

## Reservoir at No 2 Pumping Station, 1902



### Description

This is a black-and-white photograph showing three men, all of whom were involved with the completion of the water supply pipeline in Western Australia, sitting on a pipe that is discharging water into the suction tank of No 2 Pumping Station. The photograph, showing the tank nearly full, was taken on 13 April 1902, two weeks after pumping had started at No 1 Pumping Station. On the left, in the bowler hat, is T C Hodgson, then engineer-in-charge of all pipeline and pumping station construction. In the centre is attorney Reginald Forbes of Glanville and Forbes, who acted in Australia on behalf of the British firm that supplied the pumping machinery. On the right is William Reynoldson, who was to succeed Hodgson as engineer-in-charge of the Scheme. The photograph measures 15 cm x 11 cm.

### Educational value

- The water seen in the reservoir had come from Mundaring Weir on the outskirts of Perth, on the first stage of its journey through a 560-km pipeline to the gold fields. It is flowing into the suction tank that served the second of the eight steam pumping stations needed to deliver the valuable water to its destination.
- The pipeline was built to solve the freshwater shortage problems that were hindering development and causing great hardship for inhabitants of the gold fields, with many dying of dehydration and diseases that spread due to insanitary conditions. The pipeline was officially opened on 24 January 1903 and has been supplying WA's arid eastern gold fields ever since.
- The men in this photograph were three of the key players responsible for designing, building and overseeing the successful completion of the ambitious Coolgardie Water Supply Scheme, with two being employed by the Public Works Department to work on the Scheme.
- T C Hodgson, on the left, was a controversial figure who was implicated in the suicide of C Y O'Connor, the former engineer-in-chief, who had had overall



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responsibility for the pipeline. At the time this photograph was taken, Hodgson's days with the Department were numbered. He was suspended from duty on 31 May 1902 and resigned on 4 August. A royal commission of inquiry criticised him for gaining financially from the Scheme, taking loans at favourable rates from contractors and profiting from locating No 3 Pumping Station at Cunderdin, where he owned land. The commission found that the trust placed in Hodgson by O'Connor contributed to the latter's suicide on 10 March 1902.

- The Coolgardie Water Supply Scheme pumped water further and lifted it higher than ever before. It was designed as eight repetitive sections rather than one continuous pipeline. In the photograph, water is entering a tank that served as both a receiving and a suction tank at No 2 Pumping Station, after being pumped a vertical lift of almost 50 m from No 1 Pumping Station. Pumps in No 2 Pumping Station would have drawn this water and sent it to a reservoir at No 3 Pumping Station. No 3's engines would have sent it on to No 4 Pumping Station, and so on up the line. The tanks also served as service reservoirs for the pumping stations' residents.
- As a protective measure, the steel pipes of the Scheme were covered with soil where possible and buried in a trench about 1 m deep, to insulate the joints from extremes of temperature. Where the pipeline could not be buried, for instance in saline soils where corrosion would occur, it was carried on timber trestles, insulated with sawdust and kept in place by galvanised corrugated iron to prevent movement at the joints. In the 1930s the pipeline was raised above ground level so that it would be clear of corrosive soils.
- Corrosion became a problem almost as soon as the pipeline was completed, external corrosion by 1905 and internal corrosion by 1908. In this 1902 photograph the pipe is shown entering at the top of the tank, an arrangement that was then common to all pumping stations with such tanks. Later, the pipework was altered to discharge water near the bottom of the tank instead of above the surface of the water; this modification being made to prevent corrosion caused by dissolved oxygen. A report into pipeline corrosion made several recommendations, including adding lime to the water. Lime would have been added to the water in this tank between 1910 and 1913.
- Some of the sites chosen for the eight steam pumping stations were very remote and staff had to live onsite because there was nowhere else within reasonable distance. Visible in the photograph is a track that would have been made through the virgin bush specifically for the purposes of building No 2 Pumping Station.
- The tanks were fenced off to prevent animals from the surrounding forest or countryside falling in and polluting the water. The fence at No 2 Pumping Station was built to keep out wild horses.

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