

is, the deposit was shallow and the metal light, or what is commonly called "float gold." Gold in paying quantities was found along the Quesnelle River. Roads were constructed into the interior at immense cost of time and money; and public works on a large scale were constructed and carried on. He describes the yield of gold from the mines as something wonderful. Up to 1862, he says, it is safe to say, there never could have been at any one time over 5,000 miners engaged (and the return say only 4,000) in working the mines, and yet the annual yield was nearly £1,000,000, including, over the bank returns, the estimates of the gold taken away in private hands, a *per capita* average without parallel in the world. Taking the period from 1858 to 1882, he has prepared a table showing the actually known and estimated yield of gold, the number of miners employed, and average earnings per man:

YEAR.	Amount received by Banks and Private Hands.	Number miners employed.	Average earnings per man.
1858 } 6 months }	\$ 520,000	3,000	\$173
1859	1,615,072	4,000	403
1860	2,228,543	4,400	506
1861	2,666,118	4,200	634
1862 } 1863 }	4,246,266	{ 4,100 4,400	{ 517 482
1864	3,735,850	4,400	849
1865	3,491,205	4,294	813
1866	2,662,106	2,982	893
1867	2,480,868	3,044	814
1868	2,372,972	2,390	992
1869	1,774,978	2,369	749
1870	1,336,956	2,348	569
1871	1,799,440	2,450	734
1872	1,610,972	2,400	671
1873	1,305,749	2,360	567
1874	1,844,618	2,868	643
1875	2,474,904	2,024	1,222
1876	1,786,648	2,282	783
1877	1,608,182	1,960	820
1878	1,275,204	1,883	677
1879	1,290,058	2,124	607
1880	1,013,827	1,955	518
1881	1,046,737	1,898	551
1882	954,085	1,738	548
	\$47,141,711		

Williams Creek is estimated, in a territory of $2\frac{1}{2}$ miles, to have yielded five millions sterling. The Black Jack, in the Cariboo District, realized in two years £10,000, with an expenditure of £10,000; the Cunningham in four years gained £1,000,000, at a cost of £20,000; the California, the same; and the Steel Company gained £150,000 at an expense of about £50,000. All this, it should be borne in mind, was obtained without science or machinery, and with only the gold prospector's skill. On the Antler Creek, at a depth of less than five feet, men made from £10 to £50 a day regularly. What is now wanted is machinery, science and skill. It is also necessary to explore and thoroughly prospect the country for new diggings, or rediscover the old deposits in the surrounding hills.

NORTH-WEST COAL.

A very interesting article, entitled "King Coal," from the pen of Professor C. D. Wilber, formerly State Geologist of Illinois, has appeared in the *Chicago Mining Review*. Professor Wilber is personally known to us and has been a frequent visitor at our office. He bears the reputation of being one of the recognized authorities in the United States on coal; he is an able statistician and a powerful writer. During the past year he has directed some attention to the mineral resources of Canada and has carefully investigated the coal beds of our North-West Territories. After dwelling upon the development and distribution of coal in the Western and North-Western States and Territories, the sources of supply for the great agricultural areas destitute of coal, the relation of low coal rates on railroads to immigration and the recent discoveries of coal in Dakota, Wyoming and Colorado, he proceeds to speak of coal in the British possessions north of the 49th parallel, in terms as follows:—

"Taking our course north from Mexico, and comparing each political division or territory with the one south of it, we are certain to notice the

great preponderance of coal north of the 30th parallel. Large deposits of coal from 10 to 15 feet in thickness are found 400 and 500 miles north of Montana and Idaho. It is probable, however, that in the extreme north, bordering on the Arctic Ocean, we shall find a corresponding limit of coal, the cause of which is referable, as before stated, to the climatic conditions of vegetable growth.

