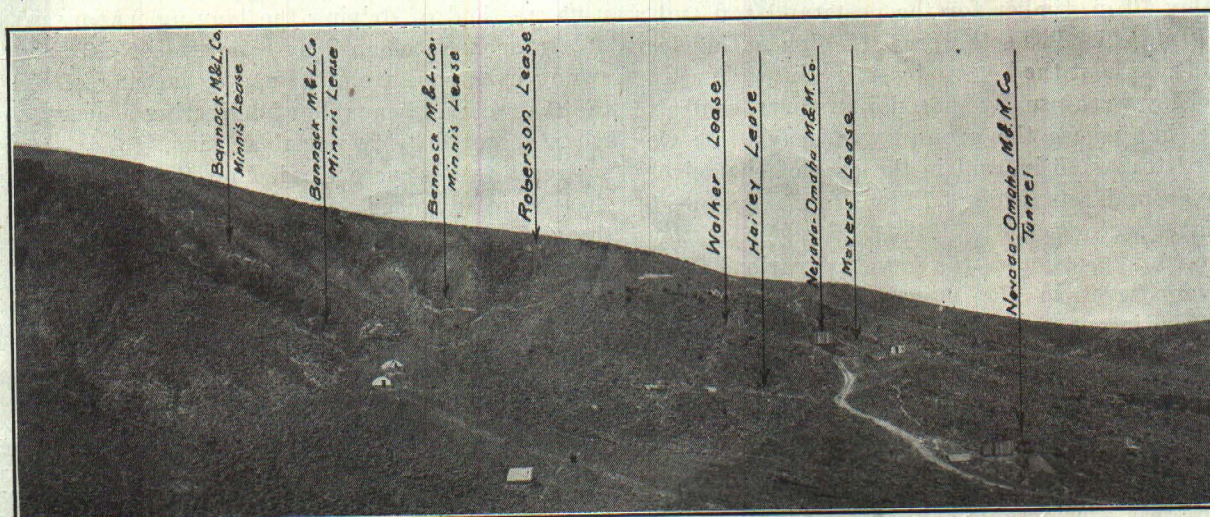


Fig. 3. Outcrops and Leases, Bannock, Nevada.