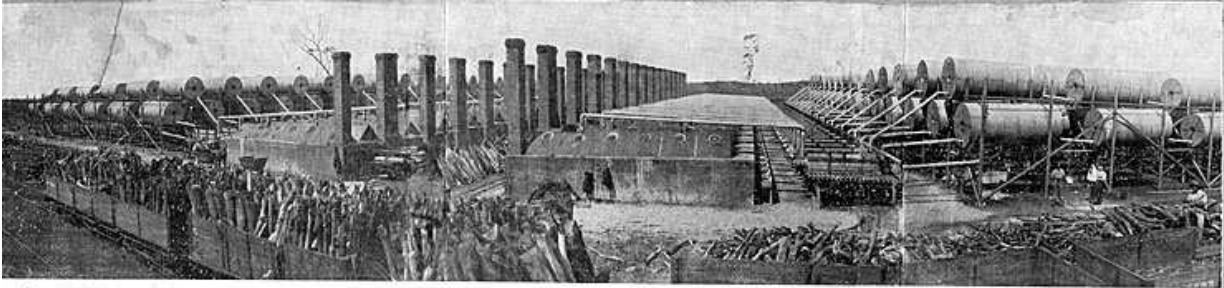


## Mammoth government condenser at Coolgardie, 1902



GOVERNMENT CONDENSERS, COOLGARDIE.  
(Coolgardie Goldfields)

### Description

This is a sepia photograph, measuring 8 cm x 27 cm, showing a huge condenser that was built by the Western Australian Government to supply fresh water to Coolgardie and to the railways, before the Coolgardie Water Supply Scheme designed by C Y O'Connor was opened. It shows ranks of boilers, chimneys and condensing units. In the foreground are wagons stacked with timber for fuelling the condensers.

### Educational value

- This asset depicts Coolgardie's largest condenser - the government condenser had 32 sets of boilers and chimneys, each containing six 400-gallon (1,800-L) square iron tanks, 32 primary condensing units and nearly 800 separate galvanised iron secondary condensing units; it employed 40 to 50 men and was claimed by the press at the time to be the largest condenser in the world; the site, which has been preserved and can be visited today, is at the eastern end of Coolgardie, Western Australia; it is situated between the old railway line formation and the present highway and is approximately 200 metres square.
- It shows early technology capable of producing 455,000 L of (reasonably) fresh water every day from 545,000 L of salty water; the 'mammoth condenser' started operations in June 1901 but became redundant by January 1903 after the completion of the Coolgardie Water Supply pipeline; ironically, its construction was probably delayed by the demand for labour to build the pipeline.
- It suggests that an enormous amount of fuel was required to produce condensed water - fires heated the saline water in large boilers to convert it into steam, which cooled as it moved further from the source of the fire and was finally collected in vast tanks as water; the mammoth condenser consumed 100 tonnes of firewood every day in its 30 wood-fired boilers.
- It indicates that timber for the condenser was delivered by train - railway lines known as 'woodlines' extended into the countryside in ever-increasing circles to find timber to meet the demand for fuel for the condensers on the gold fields; any timber found was cut and stacked in open carts for delivery to the condenser; at the condenser the logs were stacked on site, ready to be thrown into the furnaces.
- It is an example of a government initiative to overcome water shortages on the gold fields - this condenser was constructed principally to meet railway requirements since steam trains required copious quantities of water of a good quality without minerals, and the condensing process provided this water; many other condensers were privately operated.



**Categories:** Life on the Goldfields; Early Water Supplies

- It is an example of an industrial heritage site that can be visited today - the site is at the eastern end of Coolgardie, Western Australia; the condenser is no longer there, but the layout can be seen on the ground; it is situated between the old railway line formation and the present highway and is approximately 200 metres square.
- It indicates the desperate water shortages on the gold fields in the 1890s - with no permanent sources of fresh water the Government had to resort to innovative ways of obtaining water for the railways; rocks were harvested for water and salt water was boiled; rainwater run-off was channelled into railway dams built at the base of granite outcrops; these couldn't meet the demand on the heavily used railway line so the mammoth condenser was built; apart from railways, fresh water was needed for everyday consumption and mining operations; water shortages made life uncomfortable and unhealthy with no sanitation or fresh food supplies.

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**Creator** WA Mines Department, publisher, 1902

**Identifier** Battye Library number 009072D

**Source** National Trust of Australia (Western Australia), <http://valuingheritage.com.au>



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