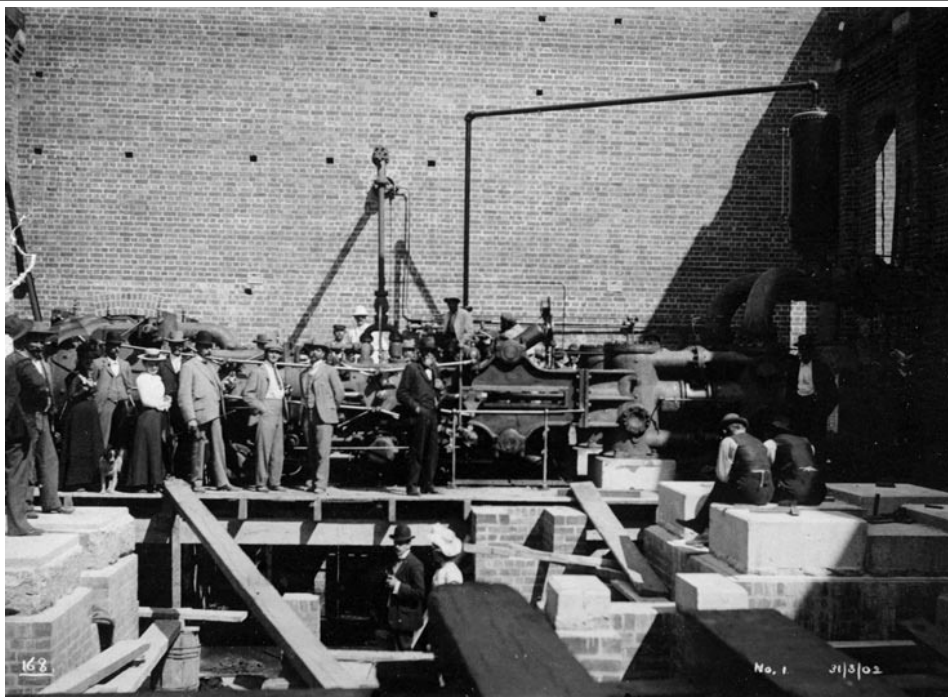


First day's pumping at No 1 Pumping Station, 1902



Description

This is a black-and-white photograph that was taken on 31 March 1902 inside No 1 Pumping Station at Mundaring Weir, Western Australia, to mark the first day that water was pumped for the Coolgardie Water Supply Scheme. A large crowd of well-dressed visitors is there to witness the event. On that date only the first of the Station's three pumping engines had been installed. In the foreground can be seen the completed foundations for one of the other two engines, partly covered with scaffolding. The photograph measures 15 cm x 11 cm.

Educational value

- This historic photograph, taken on 31 March 1902, marks the start of water being pumped through a pipeline from a dam near Perth to WA's arid gold fields about 560 km east. A shortage of fresh water had previously impeded development and resulted in death and disease from insanitary conditions.
- The Coolgardie Water Supply Scheme was an ambitious engineering feat in the early 1900s. The world's then longest freshwater pipeline was constructed, with eight steam-powered pumping stations. It was officially opened on 24 January 1903 after each of the eight sections had been completed. Today the Scheme still draws water from the original dam, using electric pumps and more than half of the original pipes.
- No 1 Pumping Station, the first of eight pumping stations needed to deliver the water to Coolgardie and Kalgoorlie, was situated at the base of Mundaring Weir. Fresh water was stored there before being pumped a distance of less than 3 km to No 2 Pumping Station and lifted to a height of about 50 m. The other pumping stations were spread out over a distance of about 500 km, their sites being determined by the hydraulics of the pumping system.
- A total of 20 pumps was required to lift and propel the water along its journey from the better-watered coastal area to the inland gold fields. While the first four



Categories: Storing and Pumping Water

of the eight pumping stations each had three pumping engines, the remaining four stations only needed two each because they were situated in flatter country.

- 'A' engine, shown here, was one of three at No 1 Pumping Station. More than 100 years after this photograph was taken, 'A' engine still sits in the same place. The foundations for 'B' engine are also visible in the foreground. Two men (at right) are sitting on the granite bed stones that were to hold the pump component, while at left, men are standing on bed stones that were to bear the actual steam engine component.
- The lack of a roof in this photograph shows the scale of the Pumping Station's machinery, in particular the steam-driven engines. It confirms that the pump house was built around the equipment, rather than having the builders manoeuvre parts into a completed building. The same procedure was used for the adjoining boiler house, with its walls built around the three boilers that generated the steam for the three engines.
- The engines were not delivered fully assembled. The various parts were shipped from Europe and then transported by rail to their pumping-station sites, where they were built in situ, with an overhead gantry used to lower the parts into place.
- The engine shown here is the 'Worthington Horizontal Duplex Triple Expansion High Duty Pumping Engine'. Although almost all pumping plants at the time were steam driven, this triple-expansion engine was more efficient than any other steam pump. It passed high-pressure steam from a high-pressure cylinder through an intermediate-pressure cylinder to a low-pressure cylinder in order to obtain a greater degree of expansion and hence a greater utilisation of the steam. The Worthington Pumping Engine shown is one of 20 supplied by James Simpson and Co for the Coolgardie Water Supply Scheme.
- The date of this photograph dispels a persistent myth surrounding the suicide of C Y O'Connor, WA's engineer-in-chief, who had overall responsibility for the water supply pipeline to the gold fields. Some people believe that he killed himself because he thought the pipeline was a failure. Most versions of the myth, ranging from a story of slight miscalculations to one of someone forgetting to open a valve, revolve around O'Connor killing himself when the water did not arrive at its destination at the expected time. This photograph, marking the first day's pumping, was taken three weeks after he shot himself on 10 March 1902.

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