APPENDIX E
Field Exploration – Marsh (Sta. 140+00 and Above)

APPENDIX E
FIELD EXPLORATION - MARSH (STA. 140+00 AND ABOVE)

Appendix E describes the field exploration performed in the marsh (Sta. 140+00 and Above). The marsh exploration consisted of drilling and sampling sixteen 3-inch soil borings using a marsh buggy mounted drill rig. The following table gives the details of the explorations:

FIELD EXPLORATION - MARSH

Exploration No.	Type of Exploration/Type of Sampling	Total Depth of boring (Below Mudline, feet)	Sampling Interval (feet)		Latitude (as-built boring location*)	Longitude (as-built boring location*)
			Continuous	5-Foot Centers		
M-1	Soil Boring/ 3-inch Soil Samples	65	5-25	25-65	409577.8	3715883.0
M-2	Soil Boring/ 3-inch Soil Samples	65	5-25	25-65	404339.1	3715472.3
M-3	Soil Boring/ 3-inch Soil Samples	68	8-28	28-68	404368.8	3707994.5
M-4	Soil Boring/ 3-inch Soil Samples	68	8-28	28-68	404743.1	3700926.8
M-5	Soil Boring/ 3-inch Soil Samples	66	6-26	26-66	408200.9	3709740.2
M-6	Soil Boring/ 3-inch Soil Samples	66	6-26	26-66	408967.2	3705245.2
M-7	Soil Boring/ 3-inch Soil Samples	66	6-26	26-66	412368.9	3701306.4
M-8	Soil Boring/ 3-inch Soil Samples	66	6-26	26-66	416275.2	3698723.1
M-9	Soil Boring/ 3-inch Soil Samples	85	5-25	25-85	420217.9	3704783.2
M-10	Soil Boring/ 3-inch Soil Samples	85	5-25	25-85	418806.5	3706525.5
M-11	Soil Boring/ 3-inch Soil Samples	65	0-25	25-65	417024.8	3705493.8
M-12	Soil Boring/ 3-inch Soil Samples	85	5-25	25-85	417422.4	3708225.5
M-13	Soil Boring/ 3-inch Soil Samples	85	5-25	25-85	416148.7	3709772.0
M-14	Soil Boring/ 3-inch Soil Samples	83	3-23	23-83	414356.5	3712011.0
M-15	Soil Boring/ 3-inch Soil Samples	64	4-24	24-64	411688.9	3709461.6
M-16	Soil Boring/ 3-inch Soil Samples	85	5-25	25-85	412964.3	3714146.4

* A survey of the as-built locations was performed by John Chance.

For the marsh borings undisturbed, high quality, cohesive and semi-cohesive soil (clayey silt, clayey sand) specimens suitable for laboratory testing were obtained using a 30-inch-long, 3-inch O.D. (0.049-inch wall thickness) steel Shelby tube sampler. The sampler was hydraulically pushed into the ground a distance not exceeding 24 inches per specimen. When a Shelby tube was not able to recover a sample, a split-spoon sampler was driven to collect a disturbed sample.

Upon retrieval of the final sample from the soil boring, the hole was backfilled with a portland cement/bentonite grout mixture. A backfill log was maintained for all the explorations.

Samples were classified in the field by GeoEngineers' field representatives, logged, labeled, and preserved for transport to a soils laboratory. Samples collected using the SPT method were stored in labeled plastic bags to preserve moisture. Three-inch diameter Shelby tube samples were sealed with caps and tape, labeled, and stored upright to minimize sample disturbance. They were later transported in the same upright fashion in which they were stored to a laboratory for processing and testing. A photo record was maintained for all the samples that were obtained onsite. The photos are stored on a compact disk and a copy of the information will be provided with the final report.

The SPT N-values were corrected in the office for field conditions using the following formula:

$$N_{60} = \frac{(N^{*}\eta_H\,\eta_B\,\eta_S\,\eta_R)}{60}$$

Where

N_{60} = Standard penetration number, corrected for field conditions
N = Measured SPT N-value on-site
η_H = Hammer efficiency
η_B = Correction for borehole diameter
η_S = Sampler type correction (with/without liner)
η_R = Correction for rod length

The calculated N_{60} value is reported on the individual boring logs. Where applicable, the corrected SPT N-value was used to determine the consistency or relative density of the soil encountered.

This appendix includes the soil boring logs for the marsh borings.

