

The average analyses of the washed coal resulting from the washing of the above coal, and covering the same period, are as follows:

Month.	Moist.	Vol. and Comb. Mat.	Fix. Carb.	Ash.	Sulphur.
1	17.25	34.86	60.58	4.52	1.27
2	13.87	35.51	62.00	3.96	1.25
3	10.95	38.20	66.14	3.64	1.45
4	14.01	28.70	65.56	5.80	1.84
5	11.00	37.92	57.36	4.72	1.75
Aver.	13.42	34.94	61.71	4.33	1.51

Thus it is seen that the average reduction for the five months has been from 16.19 per cent. to 4.33 per cent. in ash, or 73 per cent., and in sulphur from 2.18 per cent. to 1.51 per cent., over 30 per cent. reduction. It might be said in regard to the above figures that the greater quantity of ash in the coal in the last two months was due to the increased percentage of "C." coal used. This coal was not run over a picking belt since that colliery was newly opened, and was not as well equipped as the other collieries.

The most prominent feature of the coal treated, a soft bituminous variety, is the high percentage of volatile and combustible matter which is typical of the Cape Breton coal measures. The coal also has a high percentage of sulphur and more ash than is consistent with economy. Most of the impurity is present in the form of slate, there being only a small percentage of bone coal. The following analysis is that of the impurity which sinks in a calcium chloride solution of 1.35 specific gravity:

Fe S ₂	13.64	
Si O ₂	28.50	} combined as slate.
Al O ₃	17.59	
Ca O	6.74	
Mn Co ₃	2.91	
Mg O	0.44	
Chem. Comb. H ₂ O	15.10	
Carbonaceous matter	14.80	mostly bone coal.

99.72

The sulphur contained exists for the greater part as iron pyrites (Fe S₂), which seems to occur evenly and uniformly distributed through the coal and bone in the form of small nodules,