

A quantitative examination gave the following results in 100 parts :

	Spec. gr.	Moisture given out at 212° F.	Volatile Matter at red heat.	Fixed Carbon.	Ash.
I—100.....	1.373	11.88	28.66	57.25	2.21
II	1.375	11.41	29.07	56.94	2.58
III.....	1.340	6.69	33.70	53.25	6.36
IV.....	1.337	6.89	33.57	50.90	8.64

From this you will at once notice the similarity of the results obtained in I and II and III and IV respectively. The spec. gr. of I and II is the same, and the analysis of the two specimens differ from each other *less* than two consecutive analyses of the same coal are often found to do. The variation is not 17 per cent.

The amount of moisture of these two specimens is somewhat surprising. Exposure of the powdered coal for four and a half hours in drying bath to a temperature of 212° F. resulted in either case in a loss of over 11 per cent. It is quite possible that, if the coal has been taken from the outcrop, it is injured by weathering. A sample from the interior of the seam might give different results.

These two specimens of coal do not cake, and leave a coke of a brilliant lustre. The amount of ashes is very small, and of a reddish yellow (playing into orange) colour. Since it is a matter of some satisfaction to be able to inspect personally both coke and ash, I have forwarded to you with this specimen of the same.

The spec. gr. of III varies from that of IV by only 0.003, and the analyses differ much more from each other than those of I and II, yet not sufficiently to constitute these two very different kinds of coal. Percentage of ash is greater, that of moisture less, than of I and II; coke of a dull, greyish blue lustre; ash, grey, pulverulent.

If the specimens are compared among themselves, I and II prove the best, IV the poorest, yet by no means a *poor* coal. None of the specimens contain inspissated pyrites, and are comparatively free from sulphur.

I and II contain all the qualities to render them superior coal for heating purposes, and III and IV are much better than a great deal of the coal from Pennsylvania, such as we are often obliged to burn.

For comparison, I add some assays of Pennsylvania, Maryland and Virginia coal, quoted from Dana, and Joggins and Springhill coal, from the Cumberland coal field; from the carboniferous district of Pictou, and from the district of Richmond. These last quoted from Dawson's Acad. Geol.

February 13th, 1874.

The measure of working the coal fields of the North-west is of such immediate importance to the country, that every inducement will doubtless be held out to private companies to develop these rich fields, which are more important to the prosperity and development of the Dominion than the possession of a mine of diamonds. In advance of the completion of