

- Geotechnical Engineering
- Construction Materials Testing

PROJECT NAME: Anchorage Basin Sand Source Investigation

CLIENT: HDR Engineering, Inc.

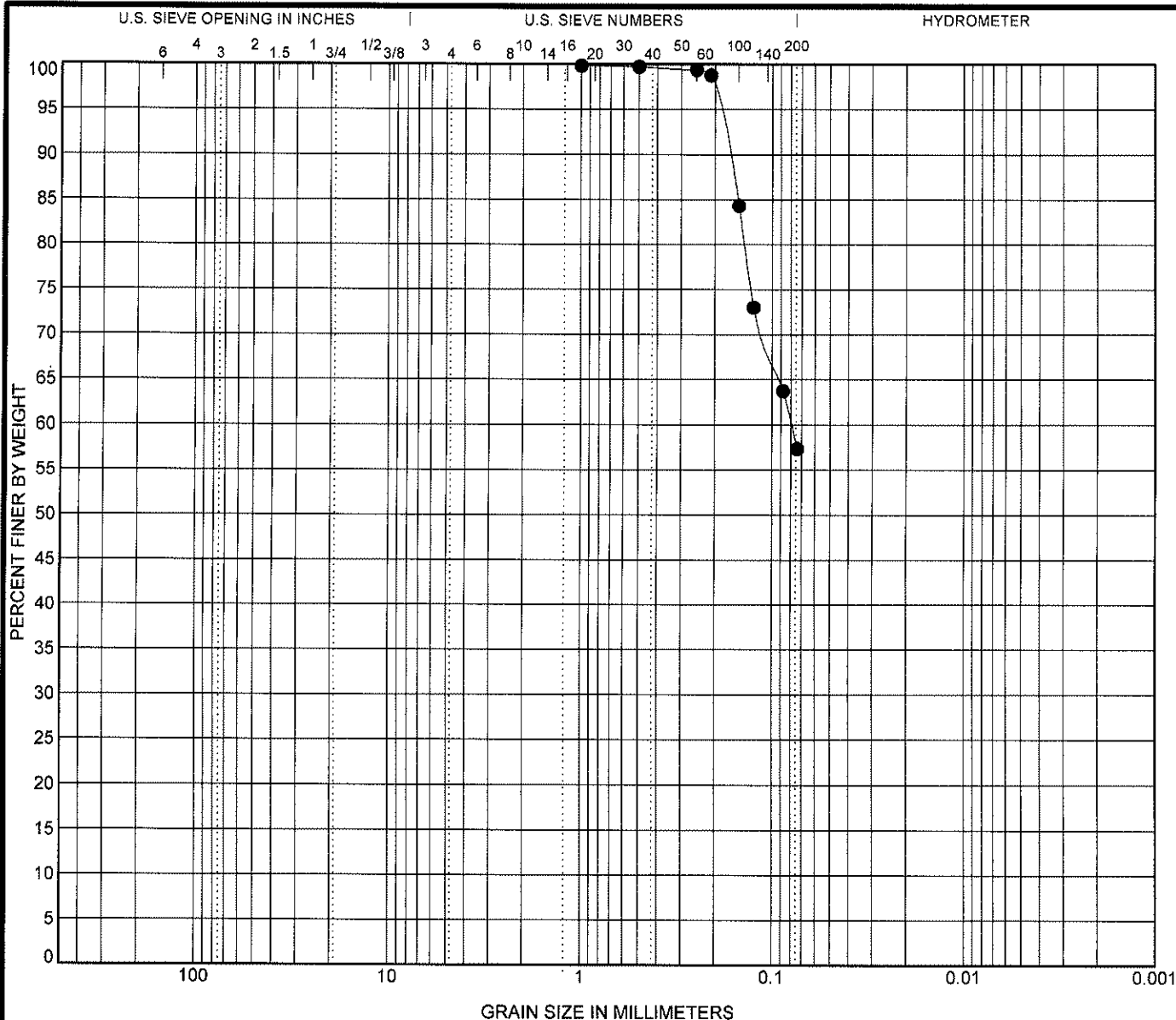
BORING ID.: AA-25

DESCRIPTION: Anchorage Basin Borrow Source Area

PERCENT SHELL BY WEIGHT (BASED ON #10 SIEVE)			
-34' to -35' NAVD	-35' to -36' NAVD	-37' to -38' NAVD	-39' to -40' NAVD
0.11	0.83	0.00	0.00