UNIFIED SOIL CLASSIFICATION

MAJOR DIVISION		TYPE	LETTER SYMBOL	SYMBOL	TYPICAL NAMES
COARSE - GRAINED SOILS More than half of material is larger than No. 200 sieve size.	GRAVELS More than half of coarse fraction is larger than No. 4 sieve size.	CLEAN GRAVEL (Little or No fines)	GW		GRAVEL,Well Graded,gravel-sand mixtures,little or no fines
			GP		GRAVEL,Poorly Graded,gravel-sand mixtures,little or no fines
		GRAVEL WITH FINES (Appreciable Amount of Fines)	GM		SILTY GRAVEL,gravel-sand-silt mixtures
			GC		CLAYEY GRAVEL,gravel-sand-clay mixtures
	SANDS More than half of coarse fraction is smaller than No. 4 sieve size.	CLEAN SAND (Little or No Fines)	SW		SAND,Well-Graded,gravelly sands
			SP		SAND,Poorly-Graded,gravelly sands
		SANDS WITH FINES (Appreciable Amount of Fines)	SM		SILTY SAND,sand-silt mixtures
			SC		CLAYEY SAND,sand-clay mixtures
FINE - GRAINED SOILS More than half the material is smaller than No. 200 sieve size.		SILTS AND CLAYS (Liquid Limit 50)	ML		SILT & very fine sand,silty or clayey fine sand or clayey silt with slight plasticity
			CL		LEAN CLAY,Sandy Clay,Silty Clay,of low to medium plasticity
			OL		ORGANIC SILTS,and organic silty clays of low plasticity
		SILTS AND CLAYS (Liquid Limit 50)	MH		SILT,fine sandy or silty soil with high plasticity
			CH		FAT CLAY,inorganic clay of high plasticity
			OH		ORGANIC CLAYS of medium to high plasticity,organic silts
HIGHLY ORGANIC SOILS			Pt		PEAT,and other highly organic soil
WOOD			Wd		WOOD
SHELLS			Sl		SHELLS
NO SAMPLE			NS		No Sample Retrieved

NOTE: Soils possessing characteristics of two groups are designated by combinations of group symbols.

Guide for * MOISTURE CONTENTS ADAPTED TO CEMVN-ED-F SOILS

CLASS	STIFF	MEDIUM	SOFT	V. SOFT	LIQUID LIMIT	PLASTICITY INDEX
CH-4	41-53	43-65	55-80	67-130	70-110	45-75
CH-3	32-43	34-55	44-67	55-114	55-80	30-55
CH-2	27-34	30-44	38-55	48-90	50-60	25-40
CL-6	23-30	25-39	33-48	40-79	40-50	20-35
CL-4	20-25	21-33	27-41	35-67	28-43	10-25
CH-OA					110-160	75-97
CH-OB					160-185	97-115
CH-OC					185-	115-

* For brown or oxidized soils, subtract 10% from the above Moisture Contents.

NOTE: We are using this with the Unified Soil Classification System as a guide and supplementation breakdown for CH's and CL's. We use the CHOA, CHOB and CHOC for organic fat clays in lieu of "OH" and CLOA, CLOB and CLOC for organic lean clays in lieu of OL when used for lean clays. Also, double classes are not used, such as SC-SM or CL-ML. The major class governs and the secondary is recorded as a modification or stratum as appropriate.

Figure 8.5 Unified Soil Classification System Modified for New Orleans Soils

NOTES:

SYMBOLS TO LEFT OF BORING

- Ground-water surface and date observed
- (C) Denotes location of consolidation test
- (S) Denotes location of consolidated-drained direct shear test
- (R) Denotes location of consolidated-undrained triaxial compression test
- (Q) Denotes location of unconsolidated-undrained triaxial compression test
- FW Denotes free water encountered in boring or sample

FIGURES TO RIGHT OF BORING

Are values of cohesion in tons/sq.ft. from unconfined compression tests

In parenthesis are driving resistances in blows per foot determined with a standard split spoon sampler (1 1/2 " I.D., 2" O.D.) and a 140 lb. driving hammer with a 30" drop

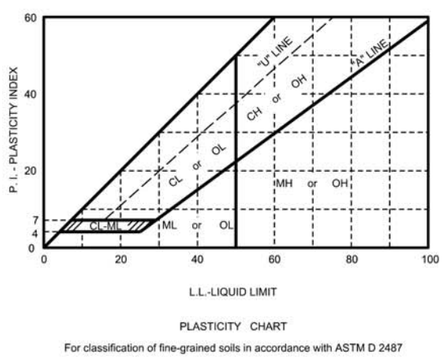
*The D_{10} size of a soil is the grain diameter in millimeters of which 10% of the soil is finer, and 90% coarser than D_{10}.

Results of the above tests are available for inspection in the GeoEngineers, Inc. Office in Baton Rouge, Louisiana.

