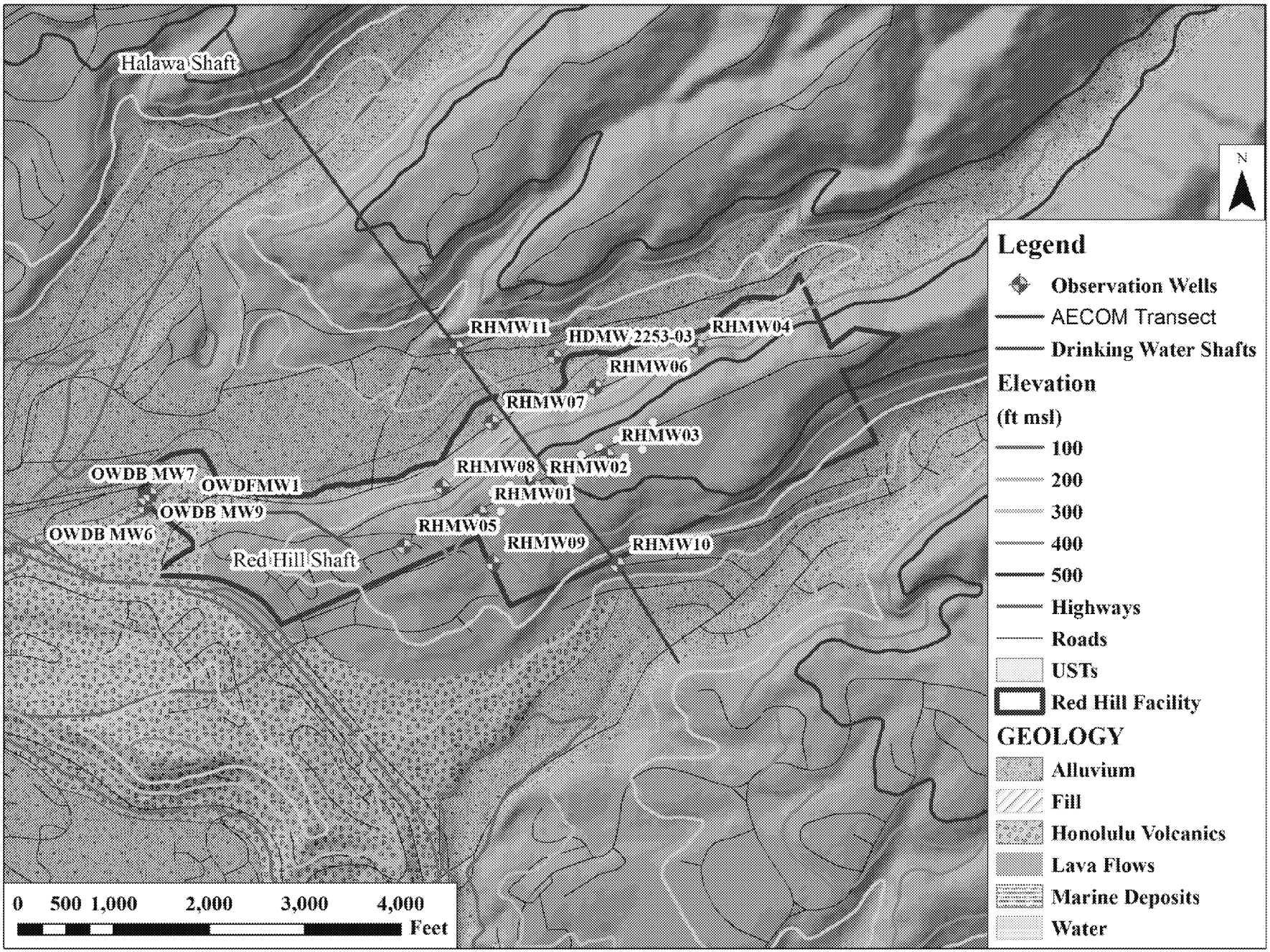

Figure A. The trace of the Work Plan Figure 3 transect is projected on a map of the geology of Oahu described by Sherrod et al. (2007). The widths of the valley fills along the transect are much less than those depicted in the Work Plan Figure 3.

