

Work Summary for Sites/Colusa Drilling Project, May 11 - June 30, 1998

Five angle drill holes have been completed to date for a drilled length of 700'. Resultant core has been logged in the field, then stored in core boxes and transported to Northern District. Field logs still need to be checked against core for accuracy, then the core marked and photographed for the final report.

Five 8" auger holes have been drilled in the Riverbank and Modesto Terraces. At both damsites, a total of about 100' of dry core samples and bulk samples have been collected.

Water pressure testing has been done for three of these holes. Gouge zones exhibited little take, with slightly higher takes in associated fracture zones. The greatest takes (12 gpm) were in the top 20 - 30' in weathered bedrock.

Both damsites have been mapped, with geologic units defined based on percentages of sandstone and mudstone.

Landslide mapping has identified recent slumping in several areas as a result of the past winter's storms.

Outcrop mapping of the Salt Lake FaultZone is in progress, noting high deformation of lithologic units much greater than what is observed in the drill holes to the south at Sites.

Golden Gate Drill Hole LC-1 is being drilled from surface to an estimated completion depth of 200'. It is an HQ vertical drill hole intended to define the foundation quality, lithology, and permeability in the channel under the proposed dam alignment. Primary lithology is mudstone, with some sandstone/siltstone intervals.

Additional Work

- 1) Three more drill holes are proposed at Golden Gate. Two of these will be vertical, and drilled to at least 200' on each abutment. A single angle hole may be placed on the left abutment to intercept a possible fault plane underlying this abutment. All of these will be finished with 2" PVC. Double-packer water pressure testing will also be performed in 13' intervals.
- 2) Grade the proposed drill pad for RA-1. This 1000' access road will require about three days of work, and should be accomplished the first week of July.
- 3) Two more auger holes at Golden Gate terraces are suggested for construction material samples.
- 4) Trenching can probably be done with a hydraulic excavator from Sutter Yard. At least 2 trenches are suggested on faults/terraces at each damsite to identify possible activity. Trenching outside the project area is suggested.
- 5) WPT data still need to be converted to lugen values for a complete analysis of flow, permeability, and associated grouting requirements.
- 6) Geologic maps for each damsite need to be finalized, and direction, type, and amount of movement for each mapped fault calculated.. Geologic cross-sections need to be developed along each dam axis and down each channel.