

Lowering pipes into trench, 1902



Description

This is a black-and-white photograph of a team of eight men preparing to lower a length of pipe into a trench excavated for the water supply pipeline in Western Australia. Trestles fitted with a hand winch, pulley system and steel-lifting ropes hold the lengths of pipe waiting to be lowered, and a number of connecting rings are distributed alongside the trench. A railway line and telegraph line can be seen running parallel with the pipeline. The caption below the photograph (not visible) reads 'Lowering Pipes into Trench'. The photograph measures 11 cm x 15 cm.

Educational value

- This photograph shows a section of the world's longest freshwater pipeline, under construction in 1902. At the time water had never been lifted so high (390 m), nor pumped so far. The pipeline stretched almost 560 km east, from a dam near Perth to Kalgoorlie in WA's arid interior. Before the Coolgardie Water Supply Scheme successfully solved the problem, a shortage of fresh water in the arid gold fields had impeded development and resulted in death and disease from insanitary conditions. The Scheme was officially opened in January 1903 and is still Kalgoorlie's primary source of fresh water.
- The relationship between the railway line and the pipeline was important, with the pipeline generally following the railway's route to accommodate distribution of the pipes. Visible in the background is a number of lengths of pipe and collars, lying where they have been unloaded from railway wagons.
- The telegraph line in the photograph is also important because just as the pipeline followed the railway line, so too had the railway line originally followed the telegraph line.
- The trench in which the pipeline was buried was somewhat controversial. The English engineers consulted by the Western Australian Government believed the piping should be above ground, uncovered, to save the expense of trenching and



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in particular to help in detecting and repairing leaks. However, Engineer-in-chief C Y O'Connor decided, against that recommendation, to bury the pipes in a trench to protect the lead joints from extremes of temperature and to minimise expansion. Earth was loosened by horse-drawn ploughs or, on more than a quarter of the total material, by explosives. Most of the trench was excavated manually. The most economical depth was about 1 m, but the trench was shallower in harder country.

- A variety of equipment was used to move the piping closer to the trench and to lower it in. Each gang had two pipe-lowering trestles and four wooden skids, two of which are partially visible on the lower right of the photograph. The pipe was rolled by hand so that it rested across the centre of the trench on the skids. Next, the trestles were erected around the pipe, the ropes attached and the pipe lifted so the skids could be removed. The men are shown using a pair of A-frame trestles fitted with a hand winch, pulley system and steel-lifting ropes. The two men with their hands on the levers are operating a braking system that would have controlled the rate at which the pipe was lowered.

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