BORING NUMBER	SAMPLE NUMBER/ TYPE	SAMPLE DEPTH (Feet)	VISUAL CLASSIFICATION	U S C	MOISTURE CONTENT (%)	UNIT DRY WEIGHT (pcf)	UNIT WET WEIGHT (pcf)	SPECIFIC GRAVITY OF SOLIDS	LIQUID LIMIT (%)	PLASTIC LIMIT (%)	BAR LINEAR SHRINKAGE (%)	ABBREVIATED MECHANICAL ANALYSIS	COMPLETE MECHANICAL ANALYSIS	HYDROMETER ANALYSIS	STANDARD COMPACTION TEST	MODIFIED COMPACTION TEST	UNDRAINED SHEAR STRENGTH (ksf)*	TORVANE SHEAR (ksf)	SOIL SALINITY (Parts per Thousand)
87-160	1Q	1-2	Very stiff red sandy clay, with roots, calcareous nodules, and silty seams	CL	21														
	2Q	2-3	Firm red clay, with sand layers and pockets	CH	24														
	3Q	5-6	Soft gray and red silty clay, with sand pockets and ferrous nodules	CL	28	97			44	15		95					0.34		
	4Q	7-8	Firm red clay, with sand pockets, partings and seams	CH	33														
	5Q	9-10	Firm red clay, with sand partings and pockets	CH	33														
	6Q	11-12	Very soft red clay, with sand pockets and partings and ferrous nodules	CH	36														
	7Q	13-14	Soft brown, red, and olive gray silty clay, with sand pockets and ferrous nodule	CL	34	88			46	17		96					0.37		
	8Q	15-16	Firm red clay, with sand pockets and partings and ferrous nodules	CH	28														
	9Q	17-18	Soft red and olive gray clay, with silt seams, sand pockets, & calcareous nodules	CH	32	87			53	19		98					0.44		
	10Q	19-20	Soft gray sandy clay, with sand & clay pockets	CL	30	92			39	17		61					0.44		
	11Q	21-22	Firm olive gray sandy clay, with calcareous nodules	CL	28	95			40	15		73					0.60		
	12J	25.5-26	Brown silty fine sand, in free water	SM								18							
	13J	29.5-30	Brown sand	SP-SM								15							
	14J	34.5-35	Firm red clay, with calcareous and ferrous nodules	CH	38														
	15Q	36-37	Stiff red and gray silty clay, with calcareous nodules	CL	29	99			42	14		94					1.71		
	16Q	38-39	Firm red silty clay, with clay pockets and calcareous nodules	CL	21														
	17Q	40-41	Stiff red clay, with silt seam and calcareous and ferrous nodules	CH	25														
	18Q	42-43	Stiff red clay	CH	32							100							
	19Q	44-45	Stiff red clay, with ferrous nodules	CH	30	94			71	23							1.94		
	20Q	46-47	Stiff red clay	CH	31														
	21Q	48-49	Stiff gray and brown clay, with calcareous and ferrous nodules	CH	25														
	22Q	50-51	Stiff red silty clay	CL	16														
			CONTINUED																

