WG Form 279
August 1973

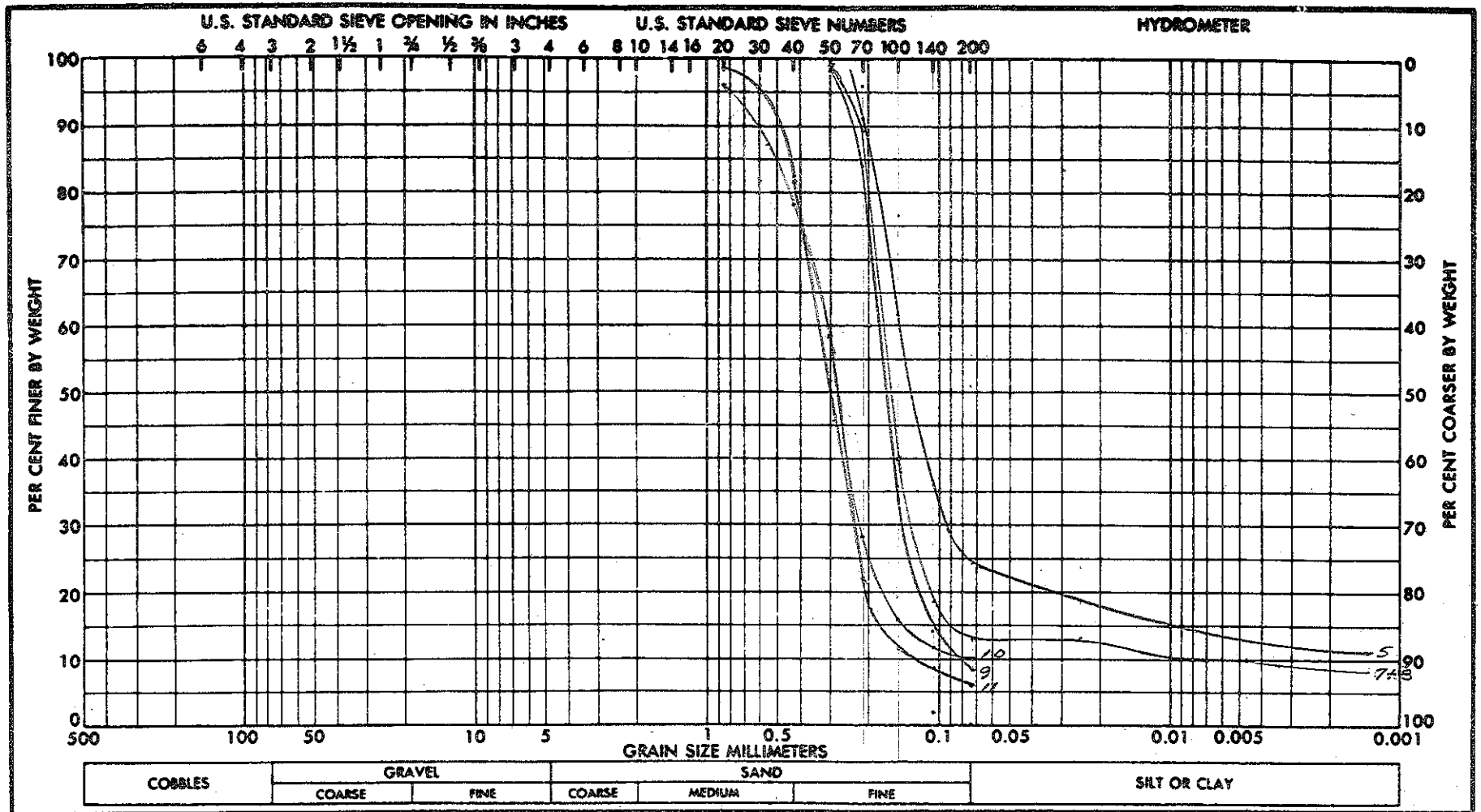
SUMMARY UNCONFINED COMPRESSION TEST DATA
TABLE 1

GALVESTON DISTRICT LABORATORY REPORT NO. 1650

PROJECT Neches River, Salt Water Barrier

BORING NO	DEPTH FT	% GRAVEL	% SAND	% FINES	% MOISTURE	DRY WT. P.C.F.	L.L.	P.L.	L.S.	% STRAIN @ MAX. STRESS	MAX. STRESS P.S.F.	POCKET PENETRO-METER*	CLASSIFICATION
79-88	40.0-42.5		Disturbed, Sheared on slickensides while trimming										
	97.5-100.0				31					13.13	2594	1.25	
79-89	0.0 - 2.50				27					11.88	1104	0.25	
	37.5-40.0				20					10.63	6950	2.50	
	42.5-45.0				33					2.50	3020	2.25	
79-90	2.5 - 5.0				20					12.50	1858	1.00	
	37.5-40.0				20					7.50	6293	2.50	
	47.5-50.0				17					20.00	9653	2.50	
79-91	0.0 - 2.5				31					8.75	1182	0.50	
	42.5-45.0				28					5.00	6839	2.75	
	55.0-57.5				20					16.25	6742	3.00	

*TONS/SQ.FT. UNCONFINED COMPRESSIVE STRENGTH



SAMPLE NO.	ELEV OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI

GRADATION CURVES

PROJECT NECHES RIVER SALT WATER BARRIER

AREA UPPER SAND LAYER

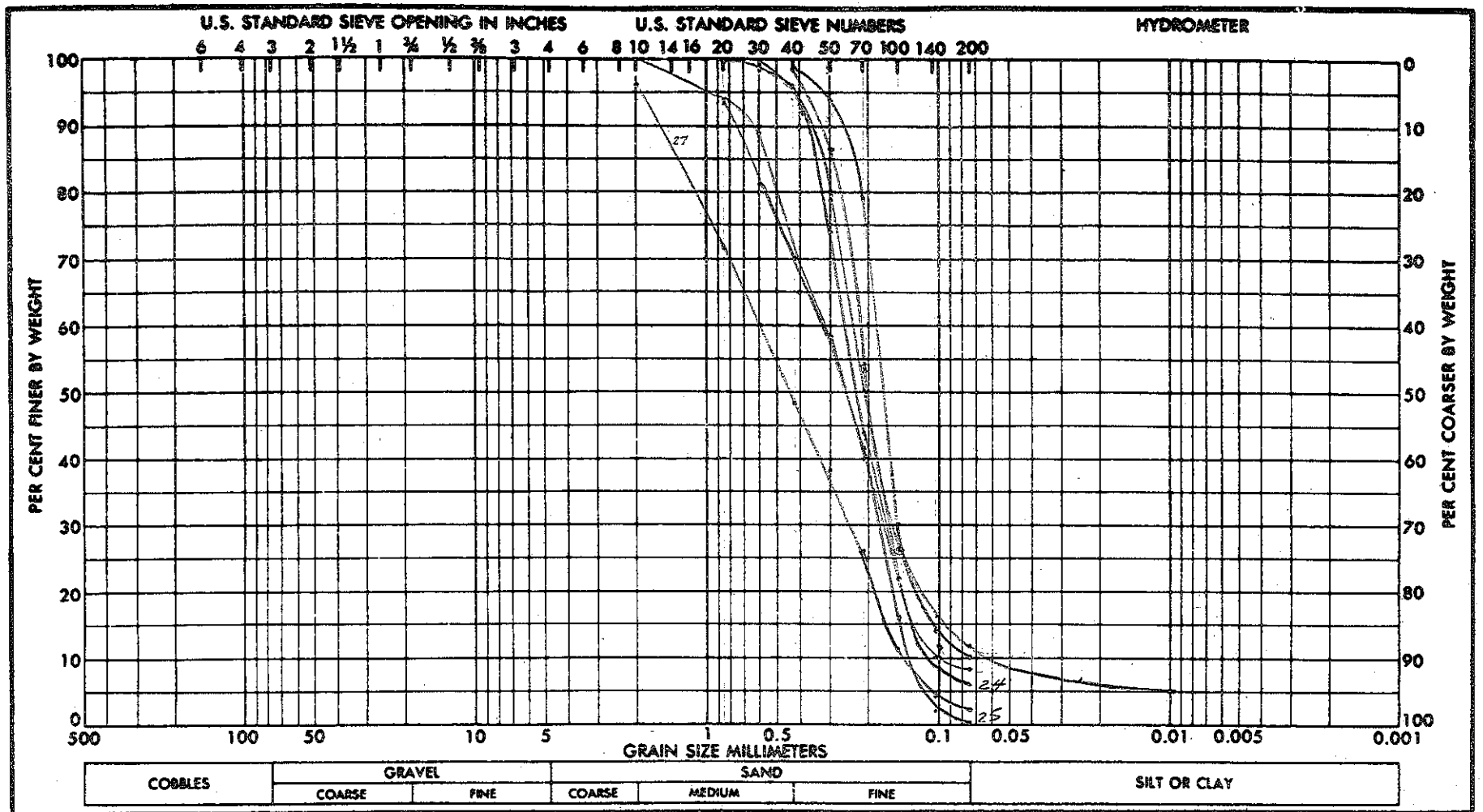
BORING NO. 79-89 Samples 5, 7, 8, 9, 10 & 11

DATE SM, SP & SP-SM Sands

ENG FORM 2087
1 MAY 63

REPLACES WES FORM NO. 1241, SEP 1962, WHICH IS OBSOLETE.

U.S. GOVERNMENT PRINTING OFFICE : 1963 OF—709-128



SAMPLE NO.	ELEV OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI

GRADATION CURVES

PROJECT NECHES RIVER SALT WATER BARRIER

AREA LOWER SAND LAYER

BORING NO. 79-89 Samples 23, 24, 25, 26, 27, 29 & 30

DATE SM, SP & SP-SM Sands

ENG FORM 2087
1 MAY 63

REPLACES WES FORM NO. 1241, SEP 1962, WHICH IS OBSOLETE.

U.S. GOVERNMENT PRINTING OFFICE : 1963 OF—700-126

12 July 1971

GDLR NO. 1650

PROJECT: NECHES RIVER SALT WATER BARRIER

BORING NO. 79-89

TEST DATA SUMMARY

LOCATION: Beaumont, Texas

DATE DRILLED: 23 Sep 79

FIELD NO.	Sample Depth, Feet From	Sample Depth, Feet To	CLASSIFICATION ELEVATION TOP BORING _____	Length of sample recv'd	SYMBOL	CONSISTENCY	POCKET (1) PENETROMETER	STAN. PENET. BLOWS/FT (2)	MOISTURE CONTENT %	DRY DENSITY p. c. f.	L.L.	P.L.	Lab 79 Sample No.	BAR L.S.	SIEVE ANALYSIS PERCENT GRVL	SAND	FINES	INIT. WT.	ACC. WT. RTND. SIEVE NO. (3) NO. 4	NO. 10	NO. 40	NO. 200
1C	0.0	2.5	Gray sandy clay with organic material 0.0-4.5	1.05	CH	S	0.25		32	110	54	22	1027		0	32	68	50	0	0	0	16
2C	2.5	5.0	Gray sandy clay with organic material	1.05		S	0.25		38	*			1028									
3C	5.0	7.5	Gray sandy clay to gray silty sand with organic material	1.05		S	0.25		33	*			1029									
4J	7.5	10.0	Wood 7.5-10.0						No	test			1030									
5J	10.0	12.5	Gray silty sand with random thin clay seams 10.0-12.5		SM				30				1031		0	72	28	50	0	0	0	36
6J	12.5	15.0	Gray sandy clay 12.5-15.0		CL				46				1032		0	46	54	50	0	0	0	23
7J	15.0	17.5	Gray silty sand 15.0-17.5		SP SM				33				1033		0	88	12	50	0	0	0	44
8J	17.5	20.0	Gray silty sand 17.5-20.0		SM SP				29				1034		0	82	18	50	0	0	0	41
9J	20.0	22.5	Gray silty sand 20.0-33.0		SM				31				1035		0	92	8	50	0	0	0	46
	22.5	24.0	#washed																			
10J	24.0	26.0	Gray & tan silty sand			VD		30	22				1036		0	90	10	50	0	0	11	45
	26.0	29.0	#washed																			
11J	29.0	31.0	Gray & tan silty sand			VD		28	22				1037		0	94	6	50	0	0	9	47
	31.0	33.0	#washed																			
12C	33.0	35.0	Gray & yellow clay 33.0-50.0		CH	M		15	41				1038									
13C	35.0	37.5	Gray & yellow clay	1.05		VST	2.00		22	107			1039									
14C	37.5	40.0	Gray, yellow & reddish brown clay with random sand pockets	1.1		VST	3.75		20	109	59	16	1040		0	8	92	50	0	0	0	4
15C	40.0	42.5	Gray & yellow clay with random sand seams	1.1		VST	2.50		31				1041									
16C	42.5	45.0	Gray & yellow clay with random calcareous nodules & sand seams	0.95		VST	2.25		32	90	74	31	1042		2	2	96	50	1+	1	1	2
17C	45.0	47.5	Gray & yellow clay with random calcareous nodules	1.0		VST	3.25		18	111			1043									

KEY: CONSISTENCY — COHESIVE SOILS: VS Very Soft, S Soft, M Medium, St Stiff, VST Very Stiff, H Hard. CONSISTENCY — COHESIONLESS SOILS: VL Very Loose, L Loose, M Medium, D Dense, VD Very Dense.

(1) Tons/Sq.Ft. Unconfined Compressive Strength
(2) Split Barrel Sampler
(3) Acc. Wt. Rtnd ÷ Init. Wt. x 100 = % Rtnd.

