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ABSTRACT

PALEOENVIRONMENTAL ANALYSIS OF THE SHALLOW SEDIMENTS WITHIN
THE "KERN WATER BANK PROJECT" AREA OF THE SOUTHERN SAN
JOAQUIN VALLEY, WESTERN KERN COUNTY, CALIFORNIA:
IMPLICATIONS FOR LOCAL HYDROGEOLOGY

Nine electric-log cross sections of shallow sediments (to a 700-foot depth) in a 59-square-mile area west of Bakersfield, known as the Kern Water Bank, were constructed to correlate and characterize continuous fine-grain units and other sedimentary packages. A 200-foot-deep clay (C2), previously mapped in the area, was correlated throughout the northeast portion, and a shallower, less extensive fine-grained clay (C1) was correlated across the central portion of the study area. The depositional history of the shallow sediments is: 1) the shallowest sediments, from 50- to 200-feet deep, represent a mixed fluvial and alluvial plain setting, 2) the two semicontinuous fine-grained layers (C1 and C2) underlying this represent a lacustrine environment with some terrigenous input, and 3) the deeper sediments, from 300- to 700-feet deep, represent a mixed fluvial and lacustrine/alluvial plain environment. This study was unable to verify correlations of the Corcoran Clay/"E" Clay made by previous studies.

Rick Wilson
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