ASTM MESH	% FINER BY WEIGHT AFTER REMOVING SHELL			
	-34' to -35' NAVD	-35' to -36' NAVD	-37' to -38' NAVD	-39' to -40' NAVD
#10	100.00	100.00	100.00	100.00
#18	99.83	98.90	99.95	99.95
#35	99.72	98.65	99.89	99.93
#60	99.42	97.78	99.62	99.89
#70	98.80	95.46	99.08	99.84
#100	84.36	38.54	55.26	98.89
#120	73.02	18.09	24.42	88.83
#170	63.75	8.17	13.41	73.41
#200	57.36	6.29	10.78	68.05
STATISTICS (EXCLUDING SHELL)				
MEDIAN GRAIN SIZE (mm)	N/A	0.17	0.14	N/A
MEAN GRAIN SIZE (mm)	N/A	0.16	0.14	N/A
SORTING (σ)	N/A	N/A	N/A	N/A

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



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen ID	Depth	Classification	LL	PL	PI	Cc	Cu
● AA-25 (-34' to -35' NAVD)		Borrow Area (-34' to -35' NAVD)					

[illegible]

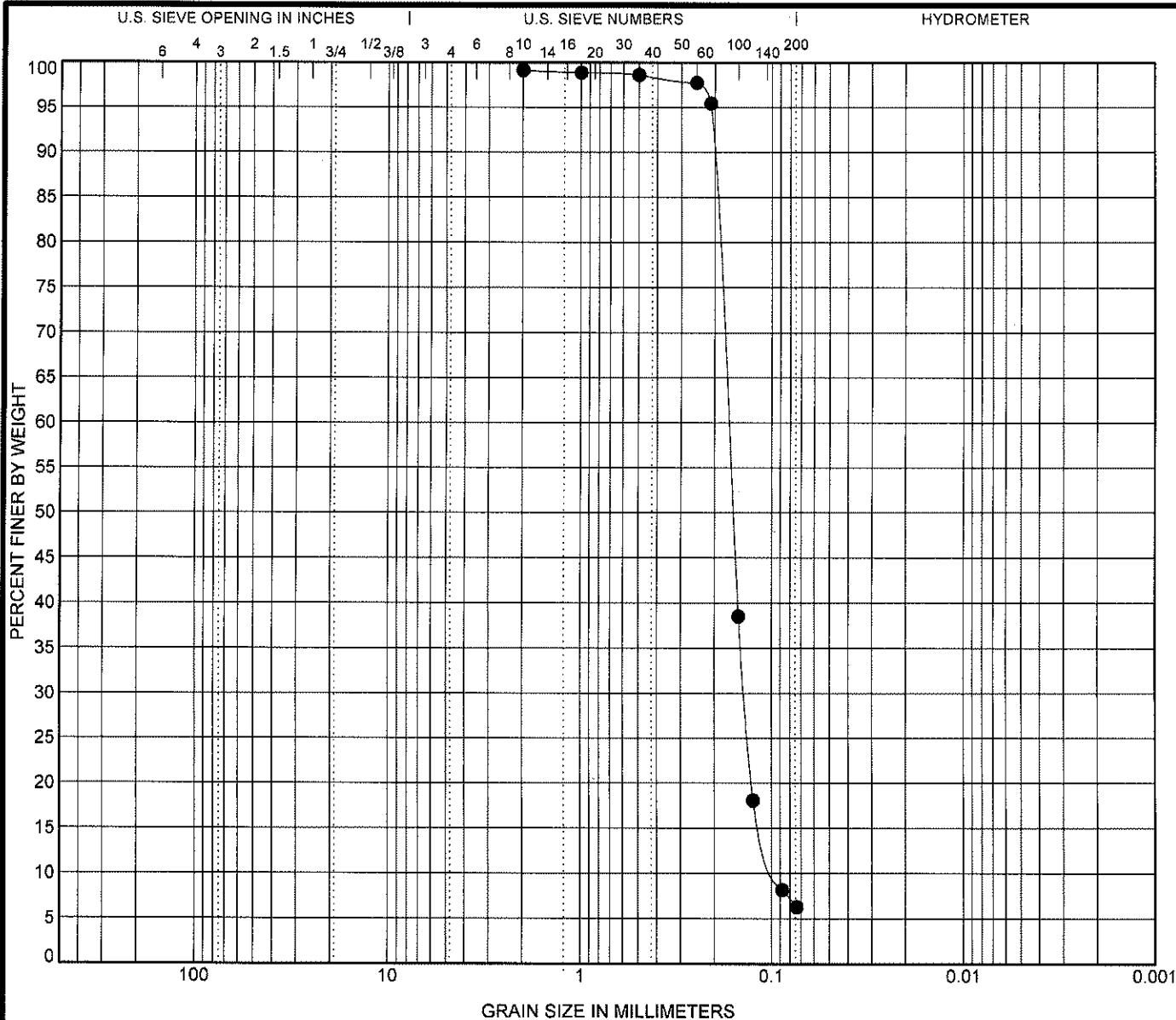
Rock Engineering & Testing Lab., Inc.
6817 Leopard St.
Corpus Christi, TX 78409
Telephone: (361) 883-4555
Fax: (361) 883-4711

