

other seams, apparently of a quality and thickness sufficient to render them workable, are known, but unless an analysis and other reliable data are available, no allowance is made in the estimate of resources. For this reason the estimate is considered a conservative one. On the other hand, no allowance is made for loss in working. Consequently the figure entered for Wankie is considerably larger than that given by Mr. Thompson, the manager of the Wankie colliery, who has made such an allowance.

The Rhodesian coal-fields are shallow, and it is unlikely that any coal exists below 4,000 feet in depth (Group II). The only really concealed coal-field is the one probably existing beneath the Victoria Falls basalts. The Wankie coal-field is cut off abruptly to the north-west by the Deka fault, which Mr. G. W. Lamplugh³ thinks may have a throw of not less than 2,000 feet. It is almost certain that the Wankie coal-series continues beneath the basalts northwards beyond the fault.

The total coal resources of Rhodesia I estimate at 569,411,000 metric tons. Some 73 per cent., or 419,317,000 tons, may be placed in actual reserve, since this much of the estimate is limited to areas which have been specially examined for coal. The possible reserves is in some cases very large, e.g., the Luano field is estimated to have an area of over 500 square miles, and outcrops of coal are known in many parts of it, whilst the coal of certain seams in an area of a little over a square mile alone enters into the figured estimate.

The majority of the coals of Rhodesia, like those of South Africa, contain a percentage of ash, which is high in comparison with the Carboniferous coals of Great Britain. The Wankie and one of the Tuli coals, however, contain only 8 to 13 per cent., which compares well with the usual 15 to 20 per cent. in South African coals.

In classifying the coals according to the scheme adopted by the Congress, it is found that most of them have a calorific value near or below the minimum value assigned to the class to which each one belongs by reason of its fuel ratio and other characters. The high percentage of ash is doubtless the chief cause of the lowering of the calorific value. Some 74 per cent., or 425,852,000 metric tons, belong to Class B.

REFERENCES

- ¹ Molyneux, A. J. C. The Sedimentary Deposits of Southern Rhodesia. *Quart. Journ. Geol. Soc.*, Vol. 59, pp. 266-290. 1903.
- ² Kynaston, H. The Geology of the Komati Poort Coal-field. *Transvaal Geol. Surv. Mem.* No. 2. 1906.
- ³ Lamplugh, G. W. The Geology of the Zambesi Basin around the Batoka Gorge. *Quart. Journ. Geol. Soc.*, Vol. 63, pp. 162-214. 1907.
- ⁴ Molyneux, A. J. C. The Correlation of the Karroo System in Rhodesia. *Rep. S. African Assoc. Adv. Sci.* 1908.
- ⁵ Molyneux, A. J. C. The Karroo System in Northern Rhodesia. *Quart. Journ. Geol. Soc.*, Vol. 65, pp. 408-439. 1909.
- ⁶ Mennell, F. P. Map of Rhodesia geologically coloured (Mining Districts of Matabeleland), Bulawayo n.d. (1911).
- ⁷ Broom, R. On the Remains of Theropodous Dinosaurs from the Northern Transvaal. *Trans. Geol. Soc. S. Africa.* Vol. 14, p. 82. 1912.
- ⁸ Lightfoot, B. Report on Claims of the Great Sabi Coal Syndicate, Victoria District. *Rep. Geol. Surv. S. Rhodesia.* 1912.