

# EMIGRANT CREEK DAM

## PERMANENT GROUND ANCHORAGES



**MENARD BACHY**



**Client:** Rous Water  
**Engineer:** John Wilson & Partners

**Contractor:** Ridge Consolidated  
**Specialist Contractor:** Menard Bachy Pty Ltd

### THE PROJECT

Due to increased flood definitions Rous Water required that the existing dam at Emigrant Creek be upgraded to allow for greater water pressures. As a result Menard Bachy was contracted by Ridge Consolidated to install the rock anchors to the project.

### MENARD BACHY'S ROLE

The rock anchor component of the project commenced in May of 2001 and was completed in 4 months. Overall it required the installation of 18 No x 6 and 7 strand 15.2mm permanent restressable anchors x 40m in length. The anchors were required to provide extra support by pinning the existing spillway to the underlying rock.

The uniqueness of this project was the difficulty in providing access for the drill rig and compressor. The anchors were designed to have the stressing head on the floor inside the gallery of the spillway and the bond and free length extended below this point. Due to the tight access and issues with confined spaces it was impossible to drill from within the gallery.

To allow for this difficulty Menard Bachy proposed to drill the anchor from above the spillway and through a hole cored in the crest.

To put this proposal into place a purpose built access platform had to be constructed to allow for the 8.0 tonne weight of the drill rig and dynamic loading during drilling, and be large enough to allow manoeuvrability of the rig. Further to this the platform had to be high enough to allow for a flash flood condition should it occur during construction.

Once holes were cored through the top of the spillway a 5.0m steel pipe was passed through the hole and cast into a recess on the gallery floor. The drill rig hooked to the top of the steel pipe and the drill string passed through this pipe for drilling through the spillway floor into the rock below. The pipe allowed all drill cuttings and water to be contained and passed to a containment area for environmental purposes.

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