

The Commonwealth Oil Corporation, Newnes, N.S.W.

Although the existence of high-grade shale in the Wolgan Valley was known as long ago as 1865, it was not until the present century that a company was formed for the purpose of developing the deposits. The Commonwealth Oil Corporation Limited was registered in England during December 1905 but shale was mined as early as 1903, being brought out of the valley by road team, via Lidsdale. In the first instance the Corporation secured the mineral leasehold for some twenty-five square miles, later increased to about thirty-five square miles, from the Government of New South Wales, subject to a royalty of six-pence per ton of oil-shale, three-pence per ton of small coal, and six-pence per ton of large coal.

The Wolgan Valley is typical of the Blue Mountains country, shut in by high inaccessible cliffs, towering 2000 feet above the narrow floor with its winding streams of permanent water. Access was possible at a few places, and that only by bridle tracks, until 1897, when the New South Wales Public Works Department constructed a road into the valley from the vicinity of Lidsdale, near the junction of Maddox's Line with the Mudgee Road.

This road, passing through scrubby country, entered the valley at its south-western end, via the Wolgan Gap, and its steep winding descent, clinging precariously to the talus slope, is, even today, something of an adventure for the city motorist searching for the remains of almost forgotten railways.

The valley was much used for the agistment of stolen cattle in the early days, to say nothing of a more recent example, and, no doubt, its proximity to Maddox's and Bell's Line, formerly much-used stock routes, was found to be convenient.

In considering why the Corporation elected to establish the works at Newnes, in the lower Wolgan Valley rather than the neighbouring Capertee Valley, where mining conditions were known to be much more favourable, it must be borne in mind that, apart from a better water supply, the Wolgan Valley offered much greater facilities for railway access — an absolute necessity for handling the products of the works and supplies for the resid-

ents of this isolated area, under the road transport conditions applying in 1905 and much later.

In connection with the development of mining operations, a preliminary survey was run by Mr. J.H. Cardew, N, Inst C.E., for a railway to a connection with the Great Western Railway at Clarence. At the Wolgan end of the proposed line some engineering difficulties presented themselves in crossing the Constance Gorge and the Island Mountain. It was intended to connect the line with an incline to the bottom of the valley with rope haulage worked by a steam engine. This system had been roughly worked out, but it was not decided whether the scheme should include a standard or a narrow gauge track, as it was estimated at the time that there would be a daily gross tonnage of at least 1,000 tons to convey over the line. However, it was later decided that the standard gauge was essential in view of the anticipated traffic and that the line should be run into the valley, if at all practicable, rather than terminate some 1200 feet above the works as originally contemplated.

LOCATION AND CONSTRUCTION.

In April 1906, Mr. D.A. Sutherland, Consulting Engineer and General Manager of the Commonwealth Oil Corporation, engaged Mr. Henry Deane, formerly Chief Engineer for Railway Construction to the New South Wales Government, to take charge of the survey and construction of the proposed railway.

Mr. Deane found Mr. G. Marshall already at work on a promising descent into the valley, with ten chain radius curves and 1 in 40 grades but, after some study of the problem, it was decided that five chain radius curves and 1 in 25 grades were unavoidable if the project was to be kept within the region of practicable cost. "There was just room by the adoption of the grades mentioned, and by the insertion of a tunnel twenty chains long, to get sufficient length to squeeze through."

Additional survey staff was engaged, including Messrs Thom, Rhodes, and Amphlett. Mr. Rhodes undertook the location of the first nineteen miles, Messrs. Marshall and Amphlett made renewed