DESCRIPTIVE SYMBOLS

COLOR	
COLOR	SYMBOL
TAN	T
YELLOW	Y
RED	R
BLACK	BK
GRAY	Gr
LIGHT GRAY	lGr
DARK GRAY	dGr
BROWN	Br
LIGHT BROWN	lBr
DARK BROWN	dBr
BROWNISH-GRAY	brGr
GRAYISH-BROWN	gyBr
GREENISH-GRAY	gnGr
GRAYISH-GREEN	gyGn
GREEN	Gn
BLUE	Bl
BLUE-GREEN	BlGn
WHITE	Wh
MOTTLED	Mot

CONSISTENCY	CONSISTENCY FOR COHESIVE SOILS: COHESION IN LBS./SQ.FT. FROM UNCONFINED COMPRESSION TEST	SYMBOL
VERY SOFT	250	vSo
SOFT	250-500	So
MEDIUM	500-1000	M
STIFF	1000-2000	St
VERY STIFF	2000-4000	vSt
HARD	4000	H



PLASTICITY CHART

For classification of fine-grained soils in accordance with ASTM D 2487

MODIFICATIONS	
MODIFICATION	SYMBOL
Traces	Tr
Fine	F
Medium	M
Coarse	C
Concretions	cc
Rootlets	rt
Lignite fragments	lg
Shale fragments	sh
Sandstone fragments	sds
Shell fragments	slf
Organic matter	O
Clay strata or lenses	CS
Silt strata or lenses	SIS
Sand strata or lenses	SS
Sandy	S
Gravelly	G
Boulders	B
Slickensides	SL
Wood	Wd
Oxidized	Ox

Soil Properties Based on Corrected SPT Blowcounts (N_{60})

Soil Type/Relative Density	Unit Weight (pcf)	Cohesion (psf)	Effective Friction Angle (deg)	SPT Blows Corrected (N_{60})
Silts				
Very Loose	113	200	8	0-4
Loose	115	200	10	5-10
(USACE) Medium Dense	117	200	15	11-30
Dense	122	200	20	31-50
Very Dense	125	200	25	51+
Silty (>12%) Sand (>50%)/Clayey(>12%) Sand (>50%)				
Very Loose	118	0	25	0-4
Loose	120	0	28	5-10
(USACE for SM) Medium Dense	122	0	30	11-30
Dense	125	0	33	31-50
Very Dense	128	0	35	51+
Poorly Graded Sand				
Very Loose	122	0	28	0-4
Loose	122	0	30	5-10
(USACE) Medium Dense	122	0	33	11-30
Dense	128	0	39	31-50
Very Dense	130	0	41	51+

TYPICAL NOTES:

1. While the borings are representative of soil conditions at their respective locations and for their respective vertical reaches, it should be noted that soil borings only provide limited data at the specific locations. Variation of soil conditions across the site should be expected.

2. Ground-water elevations shown on the boring logs represent ground-water surfaces encountered in such borings on the dates shown. Absence of water surface data on certain borings indicates that no ground-water data are available from the boring but does not necessarily mean that ground-water will not be encountered at the locations or within the vertical reaches of such borings.

3. Consistency of cohesive soils shown on the boring logs is based on driller's log and visual examination and is approximate, except within those vertical reaches of the borings where shear strengths from labratory tests are shown.

4. Unless otherwise noted:

   a. Undisturbed borings, indicated by the letter "U", are taken with a 5'' Outer Diameter Piston Type Sampler.
   b. General type borings are taken with a 3" Outer DiameterTube Sampler and/or a 1 1/2" Inner Diameter Split Spoon Sampler.

5. The classification of soil was based on the "Hurricane and Storm Damage Risk Reduction System Design Guidelines, New Orleans District Engineering Division, With Revisions through June 2012, Figure 8.5 – Unified Soil Classification System Modified for New Orleans Soils."

COASTAL PROTECTION AND RESTORATION AUTHORITY

Revisions: Description | Date | Appr.

Date: | Scale: | Drawing code: | Date:

Designed by: | Drawn by: | Checked by: | Project Engineer / Architect:

SHEET IDENTIFICATION: PLATE A

DRILLING LOG

DIVISION: N/A	INSTALLATION: N/A	SHEET 1 OF 4 SHEETS	
1. PROJECT: Mid Barataria Diversion (BA-153)	9. COORDINATE SYSTEM: SPCS83	HORIZONTAL: NAD83	VERTICAL: NAVD88
	10. SIZE AND TYPE OF BIT: 140lb hammer, 30-inch drop		
2. HOLE NUMBER: M-1 / LOCATION COORDINATES: N 409577.79 E 3715883.00	11. MANUFACTURER'S DESIGNATION OF DRILL: Marsh Buggy, Serial # MBD001, Built 2012		
3. DRILLING AGENCY: Specialized Environmental Resources, LLC	12. TOTAL SAMPLES	DISTURBED: 7	UNDISTURBED: 18
4. NAME OF DRILLER: Terry Jeansonne	13. TOTAL NUMBER CORE BOXES: 0		
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED / DEG FROM VERTICAL: --- / BEARING: N/A	14. ELEVATION GROUND WATER		
	15. DATE BORING	STARTED: 5/23/13	COMPLETED: 5/23/13
6. THICKNESS OF OVERBURDEN: 65.0	16. ELEVATION TOP OF BORING: 2.8		
7. DEPTH DRILLED INTO ROCK: 0.0	17. TOTAL CORE RECOVERY FOR BORING: N/A		
8. TOTAL DEPTH OF BORING: 65.0	18. SIGNATURE AND TITLE OF INSPECTOR: Donnie Smith		

