

# Idaho's Mining Progress During the Present Year

By Robert N. Bell.

THE flat market for ores and low metal prices has proven a rather depressing circumstance on the producing mines of Idaho during 1908. It is too early at this date to say what our metal production for 1908 will be, but it is likely to approximate as follows:

Lead, pounds	175,000,000
Silver, ounces	5,000,000
Copper, pounds	70,000,000
And the dividends will probably amount to	\$3,500,000

## COEUR D'ALENE DISTRICT.

The majority of the big mines in the Coeur d'Alene were shut down during the early months of the year, through lack of market for their product, but with a revival in prices, resumed operations during the spring, and all the principal producers have since been operating continuously, but not with the same heart and vigor as during 1907. This is true of most of the Coeur d'Alene producers, excepting the Bunker Hill & Sullivan which has a large such extensive resources of high-grade mineral in its bottom levels as to be indifferent to an ordinary depression in metal values, and has kept right on during the "panic" times producing 1,000 tons of ore a day with one eight-hour shift in the mine, and has recently added a new mill unit of 500 tons per day to its already large plant which is being increased to 1,000 tons. This will give the property a milling capacity of 2,000 tons a day.

While a good many of the newer mining development enterprises in the Coeur d'Alene, which were largely of business by the scarcity of capital due to the panic of last fall, still remain idle, several of them have continued with reduced forces with their development operations, and here a few important strikes have been developed during the year that seem to warrant the anticipation of new and lasting sources of shipping ore, and on a whole this famous district is in a healthy condition to supply any demand that may be put upon it by the improvement of general business conditions and subsequent metal values, with a prospect of maintaining its present important position as an extensive producer of rich lead, silver and copper ore for years to come.

## ELK CITY DISTRICT.

In central Idaho, the Elk City district has received considerable attention from mining investors during the year, and some very promising gold properties are being developed and equipped in that section, among which the Buster mine has reached a stage of profitable production, and has been successfully operating a stamp mill on a 20-foot vein of high-grade gold ore for the past 12 months.

The Elk City district was first noted for its placer deposits which have been largely exhausted, excepting some deep channel placers and large producing ground. Its general formations are granite gneiss with porphyry dikes and replacement fissures of quartz, containing strong shoots of gold ore associated with iron pyrite at comparatively shallow depth, and occasional bunches of high-grade pyrite, a black telluride of gold and silver.

The district also has some immense zones of altered porphyritic granitic, showing low values in gold from \$1 to \$3, which, with sufficient capital and close intelligent handling, are likely to yield mines of the Treadwell order. The district is one of imminent promise as a new source of gold, and is well worthy of the attention it is now attracting from mining investors.

## SILVER CITY DISTRICT.

The banner gold and silver mining ore district of Idaho is that of Silver City in Owyhee county, near the southwest corner of the state, whose properties have not been seriously affected by the recent financial disturbances, and have continued to operate at full capacity throughout the year. They have suffered some, of course, in the depression of silver values, but have kept constantly at work and employed a large force of men.

The Silver City district has been constantly producing for 45 years, and during that period has yielded gold and silver values to the total amount of \$60,000,000. Its source principally divided between the War Eagle mines, the Florida mountain mines and the original Delaware mine. Of these the Trade Dollar Consolidated vein, a narrow fissure traversing Florida mountain, has been the most profitable single operation, and is still employing a force of 800 men and making a large production. This property is developed by adit tunnels, the longest and lowest one being over two miles in length and traverses the vein at a vertical depth of 1,700 feet below its apex. It has produced \$20,000,000 during the past 17 years, of which fully \$10,000,000 have been returned to the stockholders in the form of dividends, while the original Delaware mine has produced \$12,000,000, of which about \$4,000,000 has been paid in dividends, and the narrow fissures of War Eagle mountain are credited with an output of \$25,000,000, and the placer deposits of the district \$3,000,000.