* Based on Unconfined Compression Test

SUMMARY OF TEST RESULTS
DELIVERY ORDER No. 0023
SNAKE ISLAND DISPOSAL AREA
TEXAS CITY, TEXAS

BORING NUMBER	SAMPLE NUMBER/ TYPE	SAMPLE DEPTH (Feet)	VISUAL CLASSIFICATION	U S C	MOISTURE CONTENT (%)	UNIT DRY WEIGHT (pcf)	UNIT WET WEIGHT (pcf)	SPECIFIC GRAVITY OF SOLIDS	LIQUID LIMIT (%)	PLASTIC LIMIT (%)	BAR LINEAR SHRINKAGE (%)	ABBREVIATED MECHANICAL ANALYSIS	COMPLETE MECHANICAL ANALYSIS	HYDROMETER ANALYSIS	STANDARD COMPACTION TEST	MODIFIED COMPACTION TEST	UNDRAINED SHEAR STRENGTH (ksf)*	TORVANE SHEAR (ksf)	SOIL SALINITY (Parts per Thousand)
87-160	23Q	52-53	Firm brown silty clay, with gravel calcareous nodules and clay pockets	CL	27	95			40	19		99					0.78		
	24Q	54-55	Firm red silty clay, with ferrous nodules	CL	29														
	25Q	56-57	Firm brown and olive gray silty clay, with silt seams and clay partings	CL	32	94			33	24		99					0.65		
	26Q	58-59	Very stiff red clay, with silt seams partings and pockets	CH	32														
	27Q	60-61	Very stiff brown clay, with silt seams	CH	29	93			72	26		99					2.38		
	28Q	62-63	Very stiff red clay, with sand pockets and partings	CH	32														
	29Q	64-65	Very stiff gray and tan clay	CH	38														
	30Q	66-67	Very stiff brown clay	CH	41	79			94	28		96					3.16		
	31Q	68-69	Stiff olive gray clay	CH	45														
	32Q	70-71	Firm olive gray clay	CH	50														
	33Q	72-73	Stiff olive gray clay, with ferrous nodules	CH	45														
	34Q	74-75	Stiff brown clay, with ferrous nodules	CH	52	70			96	30		98					2.00		
	35Q	76-77	Firm olive gray clay, with ferrous and calcareous nodules and sand pockets	CH	45														
	36Q	78-79	Stiff gray and red clay	CH	41														
	37Q	80-81	Firm olive gray clay, with ferrous nodules	CH	46														
	38Q	82-83	Stiff olive gray clay, with ferrous and calcareous nodules & organic matter	CH	50	68			103	36		94					1.87		
	39Q	84-85	Stiff gray clay, with ferrous nodules	CH	30														
	40Q	86-87	Stiff gray clay, with ferrous and calcareous nodules	CH	26														
	41Q	88-89	Stiff gray clay, with calcareous and ferrous nodules and sand pockets	CH	28														
	42Q	90-91	Stiff gray clay, with calcareous nodules	CH	26														
	43Q	94-95	Stiff gray and red clay, with sand partings, calcareous nodules & shell frasments	CH	24														
	44Q	97-98	Very stiff brown and olive gray clay, slickensided, with calcareous nodules	CH	30	93			71	22		93					2.12	4.26	
			CONTINUED																

* Based on Unconfined Compression Test

SUMMARY OF TEST RESULTS
DELIVERY ORDER NO. 0023
SNAKE ISLAND DISPOSAL AREA
TEXAS CITY, TEXAS

BORING NUMBER	SAMPLE NUMBER/ TYPE	SAMPLE DEPTH (Feet)	VISUAL CLASSIFICATION	U S C	MOISTURE CONTENT (%)	UNIT DRY WEIGHT (pcf)	UNIT WET WEIGHT (pcf)	SPECIFIC GRAVITY OF SOLIDS	LIQUID LIMIT (%)	PLASTIC LIMIT (%)	BAR LINEAR SHRINKAGE (%)	ABBREVIATED MECHANICAL ANALYSIS	COMPLETE MECHANICAL ANALYSIS	HYDROMETER ANALYSIS	STANDARD COMPACTION TEST	MODIFIED COMPACTION TEST	UNDRAINED SHEAR STRENGTH (ksf)*	TORVANE SHEAR (ksf)	SOIL SALINITY (Parts per Thousand)
87-160	45Q	99-100	Stiff gray and red clay, with silt pockets	CH	31														
	46Q	103.5-104	Stiff gray and tan clay	CH	50														
	47Q	105-106	Very stiff tan and olive gray clay, slickensided	CH	41	80			99	32		96					1.29	2.50	
	48Q	107-108	Stiff gray and tan sandy clay, with sand pockets & ferrous & calcareous nodules	CL								64							
	49Q	109-110	Firm tan sandy clay, with ferrous and calcareous nodules	CL															

