

NOTES:

1. EXPLORATORY BORINGS TH-1 THROUGH TH-18 WERE DRILLED 10-7 AND 10-8-1986.
2. EXPLORATORY BORINGS TH-19 THROUGH TH-48 WERE DRILLED 7-26, 7-28 THROUGH 7-30, AND 8-13-2004 WITH A TRUCK MOUNTED CME-75 DRILL RIG.
3. TEST PITS TP-1 THROUGH TP-12 WERE EXCAVATED 8-4-2004 WITH A RUBBER TIED CASE EXTEND-A-HOE BACKHOE.
4. MOST BORINGS WERE DRILLED WITH 4-INCH DIAMETER, SOLID STEM, CONTINUOUS FLIGHT AUGERS.
5. BORINGS WHICH WERE CORED OR IN WHICH PIEZOMETERS WERE CONSTRUCTED, WERE DRILLED WITH 8" O.D. HOLLOW STEM AUGERS WITH THE EXCEPTION OF THE CORE INTERVAL.
6. BORINGS TH-35 AND TH-45 WERE CORED USING NX ROTARY CORE METHODS. BORING TH-40 WAS CORED USING DRY CORE METHODS.
7. BORING LOCATIONS AND ELEVATIONS WERE SURVEYED.
8. LINES BETWEEN MATERIALS REPRESENT APPROXIMATE BOUNDARIES BETWEEN TYPES. TRANSITIONS MAY BE GRADUAL.
9. WITH THE EXCEPTION OF PIEZOMETERS, GROUNDWATER LEVELS WERE MEASURED AT THE TIME OF DRILLING. GROUNDWATER LEVELS WILL FLUCTUATE SEASONALLY AND WITH IRRIGATION AND RESERVOIR STAGE LEVELS.
10. A THIN PERCHED GROUNDWATER INTERVAL IS COMMONLY PRESENT IN AREAS OF SHALLOW (<10' DEEP) BEDROCK. THE PERCHED GROUNDWATER COMMONLY LIES ON TOP OF BEDROCK BUT IS ALSO LOCALLY PRESENT WITHIN THE UPPER WEATHERED BEDROCK.
11. LABORATORY TESTING:
 - DD = DRY DENSITY, PCF
 - MC = MOISTURE CONTENT, %
 - LL = LIQUID LIMIT, %
 - PI = PLASTICITY INDEX, %
 - 200 = % FINES PASSING THE #200 SIEVE
 - MDD = MAXIMUM DRY DENSITY, PCF
 - OMC = OPTIMUM MOISTURE CONTENT, %
 - UCS = UNCONFINED COMPRESSIVE STRENGTH, PSF

LEGEND:



FILL: MAN MADE, CLAY, MEDIUM STIFF TO STIFF, SANDY, DRY TO MOIST, LIGHT BROWN (CL)



CLAY: MEDIUM STIFF, LOCALLY SOFT TO VERY SOFT, LOCALLY STIFF, SILTY, LOCALLY SANDY TO VERY SANDY, LOCALLY GRADES TO VERY CLAYEY SAND AND VERY SILTY SANDY, SLIGHTLY MOIST TO MOIST, COMMONLY VERY MOIST TO WET NEAR BEDROCK AND ADJACENT TO RESERVOIR, COMMON GYPSUM, BROWN, TAN (CL, SC-SC, SC, SC-SM, SM)



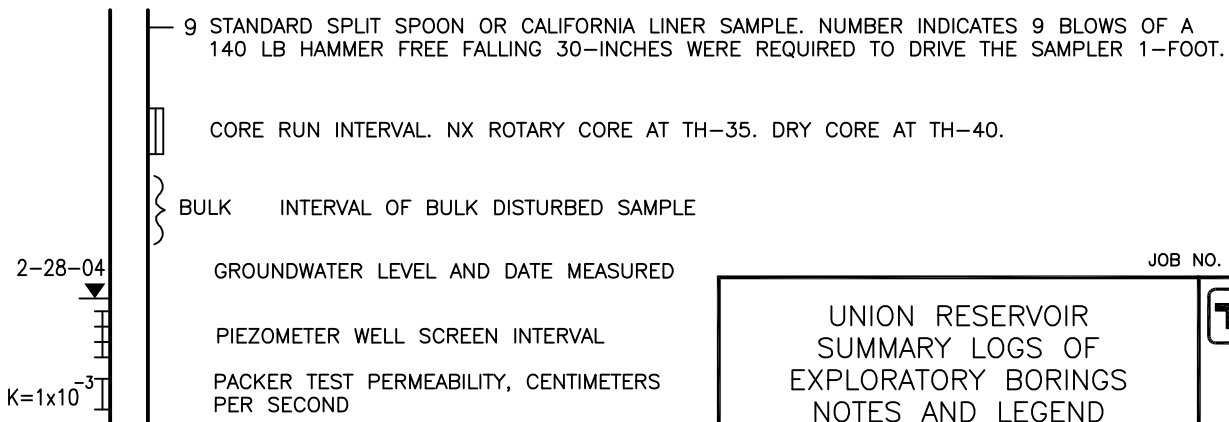
SAND: MEDIUM DENSE, LOCALLY LOOSE, GRAVELLY TO VERY GRAVELLY, LOCAL COBBLES, POORLY TO WELL GRADED, WET, GREY (SP, SW, SP-GP, SW-GW)



CLAYSTONE: MEDIUM HARD TO HARD, UPPERMOST 3 TO 5 FEET ARE COMMONLY WEATHER TO MEDIUM STIFF TO STIFF RESIDUAL CLAY SOIL WITH RELIC BEDROCK STRUCTURE PARTICULARLY ON EAST AND WEST SIDES OF RESERVOIR, LOCAL HARD INDURATED SHALE LENSES ARE PRESENT, LOCALLY SILTY, LOCALLY SANDY, MODERATELY TO VERY PLASTIC, SLIGHTLY MOIST TO WET PARTICULARLY NEAR RESERVOIR AND PERCHED GROUNDWATER, COMMON GYPSUM, GREY, BROWN.



SANDSTONE: MEDIUM HARD TO HARD, LOCALLY UPPER ZONE IS WEATHERED TO LOOSE TO DENSE RESIDUAL SILTY SAND SOIL WITH RELIC BEDROCK STRUCTURE, SILTY, LOCALLY CLAYEY, VERY FINE TO MEDIUM GRAINED, BLOCKY, SLIGHTLY MOIST, LOCALLY WET PARTICULARLY NEAR RESERVOIR AND PERCHED GROUNDWATER, BROWN.



JOB NO. 19-0033.283.00

UNION RESERVOIR
SUMMARY LOGS OF
EXPLORATORY BORINGS
NOTES AND LEGEND



FIGURE:

3.11