GRAIN SIZE DISTRIBUTION

Project: Anchorage Basin Sand Source Investigation

Location: Anchorage Basin; Galveston, Texas

Number: G109112



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen ID	Depth	Classification	LL	PL	PI	Cc	Cu
● AA-25	(-35' to -36' NAVD)	Borrow Area (-35' to -36' NAVD)				1.20	1.81

Specimen ID	Depth	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● AA-25	(-35' to -36' NAVD)	2	0.17	0.138	0.094	0.0			



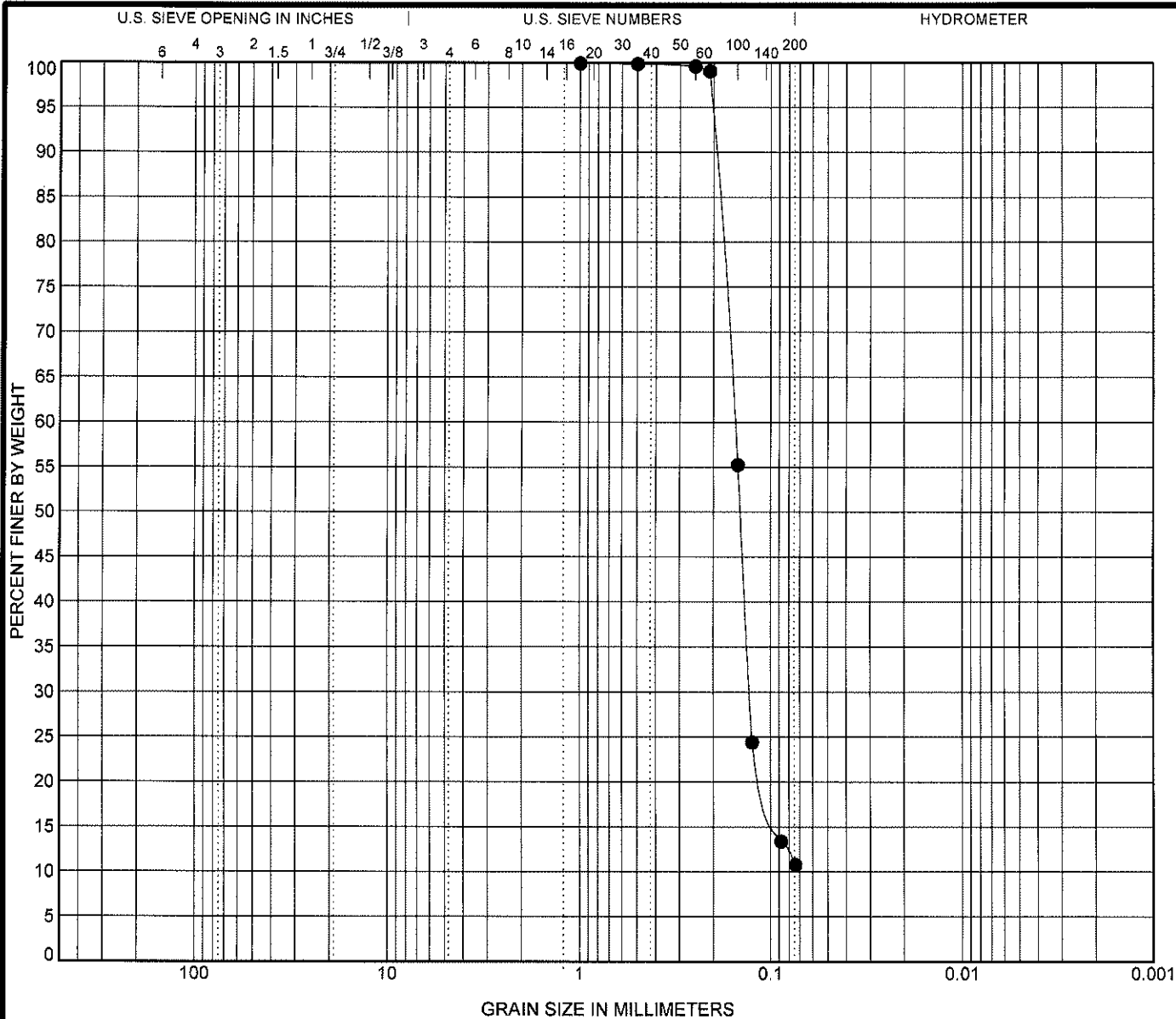
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COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen ID	Depth	Classification	LL	PL	PI	Cc	Cu
● AA-25	(-37' to -38' NAVD)	Borrow Area (-37' to -38' NAVD)				1.53	2.20

Specimen ID	Depth	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● AA-25	(-37' to -38' NAVD)	1	0.155	0.129		0.0			



