

small 0-6-0 side-tank locomotive which, as one of a batch of four, had been built by Messrs. Mort and Company in 1875, their work's number 17, to assist with the Sydney to Parramatta suburban traffic. Given the road number 69 and later classified as "Class N 67", the engine proved most efficient and also a very fast runner whilst in Departmental service. When relegated to the Duplicate list of engines it gained the ominous letter "X" after its road number. No. 69X was sold in 1892 to Messrs. Kerle and Kerle for construction work on the first section of the Lismore to Tweed Railway, the engine being in the first instance based on the jetty at Byron Bay. On the completion of this work according to report, the engine was shipped from the Byron Bay Jetty to Sydney and from thence by rail to Torbane.

Locomotive No. 69X had inside cylinders 13 inches diameter and a stroke of 20 inches. The diameter of the driving wheels was 48 inches and the total weight 28 tons. At Torbane, she still retained her original road number 69 fixed in brass figures to the front mid-position of the chimney and, although "long in the tooth" so to speak it gave good service at Torbane for several years.

THE SHALE RETORT INSTALLATION AT TORBANE TOWNSHIP

The bench of vertical shale retorts of the continuous feed type installed at Torbane were designed on a Scottish pattern for the economical treatment of low grade mineral that was too poor in quality for export trade. Construction work on the project proceeded throughout 1900 and the Company had the satisfaction of sending away the first tank-wagon of crude oil to their refinery at Hartley Vale in the early part of December 1900. A lucrative contract had been obtained to supply the Australian Gaslight Company with one million tons of crude oil annually for a period of ten years. This oil was used in the enrichment of water gas.

The retorts at Torbane were operated exclusively for the production of crude oil which was despatched to Hartley Vale for fractional distillation. The crude oil was loaded into the company's standard gauge rail tank-wagons which had capacity for eight tons, then followed a journey of forty-three miles to Hartley Vale goods sidings where the oil was discharged, either direct into storage tanks or the company's metre gauge travel-

ling tanks of three hundred and fifty gallons capacity which were drawn by the company's narrow-gauge locomotive to the top of the inclined haulage way, thence lowered by cable into the valley, and again by another locomotive to the refinery. The transport costs incurred in such an arrangement would have been far from negligible.

THE TORBANE SHALE HAULAGE NARROW-GAUGE TRAMWAY

Immediately east of the retort installation at Torbane lay the steep slopes topped by vertical walls of sandstone, of a northern spur of Airly Mountain over which it was necessary to construct a narrow-gauge skip haulage tramway to bring the shale from the several adits ranged in the neighbouring Genowlan Valley. It is of interest to state that workable kerosene shale was only to be found in the Genowlan Valley, no trace of the mineral being found on the Torbane or western side of Airly Mountain.

Before dealing with the arrangement of the main shale handling facilities provided at the Torbane Retort terminal. The contents of loaded skips of shale were dumped on to a "Picking Table", sheltered by a long narrow galvanised-iron shed. Here a gang of men and boys, particularly the latter, were engaged in grading the shale into "Export" quality or the "Smalls" destined for the local retorting process. Stone was also discarded, together with pieces of wood and scraps of metal which had found their way into the skips at the mine face. Large lumps of "Export" shale dropped down a chute into a skip waiting at the bank-head of a self-acting inclined way which descended to the valley floor. From the bank-foot the skip was trundled to one of the two previously mentioned shale loading sidings placed on either side of the standard gauge loading siding, where the mineral was discharged into Departmental open-topped wagons for further transport over the Government Railways.

Shale destined for the adjacent retorts was loaded at the "Picking Table" into skips running over a two-tracked high-level gantry, one line being for "Fulls" and the other for return "Empties". At the outer, or western end of the gantry the skips entered a tippler and their contents discharged into a holding bin from the base of which

Opposite:

The works area at Torbane, 1906.

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