* Based on Unconfined Compression Test

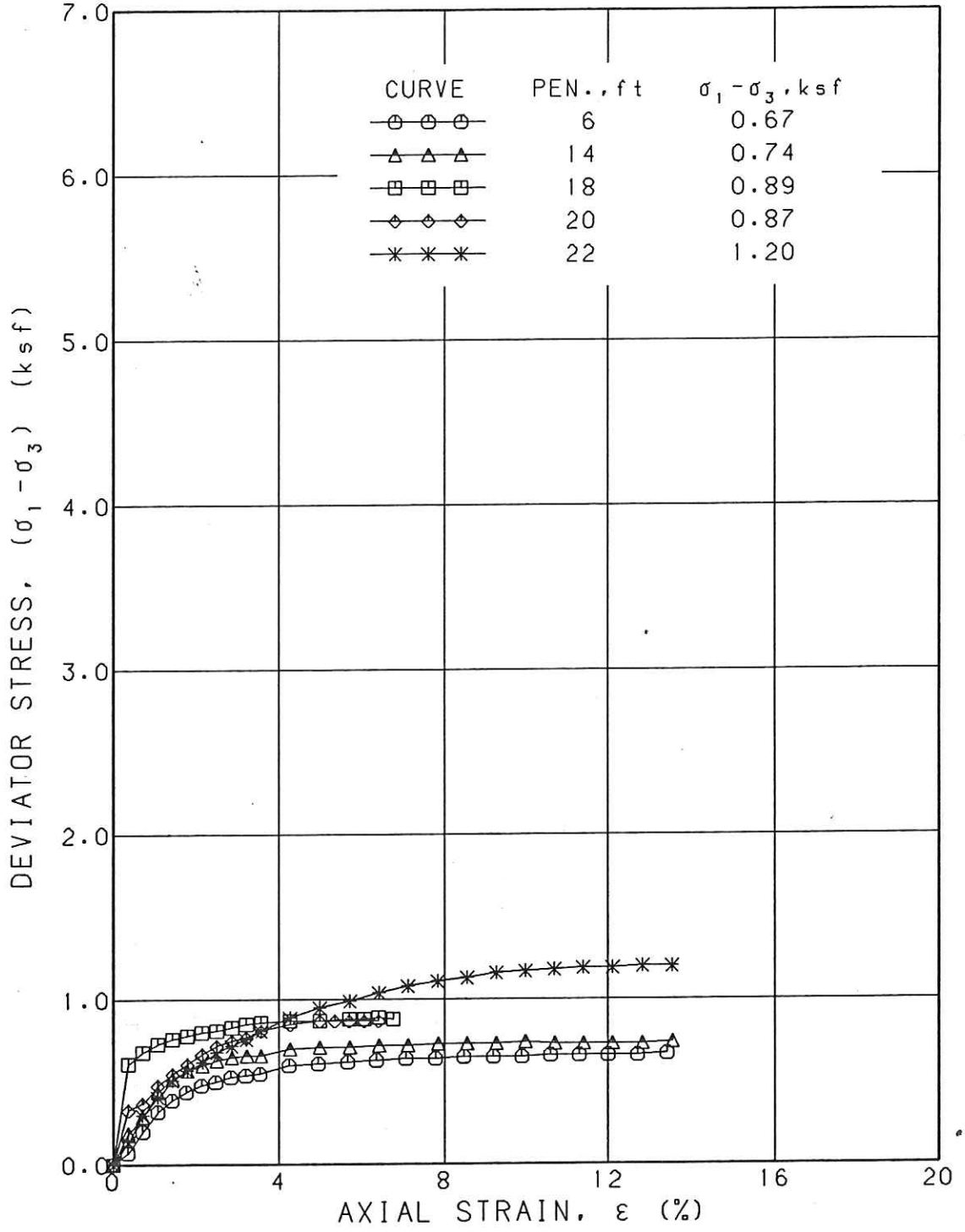
SUMMARY OF TEST RESULTS
DELIVERY ORDER No. 0023
SNAKE ISLAND DISPOSAL AREA
TEXAS CITY, TEXAS