The newest property of this district to bid for popular favor is the Potomac mine, whose vein system traverses the streets of Silver City. This is an old mine that was abandoned to shallow depth in the early days, and remained idle for 30 years until about three years ago, when it was acquired and reorganized by Mr. W. F. Summercamp, of Eisen, Idaho, and has since been undergoing development with remarkably interesting results. The mine is opened by a shaft 300 feet deep, from which three levels have been run, and a rich resource of ore developed that is showing similar proportions and values of ore, to the ground opened, as is exhibited by its famous neighbor, the Trade Dollar. The most recent development in the bottom level has revealed some remarkably rich native gold ore.

The property has recently been equipped with a mill of 20 tons daily capacity, which is now being successfully operated and supplied with ore of an average value of \$30 per ton, from which a saving of 80 per cent is being made, and the future of the mine, as a very important producer of gold and silver, seems definitely assured for a series of years.

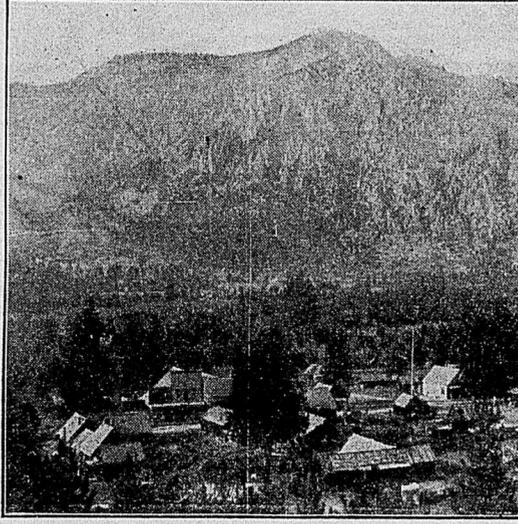
In addition to this property, half a dozen other new development enterprises have recently been undertaken in this district, each of which has installed air compressor plants and is running long tunnels to cut their respective veins at very considerable depth. These new plants are all to be electrically driven by power supplied from the Swan Falls plant on the Snake river owned by the Trade Dollar company, and the results of the coming winter's campaign it is confidently anticipated will bring in other important and profitable mines.

South Mountain, 20 miles south of Silver City, there are some immense croppings of gossan ore associated with high values in copper, lead, silver and gold which, from some shallow development indicate the existence of an immense deposit of rich smelting ore. The Goleonda group of mines at this point has a gossan cropping of brown iron sponge between a white and blue zone belt between walls of altered diorite. A shallow shaft sunk in this brown gossan changed at a depth of 60 feet to a massive yellow sulphide of



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copper and iron, containing average values of 10 per cent copper and 80 ounces silver with a dollar or two in gold per ton, and would afford an ideal matting ore for a hot blast pyritic smelter. Rich bunches of lead ore occur in the gossans of this lode that carry values up to 1,000 ounces in silver, and 100 ounces gold per ton, and besides the indications of a probable source of desirable smelting mineral. It seems not unlikely that with development bonanza values in gold and silver will also be encountered as excavation proceeds.



ATLANTA, IDAHO.

performed in the near by silicious milling ore districts.

## BOISE BASIN.

In the old Boise basin placer mines of Boise county, the Boston-Idaho Dredging company is investing a large amount of capital in the installation of a hydro-electric power plant of 2,000 H. P. capacity on the south fork of the Payette river. They have also installed one large dredge, and will commence the construction of a still larger one next spring to open an extensive tract of dredging ground on Moore creek immediately below Idaho City. This has been very thoroughly tested by drilling, and is known to contain several million dollars gross value of an average tenor in gold amounting to about 20 cents per cubic yard.

## ATLANTA DISTRICT.

Another new source of gold that is going to cut an important figure in the Idaho output of the precious metal is that of old Atlanta district in Blaine county, where extensive sources of good grade milling ore have been developed on the Monarch, Pettit, Minerva and other mines along the great Atlanta lode.

