



- Geotechnical Engineering
- Construction Materials Testing

PROJECT NAME: Anchorage Basin Sand Source Investigation

CLIENT: HDR Engineering, Inc.

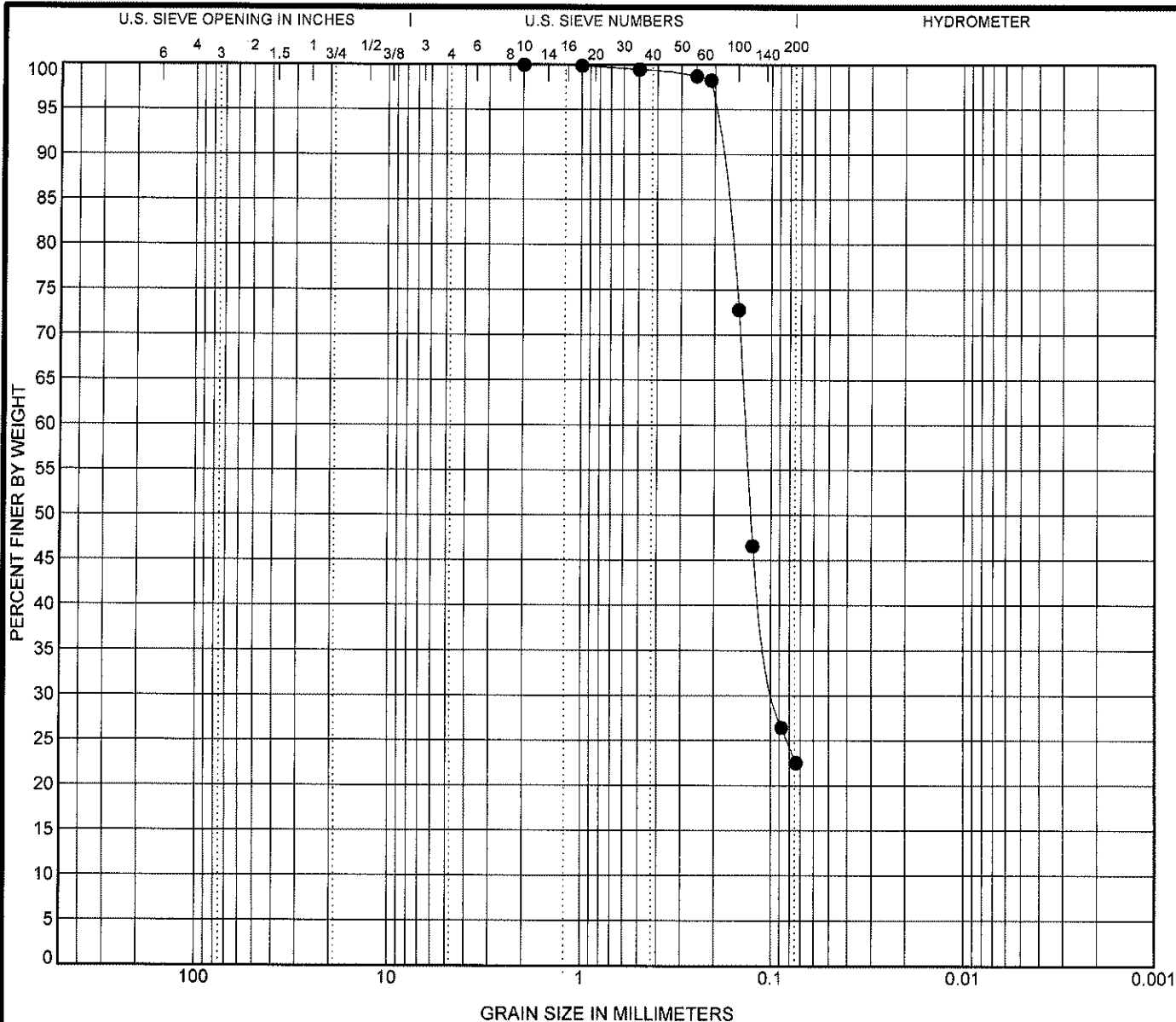
BORING ID.: AA-26

DESCRIPTION: Anchorage Basin Borrow Source Area

PERCENT SHELL BY WEIGHT (BASED ON #10 SIEVE)		
-33' to -34' NAVD	-35' to -36' NAVD	-38' to -39' NAVD
0.03	1.01	0.05

ASTM MESH	% FINER BY WEIGHT AFTER REMOVING SHELL		
	-33' to -34' NAVD	-35' to -36' NAVD	-38' to -39' NAVD
#10	100.00	100.00	100.00
#18	99.88	98.49	99.91
#35	99.48	97.85	99.88
#60	98.73	96.43	99.80
#70	98.28	94.84	99.71
#100	72.78	65.93	96.76
#120	46.57	42.85	86.76
#170	26.45	26.96	72.78
#200	22.52	17.84	68.11
STATISTICS (EXCLUDING SHELL)			
MEDIAN GRAIN SIZE (mm)	0.14	0.14	N/A
MEAN GRAIN SIZE (mm)	N/A	N/A	N/A
SORTING (σ)	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-26	(-33' to -34' NAVD)	Borrow Area (-33' to -34' NAVD)					