Boring Number	Sample Number	Depth, ft	Weight of Dry Soil gms (Total Sample)	Percent Finer				
				0.375	#4	#10	#40	#200
87-158	44	97	79.07				100	87
87-158	49	109	64.28	100	99	98	92	76
87-159	4	15	106.51				100	89
87-159	6	25	82.64				100	98
87-159	8	35	67.48				100	98
87-159	10	45	88.02				100	99
87-159	14	65	52.55			100	99	98
87-160	3	6	83.80			100	99	95
87-160	7	14	82.87				100	96
87-160	9	18	86.58				100	98
87-160	10	20	98.70				100	61
87-160	11	22	62.98				100	73
87-160	12	26	98.14				100	18
87-160	13	30	81.72				100	15
87-160	15	37	58.74				100	94
87-160	19	45	51.78					100
87-160	23	53	64.46				100	99
87-160	25	57	68.34				100	99
87-160	27	61	49.11				100	99
87-160	30	67	33.37				100	96
87-160	34	75	39.82			100	99	98
87-160	38	83	40.21			100	96	94
87-160	44	98	43.03				100	93
87-160	47	106	35.57			100	99	96

RESULTS OF ABBREVIATED SIEVE ANALYSES

Boring Number	Sample Number	Depth, ft	Weight of Dry Soil gms (Total Sample)	Percent Finer				
				0.375	#4	#10	#40	#200
87-160	48	108	116.84			100	99	64
87-161	3	5	64.15	100	99	98	96	88
87-161	4	9	88.38				100	69
87-161	5	10	90.08	100	79	65	59	16
87-161	7	15	75.55				100	71
87-161	9	25	44.68				100	99
87-161	11	32	79.30			100	97	93
87-161	13	40	114.42				100	97
87-161	16	50	79.39		100	99	99	98
87-161	17	55	34.49					100
87-161	19	65	32.63			100	99	97
87-161	21	75	45.74			100	98	93
87-161	23	84	52.12				100	93
87-161	26	100	41.17				100	97
87-161	27	104	90.28				100	60
87-162	2	3	54.96			100	98	92
87-162	4	5	45.58	100	99	99	98	97
87-162	6	10	68.04			100	99	35
87-162	8	16	52.98	100	99	98	96	74
87-162	10	19	118.35				100	80
87-162	12	24	41.15				100	99
87-162	16	32	57.55				100	96
87-181	2	4	58.48				100	59
87-181	4	8	51.74			100	99	86

