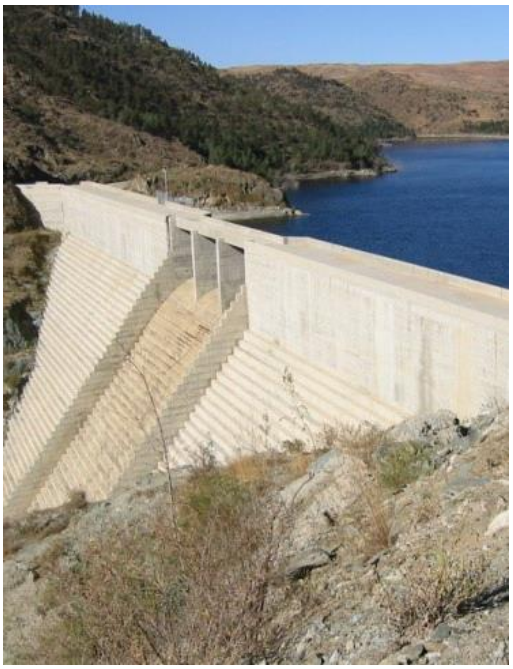
PROJECT PROFILE

Keren Water Supply Project

Geological and Geotechnical Investigations | Eritrea, Africa



Geotechnical engineers with Michael W. West & Associates, Inc. completed preliminary and final geological and geotechnical investigations for the Keren Water Supply Project in Eritrea, Africa.

CLIENT

Natural Resources Consulting Engineers, Inc.

BACKGROUND

The water supply project included a 49-foot-high (15 meter) concrete diversion dam, a 2.5-mile-long (4.1 kilometer) supply canal/pipeline extending from the diversion dam to the water storage reservoir, a 170-foot-high (52 meter) Main Dam to be constructed of earth-rock materials, a 1.9-mile-long (3.1 kilometer) raw water pipeline, a water treatment plant, and a 16.2 mile-long (26 kilometer) treated water pipeline.

SOLUTION

Investigation work completed for each project element included geologic mapping, drilling and test pit exploration programs, geophysical investigations and laboratory testing. Geotechnical design issues associated with the Main Dam included deep, variable weathering of bedrock in the foundation and potential borrow areas; foundation preparation requirements; borrow area characterization; and identification and characterization of core material for an earth-rock dam.

WJE ENGINEERS ARCHITECTS MATERIALS SCIENTISTS