

THE COAL-BASIN OF NEW SOUTH WALES.

To the Editor of the GEOLOGICAL MAGAZINE.

SIR,—By the Australian mail, just arrived, I have received a letter from my friend, Mr. JOHN MACKENZIE, Examiner of Coal-fields to the Government of New South Wales, from which I extract the following (Mr. Mackenzie is stationed at Wollongong):—‘I have had a journey of upwards of 300 miles for the purpose of seeing whether the *Hartley Coal-seams*, in the County of Cork, belong to the same Coal-basin as that of Newcastle and Wollongong; and to see if I could find out with which known seams of coal on this side they were identical. I was able to recognise them. Another reason for my going was, that I had an idea that I could find coal identical with the *Fitzroy Coal* at a distance of thirty miles from Sydney, the metropolis of New South Wales. I have satisfied myself that coal will be found there; but I must make another examination before I can tell whether there is a good seam of coal. I have found the lower coal, which is inferior; and I cannot yet tell whether it will be near enough from the edge of the Coal-basin for the next excellent seam of coal to come in above it. The Coal-measures I find gradually increase in their thickness from the edge of the Coal-basin towards the centre; and the Sydney, or Clarke’s “Hawkesbury,” Sandstone rests on the Coal-measures near the edge of the basin; and whilst, near the centre of it, it is 900 feet from the top coal; sandstones and shales, different in nature from the Hawkesbury Sandstone, intervening in the 900 feet. It has been supposed by other geologists that it would always be from 900 to 1,000 feet from the Hawkesbury Sandstone to the first coal; whilst I am certain that I can find it, only thirty miles from Sydney, at a depth of from 150 to 200 feet. But if I go to twenty-eight miles, and find the top coal coming in, it might be 400 feet.’ After giving an account of the great difficulties attending the exploration, Mr. Mackenzie continues:—‘I will first give you an outline of what I know from my own exploration of this vast coal-field. I have explored the Counties of Canada, Cumberland, Cork, Hunter, Northumberland, and Durham, and find that the New South Wales Coal-basin extends under the whole of them, and a portion or the whole of Gloucester (I have not explored the whole of it), as well as a portion of the counties of Brisbane (*not* Brisbane in Queensland), Phillip, Roxburgh, Westmoreland, and St. Vincent; and that the south-easterly and easterly side of the coal-basin lies partly buried under the Pacific Ocean, and principally washed away. This makes the New South Wales coal-basin at least 200 miles in length, and probably the same in breadth: but the breadth can never be ascertained, owing to the easterly side of the basin being in the Pacific Ocean.’

I have given the above in Mr. Mackenzie’s words: it is at your service. Mr. Mackenzie was the discoverer of a magnificent seam of coal (12 yds. or more) in New South Wales, not long since.*—I am, yours truly,

E. H. BIRKENHEAD, B.Sc., F.G.S.

WORSLEY MESNES, WIGAN: Feb. 24, 1865.

* See GEOLOGICAL MAGAZINE, No. V. p. 234.