Return to Dr. Michaels

# GEOLOGIC LOG OF DRILL HOLE NO. DH-95-6



FEATURE: Overland Bridge, Burley, Idaho
LOCATION: Sta. 165+20.8, 44' d/s
BEGUN: 04-25-95 FINISHED: 04-28-95
DEPTH AND ELEV. OF WATER LEVEL AND DATE MEASURED: 1.6 ( 4135.10) 04-28-95

PROJECT: Idaho Transportation Dept.
COORDINATES: N 0 E 0
TOTAL DEPTH: 90.0
DEPTH TO BEDROCK: n/a

STATE: Idaho
GROUND ELEVATION: 4136.7
ANGLE FROM HORIZONTAL: 90 AZIMUTH:
HOLE LOGGED BY: R. BURT
REVIEWED BY:

## NOTES

All depths are measured in feet from ground surface and are the same as those used by the driller.

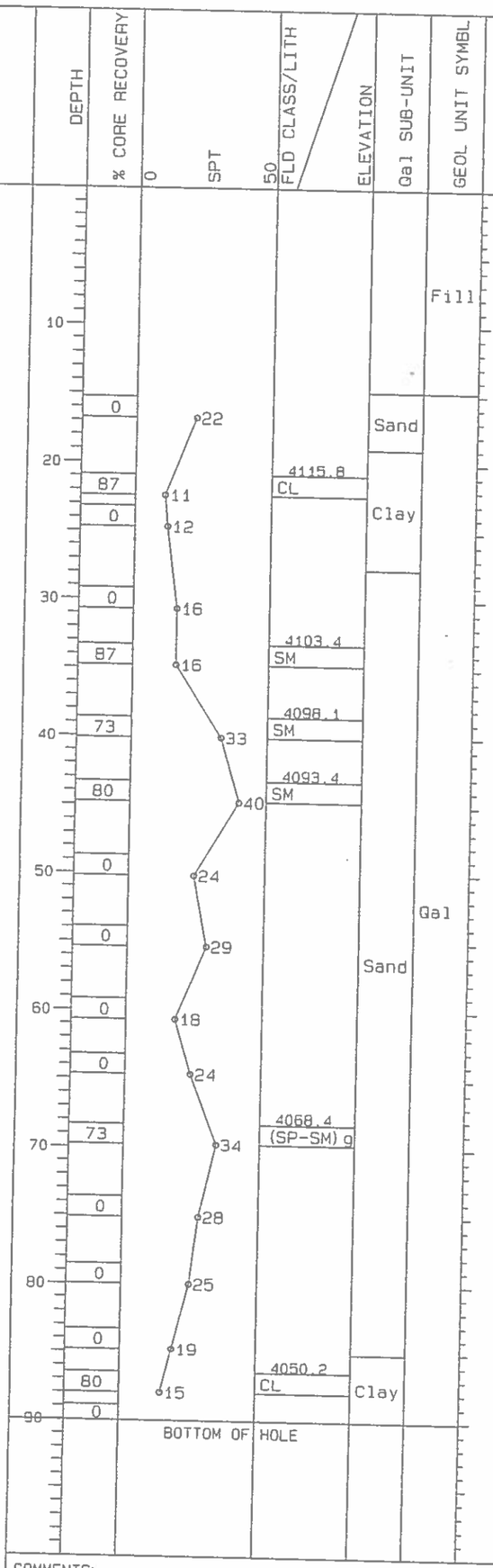
PURPOSE OF HOLE
To determine the stratigraphy and engineering properties of the materials present in the foundation of the Overland Bridge.

DRILL EQUIPMENT
Truck-mounted Ingersoll Rand T2W top head drive rotary drill.

DRILLER
Chris Peterson

DRILL SETUP
Set up about 75' right and 44' d/s Pier 19 or 44' d/s of Sta. 165+20.8.

DRILLING METHODS
0.0-14.5': Advanced hole with 6" Odex down-hole casing advancer and 6" steel casing using compressed air as drilling medium. After pulling casing advancer, casing rested at 13.9'.
14.5-20.9': Conducted penetration resistance tests (SPT's) at about 5' intervals using USBR-design 1-3/8" constant I.D. split-tube barrel mounted on Nw Mobilok rods with 140-lbm safety hammer, 30" drop using cathead and rope. Advanced hole with 4" casing advancer equipped with deflected wing bit inside 4" casing using water with biodegradable polymer additive as drilling medium.
20.9-22.4': Conducted SPT.
13.9-19.4': Added a 5' length of 6" casing and pushed it to 19.4'.
19.4-88.9': Conducted penetration resistance tests (SPT's) at about 5' intervals using USBR-design 1-3/8" constant I.D. split-tube barrel mounted on Nw Mobilok rods with 140-lbm safety hammer, 30" drop using cathead and rope. Advanced hole with 4" casing advancer equipped with deflected wing bit inside 4" casing using water with biodegradable polymer additive as drilling medium.
88.9-90.0': Attempted Shelby Tube sample. Tube crumpled at 90.0', and there was no recovery.




## CLASSIFICATION AND PHYSICAL CONDITION

0.0-14.8': FILL (F). Consisting of concrete, asphalt, gravel, sand, and fines. Description based on drilling conditions and cuttings return.

14.8-90.0': QUATERNARY ALLUVIUM (Qal). Consisting of layers of gravel, sand, silt, and clay. Description based on samples, drilling conditions, and cuttings return. Penetration resistance samples described below.

15.3-16.8': No recovery. Cuttings were sand and gravel. N = 22.

19.0': Drilling fluid return color change indicated contact.

20.9-22.4': LEAN CLAY (CL). About 100% low to medium plasticity fines with slow dilatancy, low to medium dry strength, low toughness; maximum size, fines; moist, gray, laminated; strong reaction with HCl. N = 11.

23.2-24.7': No recovery. N = 12.

27.7': Drilling conditions indicated contact.

29.2-30.7': No recovery. Cleanout cuttings were SILTY SAND (SM). N = 16.

33.3-34.8': SILTY SAND (SM). About 60% fine sand; about 40% nonplastic fines; maximum size, fine sand; moist, gray, homogeneous; strong reaction with HCl. N = 16.

38.6-40.1': SILTY SAND (SM). About 60% fine sand; about 40% nonplastic fines; maximum size, fine sand; moist, gray, lensed in silty and sandy layers; strong reaction with HCl. N = 33.

43.3-44.8': SILTY SAND (SM). About 70% fine sand; about 30% nonplastic fines; maximum size, fine sand; moist, gray, homogeneous; strong reaction with HCl. N = 40.

48.7-50.2': No recovery. Cuttings were SILTY SAND (SM) with wood. N = 24.

53.9-55.4': No recovery. Cuttings were SILTY SAND (SM) with a small amount of wood. N = 29.

59.2-60.7': No recovery. Cuttings were SILTY SAND (SM). N = 18.

COMMENTS:

This drill log is PRELIMINARY and SUBJECT TO REVISION.

Center column descriptors are defined in the Reclamation Engineering Geology Field Manual, distributed by letter December 7, 1988.

Samples were logged in the field using Designation USBR 5005-86, "Procedure for Determining Unified Soil Classification (Visual Method)".

The largest gravel size reportable for SPT's is approx. 35mm due to sampler I.D.; larger particles may be present in some cases.