Specimen ID	Depth	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● AA-26	(-33' to -34' NAVD)	2	0.137	0.094		0.0			



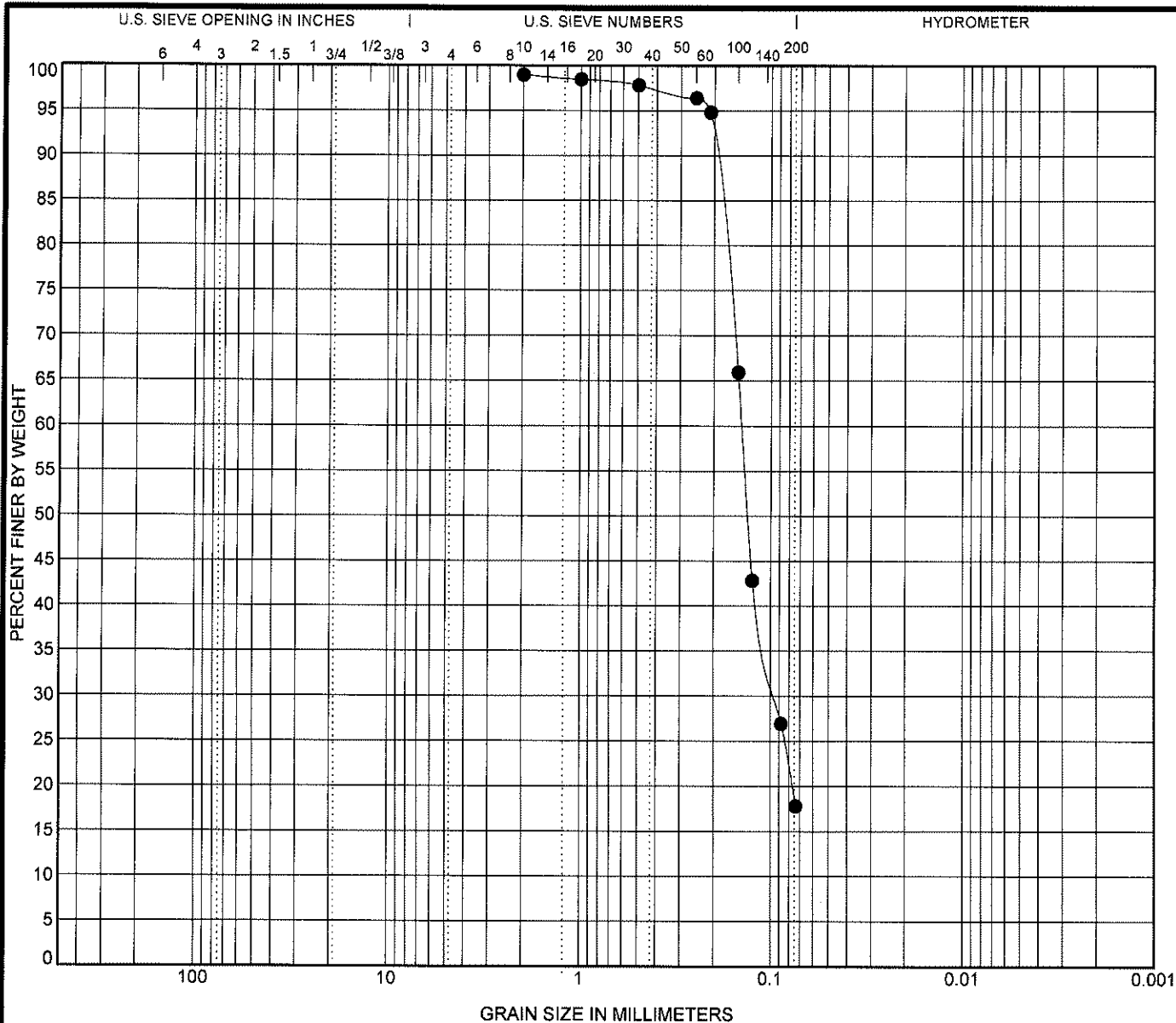
Rock Engineering & Testing Lab., Inc.
 6817 Leopard St.
 Corpus Christi, TX 78409
 Telephone: (361) 883-4555
 Fax: (361) 883-4711

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-26 (-35' to -36' NAVD)		Borrow Area (-35' to -36' NAVD)					

[illegible]

