

Flume at Karalee Rocks, 2002



Description

This is the entrance to a steel flume built to take rainwater, running off a granite outcrop, to a dam. A low perimeter wall has trapped run-off from the rock. A sluice gate in the centre of the photograph is lowered, blocking the channel. The colour slide was taken in 2002 at Karalee, approximately 50 km east of Southern Cross.

Educational value

- This asset shows a wall built around a granite outcrop channelling rainwater into a flume that leads to a dam - this system was used to obtain fresh water in the 1890s in Western Australia's arid interior; the perimeter wall prevents run-off from dissipating into the soil at the base of the rock; the run-off is directed to a collection point and through a narrow channel to a storage dam built at the lowest point at the base of the rock.
- It is an example of an innovative method of conserving and storing fresh water in the arid eastern gold fields in the 1890s - in 1893, Fred Renou, Superintendent of Water Supply in WA's newly-established Water Supply Department, investigated and reported on the water supply question on the road to Coolgardie; he contended that the only place to sink a dam was at the base of large granite rocks, using the rocks as watersheds; virtually all water in the area was saline with the exception of the run-off from rocks; with no permanent rivers, the prospectors who moved in their thousands along the waterless track and lived in the small settlements that had sprung up relied on rock catchments such as this and on the distillation of saline water.
- It illustrates features typically incorporated in rock catchments - stone slabs, a sluice gate and silt trap; rough square blocks have been used in the perimeter wall, which were quarried from the rock itself; the step at the entrance acts as a barrier, preventing debris and silt from entering the channel and hence the dam; the sluice gate has a large rock as a counterweight and can be raised to allow an



Categories: Early Water Supplies

inflow of water; when the 48.3-million-L dam was full the gate would be lowered and another opened to redirect water into the surrounding bush.

- It features an unusual flume for channelling water into the dam - most rock water catchments have rock-lined channels to direct run-off into their associated storage dams; however in this case there is also an elevated steel flume 206 m in length that carries the run-off from both the largest of the two rocks at Karalee as well as from the smaller of the two rocks; the flume can be glimpsed beyond the rock-lined entry through the sluice gate frame in the photograph, stretching into the distance; this flume has been conserved by the National Trust of Australia (WA) for its heritage value.
- It is typical of the water collection and storage system for the railways in the 1890s - steam engines used copious amounts of water; to prevent scale, steam locomotives' boilers required the mineral-free water which rock run-off provides; these systems were constructed for the railways in particular and water supply in general, hence they are often known as 'Railway Dams'; water from Karalee's dam was pumped 3.6 km to the railway line; railway contractors built more than a dozen such storage tanks and water catchments while extending the railway line to Southern Cross in 1894 and on to Coolgardie and Kalgoorlie in 1896.
- It is a photograph taken at Karalee, a historic site where people obtained water in WA's arid interior before the gold fields' water supply pipeline was opened in 1903 - wells and dams have been built at Karalee at different times to utilise run-off from the rocks; exploration parties searching for pastoral land in the 1860s, prospectors rushing by foot or coach to the gold fields in the 1890s, and labourers constructing the pipeline have all taken advantage of water running off the two rocks; water was the *raison d'etre* for every named point along the route to the gold fields and Karalee was so well-known it features in a poem, suggesting that it was an oasis in the sand plain.

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Creator Gary Peters, photographer, 2002

Identifier National Trust of Australia (Western Australia) number W9p27598-27

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



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