GEOLOGIC LOG	DATE STARTED: 19-Sept-14 DATE COMPLETED: 6-Oct-14	LOGGER: TM Jensen WEATHER: 90 degrees Fahrenheit	PAGE 1 OF 8 WELL NO.: RHMW07
COMPANY NAME: **PARSONS**		DRILLING SUBCONTRACTOR: Valley Well Drilling	SURFACE ELEV.: 216.53 ft amsl
OFFICE LOCATION: South Jordan, Utah		DRILL RIG TYPE: Mobile B-59 and B-90	SOUNDING TUBE ELEV.: 220.29 ft
PROJECT: Monitoring Well Installation N62583-11-D-0515, TO KB01		DRILLING METHOD: Ream, HQ core, Air Rotary	NORTHING: 74964.96
LOCATION: Red Hill BFSF, HI	JOB NUMBER: 749435	BOREHOLE DIAMETER: 12" Ream, 4" Core, 8" Air	EASTING: 1675189.52

DEPTH (ft bgs)	DESCRIPTION OF MATERIALS	GRAPHIC LOG	ERPIMS LITHO-LOGIC CODE	PID HS, ppmv (DEPTH, ft bgs)	BLOW COUNT/ RQD	WELL CONSTRUCTION (ft bgs)
0	(0.0, 10.0) Clay		CLAY			
5						
10	(10.0, 11.5) Clay: dusky yellowish brown (10YR 2/2), CH, stiff, plastic, slightly moist, Note: basalt cobbles and boulders within clay were contacted from ground surface to the saprolite contact		CLAY	0.0	35/50 for 12"	
	(11.5, 20.0) Clay		CLAY			
15						
20	(20.0, 21.5) Clay: pulverized rock and sand, probably a cobble at this depth broken up by air hammer bit, Note: dry clay from 10 to 20 feet with some sand		CLAY	0.0	100 for 3"	
	(21.5, 23.0) Clay		CLAY	0.0		
25	(23.0, 27.0) Saprolite: no split spoon recovery at 24 ft, reddish brown cuttings, likely saprolite		SAPR	0.0		
30	(27.0, 45.0) Basalt: gray with vesicles, cuttings from air hammer to 42 feet, then rock core from 40 to 45 feet with description as follows: 2 feet of cement grout (from conductor casing), dark gray (N3)		VLBA	0.0		

WELL CONSTRUCTION INFORMATION

SURFACE COMPLETION: 3.5' x 3.5 'x 2' concrete pad w/ 8" above-ground steel casing

WELL CASING:
- Material: SCH. 80 PVC
- Diameter: 4"
- Interval: +3.76-184 bgs

WELL SCREEN:
- Material: SCH. 80 PVC
- Screen Opening: 0.020
- Diameter: 4"
- Interval: 184-214 bgs

CONDUCTOR CASING:
- Material: PVC
- Diameter: 10"
- Interval: 0-40 bgs

DEPTH INTERVAL:
- Concrete: 0-3
- Cement Grout: 3-40 bgs
- Bentonite Chips: 40-176 bgs
- Bentonite Seal: 176-179 bgs
- Sand Pack: 179-230 bgs
- Hole Cuttings: 230-235 bgs

NOTE: All intervals are measured from ground surface.

amsl - Above Mean Sea Level
bgs - Below Ground Surface
ft - feet
mm - millimeter(s)
N/A - Not Applicable
NS - Not Sampled
PID - Photoionization Detector
ppmv - Parts per Million, Volume per Volume
SAA - Same as Above
Horizontal Survey System: NAD 83 Epoch 2010.0
Elevations: Local Mean Sea Level (feet)

DP - Direct Push
HSA - Hollow Stem Auger
SSA - Solid Stem Auger
TD - Total Depth
HS - Head Space
ERPIMS CODE DESCRIPTIONS:
ASPT - Asphalt
CLAY - Clay
CLGV - Clay and Gravel
CLSD - Clay and Sand
CLSL - Clay and Silt

CN - Concrete
COBL - Cobble or Boulder
CORL - Coral
FILL - Fill or other Man-Made Deposits
GVL - Gravel
GVLP - Gravel, predominantly pebble-sized
GVSL - Gravel and Silt
NDPS - No Description Provided, Problems in Sampling
NSNR - No Sample or No Recovery Obtained
PTHM - Peat, Humus, and other Organic Material
SAPR - Saprolite

SD - Sand
SDSL - Sand and Silt
SDGR - Sand and Gravel
SEDU - Sedimentary (Undifferentiated)
SLCL - Silt and Clay
SLGV - Silt and Gravel
SLSD - Silt and Sand
VLBA - Basalt, Lava
VLTF - Volcanic Tuff

