



*An early photo of the winding house at the top of Joadja incline.*

*N.S.W. Govt. Printer.*

It was decided to erect a bank of thirty-one horizontal retorts at Joadja, a site being chosen on the eastern side of the company's railway on the valley floor below the main shale adits. These retorts were flat at the base with shallow oval-shaped tops and straight flanged end-plates, the whole assembly being strongly butt-strapped and held together with rivets. Each retort had a run-off valve and a flanged filler hole at the end, through which some two and a half tons of crushed shale could be charged. Beneath each retort was a separate coal-fired furnace which discharged its smoke into brick flues which led to a common brick chimney. The oil saturated volatile vapours, thrown off by the shale roasting process, were piped to a water-cooled condensing apparatus and the resultant distillate, in the form of crude-oil, was conveyed to the company's oil refinery for fractional distillation. Kerosene, naptha, blue-oils, paraffin wax, tar, etc were listed amongst the various products thus obtained, whilst a waste liquid, without commercial value at that time, was known as petrol and gen-

erally found its way into Joadja Creek, a forerunner of today's formidable industrial pollution problem. A dead-end railway siding, with its entrance point facing towards the mines at the head of the valley, was constructed to afford standage to the wagons bringing the shale to the retorts.

The refinery, together with its bulk storage tanks and other appurtenances, and a kerosene-tin and wooden case making plant, were also located on the valley floor, at a short distance to the south of the retort installation, and placed within an area of some seven acres protected by a high fence surround. There was also a brick making establishment where the kilns supplied bricks for the various furnaces and the housing of the company's employees. The warehouse section of the refinery was also served by a dead-end siding which left the main line that traversed the Joadja Valley in the vicinity of the northern side of the railway bridge over Joadja Creek, the siding curving westwards to pass through the gates of the enclosing fence. A locomotive shed was later erected near