The Monarch property was equipped with a milling plant of 150 tons daily capacity, but after trying out it has proven inadequate to treat the rather complex ore this mine affords, and will have to be readjusted at considerable expense. The Monarch has a million tons of pay ore developed, and when its metallurgical problem has been fully solved will make a large producer.

Adjoining on the east, the Pettit mine, now owned by the Bagdad-Chase Gold Mining company, of Rochester, New York, has been given the advantage of a large investment of capital in new development and milling equipment. A mill of 75 tons daily capacity has been completed and put in operation on this property, and the metallurgical features of the enterprise have been successfully worked out. The mine itself has responded to development in such a manner as to warrant doubling the milling capacity of this plant, and the new machinery for that purpose is now being installed, and when completed will make one of the large gold producers of the state, as the ore bodies have opened up in a magnificent manner, and for their size contain comparatively high values; and while the ore is rather refractory to treat owing to the association of the small percentage of mixed silver minerals with the gold, they have been shown to afford a handsome margin of profit, and the enterprise in its present stage of development and equipment assures an extensive, lasting and profitable producer at this point.

## CUSTER COUNTY.

The old White Knob mine at Mackay was idle during the greater part of the year, but is being operated on a small

grade ore of that section, which will not stand shipping owing to the long wagon haul involved. This is one of the most interesting regions in Idaho from a geological standpoint for the development of lead-silver ores, and the new smelting enterprise will probably prove a great stimulant to the development of its ore resources.

The Gilmore mine of this section in any other lead-silver field would be considered a bonanza. There is strong talk of a railroad being extended into this territory which would be a boon to its operators, as their present means of transporting ore is by wagon haul over distances ranging from 50 to 85 miles to their present railroad connection.

## COAL DEPOSITS.

The coal deposits at Salmon City have been undergoing continued development with a small force of men, and have responded in a very flattering manner, and are now said to warrant a very much larger production in the local market of Salmon City.

In Fremont county considerable work has been carried on at the Horseshoe Creek coal field, and marked improvement in the showing has resulted tending to demonstrate the permanency and importance of these deposits. At the Brown Bear mine the vein being operated was intersected by a cross-cut tunnel early last spring at a depth of 200 feet below its apex where it was found to be cleaner and harder coal than in the shallow workings above. This vein is five feet wide, and supplies fuel to the local settlers of that region for about \$3 per ton on the average. The property is situated 2 1/2 miles from the railroad, but it is an easy agricultural country to build over, and the route has been surveyed and the line no doubt will be built at an early date, as the coal of this field is of such quality and in such apparent quantity as to afford the prospect of every important item of railroad traffic.

This field carries a series of steep pitching veins in cretaceous formations that range from 2 to 10 feet in width and from a series of analyses made from the present comparatively shallow development, they have received indicate one of the most valuable resources of high grade fuel that has been discovered in the West.

The following analysis, which represents average samples of different veins, eliminating the bone streaks which, however, are very narrow and free, will give an idea of the high quality of this fuel which is such as will force a market for itself when the property has been more fully developed and connected with a railroad spur, as the geographical position of the field is of marked advantage to it. There is a

cryingly demand for this coal in the immense agricultural and metal mining territory lying to the west of it for several hundred miles, and I know of no mineral feature in Idaho that presents a more attractive or promising field for the investment of capital.

Analysis of coal, and coke made from same, Horseshoe basin coal deposits, Fremont county, Ida. No. 1 coal, 10-foot vein—Moisture, 4.0 per cent; volatile combustible matter, 37.15 per cent; fixed carbon, 48.5 per cent; ash (light brown), 2.30 per cent; sulphur, 0.74 per cent; specific gravity, 1.23; calorific power, 6938.24 calories; coke, 55.5 per cent.

No. 2 coal, 5-foot vein—Moisture, 2.7 per cent; volatile combustible matter, 37.61 per cent; fixed carbon, 56.9 per cent; ash (light brown), 2.0 per cent; sulphur, 0.79 per cent; specific gravity, 1.28; calorific power, 6932.87; coke, 59.2 per cent.