+ calcareous nodules

BORING NO. 79-89

Bottomed at _____ Water at _____ Tide Reading _____

Sheet 1 of sheets 2

12 July 1971

GDLR NO. 1650

PROJECT NECHES RIVER SALT WATER BARRIER

BORING NO. 79-89

TEST DATA SUMMARY

LOCATION:

DATE DRILLED:

FIELD NO.	Sample Depth, Feet From	Sample Depth, Feet To	CLASSIFICATION ELEVATION TOP BORING	Length of sample recv'd	SYMBOL	CONSISTENCY	POCKET (1) PENETROMETER	STAN. PENET. BLOWS/FT (2)	MOISTURE CONTENT %	DRY DENSITY p. c. f.	L.L.	P.L.	Lab Sample No. 79	BAR L.S.	SIEVE ANALYSIS PERCENT GRVL	SAND	FINES	INIT. WT.	ACC. WT. RTND. SIEVE NO. (3) NO. 4	NO. 10	NO. 40	NO.
18C	47.5	50.0	Gray & yellow clay with random calcareous nodules	1.1	CH	VST	2.50		20	107			1044									
19C	50.0	52.5	Gray & yellow sandy clay with random calcareous nodules 50.0 - 52.5	1.5	CL	VST	2.00		19	112	41	14	1045		0	26	74	50	0	1+	3	13
20C	52.5	55.0	Gray & yellow clayey sand 52.5 - 55.0	1.0	SC	ST	1.75		20	107			1046	7	0	50	50	50	0	0	0	25
21J	55.0	57.0	Gray & yellow sandy clay 55.0 - 60.0		CL	X	2+	37	23	102			1047		0	32	68	50	0	1	1	16
	57.0	59.0	#washed																			
22C	59.0	60.0	Gray & yellow clay with random sand layers	1.05		S	0.25		26		39	16	1048		0	10	90	50	0	0	0	5
	60.0	62.5	#no recovery																			
	62.5	64.0	#washed																			
23J	64.0	66.0	Gray & tan silty sand 60.0 - 71.0		SP SM	VD		114	26				1049		0	92	8	50	0	0	2	46
	66.0	69.0	#washed																			
24J	69.0	71.0	Gray & tan silty sand			VD		58	27				1050		0	94	6	50	0	0	15	47
	71.0	74.0	#washed																			
25J	74.0	76.0	Gray sand 71.0 - 76.0		SP	VD		74	28				1051		0	100	0	50	0	0	15	50
	76.0	79.0	#washed																			
26J	79.0	81.0	Gray silty sand 76.0 - 80.1		SP SM	VD		54	25				1052		0	92	8	50	0	0	2	46
	81.0	82.0	#washed																			
27J	82.0	84.0	Gray sand with random calcareous nodules (wash sample)# 80.1 - 84.0		SP				22				1053		0	98	2	50	0	0	26	49
28J	84.0	86.0	Gray clayey sand 84.0 - 86.0		SC	L		6	23				1054		0	76	24	50	0	0	2	38
	86.0	89.0	#washed																			
29J	89.0	91.0	Gray silty sand 86.0 - 91.0		SP SM	VD		127	22				1055		0	90	10	50	0	0	1	45
	91.0	94.0	#washed																			
0J	94.0	96.0	Gray silty sand 91.0 - 96.0		SM	VD		164	20				1056		0	86	14	50	0	0	1	43
1J	96.0	100.	Gray silty sand 96.0 - 100.		SM				31				1057		0	94	6	50	0	0	3	49
			#(wash sample)																			

KEY: CONSISTENCY — CLAYEY SOILS: VS Very Soft, S Soft, M Medium, St Stiff, VST Very Stiff, H Hard. DENSITY — COHESIONLESS SOILS: VL Very Loose, L Loose, M Medium, D Dense, VD Very Dense.

(1) Tons/Sq.Ft. Unconfined Compressive Strength
(2) Split Barrel Sampler
(3) Acc. Wt. Rtnd ÷ Init. Wt. × 100 = % Rtnd.

+ calcareous nodules

BORING NO. 79-89

#information obtained from driller's log

*Disturbed

Sheet 2 of sheets 2

GAMMA LOG SURVEY

DISTRICT BORING NO. 79-89

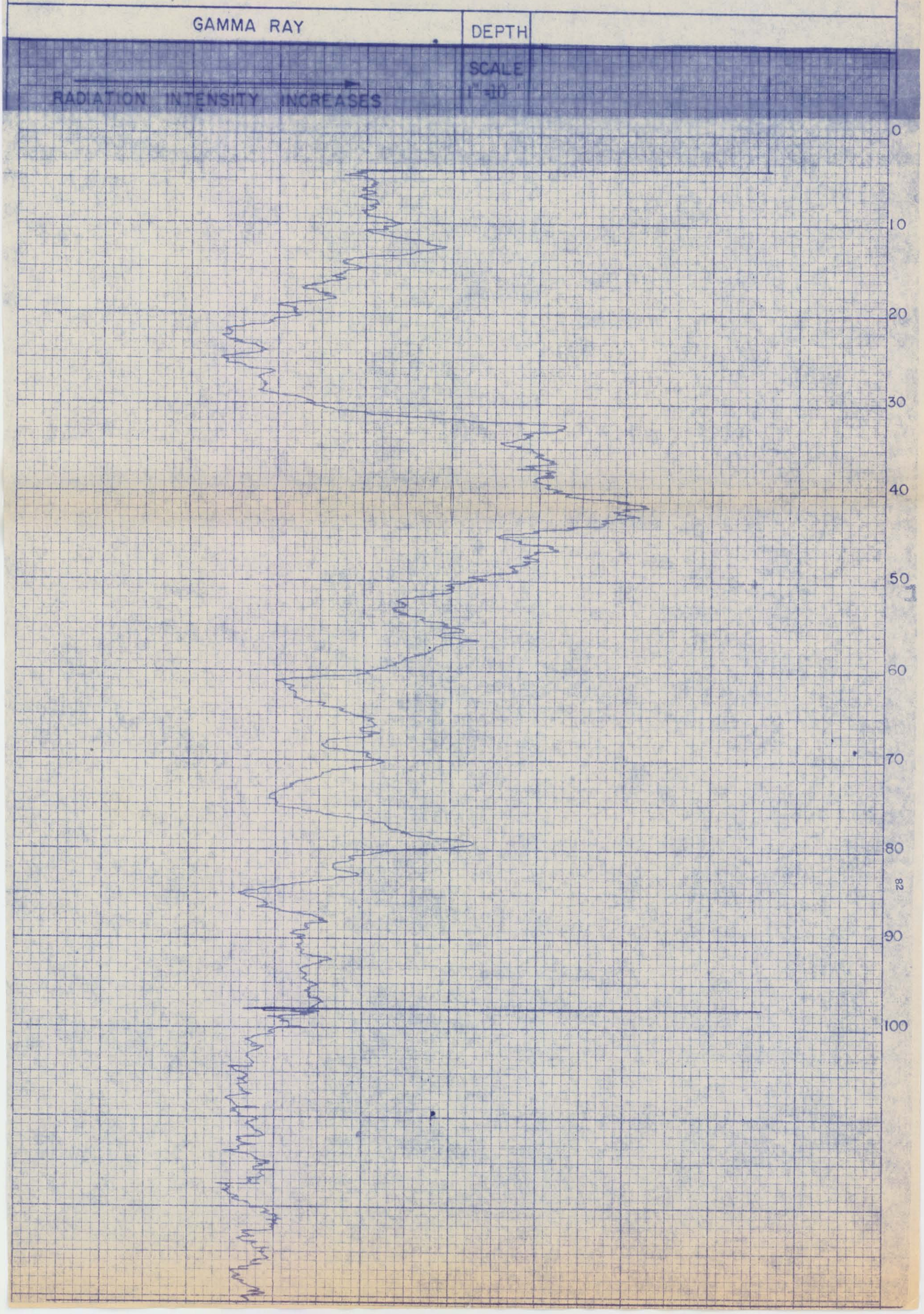
PROJECT: NECHES RIVER SALT WATER BARRIER
FEATURE:
STATION:
ELEVATION:

DRILLED BY: CURTIS | BIT SIZE: 4" | DATE: 8/28/79 | DEPTH: 105'

RUN NO.: 1 | DATE: 8/28/79 | BY: GREENOUGH | DEPTH: 98'
MUD WEIGHT: | LOGGING SPP: 10-15 | FT/MIN:
MUD TEMP: | TIME CONST: 4 | SEC:
MUD RESISTIVITY: | VARIABLE SPAN: 3.0 | COUNT RANGE: 10 | COUNTS/SEC:

REMARKS:

MUD ELECTRICAL CONDUCTIVITY - 0.96 MMHOS/CM - 614 PPM



ELECTRIC LOG SURVEY

DISTRICT BORING NO. 79-89

PROJECT: NECHES RIVER SALT WATER BARRIER
FEATURE:
STATION:
ELEVATION:

DRILLED BY: CURTIS BIT SIZE: 4" DATE: 8/28/79 DEPTH: 105'

RUN NO.: 2 DATE: 8/28/79 BY: GREENOUGH DEPTH: 98'
MUD WEIGHT: VARIABLE SPAN (RESIS.) 20 OHMS - V.S. 8.3
MUD TEMP: 78° F
MUD RESISTIVITY: VARIABLE SPAN (SP) 25 MV - V.S. 4.2

REMARKS:
MUD ELECTRICAL CONDUCTIVITY - 0.96 MMHOS/CM - 614 PPM

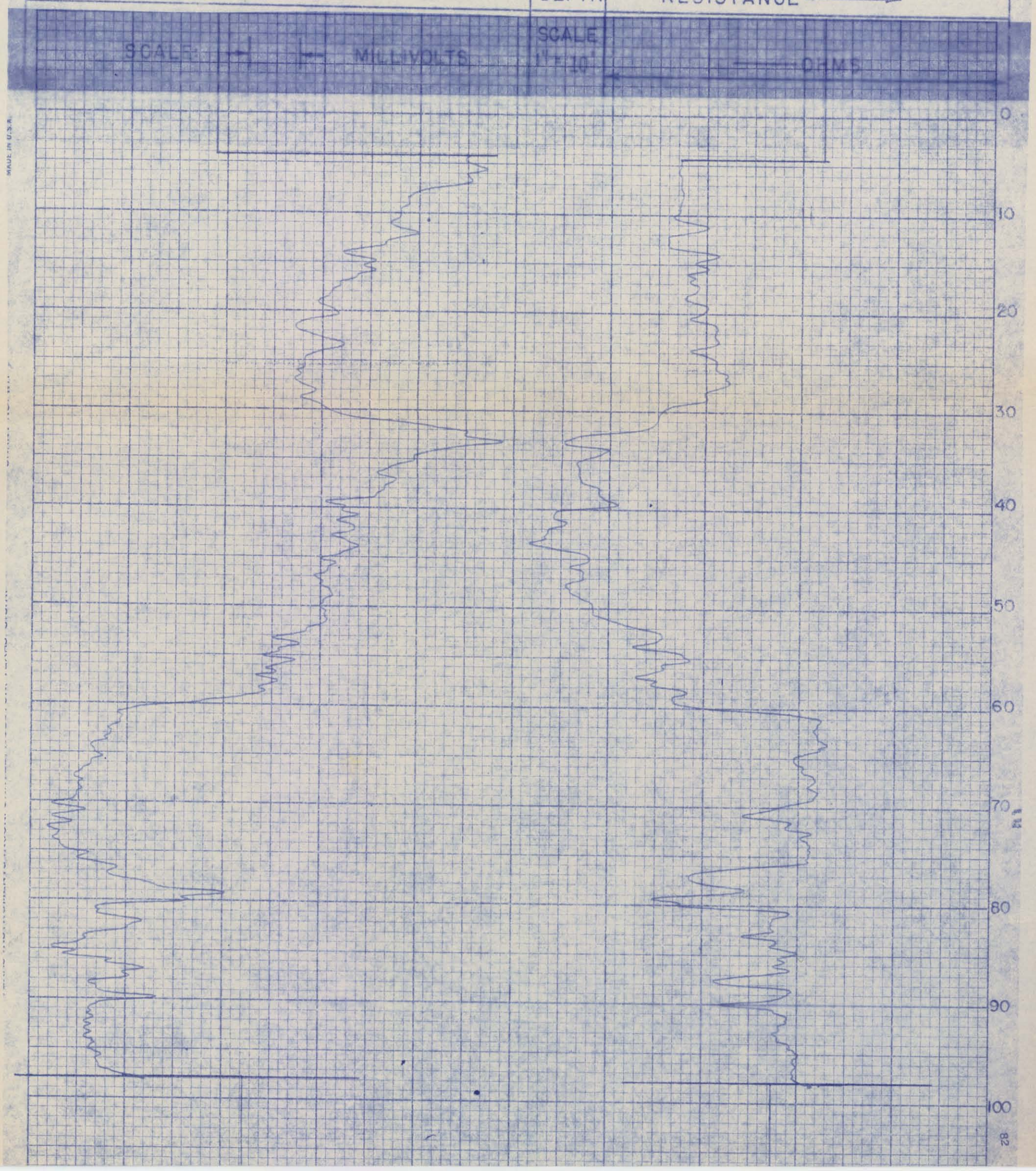


TABLE 2

GRAIN SIZE & HYDROMETER ANALYSIS

NECHES RIVER SALT WATER BARRIER — GALVESTON DISTRICT LABORATORY, NO. 1650

BORING NO.	SAMPLE NO.	DEPTH (FT.)	GDLR NO.	Diameter in Millimeters/Percent Finer by Weight																						D_{10} MM
				4.76	2.00	0.84	0.59	0.42	0.297	0.210	0.149	0.105	0.074	0.050	0.045	0.025	0.023	0.0094	0.0090	0.0064	0.0060	0.0047	0.0044	0.0034	0.0014	
79-87	13	30.0'-32.5'	79-962						100	90	40	14	8													0.084
	14	32.5'-35.0'	79-963						100	95	59	31	19	11		9		9		8		8		7	6	0.035
	15	35.0'-37.0'	79-964			100	99	92	81	57	35	27	24	19		18			18	16		15		15	13	*
	24	58.0'-60.0'	79-973					100	99	95	80	57	37		22	13		10		9		8		8	7	0.009
79-88	1	31.0'-33.0'	79-1003		100	96	78	36	8	2	2	2	2													0.306
	11	55.0'-57.0'	79-1013						100	90	60	22	10													0.074
	12	60.0'-62.0'	79-1014						100	97	75	32	18	5		4		4		4		3		3	3	0.060
	14	65.0'-67.0'	79-1016						100	80	32	12	4													0.097
79-89	5	10.0'-12.5'	79-1031						100	92	62	36	24	20		18			15	14		13		13	11	*
	6	12.5'-15.0'	79-1032						100	96	77	60	51		42		37		31		29		27	26	22	*
	7	15.0'-17.5'	79-1033					100	99	89	40	18	13	13		13		10		10		10		9	8	0.008
	8	17.5'-20.0'	79-1034					100	99	90	49	21	15	14		13		11		11		10		9	8	0.005
	9	20.0'-22.5'	79-1035					100	98	84	36	14	8													0.084
	10	24.0'-26.0'	79-1036		100	96	90	78	60	28	16	12	10													0.074
	11	29.0'-31.0'	79-1037		100	98	96	82	52	22	12	8	6													0.127
	21	55.0'-56.0'	79-1047		100	96	96	96	96	96	95	83	63		40		28		19	18		15		15	12	*
	23	64.0'-66.0'	79-1049			100	98	96	74	44	22	10	8													0.105
	24	69.0'-71.0'	79-1050		100	94	84	70	58	42	22	8	6													0.111

