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NOTE ON EXTENT, STRUCTURE AND THICKNESS OF COORABIN COAL MEASURES

by

C.L. Knight

NOTE ON EXTENT, STRUCTURE AND THICKNESS  
OF COORABIN COAL MEASURES.

The coal measures are not known to outcrop and all available data on extent and thickness has been gained by boring and shaft sinking.

The coal measures have been proved to extend over an area of four and a half miles by two and a half miles, centring around Coorabin railway siding, which is five miles north of Oaklands. There is no definite evidence of any extension beyond this limited area. There are unconfirmed reports by water-bore contractors that coal and black material was struck in two bores located some fourteen miles south-south-east and eighteen miles south-south-west of Coorabin. Carbonaceous shale was pierced in a bore fourteen miles to the north just south of Lake Urana. The water bores in the country around Coorabin are too shallow to prove or disprove the presence of the coal measures.

Reconnaissance work has been carried out by Mineral Resources Survey and the New South Wales Geological Survey in an attempt to define the limits of the basin in which the Coorabin coal measures were laid down. Bed rock outcrops ten miles to the east and continues south for eleven miles. To the north older rock outcrop, or occur at shallow depths, beneath the Tertiaries(?), along an east-west line through Lake Urana. To the south-west a belt of older palaeozoic rocks outcrops between Mulwala and Berrigan. Elsewhere the country is flat and occupied by Tertiaries(?), which mask basement rock and any possible continuation of the coal measures.

In the Coorabin area, the permian beds are overlain by a thickness of from 110 to 220 feet or more of well-bedded sandstone, grit and white clay which are apparently of Tertiary age. A bed of gravel is found at the base in several places. The base of the Tertiaries is believed to dip flatly south.

The permian beds were gently folded before deposition of the Tertiaries. A broad structural dome a mile and a quarter long and at least half a mile wide has been proved in the Lane's shaft - Gunambil shaft area. Over much of this area the coal-bearing band has been partly denuded and the Tertiaries lie directly on it. West of Lane's shaft the coal-bearing band falls to a synclinal trough and rises again to the west to the Clear Hills shaft, where Tertiaries again lie directly on it. To the south of Lane's shaft the band dips south, and the synclinal structure probably pitches south also.

A section of permian beds at least 220 feet thick has been intersected in the bores. The coal-bearing band, outside the areas where it has been partly denuded, ranges from 38 feet to 79 feet in thickness, and averages 60 feet. Above the band are sandstones and shales, not noticeably carbonaceous, to a height of approximately 130 feet above the base of the band. A few feet of carbonaceous or coaly material follows and this gives place again to sandstones. Below the band are sandstone and light gray mudstone, which have been pierced to a depth of 84 feet in one bore.

The coal-bearing band consists of bands of coal, carbonaceous shale and shale. The aggregate proved thickness of coal within the band varies from forty-seven feet to a few inches.

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