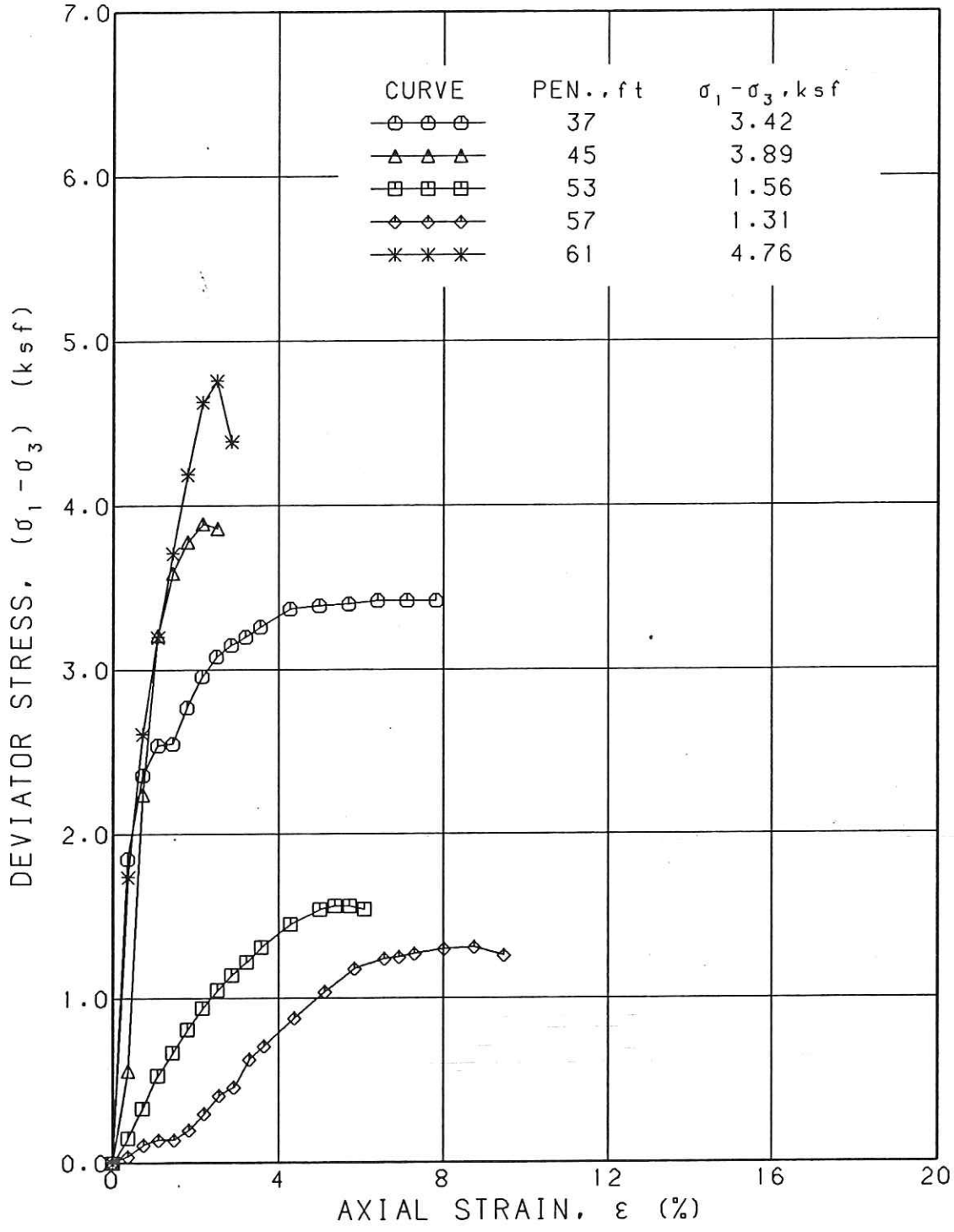
RESULTS OF ABBREVIATED SIEVE ANALYSES



STRESS-STRAIN CURVES
UNCOFINED COMPRESSION TEST
BORING 87-160

McCLELLAND ENGINEERS

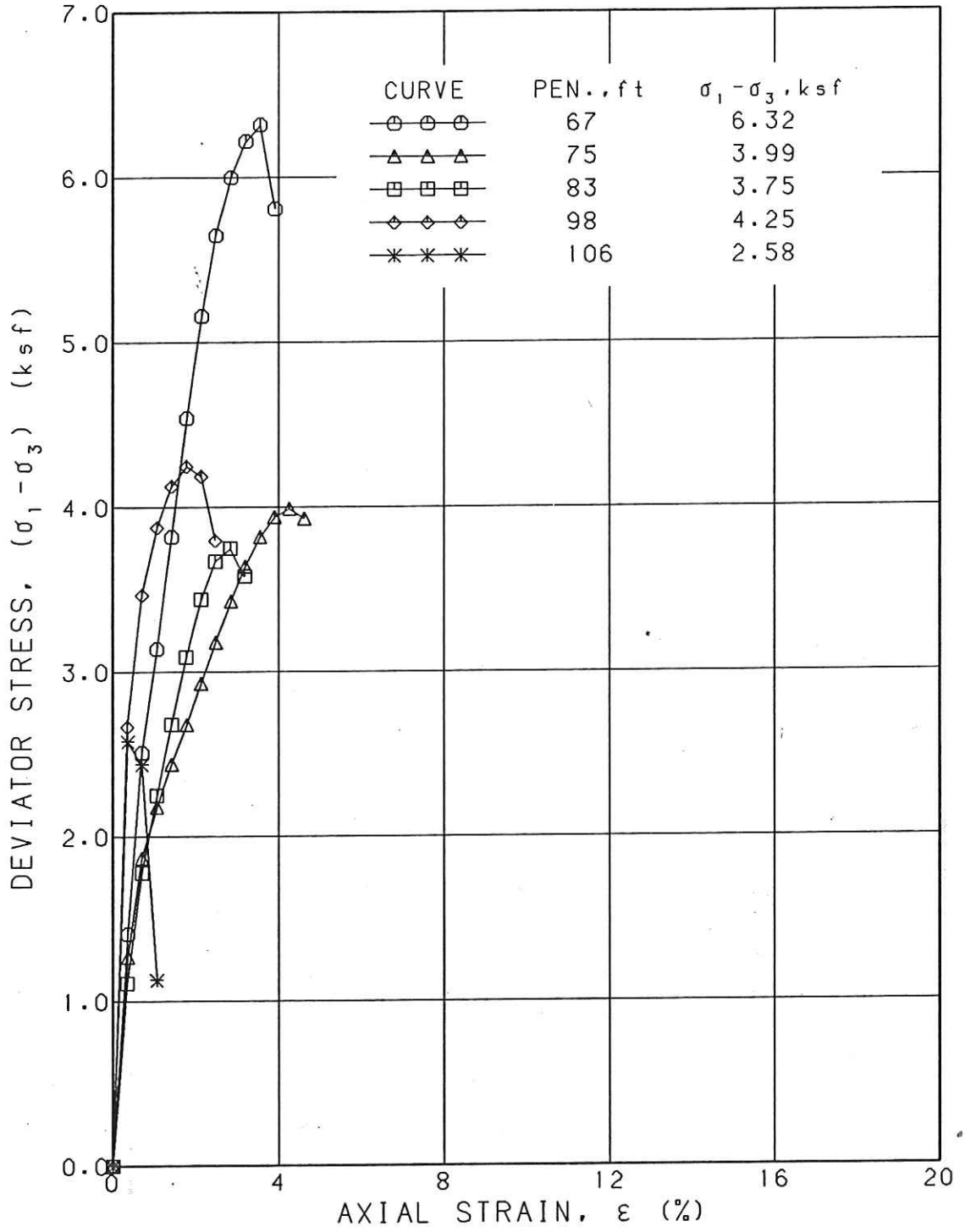
PLATE 53



STRESS-STRAIN CURVES
