

To railway minded men each system of operation had its special fascination.

The haulage over the southern most double-tracked inclined way at Joadja, approximately twelve chains in length and very steeply graded, was performed by two horses harnessed to a vertically arranged whim. This appurtenance consisted of a strong shaft, held upright by strongly placed bottom and top bearings, surmounted by a large diameter wooden winding drum around the outside edge of which two or three turns of the haulage cable were passed. Hanging from and below the drum were two opposed radiating arms made from poles, to each of which a horse was harnessed. The animals, trotting around a circular shaped track rotated the drum thus enabling the cable to bring the loaded skips to the head of the inclined way and, at the same time, lower the empty skips to the bottom level. The winding direction of the whim was changed by the simple expedient of reversing the travelling direction of the horses.

Haulage of the skips between the base of the two inclined ways, a distance of over a mile, was performed by mules. There was an unloading platform at the crest level of the southern haulage way where the contents of the skips were emptied on to a loading stage elevated above road vehicle level. Further conveyance of the shale to Mittagong was made, as previously, by road wagons hauled by horse teams.

THE MINING ACTIVITIES OF MESSRS BROWN AND LAMB

The land adjoining Edward Carter's sixty acres property at Joadja was held by Messrs Brown and Lamb who commenced to develop their shale winning activities on an extensive scale. They had a tramway constructed from their adit to a depot located at the bottom level of the Joadja Valley. The loaded skips, with their hand-brakes well applied, were gravitated down this line and when emptied were hauled back to the workings by mules. A three feet six inches gauge haulage way also constructed from the depot and climbed another outlying spur of the southern mountain ridge to reach the crest level, the line being sited about half a mile to the east of the previously installed whim haulage way owned by Edward Carter.

Opposite:

Entrance to one of the adits at the Joadja shale mines, 1879.

Messrs Brown and Lamb terminated their haulage line at a nest of sidings placed at a distance of about half a mile to the north of the Joadja-Mittagong Roadway, linking the latter with their tramway terminal by a bush track which dodged all natural obstacles in a well planned manner. A forty-horsepower steam winding engine and boiler unit was installed at the bank-head for raising and lowering the rail wagons. The length of the single track from the engine house to the foot of the mountain was over three thousand feet, of which more than half was graded at 1 in 2 and the remainder varied from this steep inclination to 1 in 20.

At the base of the haulage way was an arrangement of three sidings, that on the west being utilised for wagon standage purposes, the looped central track was set aside for the reception of empty vehicles from the haulage way, whilst the eastern looped track was sharply down graded in its length to permit loaded vehicles being gravitated forward for attachment to the haulage rope. Both the "FULL" and the "EMPTY" tracks crossed a rough wooden bridge spanning a watercourse before uniting at the foot of the haulage way, which, incidentally, came into operation during 1877.

From the sidings the line in the valley crossed Joadja Creek by means of a low level bridge, resting on seven piers, and then led to the scene of the various mining activities of the company. At this period proposals were made by Messrs Lamb and Parbury to acquire the property of Mr. Carter and other holders of shale lands in the Joadja Valley. When the negotiations were satisfactorily completed it was decided to float a company to be registered under the name of the Australian Kerosene, Oil, and Mineral Company. The nominal capital of the new company at its inception was £50,000 divided into shares of £10 each.

THE AFFAIRS OF THE AUSTRALIAN KER- OSENE OIL & MINERAL COMPANY

The influx of new capital permitted the company to greatly extend its activities and while the best grades of shale found a ready market in the gas industry, both in Australia and abroad, there was an accumulation of second grade material at the mines which, as such, had little saleable value.

N.S.W. Govt. Printer.