

UNIVERSITY OF CALIFORNIA

JANUARY 10th, 1871.

GENTLEMEN,—

I beg to report to you on the examination I have just completed for the General Mining Association of London, according to directions from R. H. Brown, Esq., Manager at the Sydney Mines, Cape Breton.

The sample of Coal forwarded to me, last month, was in two boxes, each 8 inches square by 3 feet long, which contained a full section of the Main Seam 6 feet high, half the length being in each box. Pieces were taken throughout, so that a fair average of the quality of the whole seam might be procured. The Coal arrived in excellent condition after a long sea voyage and about 50 miles of land carriage, of which 45 were by rail. I obtained the following results on analysis:—

COMPOSITIVE OF AVERAGE SAMPLES OF THE WHOLE
SEAM OF COAL.

BY MEDIUM COKING.

Moisture.....	3.04
Volatile combustible matter... 31.14	
Fixed carbon.....	61.50
Ash (reddish brown).....	4.32
	100.00

Coke per cent. 65.82
Theoretical evaporative power. 8 45 lb.

BY FAST COKING.

Total volatile matters	37.48
Coke	62.52
	100.00
Theoretical evaporative power.	7.98 lb.

BY SLOW COKING.

Total volatile matters.....	29.70
Coke.....	70.30
	100.00
 Theoretical evaporative power. 9.06 lb.	

Mean coke per cent.....	66.21
Mean theoretical evaporative power.....	8.49 lb.
Ash per cent.....	4.32
Sulphur per cent.....	1.24
Specific Gravity of average samples.....	1.30
Calculated weight of one cubic foot, unbroken.....	81.10 lb.
" " " broken.....	54.50 lb.
for one ton, 2240 lb., on stowage ("Economic").....	47.10 cu.