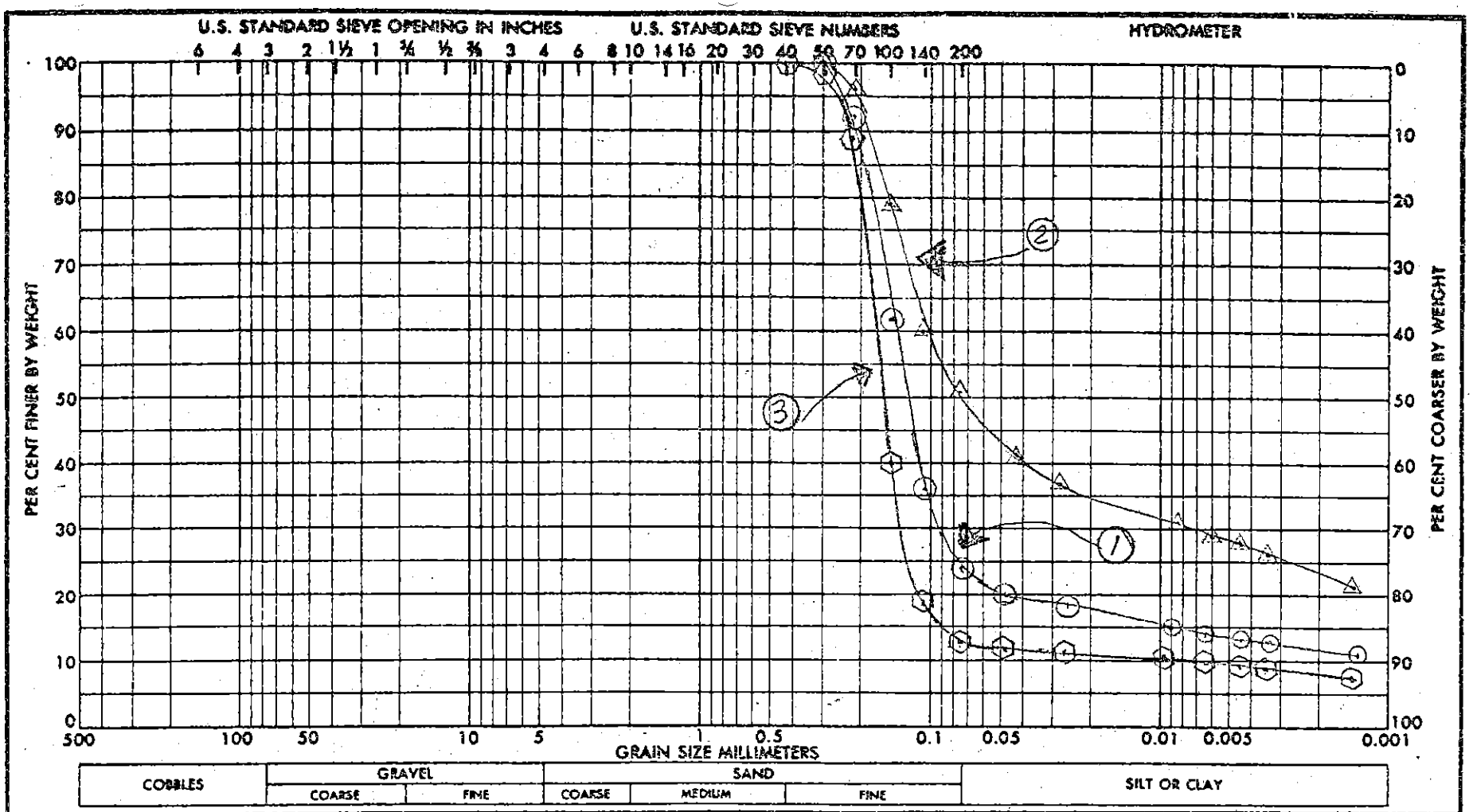
*D_{10} - not determined (paragraph 5a)

TABLE 2

GRAIN SIZE & HYDROMETER ANALYSIS

NECHES ER SALT WATER BARRIER — GALVESTON DISTRICT LABORATORY . 1650

BORING NO.	SAMPLE NO.	DEPTH(FT)	GDLR NO.	4.76	2.00	0.84	0.59	0.42	0.297	0.210	0.149	0.105	0.074	0.050	0.045	0.025	0.023	0.0094	0.0090	0.0064	0.0060	0.0047	0.0044	0.0034	0.0014	D_{10} MM
				Diameter in Millimeters/Percent Finer by Weight																						
79-89	25	74.0'-76.0'	79-1051		100	94	82	70	58	40	16	2	0													0.130
	26	79.0'-81.0'	79-1052				100	96	78	50	22	10	8													0.105
	27	82.0'-84.0'	79-1053	100	96	72	60	48	38	26	12	4	2													0.138
	28	84.0'-86.0'	79-1054				100	97	85	57	39	27	21	19		12			10	9		8		7	4	0.009
	29	89.0'-91.0'	79-1055				100	98	94	74	30	14	10													0.074
	30	94.0'-96.0'	79-1056				100	98	87	53	26	16	12	8		7		5		5		4		4	2	0.062
	31	96.0'-100'	79-1057			100	98	94	82	60	30	12	6													0.095
79-90	7	15.0'-17.0'	79-931			100	90	64	30	12	8	6	4													0.180
	8	20.0'-22.0'	79-932		100	98	94	78	58	34	16	10	8													0.105
	9	25.0'-27.0'	79-933		100	97	93	87	76	49	27	21	20	18		17			14	14		13		12	10	0.001
	10	30.0'-32.0'	79-934			100	96	84	62	26	10	6	4													0.149
	21	60.0'-62.0'	79-945					100	99	93	68	39	19	10		6			5	5		4		4	3	0.049
	22	65.0'-67.0'	79-946			100	98	92	78	48	26	12	8													0.090
	23	70.0'-72.0'	79-947					100	98	90	44	14	8													0.084
	24	75.0'-77.0'	79-948			100	98	88	46	20	12	8	8													0.127



	SAMPLE NO.	ELEV OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
1	5 (79-1031)	10.0–12.5	Gray silty sand (SM)				
2	6 (79-1032)	12.5–15.0	Gray sandy Clay (CL)				
3	7 (79-1033)	15.0–17.5	Gray Silty sand (SM)				

PROJECT Neches River Salt Water Barrier

AREA

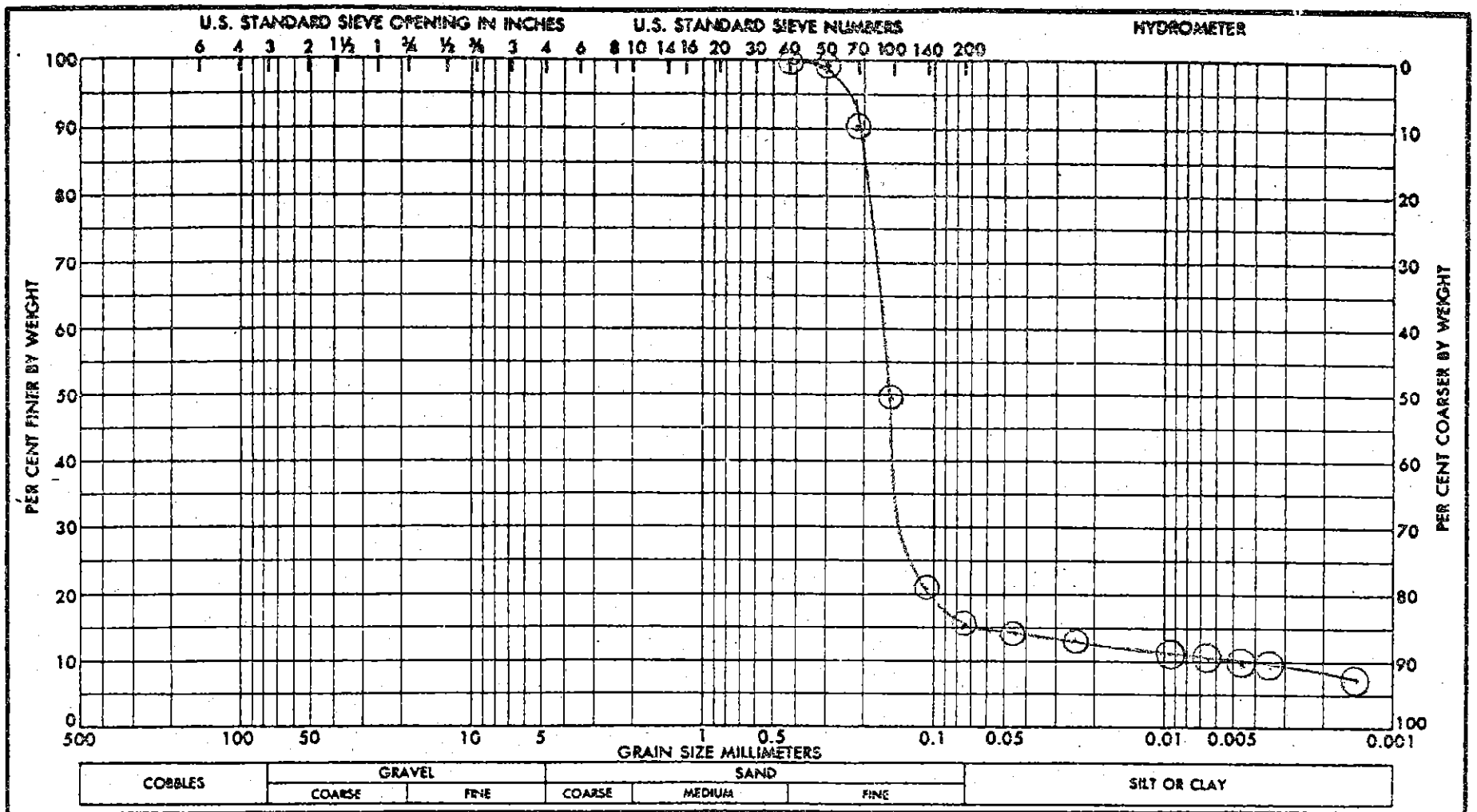
BORING NO. 79-89

DATE 10-1-79

GRADATION CURVES

ENG FORM 1 MAY 63 **2087** REPLACES WES FORM NO. 1241, SEP 1962, WHICH IS OBSOLETE.

U.S. GOVERNMENT PRINTING OFFICE : 1963 OF—700-126



SAMPLE NO.	ELEV OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
B(79-1034)	17.5-20.0	Gray silty sand (SM)				

PROJECT Neches River Salt Water Barrier

AREA

BORING NO. 79-89

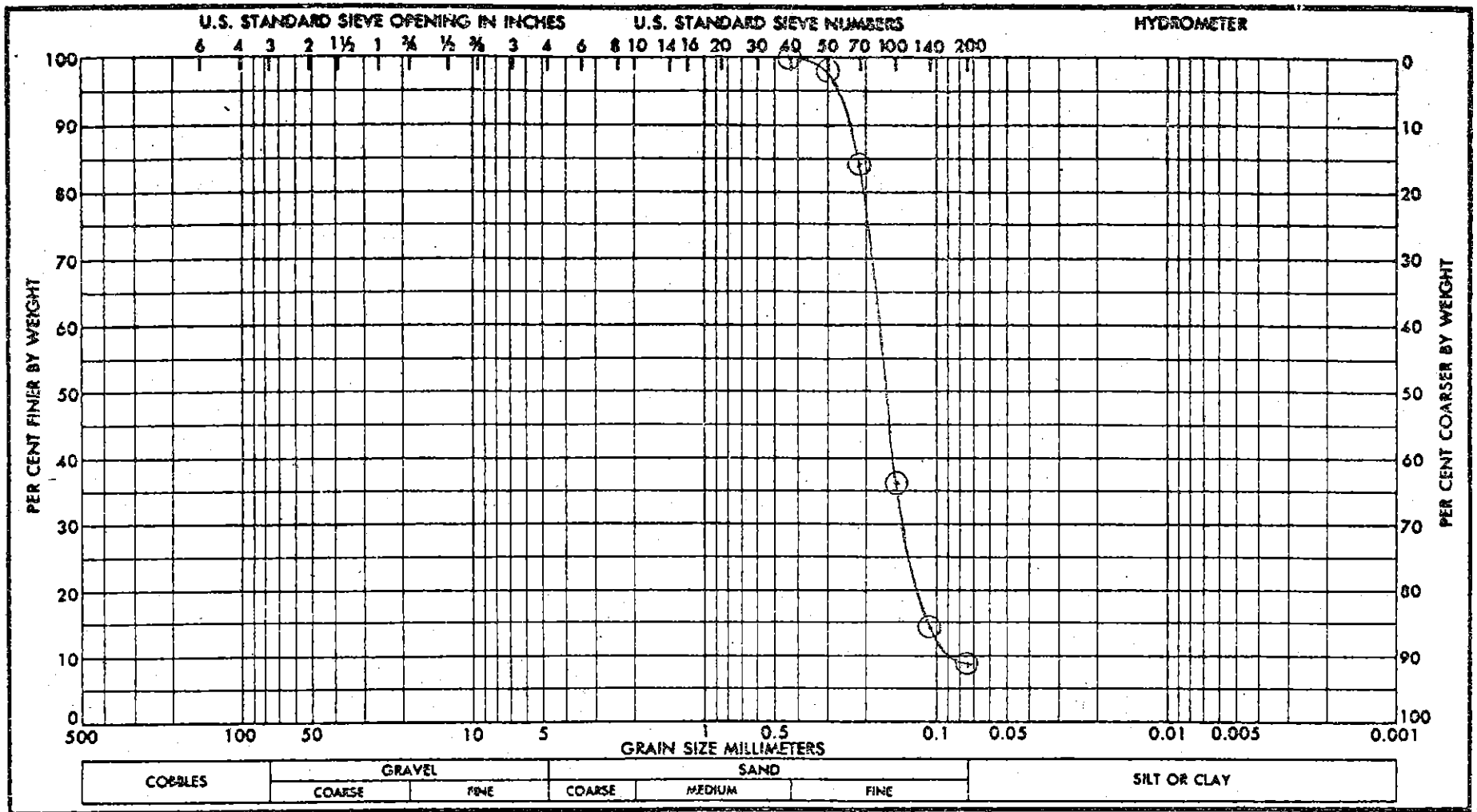
DATE 10-1-79

GRADATION CURVES

ENG FORM 1 MAY 63 **2087** REPLACES WES FORM NO. 1241, SEP 1962, WHICH IS OBSOLETE.