Figure B. Bore log From RHMW07

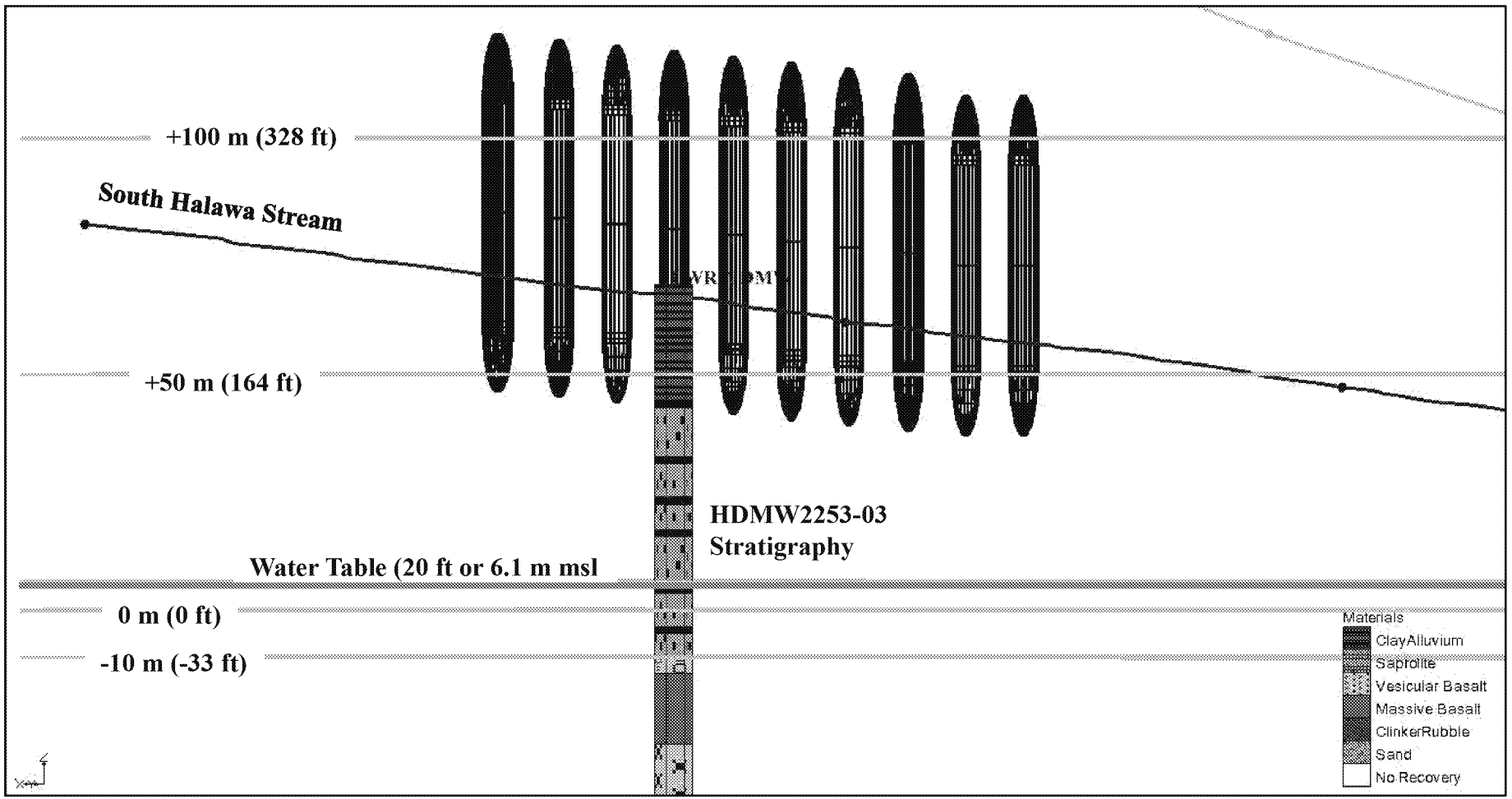

Figure C. This figure is a project cross-sectional view of the Facility looking to the southeast. It shows the USTs, the profile of South Halawa Stream, the stratigraphy of HDMW2253-03, and the elevation of the water table. The saprolite in the bore hole for HDMW2253-03 only extends to a depth of -33 ft msl. This is much shallower than suggested by the Work Plan Figure 3.