

which lies before the Ymir District can hardly be overestimated.

THE FUTURE OF THE COAL AND COKE SUPPLY OF THE INTERIOR OF BRITISH COLUMBIA.

(By W. Blakemore, M.E., Fernie, B.C.)

THE future prosperity of this Province depends on an abundant supply of the best quality of fuel at a low price. This controlling factor is determined by two conditions—the general low grade value of our ores, and the fact that the geological formation forbids the existence of coal in proximity to the metalliferous deposits, and so involves more or less costly transportation. This governs the conduct of our mining industry absolutely, and, as I shall be able to show further on, is of equal force as applied to other important industries that may be established, the only important consumers of fuel not likely to be handicapped in this respect being the railways, and that because the matter of quality is not so important as in the case of smelting and manufacturing.

Steam Fuel.—As there can be no considerable development without railway transportation, it may be well to consider first how our coal deposits will serve existing and prospective railways in British Columbia. The natural surface conditions will probably limit railway construction from east to west to three lines. In the north, the Canadian Northern, from the Yellowhead Pass to the Coast. In the centre, the Canadian Pacific, from the Kicking Horse pass to Vancouver, and in the south, the Crow's Nest Pass, with some continuation of the same by way of the Similkameen Valley to Vancouver. The difficulties and the cost of building across the mountain ranges of this Province are sure to militate against more than these. The natural method of serving the interior will be by means of branch lines running north and south between the mountain ranges. In order that transportation may be as cheap as possible, it is necessary that these main lines should pass through or near to large coal deposits of suitable quality for steaming; at any rate this is a present necessity, and will remain so until some day, in the possibly not very distant future, when our magnificent water powers are harnessed to electric locomotion.

The main line of the C. P. R. has hitherto been well served with fuel by the Canmore mines, and it is likely that for at least ten years these will continue to furnish all that may be required. The unworked area, however, is not large, and already it is time to look further afield. On the eastern slope of the Rockies, eight miles west of Calgary, we have exposures of coal seams running north and south which are probably continuations of the large bituminous coal field lying to the south. Little or no development work has been done at this point, but the exposures are consistent with the theory named, and I have little doubt that a season's work would show up a series

of seams of good quality. A line can be gotten as to this by examining the coal at Sheep Creek, which, though inferior to that at Canmore, is still of fair quality and such as could well be used in the absence of a higher grade. Recent investigations convince me that the coals found in the Blairmore district and as far south as the entrance to North Kootenay Pass continue northwards parallel to the Rockies far beyond the Yellowhead Pass, and, if so, although they are on the Alberta side, they are in an ideal position to furnish steam fuel for the main lines at least half way across the Province of British Columbia.

As far as the Canadian Northern is concerned, no portion of this system has yet been constructed, but the route has been surveyed from the Yellowhead Pass to the coast, and at three points, at least, good steam coal has been located in large quantities. Two hundred miles east of the Pass, upon the Saskatchewan River, a high-class lignitic coal has been discovered, yielding on analysis—

Fixed carbon	52 per cent.
Volatile combustible matter . .	35 "
Ash	12 "

This is about the same grade as the Lethbridge coal, of which more than 1,000 tons a day is mined in the season for steam and domestic purposes, and which is a far superior coal to that used by the Great Northern south of the International line.

At a point 200 miles west of the Yellowhead Pass, outcroppings have been met with by the surveyors, and at the moment these are being traced. They no doubt represent the northern continuation of the cretaceous measures, and, if so, the quality will be that of a high-grade bituminous coal, and the only question will be as to the extent.

On the Pacific Coast, 400 miles north of Vancouver, there are extensive coal seams near the route of the proposed railway. The measures run north and south, and the average of several samples recently taken by a reliable expert shows:

Fixed carbon	54 per cent.
Volatile combustible matter . .	37 "
Ash	14 "

This coal, although high in ash, compares favourably with the fuel recently used on American lines in the West.

Coming to the Crow's Nest Pass line and prospective continuation to the Coast, we have the highest grade of steam coal known on this continent in the Crow's Nest Pass and its extensions, and it is not necessary that I should say anything about it except that its only limitation as a railway fuel is one of distance. It will always control the market for this purpose as far west as the Arrow Lakes, but recent discoveries farther west tend to show that, as the Columbia and Kootenay extension is built, it will open up new coal fields, which, by reason of their shorter haul, will secure this trade.

On the north fork of Kettle River, outcroppings of high-class bituminous coal have been found and are