

## THE MINERAL WEALTH OF THE UNITED STATES

The following from Munsey's Magazine should furnish matter for thought to those who desire to promote mineral development in Nova Scotia.

The United States holds first place as a mining and mineral producing nation. We are preeminent in our output of four of the great minerals which are the basis of manufactures—coal, iron, copper, and lead. In the production of gold we are outranked only by South Africa, and in that of silver only by Mexico. Russia alone rivals us in petroleum.

Although water-power and wind-power have long been used as sources of energy for various manufacturing purposes, and though they have been made far more available in modern times, largely through the skill of American inventors, yet the range of their application is limited, while that obtained from coal fits almost all the needs of the arts. It is mainly on account of its applicability to all sorts of conditions that the steam engine has become the great agent of civilization; and in this country, practically the whole of the fuel that it consumes is drawn from our coal-deposits.

The prosperity of peoples is largely determined by their access to coal. Great as is the dependence of the arts upon steam-power, for the near future, at least it seems likely to increase rather than decrease. Except so far as the manufacturing of this country can avail itself of water-power, the development of our technical industries seems likely to depend mainly on the distribution of coal supplies.

We are fortunate indeed to be in possession of almost unlimited deposits of this vital mineral, lying in positions which make it easy to mine, and readily accessible to the places where it is naturally demanded.

Appalachian coal field is the largest and richest area of such deposits known in the world. It is doubtful if it is equaled in extent, or in the quality of its product, by the great field in China, which alone can vie with it.

There were produced in the United States last year, of both bituminous and anthracite coal, 437,176,241 tons.

Notwithstanding the present supremacy of coal, the energy derived from streams is of vast and ever-increasing value to the people of this country. The United States is already first among the nations as regards the amount of water-power utilized in industry. It is probable that, measured in horse-power or by manufactured product, the energy derived from the streams of this country is more valuable to man than those of all other lands put together. The valuable water-powers of this country are in the main limited to the region east of the Mississippi and south of the St. Lawrence and the Great Lakes. It is remarkable that this section should be so well supplied with the two important sources of energy—water-powers and fossil fuel. To these resources, however, must be added the stores of petroleum and for burnable rock-gases, which are here contained in larger quantity and over a wider field than in any part of the world. Such an assemblage of power-giving conditions insures to this country very singular industrial advantages.

Next in importance to these great natural sources of energy must be ranked the country's stores of iron ore. These are remarkable in quantity, at least in the eastern half of the continent, with reference to the fuel required for the conversion of the ore to the metallic state.

The supplies of iron ore on which the furnaces of Europe depend are, at many points, approaching exhaustion; and it is probable that civilization's increasing demand for iron and steel cannot be met, in the Old World, without a considerable addition to the cost of

the product. On the other hand, it is calculated that in the United States the output might be quadrupled without any considerable increase in cost.

The year 1909 took its place among those of greater activity in the production of iron ore. About fifty-three million tons of it were mined—an increase of nearly twenty million tons over 1908. It required 2.11 tons of ore to make one of pig iron—a larger amount than ever before—owing, presumably, to the use of slightly lower-grade ores. The value of the pig iron produced was \$437,101,382. Though commonly reckoned as the basest metal, iron, it will be seen, is the most precious of all metallic substances that this country possesses.

Next to iron, the most valuable of our under-earth assets is copper. With the modern extension of the use of electricity, the demand for it is metal has increased enormously. The copper-bearing deposits of the United States are very extensive and extraordinarily rich, containing larger available supplies than any part of the Old World. The production of copper refined from ores found in the United States was, last year, 1,098,000,000 pounds. For the same period the output of Mexico was only 126,000,000 pounds and that of Canada 48,000,000 pounds. As a whole, the copper-bearing rocks of the United States, owing to their great extent and richness, give promise of affording mining values second only to those afforded by the iron ores of the country.

Our production of lead in 1909 exceeded the highest figure previously on record; it amounted to 374,000 tons. Our production of zinc was 276,096 tons. The combined value of these two metals was about five millions dollars. Gold and silver, the so-called "precious" metals—although as a matter of fact, they are of less economic value to man, at least in the technical arts, than most of those already mentioned—occur plentifully notably in the mountain region of the far west. Although this field has been for many years, the seat of untiring search on the part of prospectors, the swift successive discoveries indicate that its mineral resources are as yet most imperfectly known. The gold of Alaska is already becoming an important factor in the world's supply. Competent authority does not deem it unlikely that a thorough exploration of a great northern possession may double the resources of our country, as far as the precious metals are concerned.

Last year production in gold is estimated to have been \$99,000,000,—a gain of \$4,500,000 over our output in 1908. The two leading States were California and Colorado, each producing about one-fifth of the total, while Nevada contributed nearly \$15,000,000. These figures are given by the Geological survey, which adds the statement that in the year 1910 the hundred-million-dollar line is likely to be passed for the first time.

The same authority states our output of silver, for 1909 at \$3,849,000 ounces—an increase of 1,400,000 ounces over 1908. Owing to the great decline in the price of silver, which sold during the year at an average of fifty-two cents an ounce, the value of our silver product is now much less than formerly.

One item from Alabama tells of an explosion that killed 41 men. The next one tells of a shortage of labor—says 1,000 men could find employment. Is it a case of cause and effect? We fancy so, to some extent at least. The accidents have gained such notoriety that labor fights shy of the coal mines. Competitive bidding with other lines of employment is the only way to get more men. Coal is going to cost more and must sell for more. It is worth more money—far more money—than the average price of the past ten years.