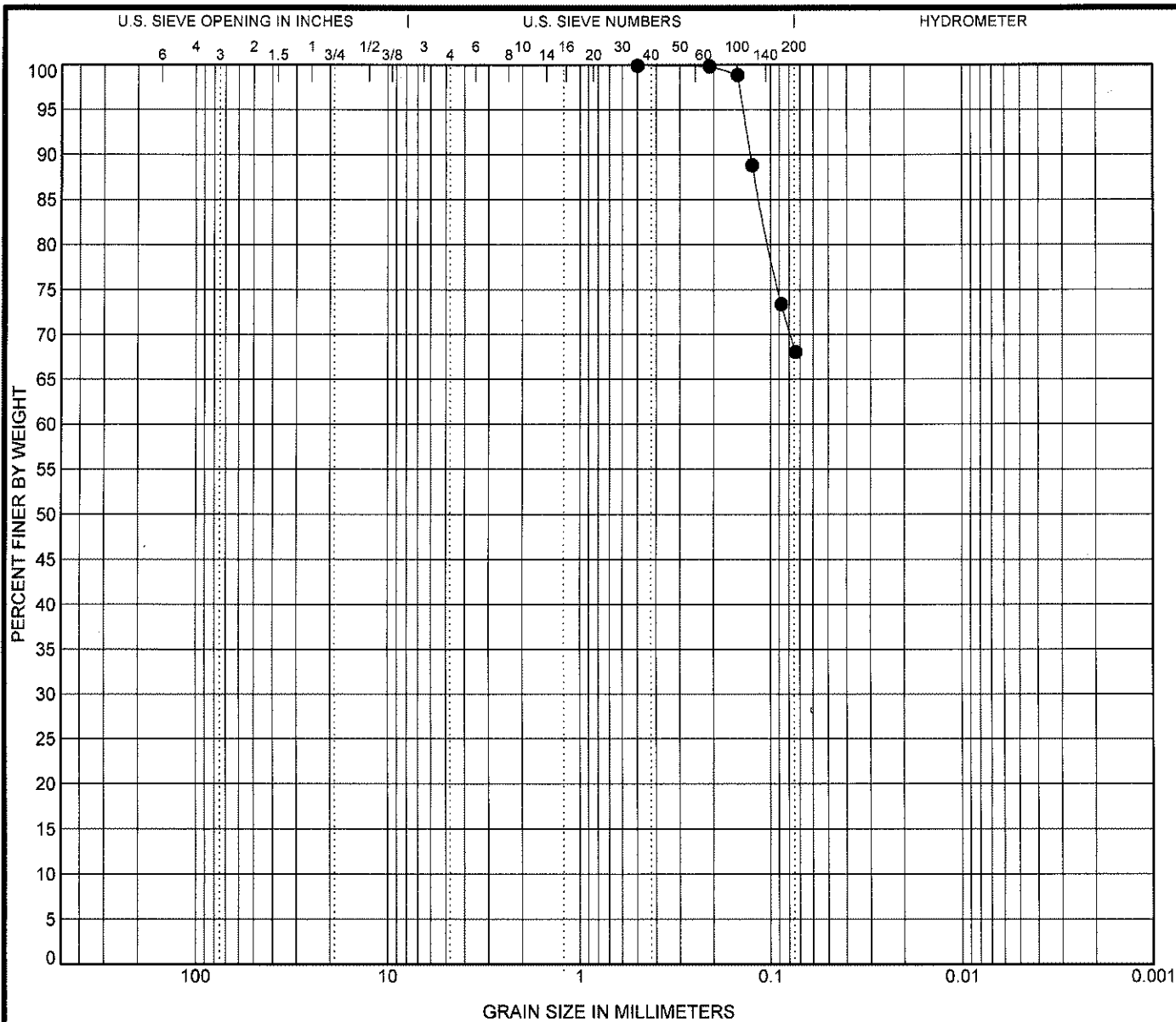
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COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen ID	Depth	Classification	LL	PL	PI	Cc	Cu
● AA-25	(-39' to -40' NAVD)	Borrow Area (-39' to -40' NAVD)					

Specimen ID	Depth	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● AA-25	(-39' to -40' NAVD)	0.5				0.0			



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LOG OF BORING AA-25

SHEET 1 OF 2



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CLIENT: HDR Engineering, Inc.
PROJECT: Anchorage Basin Sand Source Investigation
LOCATION: Anchorage Basin, Galveston, Texas
NUMBER: G109112

DATE(S) DRILLED: 03/10/09 - 03/10/09

FIELD DATA				LABORATORY DATA							GROUNDWATER INFORMATION:	
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 (%)	SURFACE ELEVATION: -34' NAVD
						LL	PL	PI				
	19											
	20											
	21											
	22											
	23											
	24											
	25											
	26											
	27											
	28											
	29											
	30											
	31											
	32											
	33											
	34	S-1									57	SANDY CLAY , gray.
	35	S-2									6	POORLY GRADED SAND , with clay, gray.
	36											

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

REMARKS:
Boring depth and location was determined by HDR Engineering, Inc. Boring operations were performed by Ocean Surveys, Inc.
GPS Coord. N. 13,699,095' E. 3,322,545'

LOG OF BORING AA-25

SHEET 2 OF 2



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DATE(S) DRILLED: 03/10/09 - 03/10/09

DRILLING METHOD(S):

Vibracore

GROUNDWATER INFORMATION:

SURFACE ELEVATION: -34' NAVD

DESCRIPTION OF STRATUM

Same as above.

Same as above.

SANDY CLAY, gray.

Same as above.

Boring was extended to an elevation of -40-feet NAVD during the drilling operations.

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 (%)
						LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			
						LL	PL	PI			
	37	S-3									
	38	S-4									11
	39	S-5									
	40	S-6									68

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