U.S. GOVERNMENT PRINTING OFFICE : 1963 OF—709-124

PLATE NO. 7



SAMPLE NO.	ELEV OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
9(79-1035)	20.0-22.5	Gray & Tan Silty Sand (SP-SM)				

PROJECT Neches River Salt Water Barrier

AREA

BORING NO. 79-89

DATE 10-2-79

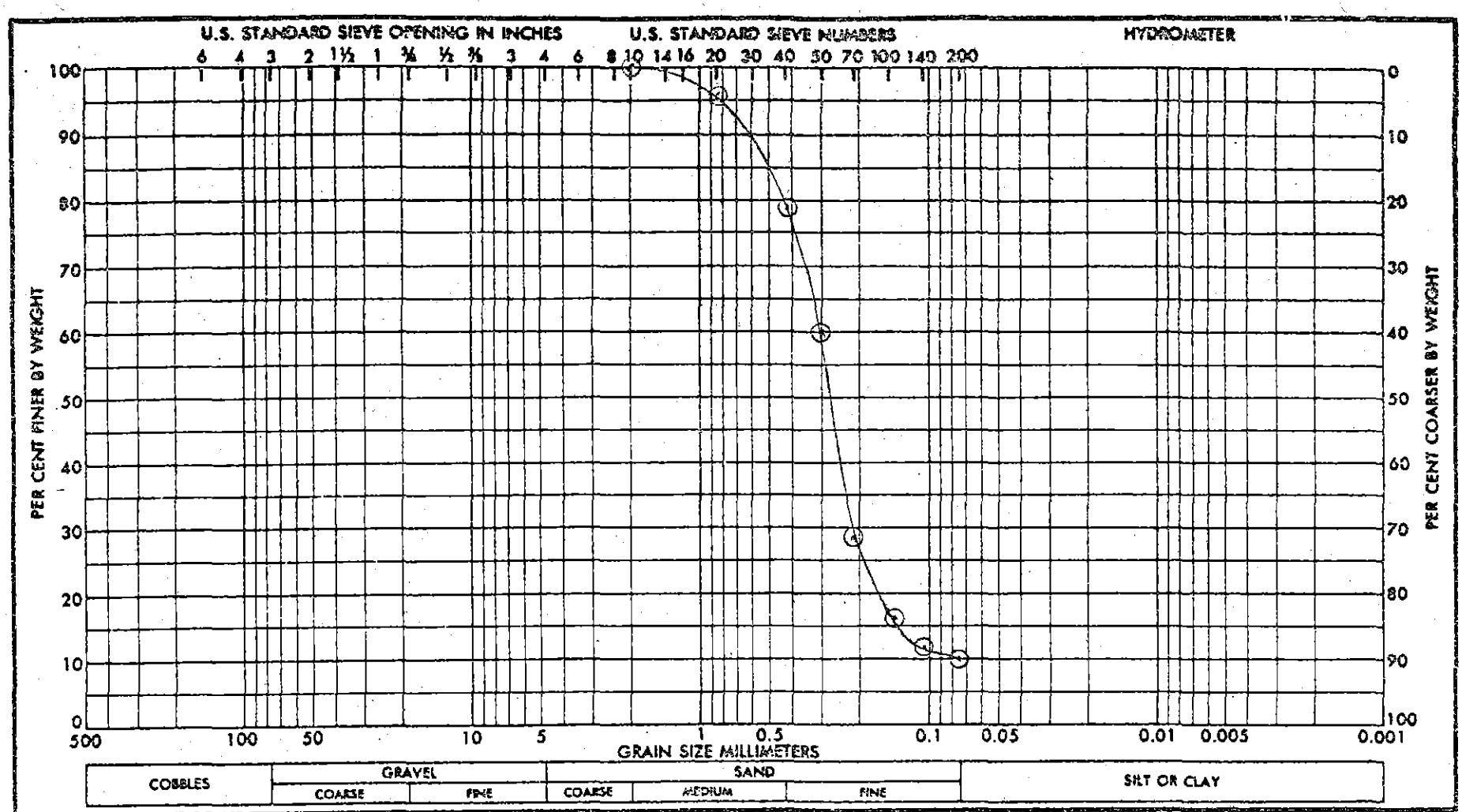
GRADATION CURVES

ENG FORM 2087
1 MAY 63

REPLACES WES FORM NO. 1241, SEP 1962, WHICH IS OBSOLETE.

U.S. GOVERNMENT PRINTING OFFICE : 1963 OF—789-154

PLATE NO. 8



SAMPLE NO.	ELEV OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
10(79-1036)	24.0-26.0	Gray & Tan Silty Sand (SP-SM)				

PROJECT Neches River Salt Water Barrier

AREA

BORING NO. 79-89

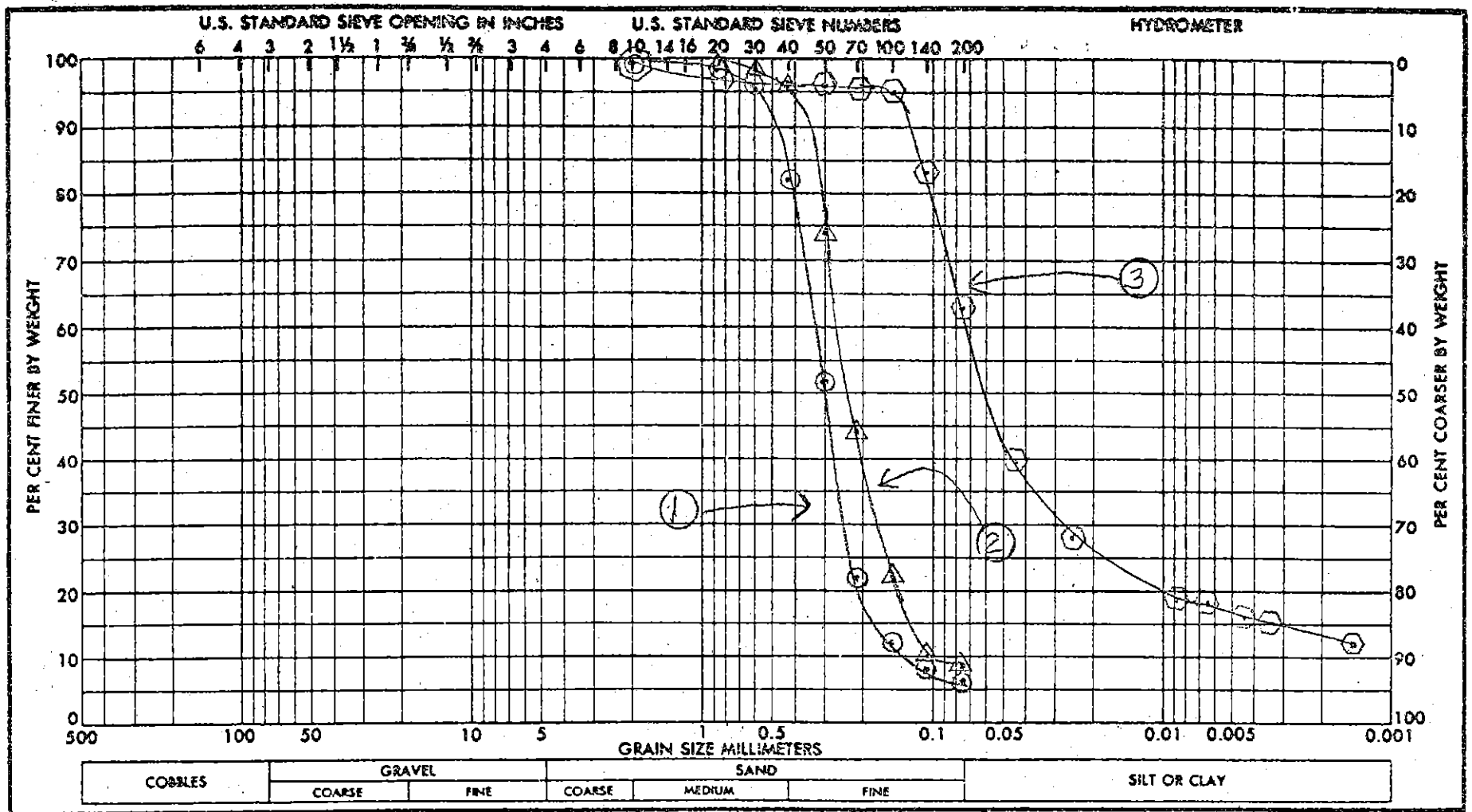
DATE 10-2-79

GRADATION CURVES

ENG FORM 1 MAY 63 **2087** REPLACES WES FORM NO. 1241, SEP 1962, WHICH IS OBSOLETE.

U.S. GOVERNMENT PRINTING OFFICE : 1968 OF—700-128

PLATE NO. 9



	SAMPLE NO.	ELEV OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
1	11 (79-1037)	29.0-31.0	Gray & Tan Silty Sand (SP-SM)				
2	23 (79-1049)	64.0-66.0	Gray & Tan Silty Sand (SP-SM)				
3	21 (79-1047)	55.0-56.5	Gray & Yellow Sandy Clay (CL)				

GRADATION CURVES

PROJECT Neches River Salt Water Barrier

AREA

BORING NO. 79-89

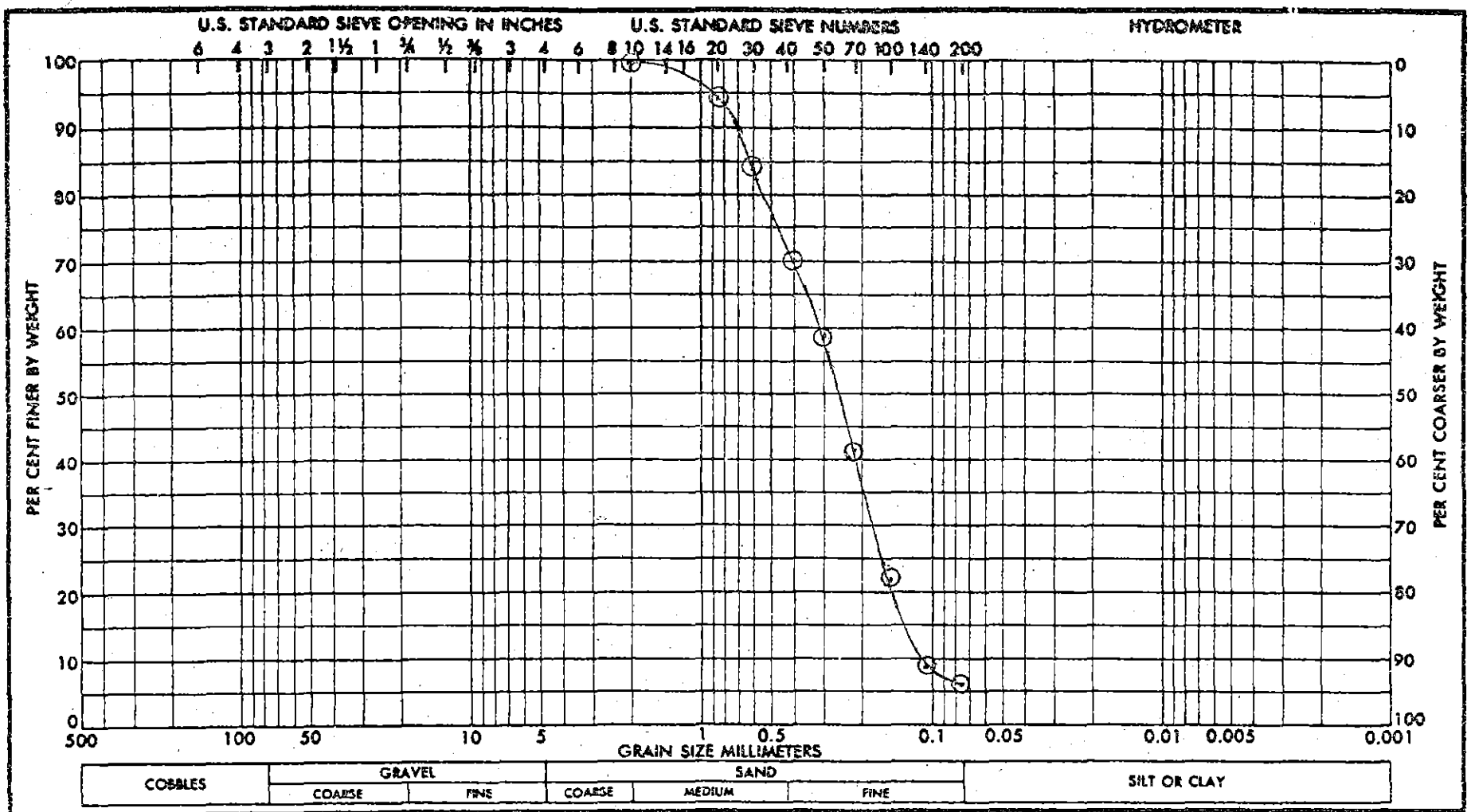
DATE 10-2-79

ENG FORM 2087
1 MAY 63

REPLACES WES FORM NO. 1241, SEP 1962, WHICH IS OBSOLETE.