UNCOFINED COMPRESSION TEST
BORING 87-160

McCLELLAND ENGINEERS

PLATE 54



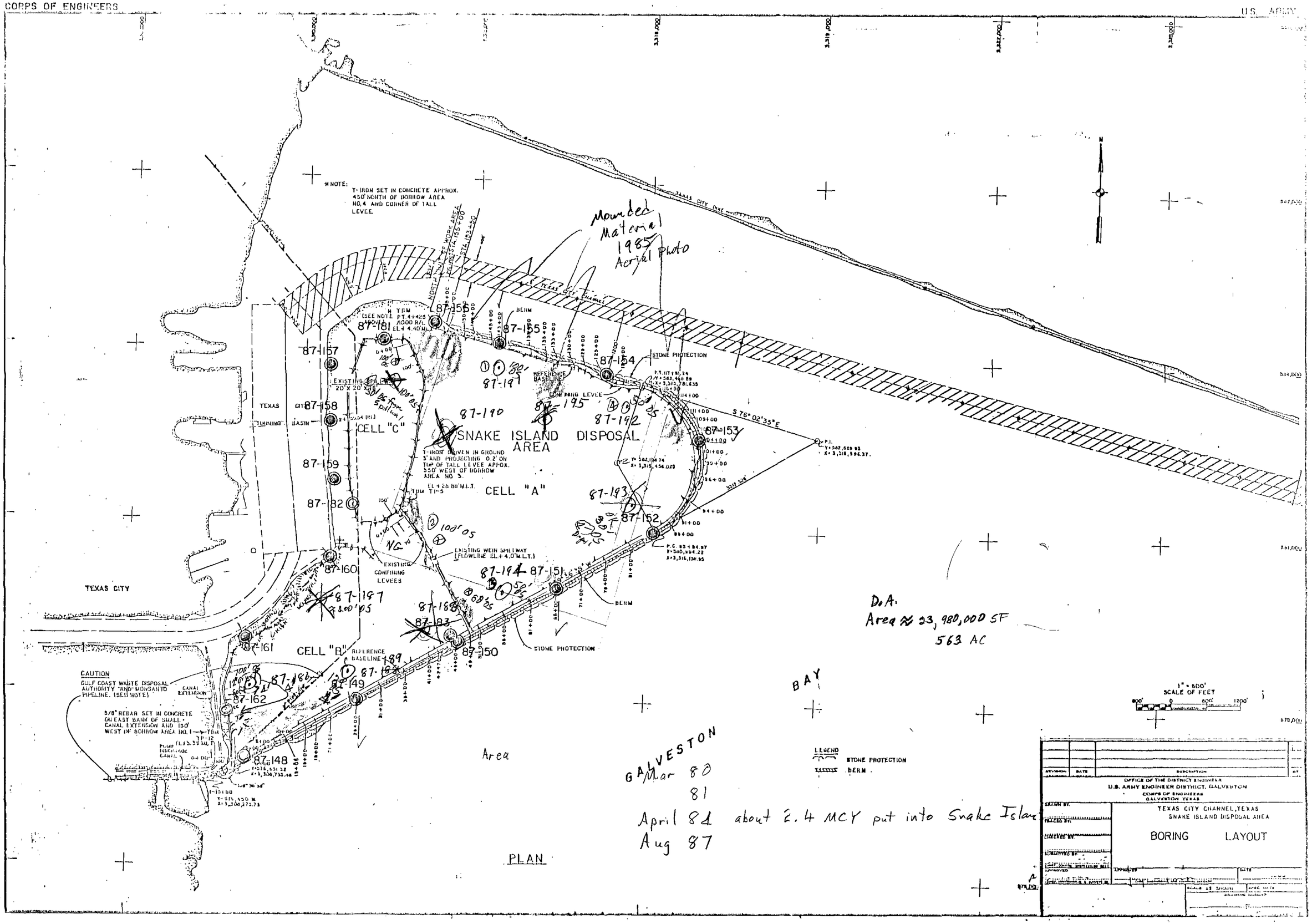
STRESS-STRAIN CURVES
UNCOFINED COMPRESSION TEST
BORING 87-160

McCLELLAND ENGINEERS

PLATE 55

CORPS OF ENGINEERS

U.S. ARMY



D.A.
Area ≈ 23,980,000 SF
563 AC

Mar 80
81
April 81 about 2.4 MCY put into Snake Isla
Aug 87

OFFICE OF THE DISTRICT ENGINEER
U.S. ARMY ENGINEER DISTRICT, GALVESTON
CORPS OF ENGINEERS
GALVESTON TEXAS

TEXAS CITY CHANNEL, TEXAS
SNAKE ISLAND DISPOSAL AREA

BORING LAYOUT