"It will be interesting, especially to Canadians, to know the sources of coal for the vast region now intersected by the Canadian Pacific Railway. This area comprises the Provinces of Manitoba, Assiniboia, Alberta, and British Columbia. Here is an immense wilderness of both flat and rolling prairie, of grassy plains and magnificent rivers, having a soil both capable of husbandry and herding, as is proven to-day by thousands of new farms where so recently prevailed the wild and hopeless monotony of Nature.

"Into this unmeasured domain nearly 2,000 miles in length, east and west, by at least 500 in width, north of the 49th parallel—the international boundary—are coming, with the facilities of this new trans-continental railway, now being constructed by the Government, hundreds of thousands of the more hardy populations of northern latitudes—of Ontario, Quebec and Northern Europe, already accustomed to long winter terms.

"A colony of families from Iceland,' says a Winnipeg paper of recent date, 'have settled in Manitoba, and are so delighted with their new summer-land that they have sent greetings to their friends, with advice to come and possess the fertile acres of Manitoba, 'without money or price.' It is pleasant to anticipate them and their cousins, the Greenlanders, removing from the 75th to the 50th parallel, and rejoicing in the sunshine of a warmer climate, where even 40° below zero is to them a foretaste of ethereal mildness.

"Coal supplies for the eastern portion of this new region will come from the Souris River lignites already referred to. The middle region can be supplied from the Medicine Hat and Belly River coal districts which also afford lignites. The last named coals are inferior in quality, i.e., not compact, having a heavy per cent. of ash and moisture, and easily disintegrated in the open air. But notwithstanding they are the lowest order of cretaceous coals, yet the necessities of a six months' winter will compel their use and distribution by rail on an extensive scale.

"Beyond Calgary, which is destined to become the leading city of the North-West Territory, coal is found of a quality far superior to the lignite of the plains just referred to.

"A field of anthracite coal has recently been found near Cascade Mountain on the Canadian Pacific Railway 900 miles west of Winnipeg. It has been traced in a direct line, on its outcrops, for several miles, and at intervals pits or shafts have been dug to prove the regularity and persistence of this anthracite stratum. About 300 tons have been mined and shipped to the East, and from this amount, sufficient tests have been made, to prove not only its great value, but also its identity, as a true anthracite coal.

"In the Western States and Territories it is a universal fact that the grade of coals, in quality or value, increase towards the Rocky Mountains as follows:—

1. We have loose or spongy lignites;
2. Compact or solid lignites;
3. Semi-bituminous;
4. Anthracite.

"A correct outline map of the productive coal limits of the Western States and Territories must be vague and uncertain especially on the south. Western Texas, New Mexico and Arizona should have areas indefinitely shaded with frequent doubtful signals—thus (?)

"But the coal area rapidly enlarges with every succeeding parallel going north. This area is over 200 miles wide in Southern Colorado. While in northern Colorado from Greeley westward, across North Park to the coal fields of Utah in Great Salt Lake region, the width of the coal area is nearly 600 miles.

"Through Wyoming, beginning in the Black Hills Region, the coal area extends into Idaho, and includes several deposits of great size and value, notably one near Evanston on the Union Pacific Railway, having a thickness exceeding 40 feet; easily traceable several miles northward in the Bear River Valley. But, on the other hand, it is quite contrary to expectation, yet a fact, that the country nearly 900 miles west of Ogdon, including both Nevada and California, is almost, if not quite destitute of coal.

"We find the greatest width of coal area is spanned by the 40th parallel, or the international boundary, reaching from the Souris River coal system to the Pacific coast, with considerable areas intervening that are destitute of coal, both in northern Idaho, Montana and Manitoba.

"North of this line we have already followed the route of the Canadian Pacific Railway, with results as above stated. Still further to the north-west, 200 miles north of Calgary, in the vicinity of Edmonton, are found large areas of excellent coal, exceeding 12 feet in thickness, extending thence west to the head waters of the Athabasca, and across again to the Pacific coast.

"So varied are the above described coal areas, in their quality, quantity and surroundings, that the man who reads the mute but sure