



DEPTH (FEET)	DEPTH (METERS)	SAMPLE NUMBER	LOG, LOCATION AND TYPE OF SAMPLE	DATE OF BORING: February 20, 2004	BLOWS/FT.	qu	IN PLACE	
				SURFACE ELEVATION: Approx. 16 feet (5 meters)		UNCON STRENGTH (TSF)	DRY UNIT WEIGHT	MOIST. CONTENT
DESCRIPTION						*FIELD PENET. APPROX.	(PCF)	% DRY WEIGHT
0				Short grass.				
-1		1-1		SANDY SILT (SM), dark brown, medium stiff, moist, trace very fine-grained sand.	7	3.25*		
-2		1-2		Same as above.	11	+4.5*		
-3		1-3		SILTY SAND (SM), olive brown, medium stiff to stiff, moist, very fine-grained sand.	15	4.5*		
-4								
-5		1-4		Poor sample recovery (possible sluff). SILTY SAND (GM), brown, loose, medium dense, wet, coarse sand grains and fine gravel grains.	9			
-6		1-5		Poor sample recovery. SILTY SAND (SM), olive brown, medium dense, wet, medium-grained sand, (some very coarse sand, probably sluff from above).	15			
-7								
-8		1-6		CLAYSTONE, olive gray/dark gray, hard, wet.	116	+4.5*		
-9		1-7		Same as above.	50/5"			
-10								
-35								

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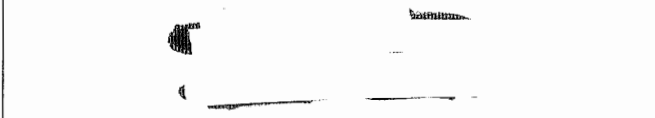


BORING NO.: B-1
 LOGGED BY _____
 PROJ. NO. _____ CHECKED BY _____


FIGURE NO.


DEPTH (FEET)	DEPTH (METERS)	SAMPLE NUMBER	LOG, LOCATION AND TYPE OF SAMPLE	DATE OF BORING: February 20, 2004	BLOWS/FT.	qu UNCON STRENGTH (TSF) *FIELD PENET. APPROX.	IN PLACE	
				SURFACE ELEVATION: Approx. 16 feet (5 meters)			DRY UNIT WEIGHT (PCF)	MOIST. CONTENT % DRY WEIGHT
DESCRIPTION								
35	-11	1-8		Same as above.	50/7"			
40	-12	1-9		Same as above.	50/4"			
	-13			Bottom of boring at approximately 41 feet. Groundwater level not establish due to drilling method.				
45	-14							
50	-15							
55	-16							
60	-17							
65	-18							
70	-19							
	-20							
	-21							

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FIGURE NO.

KEY TO BORING LOGS

MAJOR TYPES		DESCRIPTION	
COARSE-GRAINED SOILS MORE THAN HALF OF MAT'L LARGER THAN #200 SIEVE	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE SIZE	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW - Well graded gravels or gravel-sand mixtures GP - Poorly graded gravels or gravel-sand mixtures
		GRAVELS WITH OVER 12 % FINES	GM - Silty gravels, gravel-sand and silt mixtures GC - Clayey gravels, gravel-sand and clay mixtures
	SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE SIZE	CLEAN SANDS WITH LITTLE OR NO FINES	SW - Well graded sands, or gravelly sand mixtures SP - Poorly graded sands or gravelly sand mixtures
		SANDS WITH OVER 12 % FINES	SM - Silty sand, sand-silt mixtures SC - Clayey sand, sand-clay mixtures
	FINE-GRAINED SOILS MORE THAN HALF OF MAT'L SMALLER THAN #200 SIEVE	SILTS AND CLAYS LIQUID LIMIT 50 % OR LESS	ML - Inorganic silt with low to medium plasticity CL - Inorganic clay with low to medium plasticity OL - Low plasticity organic silts and clays
			SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50 %
HIGHLY ORGANIC SOILS			

GRAIN SIZES

U.S. STANDARD SERIES SIEVE SIZE								CLEAR SQUARE SIEVE OPENINGS			
		200	40	10	4	3/4 "	3"	12"			
SILTS AND CLAYS	SAND				GRAVEL		COBBLES	BOULDERS			
	FINE	MEDIUM	COARSE	FINE	COARSE						

RELATIVE DENSITY

SANDS AND GRAVELS	BLOWS/FOOT (S.P.T.)
VERY LOOSE	0-4
LOOSE	4-10
MEDIUM DENSE	10-30
DENSE	30-50
VERY DENSE	OVER 50

SILTS AND CLAYS

VERY SOFT
SOFT
MEDIUM STIFF
STIFF
VERY STIFF
HARD

CONSISTENCY

STRENGTH*	BLOWS/FOOT (S.P.T.)
0-1/4	0-2
1/4-1/2	2-4
1/2-1	4-8
1-2	8-15
2-4	15-30
OVER 4	OVER 30








MOISTURE CONDITION

DRY	Absence of moisture, dusty, dry to touch
MOIST	Damp but no visible water
WET	Visible freewater
SATURATED	Below the water table

MINOR CONSTITUENT QUANTITIES (BY WEIGHT)

TRACE	Particles are present, but estimated to the less than 5%
SOME	5 to 15%
WITH	15 to 30%
.....Y	30 to 50%



SAMPLER SYMBOLS

	Modified California (3" O.D.) sampler
	California (2.5" O.D.) sampler
	S.P.T. - Split spoon sampler
	Shelby Tube
	Continuous Core
	Bag Samples
	Grab Samples
NR	No Recovery

LINE TYPES

—————	Solid - Layer Break
-----	Dashed - Gradational or approximate layer break

GROUND-WATER SYMBOLS

	Groundwater level during drilling
	Stabilized groundwater level

KEY TO ROCK CHARACTERISTICS

STRENGTH

Weak Friable Moderately strong Strong Very strong	Plastic or very low strength Crumbles easily by hand Crumbles under light hammer blows Crumbles under a few heavy hammer blows Breaks into large pieces under heavy, ringing hammer blows
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FRACTURING

<u>Fracture Spacing</u>	<u>Size of Pieces</u>
Very widely	Greater than 4 feet
Widely	1 foot to 4 feet
Moderately	6 inches to 1 foot
Closely	1 inch to 6 inches
Very closely	½ inch to 1 inch
Crushed	Less than ½ inch

BEDDING OF SEDIMENTARY ROCKS

<u>Stratification</u>	<u>Thickness of Beds</u>
Massive	No apparent bedding
Very thick bedding	Greater than 4 feet
Thick bedding	2 feet to 4 feet
Thin bedding	2 inches to 2 feet
Very thin bedding	½ inch to 2 inches
Laminated	Less than 1/8 inch to ½ inch

WEATHERING

Deep	Moderate to complete decomposition; extensive disintegration; deep and thorough discoloration; many extensively-coated fractures.
Moderate	Slight decomposition of minerals; little disintegration; moderate discoloration; moderately coated fractures.
Little	No megascopic decomposition of minerals; slight to no effect on cementation; slight and intermittent, or localized discoloration; few stains on fracture surfaces.
Fresh	Unaffected by weathering agents; no disintegration or discoloration; fractures usually less numerous than joints.