U.S. GOVERNMENT PRINTING OFFICE : 1963 OF—760-126

PLATE NO. 10



SAMPLE NO.	ELEV OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
24/79-1050	69.0-71.0	Gray silty sand (SP-SM)				

PROJECT Neches River
Salt River Barrier

AREA

BORING NO. 79-89

DATE 10-2-79

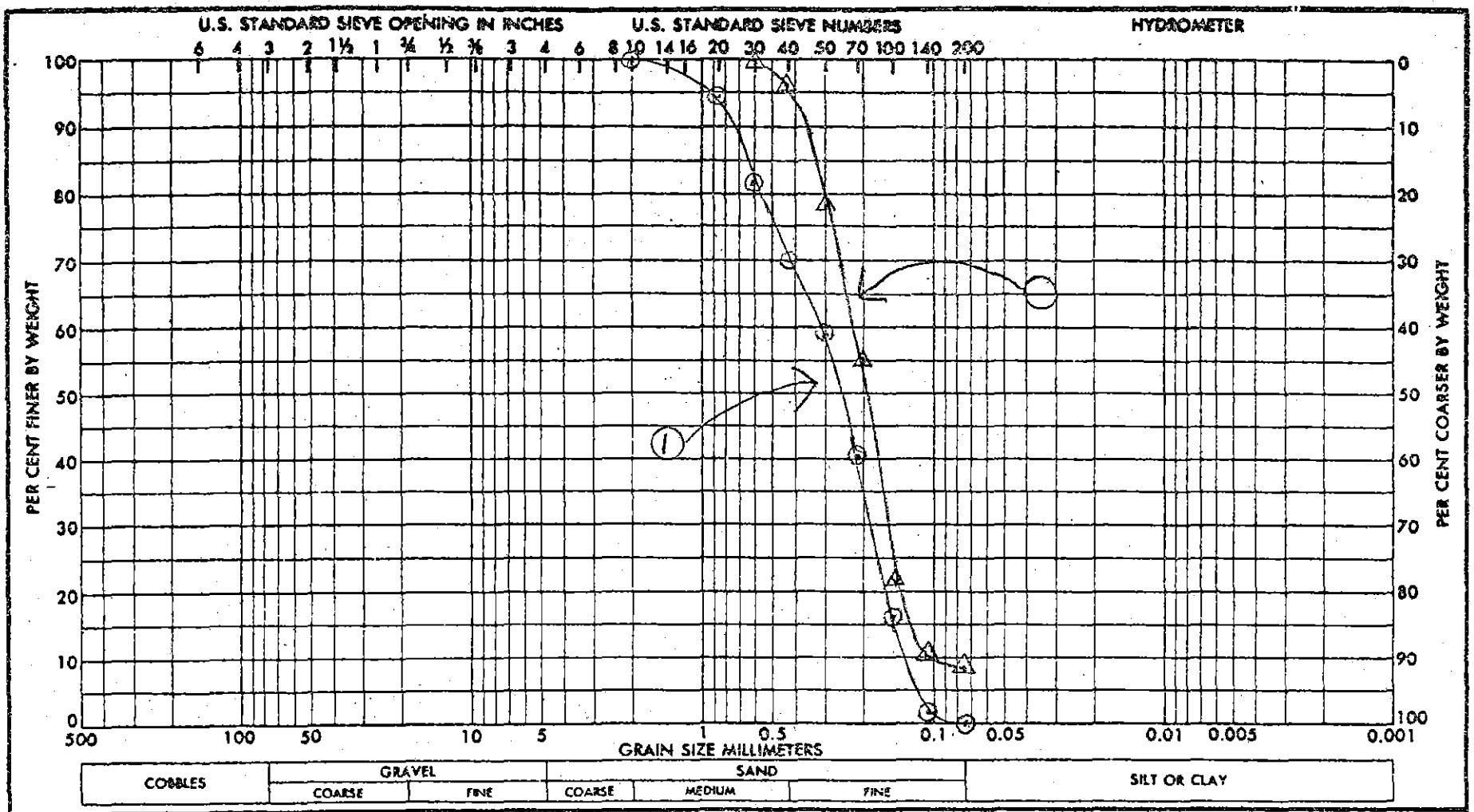
GRADATION CURVES

ENG FORM 2087
1 MAY 63

REPLACES WES FORM NO. 1241, SEP 1962, WHICH IS OBSOLETE.

U.S. GOVERNMENT PRINTING OFFICE : 1963 O—700-124

PLATE NO. 11



	SAMPLE NO.	ELEV OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
1	25(79-1051)	74.0-76.0	Gray Sand (SP)				
2	26(79-1052)	79.0-81.0	Gray Silty Sand (SP-SM)				

PROJECT Neches River Salt Water Barrier

AREA

BORING NO. 79-89

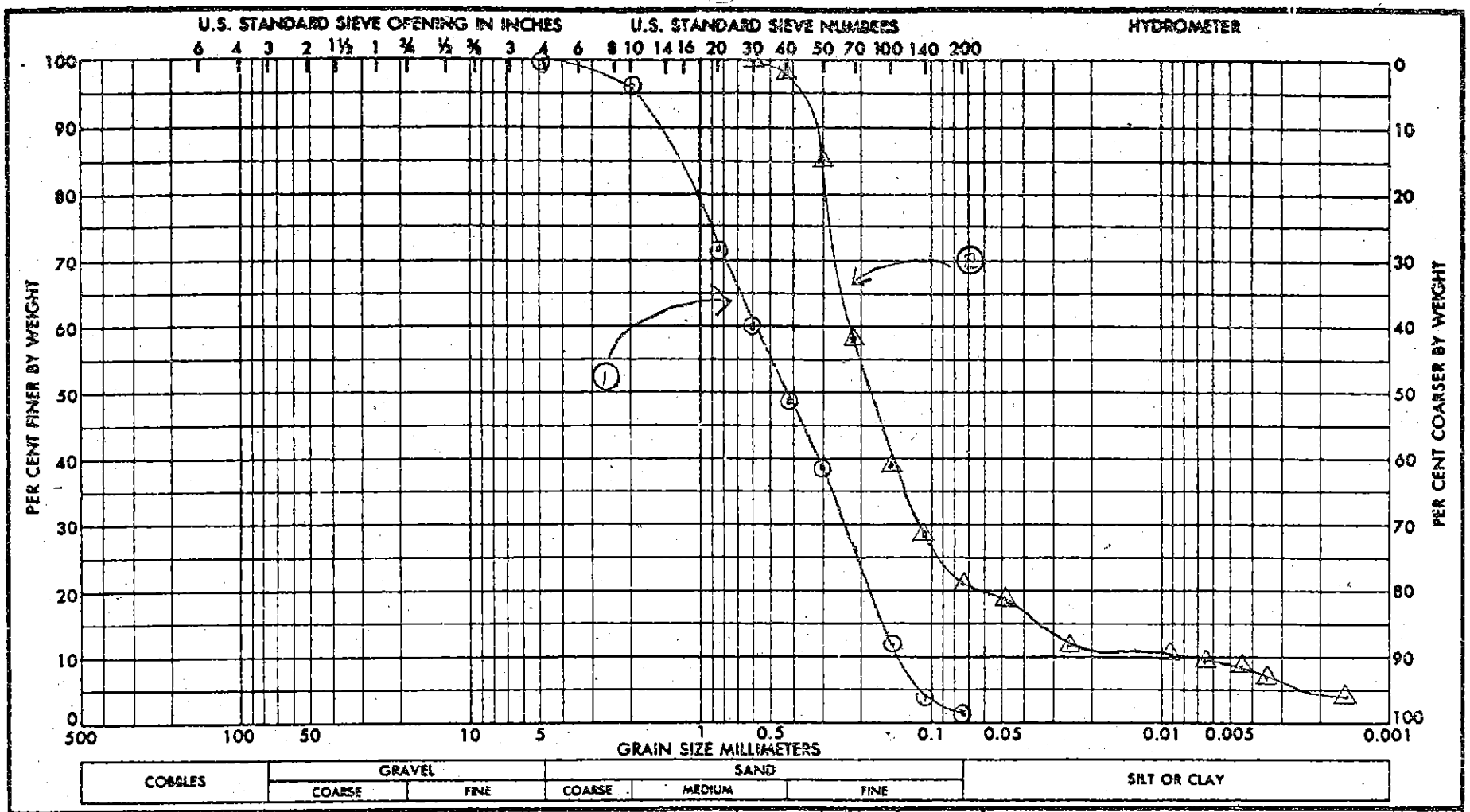
DATE 10-2-79

GRADATION CURVES

ENG FORM 1 MAY 63 2087 REPLACES WES FORM NO. 1241, SEP 1962, WHICH IS OBSOLETE.

U.S. GOVERNMENT PRINTING OFFICE : 1963 OF—760-188

PLATE NO. 12



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

	SAMPLE NO.	ELEV OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
1	27(79-1053)	82.0-84.0	Gray Sand (SP)				
2	28(79-1054)	84.0-86.0	Gray Clayey Sand (SC)				

PROJECT Neches River Salt Water Barrier

AREA

BORING NO. 79-89

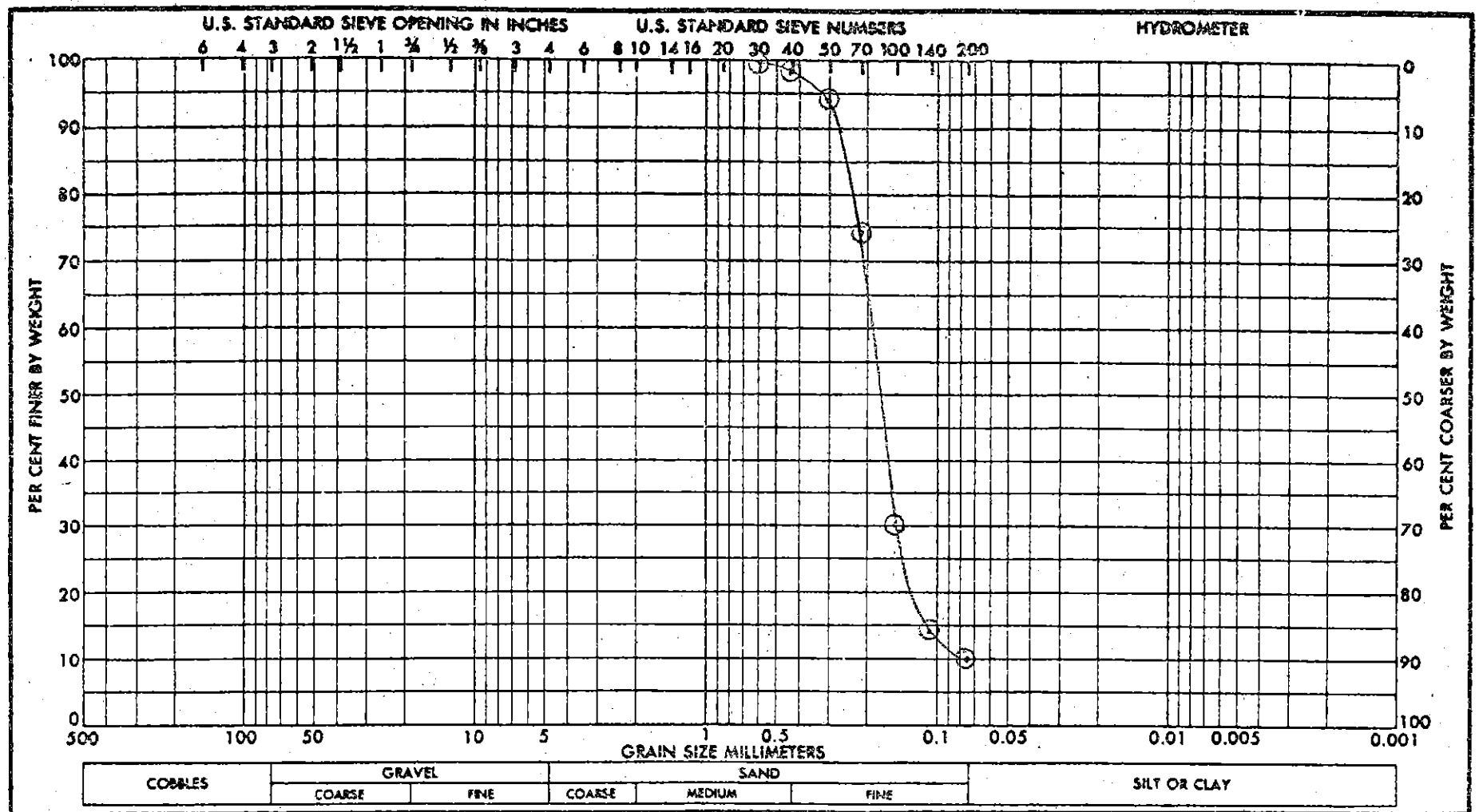
DATE 10-2-79

GRADATION CURVES

ENG FORM 1 MAY 63 **2087** REPLACES WES FORM NO. 1241, SEP 1962, WHICH IS OBSOLETE.

U.S. GOVERNMENT PRINTING OFFICE : 1963 OF—700-126

PLATE NO. 13



SAMPLE NO.	ELEV OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
29 (79-1055)	89.0-91.0	Gray Silty Sand (SP-SM)				

PROJECT Neches River Salt WATER Barrier

AREA

BORING NO. 79-89

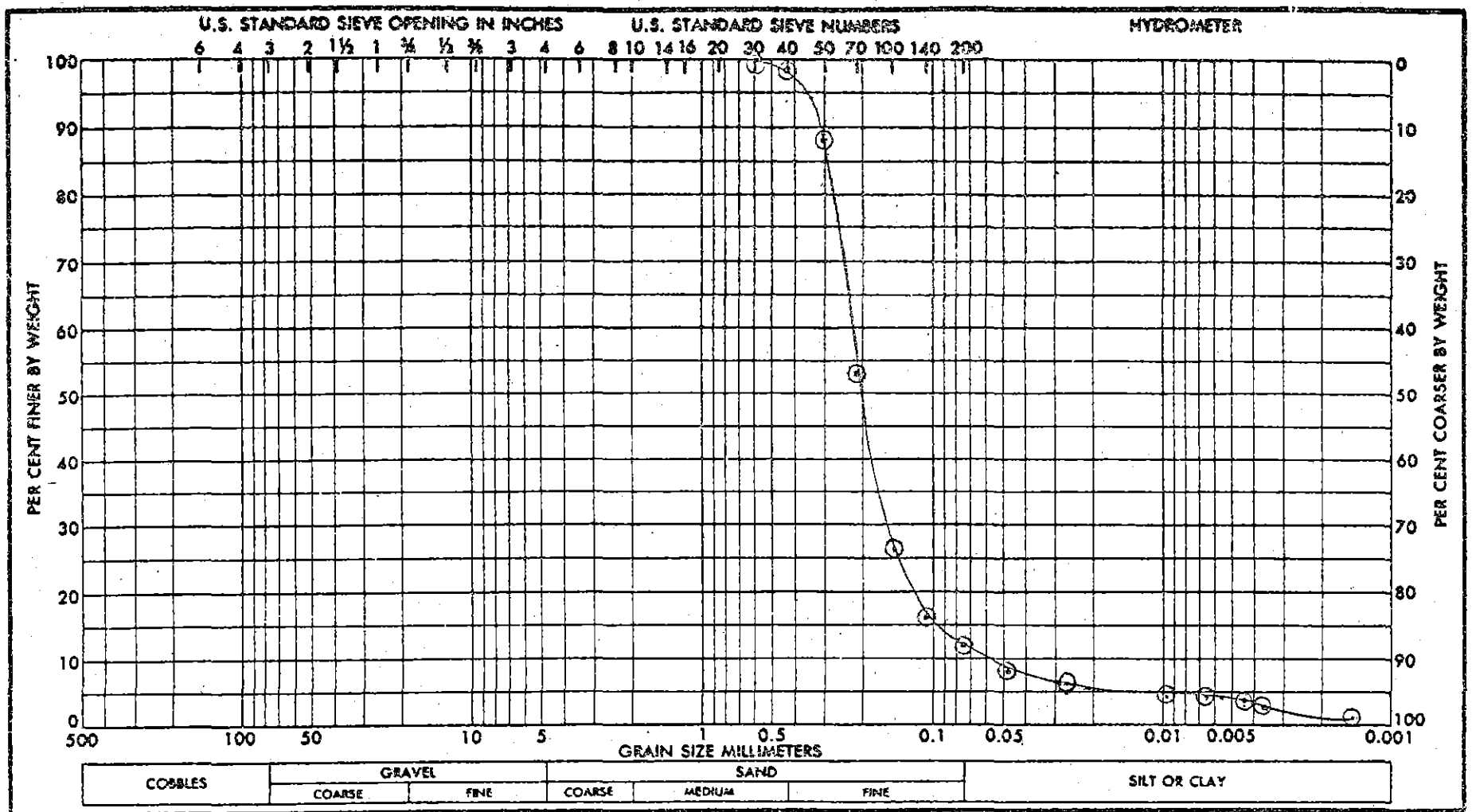
DATE 10-2-79

GRADATION CURVES

ENG FORM 1 MAY 63 **2087** REPLACES WES FORM NO. 1241, SEP 1962, WHICH IS OBSOLETE.

