It is a very usual and easy objection to these results, that the lights, the respiration of horses and men, pyritous decompositions, &c. raise the temperature. The contrary is generally true, as we have shown in narrating the particulars of an experiment (1834) at Monk-wearmouth, where the coal had been reached only a few days previous, no horses had entered the mine, few miners were at work, no chemical decompositions apparent, and the *air supposed to be heated* was many degrees cooler than the coal and rocks, and grew hotter only in proportion to their influence.* The depth of this pit was 1584 feet; mean temperature at the surface 47·6°; thermometer at the bottom, in coal, 71·5°, 72·0° and 72·6°. Ratio deduced 1° Fahr. for 20 yards English.

This ratio, lower than Mr. Bald's, derived from the water in the coal mines, may perhaps be more correct; and it is supported by experiments at Wigan, under the care of Mr. Peace, which give 60 feet for 1°. At Manchester, Mr. Hodgkinson obtained a ratio from the surface, of 1° in 69 feet; while at Bedminster, under the care of Mr. W. Sanders, the ratio was found to be as high as 1° in 30 feet, and some anomalous facts were observed. (In each case 100 feet are deducted from the depth as an allowance for the depth of variable heat.)

M. Cordier gives the following summary of observations in the coal mines of Carmeaux, Littry and Decise (1827)

Carmeaux.

Water in the well Veriac,	at 6·2	mètres	12·9°	cent.
Bigorrè	11·5	-	13·1	—
Rock at the bottom of Ravin mine	181·9	-	17·1	—
Castellan	192·0	-	19·5	—

* Phil. Mag. and Annals, 1834.