

LOG OF BORING C-06

SHEET 1 of 1



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CLIENT: HDR, Inc.
PROJECT: Prop. Large Scale Beach Nourishment Project
LOCATION: S. Jetty Borrow Source Area; Galveston, TX
NUMBER: G108558

DATE(S) DRILLED: 08/01/08 - 08/01/08

DRILLING METHOD(S):

Hollow Stem Auger

GROUNDWATER INFORMATION:

SURFACE ELEVATION: -8.5' NAVD

DESCRIPTION OF STRATUM

FIELD DATA		LABORATORY DATA									
SOIL SYMBOL	Elevation, Ft. [NAVD]	SAMPLE NUMBER	SAMPLES	N: BLOWS/FT P: TONS/SQ FT T: TONS/SQ FT PERCENT RECOVERY/ ROCK QUALITY DESIGNATION	MOISTURE CONTENT (%)	ATTERBERG LIMITS			DRY DENSITY POUNDS/CU.FT	COMPRESSIVE STRENGTH (TONS/SQ FT)	MINUS NO. 200 SIEVE (%)
						LL	PL	PI			
	5										
	10	SS S-1	N= 14	25						5	POORLY GRADED SAND , with clay and shell, brown and gray, moist, medium. Same as above, gray.
		SS S-2	N= 10							5	Same as above, loose.
		SS S-3	N= 8	25						5	Same as above, loose.
	15	SS S-4	N= 33							16	POORLY GRADED SAND , with clay and shell, gray, moist, dense. SILTY CLAYEY SAND , with shell, gray, moist, loose.
		SS S-5	N= 7	26						16	POORLY GRADED SAND , with clay and shell, gray, moist, medium.
	20	SS S-6	N= 22							8	Same as above, loose.
		SS S-7	N= 6	25						8	Same as above, loose.
		SS S-8	N= 7	29						20	SILTY CLAYEY SAND , with shell, gray, moist, loose.
	25	SS S-9	N= WOH	46						61	SANDY CLAY , with shell, gray, very moist, very soft.
		SS S-10	N= WOH							61	Same as above.
		SS S-11	N= 4							61	Same as above, soft.
		SS S-12	N= 1							61	SANDY CLAY , with shell, gray, moist, very soft.
		SS S-13	N= 4							61	Same as above, soft.
											Boring was extended to an elevation of -33.5-feet NAVD during the drilling operations.

LOG_OF_BORING G1085588 PROP. LARGE SCALE BEACH NOURISHMENT PROJECT GP-J ROCK ETL-GDT 10/21/08

N - STANDARD PENETRATION TEST RESISTANCE
P - POCKET PENETROMETER RESISTANCE
T - POCKET TORVANE SHEAR STRENGTH

REMARKS:

Boring depth and location was determined by HDR, Inc. Boring operations were performed by RETL.
GPS Coord. N. 29.33628 W. 94.72204



- Geotechnical Engineering
- Construction Materials Testing

PROJECT NAME: West Galveston Island Large Scale Beach Nourishment Project

CLIENT: HDR, Inc.

BORING ID.: C-06

DESCRIPTION: South Jetty Borrow Source Area

PERCENT SHELL BY WEIGHT (BASED ON #10 SIEVE)			
-8.5' TO -10.5' NAVD	-12.5' TO -14.5' NAVD	-16.5' TO -18.5' NAVD	-20.5' TO -22.5' NAVD
1.15	1.50	0.63	1.09

ASTM MESH	% FINER BY WEIGHT AFTER REMOVING SHELL			
	-8.5' TO -10.5' NAVD	-12.5' TO -14.5' NAVD	-16.5' TO -18.5' NAVD	-20.5' TO -22.5' NAVD
#10	100.00	100.00	100.00	100.00
#18	98.53	98.71	99.22	98.15
#35	97.20	97.50	98.46	96.43
#60	95.75	95.88	97.56	94.15
#70	91.18	93.05	N/A	N/A
#120	44.38	51.70	N/A	N/A
#120	15.88	15.60	34.89	18.78
#170	6.52	6.59	22.74	9.46
#200	5.31	5.18	16.30	7.74
STATISTICS (EXCLUDING SHELL)				
MEDIAN GRAIN SIZE (mm)	0.16	0.16	0.16	0.18
MEAN GRAIN SIZE (mm)	0.16	0.16	0.14	0.17
SORTING (σ)	0.39	0.36	N/A	N/A

*The #10 material was utilized as the total sample for Grain Size Distribution Curve calculations.



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CLIENT: HDR, Inc.

BORING ID.: C-06

DESCRIPTION: South Jetty Borrow Source Area

PERCENT SHELL BY WEIGHT (BASED ON #10 SIEVE)	
-22.5' TO -24.5' NAVD	-24.5' TO -26.5' NAVD
0.70	N/A

ASTM MESH	% FINER BY WEIGHT AFTER REMOVING SHELL	
	-22.5' TO -24.5' NAVD	-24.5' TO -26.5' NAVD
#10	100.00	N/A
#18	98.95	N/A
#35	98.21	N/A
#60	97.22	N/A
#120	33.51	N/A
#170	21.64	N/A
#200	19.56	61.40
STATISTICS (EXCLUDING SHELL)		
MEDIAN GRAIN SIZE (mm)	0.17	N/A
MEAN GRAIN SIZE (mm)	N/A	N/A
SORTING (σ)	N/A	N/A

*C-06; -24.5' to -26.5' NAVD was only passed through the -#200 sieve.

*The -#10 material was utilized as the total sample for Grain Size Distribution Curve calculations.