

# LOG OF BORING C-21



Rock Engineering & Testing Lab., Inc.  
6817 Leopard St.  
Corpus Christi, TX 78409  
Telephone: (361) 883-4555  
Fax: (361) 883-4711

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

DATE(S) DRILLED: 07/29/08 - 07/29/08

DRILLING METHOD(S):  
Hollow Stem Auger

GROUNDWATER INFORMATION:

SURFACE ELEVATION: -18.4' NAVD

DESCRIPTION OF STRATUM

LOG OF BORING G108558B PROP. LARGE SCALE BEACH NOURISHMENT PROJECT.GPJ ROCK.ETL.GDT 10/20/08

SOIL SYMBOL	FIELD DATA				LABORATORY DATA							MINUS NO. 200 SIEVE (%)	DESCRIPTION OF STRATUM
	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)			
						LL	PL	PI					
	5												
	10												
	15												
	20	SS S-1	N= WOH										<b>SANDY CLAY</b> , dark gray, very moist, very soft.
		SS S-2	N= WOH	58						84			Same as above.
		SS S-3	N= WOH										Same as above.
	25	SS S-4	N= 12	22						27			<b>SILTY CLAYEY SAND</b> , with shell, dark gray, moist, medium.
		SS S-5	N= 10										Same as above.
	30	SS S-6	N= 8										<b>SANDY CLAY</b> , with shell, gray, very moist, stiff.
		SS S-7	N= 1	45						73			Same as above, very soft.
		SS S-8	N= WOH										Same as above.
	35	SS S-9	N= WOH										<b>SANDY CLAY</b> , with shell, gray, moist, very soft.
													Boring was extended to an elevation of -36.9-feet NAVD during the drilling operations.