U.S. GOVERNMENT PRINTING OFFICE : 1963 OF—799-126

PLATE NO. 14



SAMPLE NO.	ELEV OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
30(79-1056)	94.0-96.0	Gray silty sand (SM)				

PROJECT Neches River Salt Water Barrier

AREA

BORING NO. 79-89

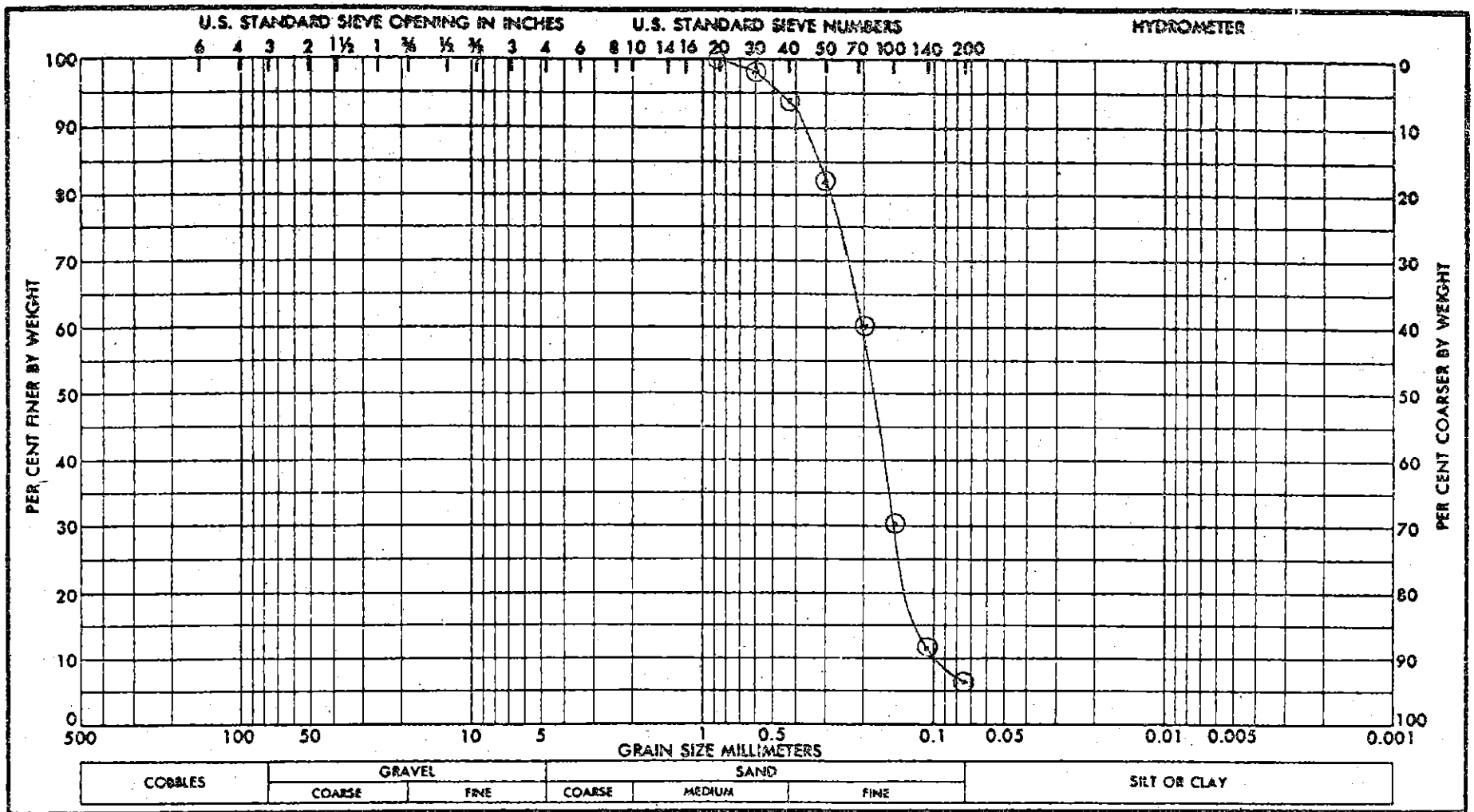
DATE 10-2-79

GRADATION CURVES

ENG FORM 1 MAY 63 2087 REPLACES WES FORM NO. 1241, SEP 1962, WHICH IS OBSOLETE.

U.S. GOVERNMENT PRINTING OFFICE : 1963 OF—709-126

PLATE NO. 15



SAMPLE NO.	ELEV OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
31(79-1057)	96.00-100.00	Gray silty Sand (SP-SM)				

PROJECT Neches River Salt Water Barrier

AREA

BORING NO. 79-89

DATE 10-2-79

GRADATION CURVES

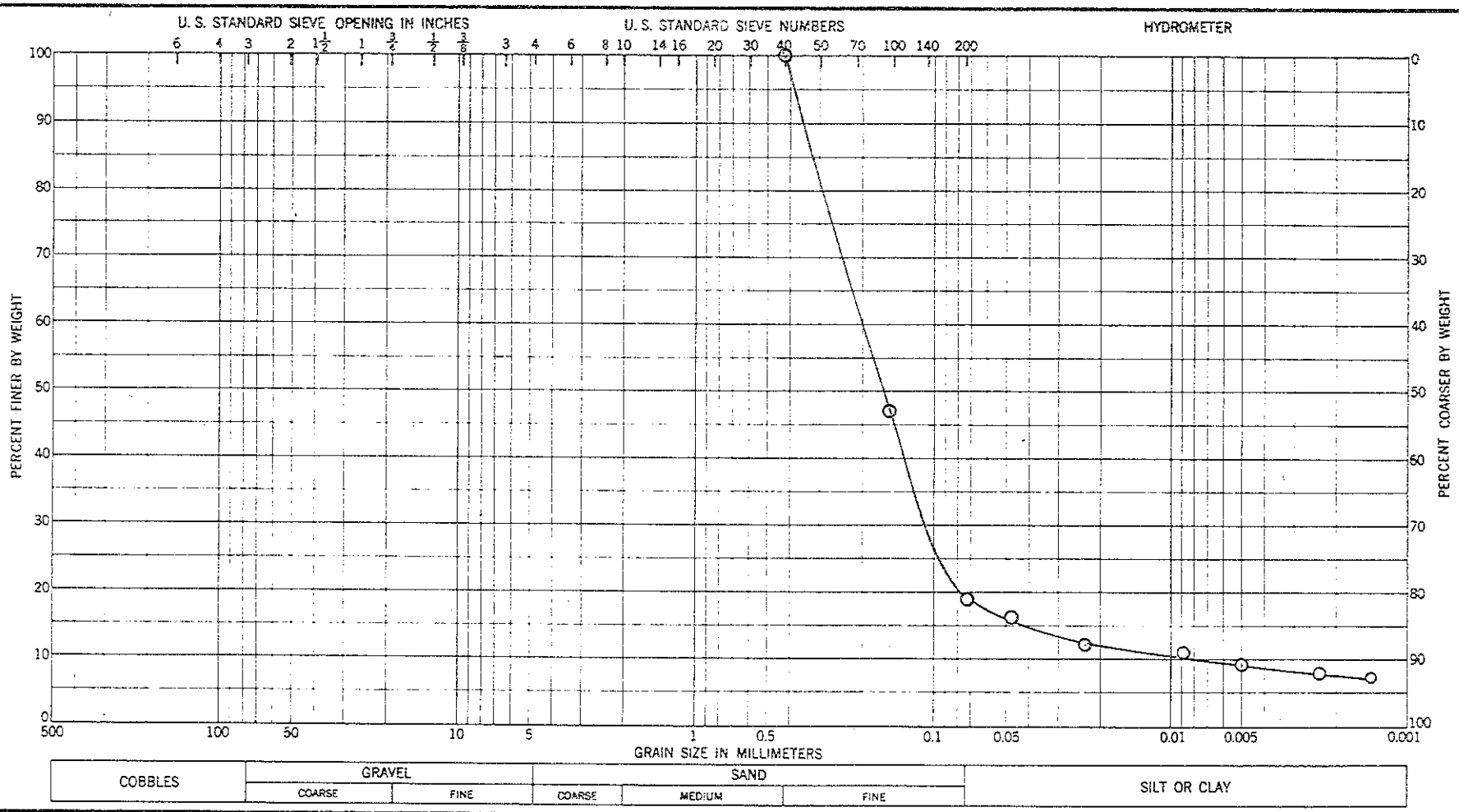
ENG FORM 1 MAY 63 2087 REPLACES WES FORM NO. 1241, SEP 1962, WHICH IS OBSOLETE.

U.S. GOVERNMENT PRINTING OFFICE : 1963 OF—700-126

PLATE NO. 16

Results of Tests of Foundation Material

Boring No.	Field No.	SWD No.	Depth Ft.	Mechanical Analysis Gr	Sa	Fi	Permeability cm/sec	Void Ratio	Dry Density lb/cu ft	Test Type	Plate	Description	
79-89	S-7 & S-8	A-3628	15.0-20.0	0	81	19	8.4×10^{-4}	1.111	78	Perm	12	SC	Light brown clayey SAND.
							3.8×10^{-4}	.888	88				
							0.8×10^{-4}	.658	100				
	S-9 & S-10	A-3629	20.0-26.0	0	93	7	8.6×10^{-3}	.819	91	Perm	13	SP-SM	White SAND
							5.2×10^{-3}	.759	94				
							3.0×10^{-3}	.654	100				
	S-27	A-3630	82.0-84.0	0	95	5	18.3×10^{-3}	.678	99	Perm	14	SP	White SAND
							10.5×10^{-3}	.558	106				
							4.3×10^{-3}	.439	115				
	S-29 & S-30	A-3631	89.0-96.0	0	90	10	2.7×10^{-3}	.806	92	Perm	15	SP-SM	White SAND
							1.4×10^{-3}	.690	98				
							0.6×10^{-3}	.603	103				
79-90	S-7 & S-8	A-3632	15.0-22.0	0	92	8	12.2×10^{-3}	.897	87	Perm	16	SP-SM	White SAND
							4.5×10^{-3}	.764	94				
							1.9×10^{-3}	.586	104				
	S-12 & S-23	A-3633	65.0-72.0	0	91	9	18.5×10^{-4}	.889	88	Perm	17	SP-SM	White SAND
							5.3×10^{-4}	.777	93				
							0.9×10^{-4}	.616	102				
79-91	S-7	A-3634	15.0-17.5	0	91	9	11.4×10^{-3}	.697	97	Perm	18	SP-SM	White SAND
							4.4×10^{-3}	.570	105				
							1.0×10^{-3}	.445	114				
	S-9 & S-10	A-3635	24.0-31.0	0	94	6	9.7×10^{-3}	.810	91	Perm	19	SP-SM	White SAND
							4.4×10^{-3}	.751	94				
							1.8×10^{-3}	.553	107				



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
A-3628	15.0-20.0	SAND, clayey (SC)	--	--	--	--

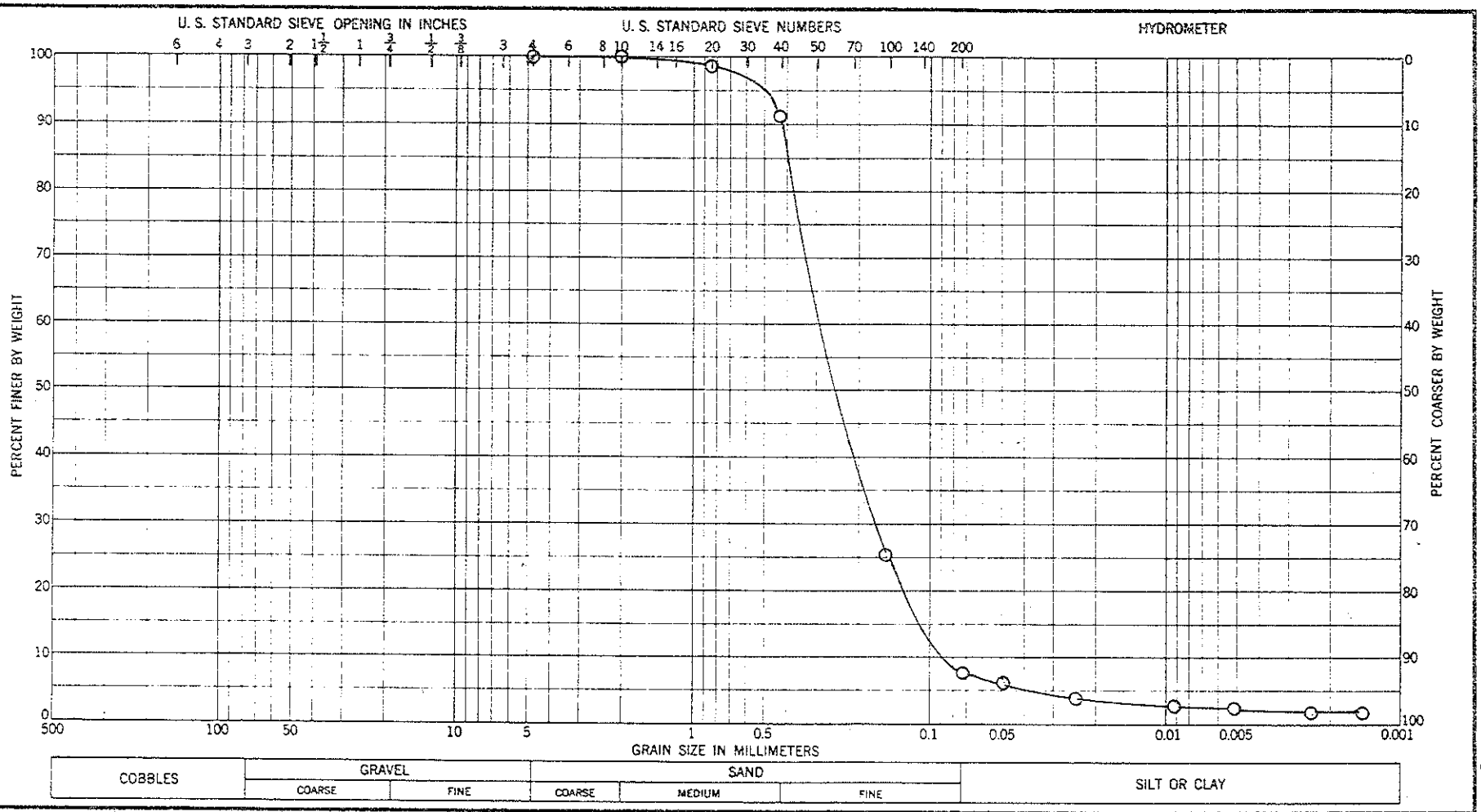
Project Neches River
S-7 & S-8
Area
Boring No. 79-89
Date Jan 1980