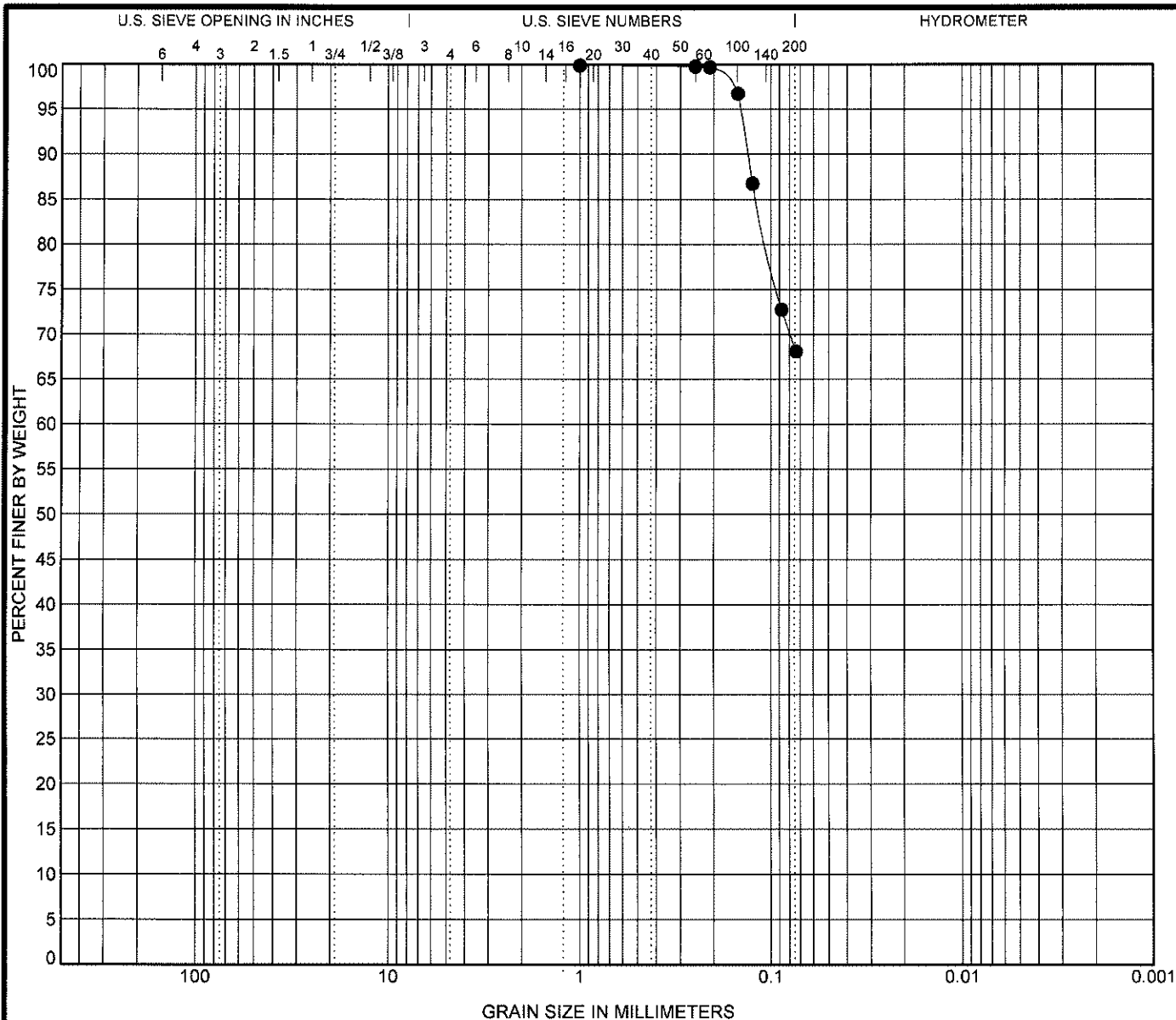
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GRAIN SIZE DISTRIBUTION

Project: Anchorage Basin Sand Source Investigation

Location: Anchorage Basin; Galveston, Texas

Number: G109112



LOG OF BORING AA-26

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					DRILLING METHOD(S): Vibracore	
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 (%)	GROUNDWATER INFORMATION:				
						LL	PL	PI								
												SURFACE ELEVATION: -33' NAVD				
												DESCRIPTION OF STRATUM				
	21															
	22															
	23															
	24															
	25															
	26															
	27															
	28															
	29															
	30															
	31															
	32															
	33															
	34	S-1									23	SILTY CLAYEY SAND gray.				
	35	S-2										Same as above.				
	36	S-3									18	Same as above.				
	37	S-4										SANDY CLAY dark gray.				
	38	S-5										Same as above.				
	39	S-6										Same as above.				
	40	S-7									68	SANDY CLAY dark gray.				
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. 13,699,510' E. 3,322,110'				

LOG OF BORING G109112 PROP. ANCHORAGE BASIN SAND SOURCE GPJ ROCK ETL GDT 4/28/09

LOG OF BORING AA-26

SHEET 2 OF 2



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PROJECT: Anchorage Basin Sand Source Investigation
LOCATION: Anchorage Basin; Galveston, Texas
NUMBER: G109112

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

DRILLING METHOD(S):

Vibracore

GROUNDWATER INFORMATION:

SURFACE ELEVATION: -33' NAVD

DESCRIPTION OF STRATUM

Same as above.

Boring was extended to an elevation of -41-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 (%)
						LL	PL	PI			
	41	2-8									

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

REMARKS:

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GPS Coord. N. 13,699,510' E. 3,322,110'