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. 29.33338 W. 94.71127



- Geotechnical Engineering
- Construction Materials Testing

**PROJECT NAME:** West Galveston Island Large Scale Beach Nourishment Project

**CLIENT:** HDR, Inc.

**BORING ID.:** C-21

**DESCRIPTION:** South Jetty Borrow Source Area

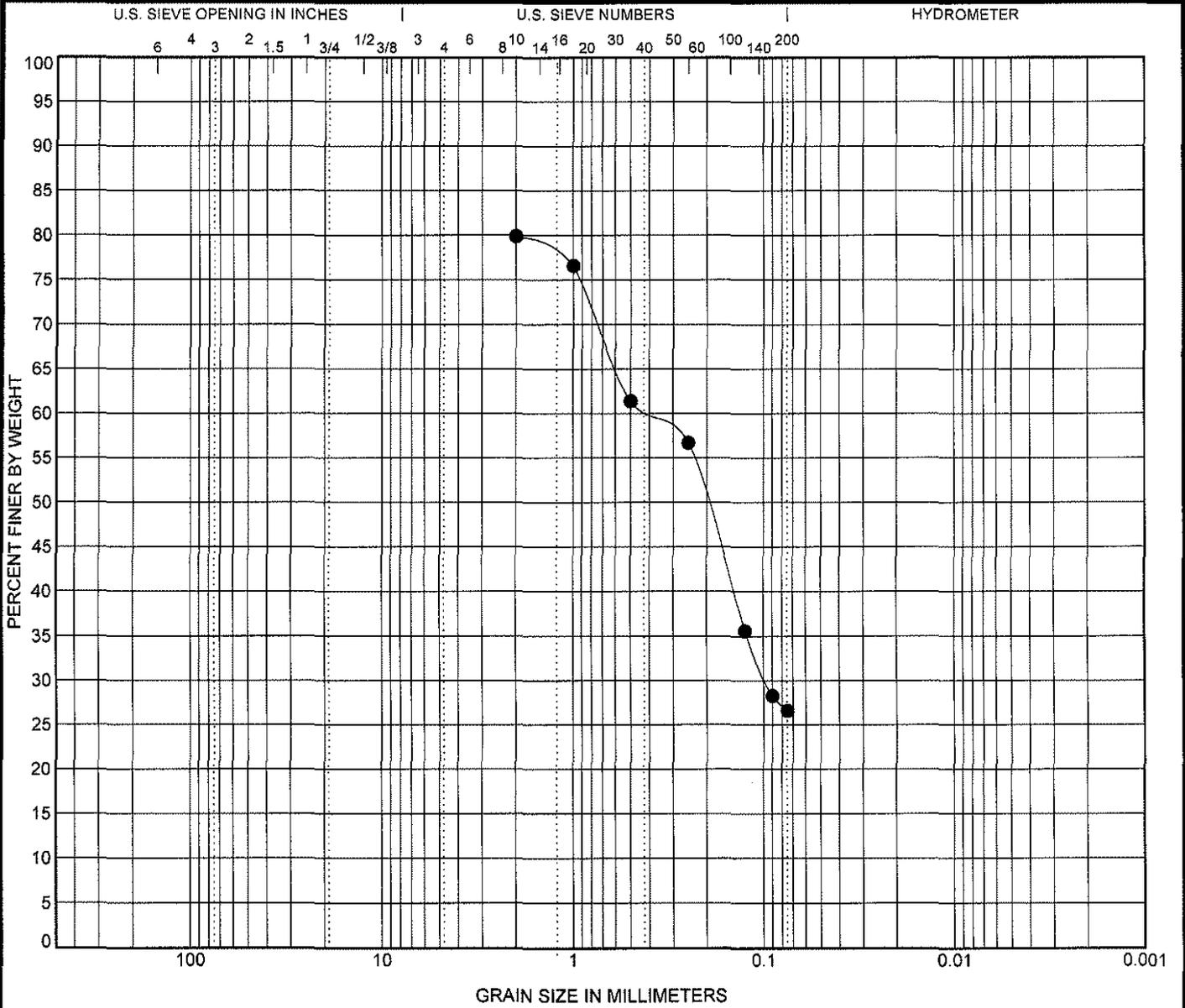
PERCENT SHELL BY WEIGHT (BASED ON #10 SIEVE)		
-20.4' TO -22.4' NAVD	-24.4' TO -26.4' NAVD	-30.4' TO -32.4' NAVD
N/A	20.09	N/A

ASTM MESH	% FINER BY WEIGHT AFTER REMOVING SHELL		
	-20.4' TO -22.4' NAVD	-24.4' TO -26.4' NAVD	-30.4' TO -32.4' NAVD
#10	N/A	100.00	N/A
#18	N/A	76.60	N/A
#35	N/A	61.40	N/A
#60	N/A	56.70	N/A
#120	N/A	35.60	N/A
#170	N/A	28.30	N/A
#200	84.00	26.60	72.90
STATISTICS (EXCLUDING SHELL)			
MEDIAN GRAIN SIZE (mm)	N/A	0.18	N/A
MEAN GRAIN SIZE (mm)	N/A	N/A	N/A
SORTING ( $\sigma$ )	N/A	N/A	N/A

\*C-21; -20.4' to 22.4' NAVD and C-21; -30.4' to -32.4' NAVD were only passed through the -#200 sieve.

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

U.S. GRAIN SIZE G108558B PROP. LARGE SCALE BEACH NOURISHMENT PROJECT.GPJ US LAB.GDT 10/20/08



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen ID	Depth	Classification	LL	PL	PI	Cc	Cu
● C-21 (-24.4' to -26.4' NAVD)		<b>Borrow Area (-24.4' to -26.4' NAVD)</b>					

Specimen ID	Depth	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● C-21 (-24.4' to -26.4' NAVD)		2	0.407	0.097		0.0	53.3	26.6	



Rock Engineering & Testing Lab., Inc.  
 6817 Leopard St.  
 Corpus Christi, TX 78409  
 Telephone: (361) 883-4555  
 Fax: (361) 883-4711

### GRAIN SIZE DISTRIBUTION

Project: Prop. Large Scale Beach Nourishment Project  
 Location: South Jetty Borrow Source Area; Galveston, Texas  
 Number: G108558