GRADATION CURVES

Plate

ENG FORM 1 MAY 63 2087

SWDED-FL Report No. 13023



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
A-3629	20.0-26.0	SAND (SP-SM)	--	--	--	--

Project Naches River
S-9 & S-10

Area

Boring No. 79-89

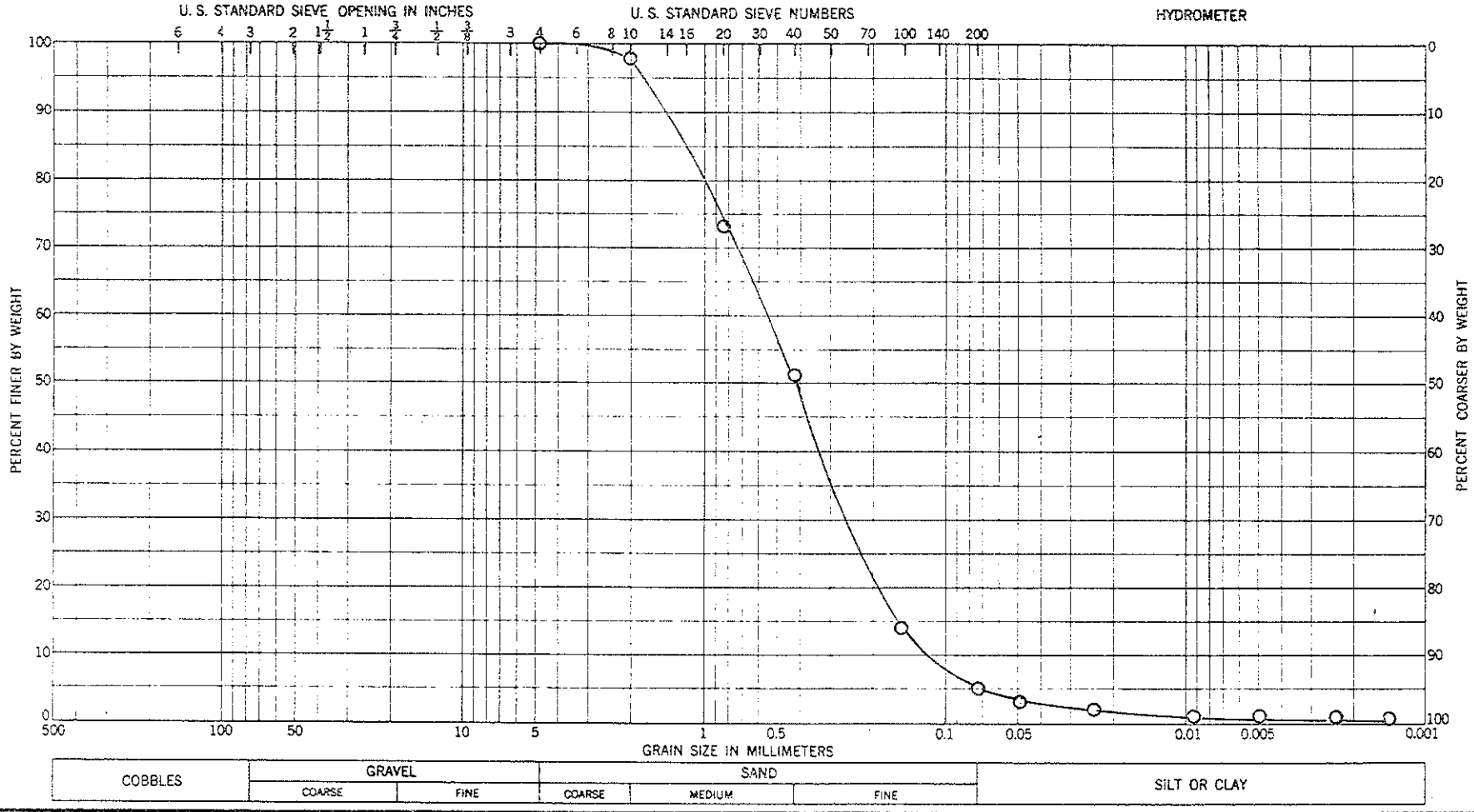
Date Jan 1980

GRADATION CURVES

ENG FORM 1 MAY 63 2087

Plate 2

SWDED-FL Report No. 13023



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
A-3630	82.0-84.0	SAND (SP-SM)	--	--	--	--

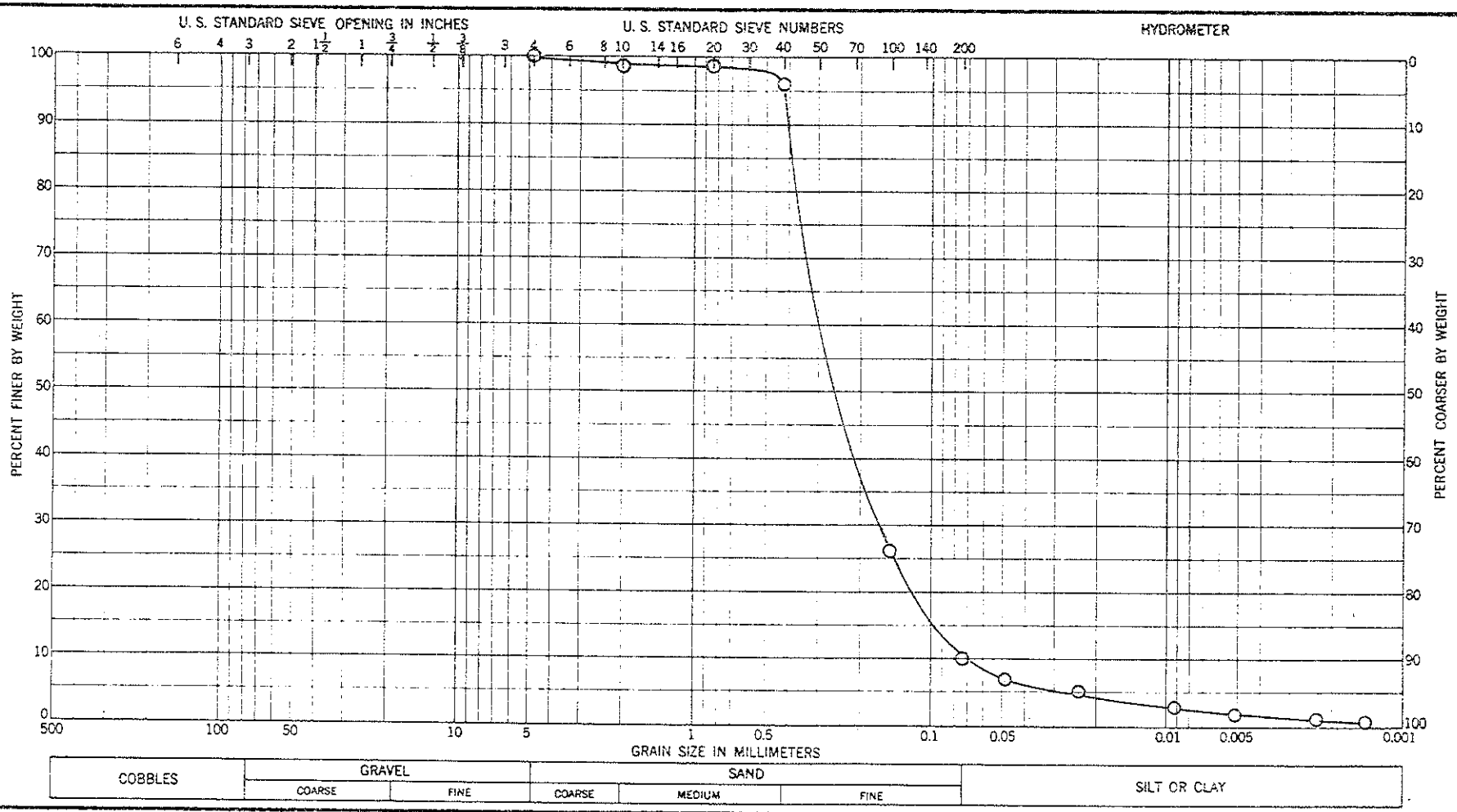
Project Neches River
S-27
Area
Boring No. 79-89
Date Jan 1980

GRADATION CURVES

ENG FORM 1 MAY 63 2087

Plate 3

SWDED-FL Report No. 13023



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
A-3631	89.0-96.0	SAND (SP-SM)	--	--	--	--

