

BORING LOG NO. B-11

Page 1 of 1

PROJECT: Galveston Bay Sand Reclamation Project

CLIENT: Atkins North America, Inc.
Houston, Texas

SITE: Galveston Bay
Galveston, Texas

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 29.30375° Longitude: -94.83423°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	CLAY , gray, very soft, with shell fragments				WOH							
	2.0											
	POORLY GRADED SAND WITH SILT (SP-SM) , gray, medium dense to very dense, with shell fragments				5-4-6 N=10							
		5			3-5-10 N=15							
					5-7-14 N=21							5
		10			9-26-28 N=54							
					6-10-18 N=28							
					5-10-11 N=21							
		15			11-13-27 N=40							
					9-15-20 N=35							
		20			6-8-10 N=18							12
					4-6-6 N=12							
	22.0											
	CLAY , reddish brown and light gray, very stiff, with ferrous nodules				3.0 (HP)							
	24.0											
	Boring Terminated at 24 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Dry augered to 12 feet; wet rotary thereafter.

Abandonment Method:
Not applicable

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:
- WOH = Weight of Hammer.
- Water depth of about 10 feet at the time of our field program.

WATER LEVEL OBSERVATIONS

Not applicable

Terracon
551 League City Pkwy Ste F
League City, TX

Boring Started: 07-13-2017

Drill Rig: Truck

Project No.: 91175047

Boring Completed: 07-13-2017

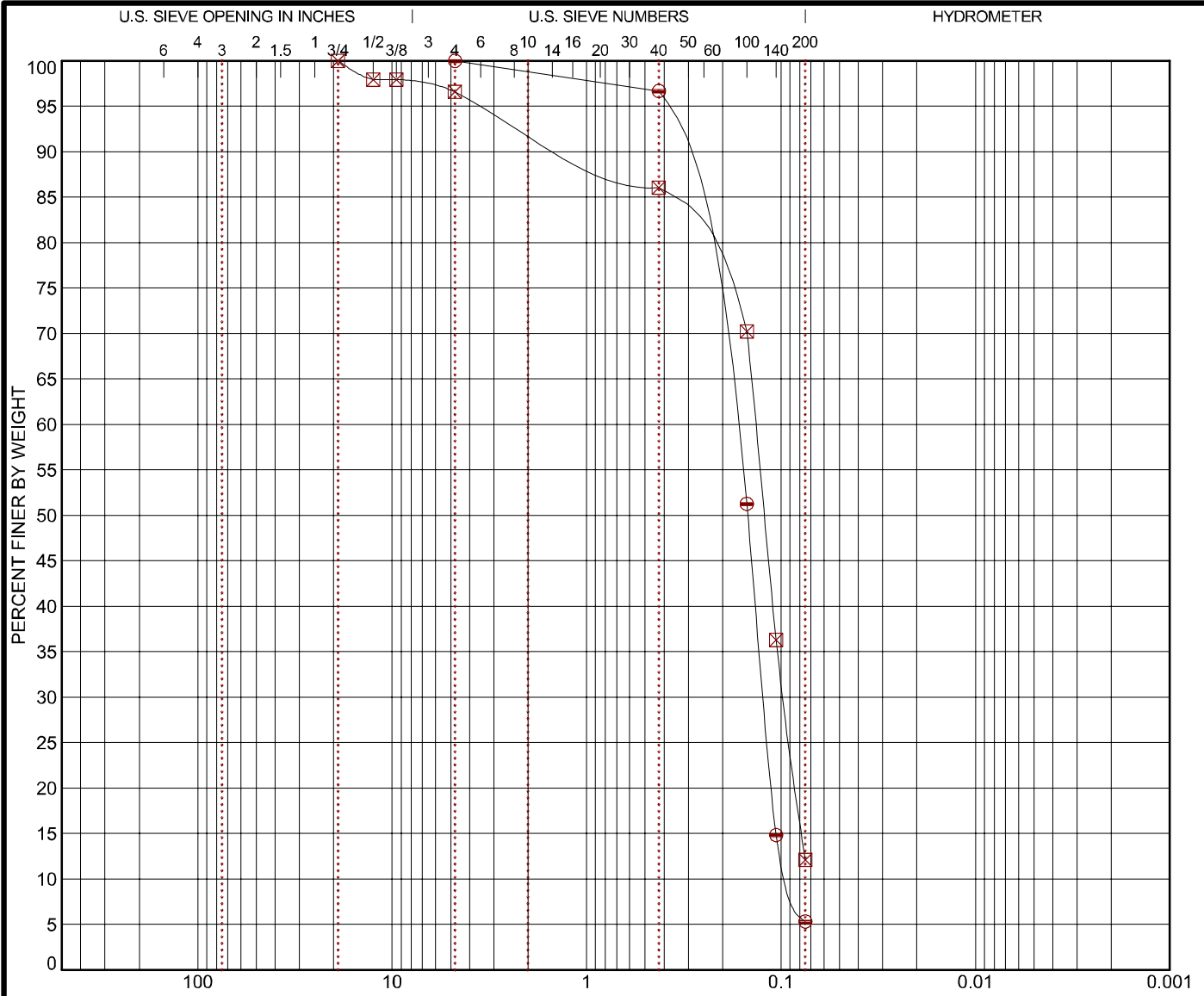
Driller: Van and Sons

Exhibit: A-13

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 91175047 REV1 GALVESTON BAY SAN.GPJ TERRACON_DATATEMPLATE.GDT 11/2/17

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID	Depth	USCS Classification				WC (%)	LL	PL	PI	Cc	Cu
⊖ B-11	6.5 - 8	POORLY GRADED SAND WITH SILT (SP-SM)								0.92	2.06
⊗ B-11	18.5 - 20	POORLY GRADED SAND WITH SILT (SP-SM)								0.95	1.86
Boring ID	Depth	D ₁₀₀	D ₈₅	D ₅₀	D ₁₀	%Gravel	%Sand	%Silt	%Fines	%Clay	
⊖ B-11	6.5 - 8	4.75	0.325	0.148	0.089	0.0	94.7	5.3			
⊗ B-11	18.5 - 20	19	0.396	0.122		3.4	84.5	12.1			

PROJECT: Galveston Bay Sand Reclamation Project

SITE: Galveston Bay
Galveston, Texas

Terracon
551 League City Pkwy Ste F
League City, TX

PROJECT NUMBER: 91175047

CLIENT: Atkins North America, Inc.
Houston, Texas

EXHIBIT: A-28