APPENDIX TO REPORTS ON THE PICTOU COAL FIELD.

The ash from this sample contained 75 per cent. of matter insoluble in character of hydrochloric acid, which was chiefly aluminous silicate. Iron was estimated in the soluble portion, which, by the volumetric method, gave of metallic iron equal to 2.762 per cent. of the ash. Supposing all the iron to exist in this coal as pyrites, this amount would correspond to 0.4243 per cent. of sulphur in the coal. As experiment gave a larger proportion, it is evident that some of the sulphur present exists as a sulphate, probably of lime. The ash was gray, with a faint tinge of pink. This colour of ash is usual with the coal of this seam. Coke, by rapid carbonization, hard; by slow coking, a pulverulent mass was obtained.

To this analysis may be added the results of Prof. How, from an examination of a large sample; probably a better average of the whole seam than the specimen examined by Mr. Broome :---

"Coal from Deep, or Cage-Pit Seam.—An average of the large How's analysis. sample sent, (one barrel), gave :—

How.
2.54
20.46
68.50
8.50
100.00
77.0
1.69
1.345
0.411hg

"This is an excellent coal, especially for domestic and steam purposes. As compared with that of the Foord pit, it gives a larger quantity of coke, and its theoretical evaporative power is decidedly higher, so that it must prove a valuable steam coal. It burns well in a stove, affording a strong enduring heat; its ash not being much above that of the Foord-pit coal, it will also be found superior for domestic uses to the coal formerly raised at your mines. The sulphur is not high, as compared with many coals, though it is rather above the average of that in Welsh steam coal.

"The ash is chiefly sand; there is very little lime, so there will not be much clinker formed. From the high specific gravity, one cubic foot of the coal should weigh about 53 lbs., when broken, and a ton of 2,240 lbs. should be stored in about 42 cubic feet.

" The coal is harder and less easily broken than that from the Foord pit."*

rcoal.

at distances

Ashes. 11.4 7.55.354.020.4 31.6 7.328.610.7 13.4 28.3 24.6 8.05.6 8.5 16.3

55.9 being worked

BROOME, Coking.	
pid.	Slow.
3.1	25.5
.9	74.5
	-
0.0	100.0
• • • • • •	1.296 25.443
	61.650
	.861
• • • • •	10.250
100.000	
• • • • •	1.33

^{*} Extract from a letter from Prof. How to James Hudson, Esq., G.M.A.