Project Neches River
S-29 & S-30

Area

Boring No. 79-89

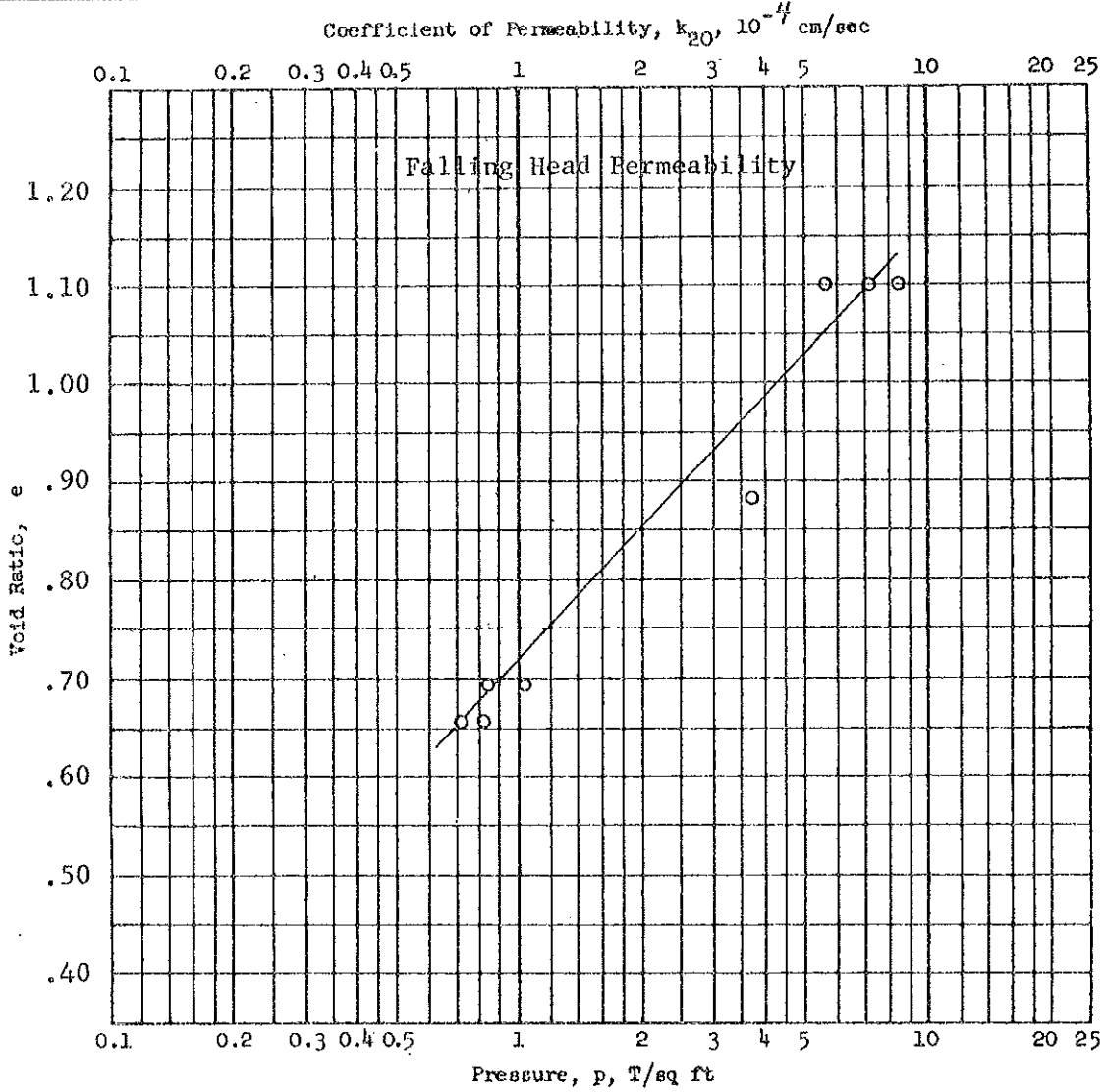
Date Jan 1980

GRADATION CURVES

ENG FORM 1 MAY 63 2087

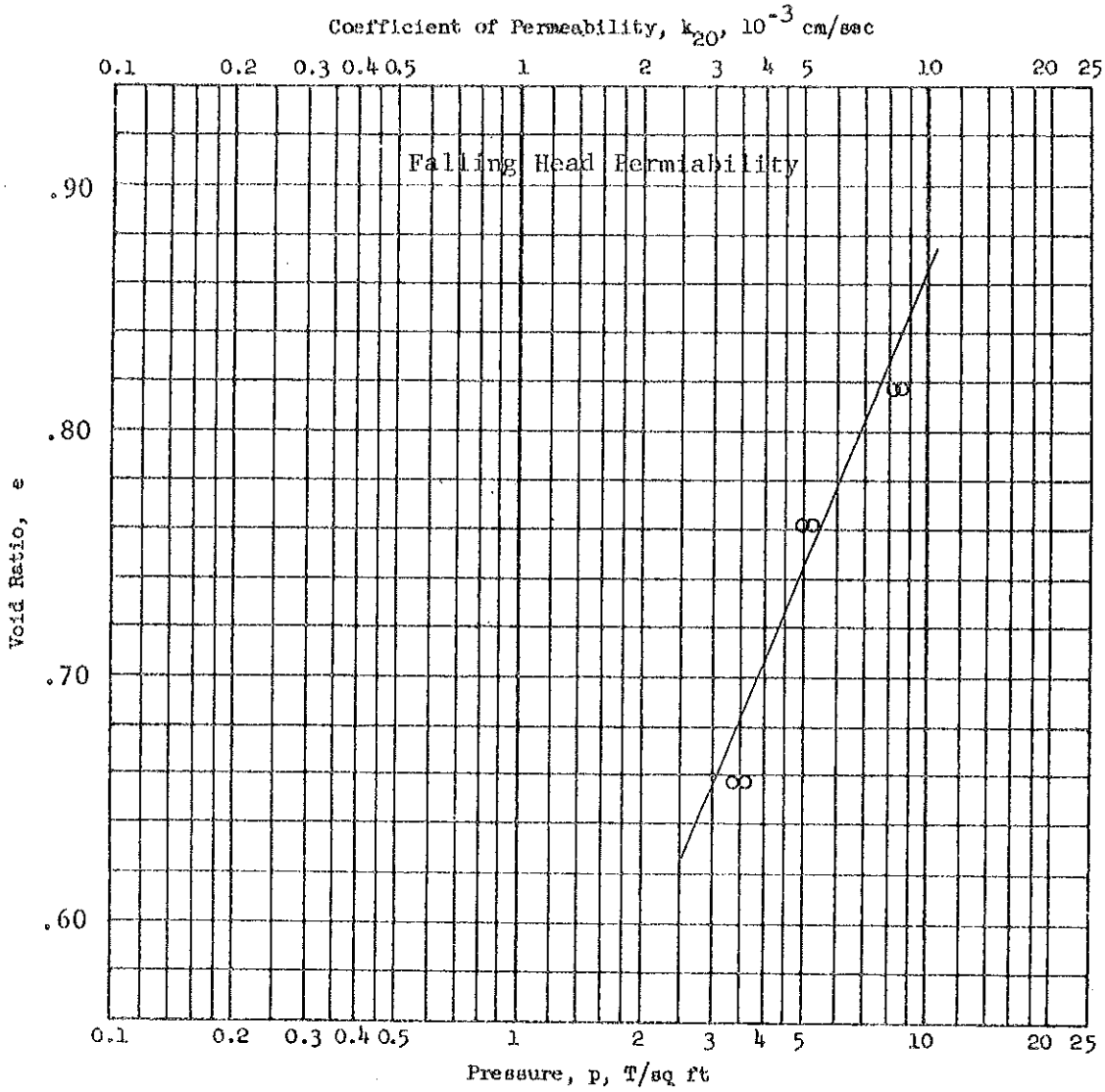
Plate 4

SWDED-FL Report No. 13023



Type of Specimen		Before Test		After Test	
Diam in.	Ht in.	Water Content, w_o	%	w_f	%
Overburden Pressure, p_o	T/sq ft	Void Ratio, e_o		e_f	
Preconsol. Pressure, p_c	T/sq ft	Saturation, S_o	%	S_f	%
Compression Index, C_c		Dry Density, γ_d	lb/ft^3		
Classification		k_{20} at e_o =	$\times 10^{-}$ cm/sec		
LL	G_s	Project Neches River			
PL	D_{10}	S-7 & S-8			
Remarks		Area			
		Boring No. 79-89		Sample No. A-3628	
		Depth El 15.0-20.0		Date Jan 1980	
		CONSOLIDATION TEST REPORT			

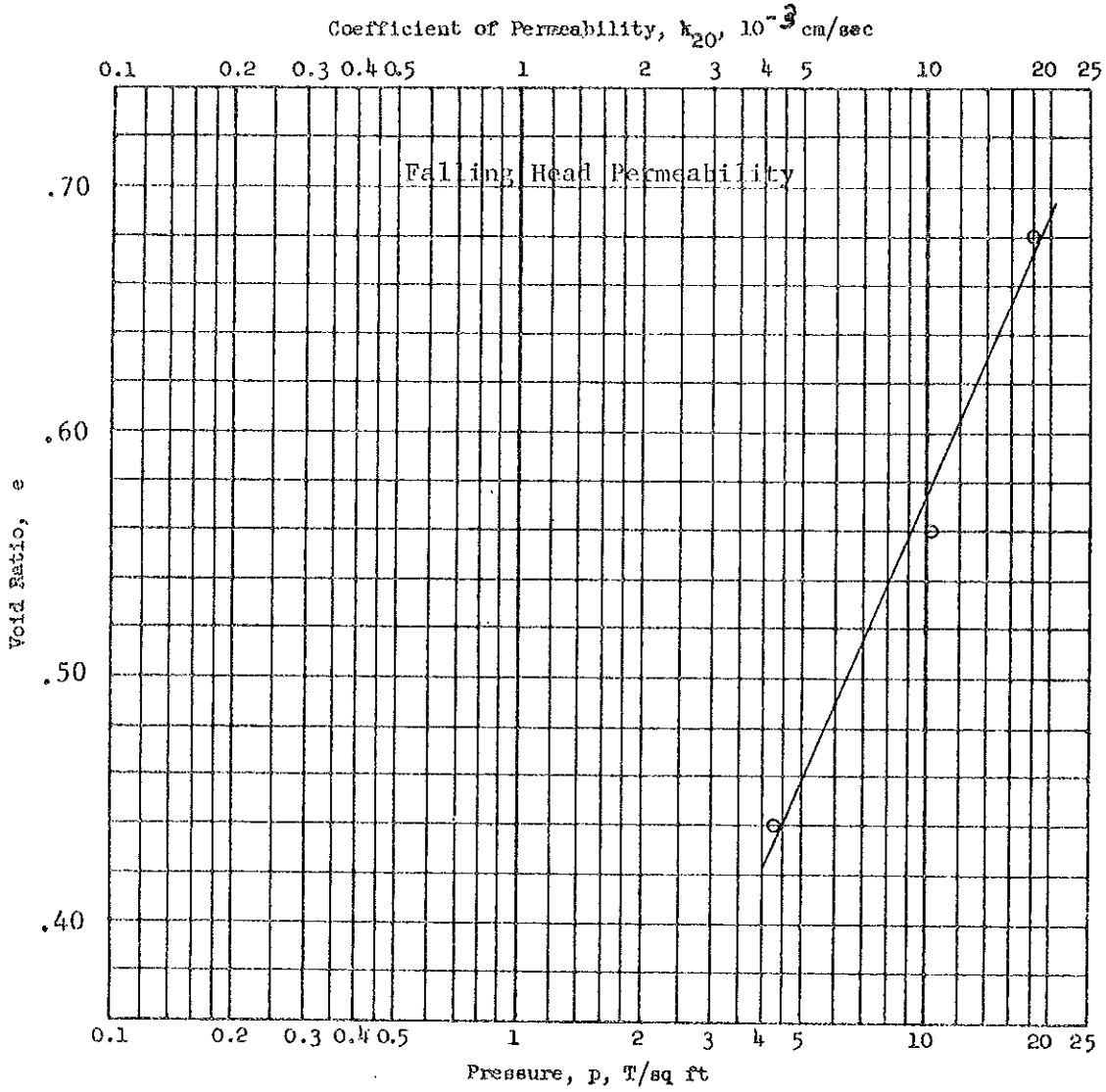
ENG FORM 1 MAY 63 2090 PREVIOUS EDITIONS ARE OBSOLETE.



Type of Specimen		Before Test		After Test	
Diam in.	Ht in.	Water Content, w_o	%	w_f	%
Overburden Pressure, p_o	T/sq ft	Void Ratio, e_o		e_f	
Preconsol. Pressure, p_c	T/sq ft	Saturation, S_o	%	S_f	%
Compression Index, C_c		Dry Density, γ_d	lb/ft^3		
Classification		k_{20} at e_o =	$\times 10^{-}$ cm/sec		
LL	G_s	Project	Neches River		
PL	D_{10}		S-9 & S-10		
Remarks		Area			
		Boring No.	79-89	Sample No.	A-3629
		Depth El.	20.0-26.0	Date	Jan 1980

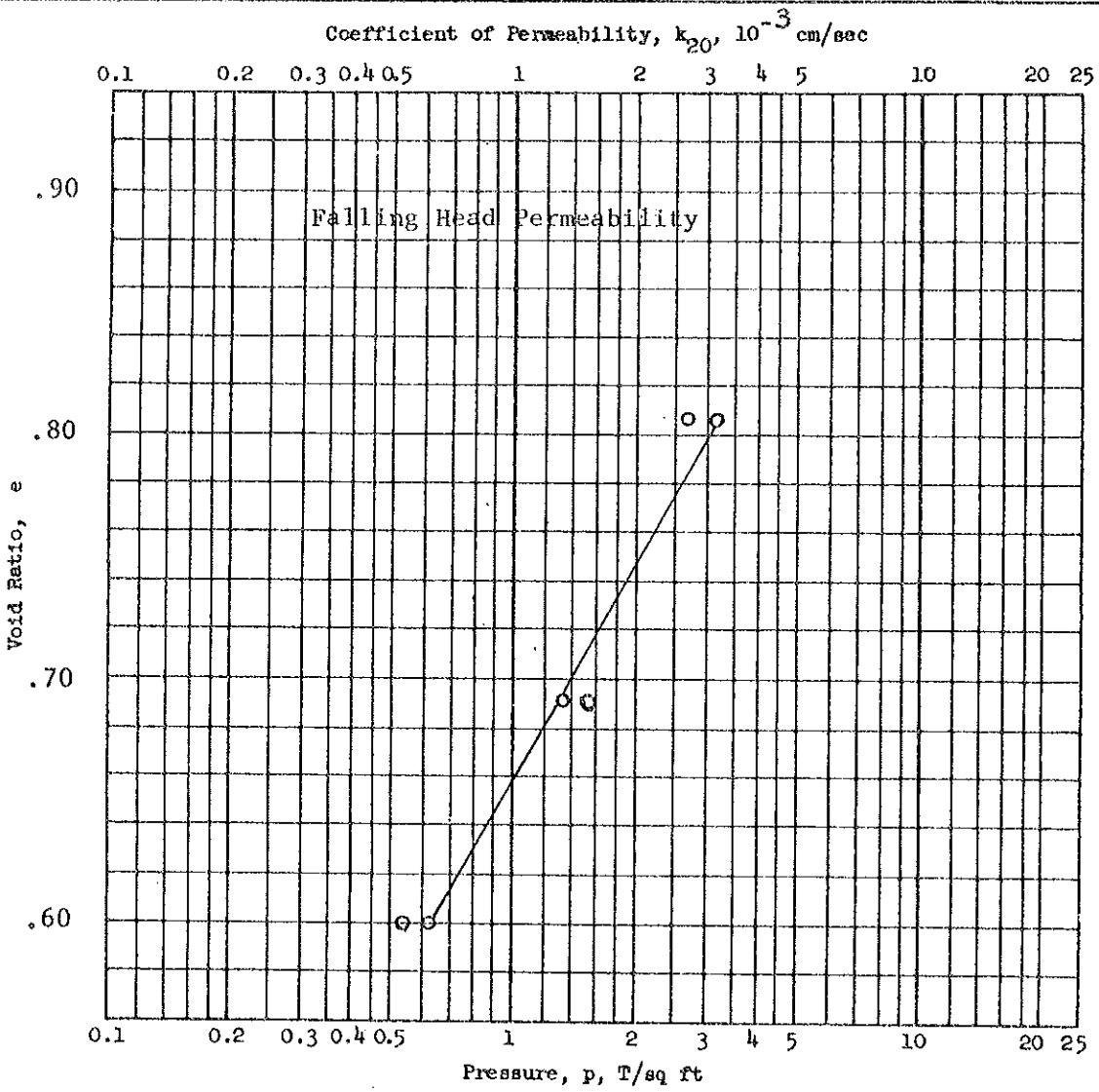
CONSOLIDATION TEST REPORT

ENG FORM 1 MAY 63 2090 PREVIOUS EDITIONS ARE OBSOLETE.



Type of Specimen		Before Test		After Test	
Diam in.	Ht in.	Water Content, w_o	%	w_f	%
Overburden Pressure, p_o	T/sq ft	Void Ratio, e_o		e_f	
Preconsol. Pressure, p_c	T/sq ft	Saturation, S_o	%	S_f	%
Compression Index, C_c		Dry Density, γ_d	lb/ft^3		
Classification		k_{20} at e_o =	$\times 10^{-}$ cm/sec		
LL	G_s	Project Neches River			
PL	D_{10}	S-27			
Remarks		Area			
		Boring No. 79-89		Sample No. A-3630	
		Depth El 82.0-84.0		Date Jan 1980	
		CONSOLIDATION TEST REPORT			

ENG FORM 1 MAY 63 2090 PREVIOUS EDITIONS ARE OBSOLETE.



Type of Specimen		Before Test		After Test	
Diam in.	Ht in.	Water Content, w_o	%	w_f	%
Overburden Pressure, po	T/sq ft	Void Ratio, e_o		e_f	
Preconsol. Pressure, p_c	T/sq ft	Saturation, S_o	%	S_f	%
Compression Index, C_c		Dry Density, γ_d	lb/ft^3		
Classification		k_{20} at e_o =	$\times 10^{-}$ cm/sec		
LL	G_s	Project Neches River			
PL	D_{10}	S-29&S-30			
Remarks		Area			
		Boring No. 79-89		Sample No. A-3631	
		Depth El 89.0-96.0		Date Jan 1980	
		CONSOLIDATION TEST REPORT			

ENG FORM 1 MAY 63 2090 PREVIOUS EDITIONS ARE OBSOLETE.