No. 3 coal, 3-foot vein—Moisture, 2.1 per cent; volatile combustible matter, 37.23 per cent; fixed carbon, 56.5 per cent; ash (light brown), 2.3 per cent; sulphur, 0.77 per cent; specific gravity, 1.23; calorific power, 6877.48; coke, 59.2 per cent.

Coke from No. 1—Moisture or volatile combustible matter, none; fixed carbon, 92.14 per cent; ash, 4 per cent; sulphur, 0.86 per cent; specific gravity, 1.1; calorific power, 8422.67.

Coke from No. 2—Moisture or volatile combustible matter, none; fixed carbon, 95.48 per cent; ash, 3.5; sulphur, 1.02 per cent; specific power, 8446.08.

Coke from No. 3—Moisture or volatile combustible matter, none; fixed carbon, 95.13 per cent; ash, 4.00 per cent; sulphur, .87 per cent; specific gravity, 1.15; calorific power, 8411.2. (Signed) R. H. OFFICER & CO., W. A. B.

## CEMENT AS A SUBSTITUTE FOR WOOD.

The relation between the increasing use of cement and the diminishing timber supply in the United States has been the subject of some interesting correspondence between the Geological Survey and the forest Service at Washington. In a letter to the Forester, the Director of the Survey took occasion to quote from a statement of a large Philadelphia firm to the effect that it would be difficult to estimate what the additional drain on the lumber supply would have been during the last few years had not cement come into such general use. The Forester replied in part as follows:

"The Forest Service is watching with a great deal of interest the increasing use of cement and other substitutes for wood. They are undoubtedly

having some influence on the price of lumber, though I do not think that up to the present time they have greatly retarded the advance in lumber prices. The fact is that our industrial progress has been so great that our requirements for every kind of structural material have increased tremendously. We are using at the present time more lumber per capita than ever before and probably twice as much per capita as we did 50 years ago. The conclusion can not be escaped, therefore, that in the future we must depend more than in the past on other materials than wood for certain purposes at least. As to the increase that will take place in the production of cement, my impression is that this will be very great."

## THE MINERAL PRODUCTS OF THE UNITED STATES.

The growth of the mineral industries of the United States is graphically exhibited by a chart just issued by the geological survey, tabulating for each year of the last decade the quantity and value of the output of our metallic and nonmetallic mineral products.

This chart shows that in 1898 the domestic production of the metals—pig iron, silver, gold, copper, lead, zinc, quicksilver, aluminum, antimony, nickel, and platinum—had a total value of \$205,482,183; in the same year the total value of the other mineral products amounted to \$418,790,671; the grand total for the country in 1898 was therefore \$724,272,854. Ten years later, at the close of the calendar year 1907, the value of the metals had increased to \$393,024,005, that of the other products to \$1,166,265,191, and the grand total was \$2,059,289,196.

The chart has great interest and value in connection with a summary of the mineral production of the country, published by the Survey as an advance chapter from "Mineral Resources of the United States, Calendar Year 1907," and copies of both the chart and the summary may be obtained by applying to the director of the survey at Washington, D. C. The Survey has also published for free distribution separate chapters of its annual report on the mineral resources of the country, giving detailed statistics of many of the products that make up these totals.

## WANTS GUARDIAN NAMED.

Lillian Cluff Pawlas in Court in Behalf Of Orphaned Children.

Lillian Cluff Pawlas has filed petition in the Third district court, probate division, asking for the appointment of W. W. Cluff as guardian of the estate of John C. Pawlas, Marlon Lenore Pawlas and Lillian Arloren Pawlas, minor children of the late John C. Pawlas, who met his death in a railroad accident in Montana recently. Deceased left personal property of the probably value of \$3,000, besides life insurance policies of aggregate value of \$18,500, and there is also a claim against the Northern Pacific railroad company for the death of the deceased, of speculative value. Deceased left no will, and the petition for the appointment of the guardian is signed by Lillian Cluff Pawlas, widow of deceased and daughter of W. W. Cluff, whose appointment as such guardian is requested.

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