ELEV	DEPTH	Blows/0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						Top of marsh buggy deck at EL +2.8 feet										
						Top of water surface at approximately EL +0.8 feet										
-2.2	5.0					Top of mudline at EL -2.2 feet										
						Pt, very soft, black	90	S1				349	199	492		Organic content = 29.90%
-4.2	7.0															
						CHOB, very soft, black	83	S2				174	122	229		C_v = 0.05 ft²/day; Organic content = 24.40%; Fiber content = 6.69%
-6.2	9.0															
						CHOB, very soft, black	100	S3				176	113	232		
-8.2	11.0															
						CH3, very soft, black & gray, with silt	100	S4				63	39	74		Organic content = 26.60%
-10.2	13.0															
						CL6, very soft, gray	73	S5								
-12.2	15.0															

0.0 2.5 5.0 7.5 10.0 12.5 15.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET
N/A	2 OF 4 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES
N 409577.79 E 3715883.00

ELEVATION TOP OF BORING
2.8

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
-14.2	17.0					SM, loose, gray	38	S6						27		
-16.2	19.0					ML, loose, dark gray	100	S7				33	2	40		
-18.2	21.0					CH3, very soft, gray, with silt pockets, with rootlets	75	S8						69		
-20.2	23.0					CH3, very soft, dark gray, trace fine sand, with rootlets	100	S9				78	49	66		C_v = 0.07 ft^2/day
-25.2	28.0					SP, loose, gray, silt	70	S10	0.0	90.0	10.0			25		
-27.2	30.0					NS		S11								
		0 0 1	1	1		CHOB, very soft, dark gray		S12				172	106			Organic content = 17.30%

15.0 17.5 20.0 22.5 25.0 27.5 30.0 32.5

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET
N/A	3 OF 4 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES
N 409577.79 E 3715883.00

ELEVATION TOP OF BORING
2.8

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CHOB, very soft, dark gray *(continued)*										
-32.2	35.0															
		8 11 20	31	28		SP, medium dense, gray		S13	0.0	90.0	10.0			15		
-35.2	38.0															
		10 10 11	21	20		ML, medium dense, gray, with silty sand pockets		S14	0.0	28.0	72.0			26		
-40.2	43.0															
		8 11 13	24	23		ML, sandy, medium dense, gray, trace clay		S15	0.0	42.0	58.0			23		Alternating layers of clay and sand/silt from 45 to 53 feet
-45.2	48.0															
		5 4 7	11	11		ML, sandy, medium dense, gray		S16	0.0	45.0	55.0			23		

35.0
37.5
40.0
42.5
45.0
47.5
50.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A		SHEET 4 OF 4 SHEETS
PROJECT: Mid Barataria Diversion (BA-153)	COORDINATE SYSTEM: SPCS83 / HORIZONTAL: NAD83 / VERTICAL: NAVD88	
LOCATION COORDINATES: N 409577.79 E 3715883.00	ELEVATION TOP OF BORING: 2.8	

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						ML, sandy, medium dense, gray *(continued)*										
-50.2	53.0															
		7 6 5	11	11		SM, medium dense, gray		S17								
-55.2	58.0															
						ML, medium dense, gray	100	S18				30	6	34		
-60.2	63.0															
						CL6, medium, gray, with sand	100	S19								
-62.2	65.0															

52.5 55.0 57.5 60.0 62.5 65.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG

DIVISION: N/A	INSTALLATION: N/A	SHEET 1 OF 4 SHEETS	
1. PROJECT: Mid Barataria Diversion (BA-153)	9. COORDINATE SYSTEM: SPCS83	HORIZONTAL: NAD83	VERTICAL: NAVD88
	10. SIZE AND TYPE OF BIT: 140lb hammer, 30-inch drop		
2. HOLE NUMBER: M-2 / LOCATION COORDINATES: N 404339.10 E 3715472.32	11. MANUFACTURER'S DESIGNATION OF DRILL: Marsh Buggy, Serial # MBD001, Built 2012		
3. DRILLING AGENCY: Specialized Environmental Resources, LLC	12. TOTAL SAMPLES	DISTURBED: 0	UNDISTURBED: 18
4. NAME OF DRILLER: Terry Jeansonne	13. TOTAL NUMBER CORE BOXES: 0		
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED / DEG FROM VERTICAL: --- / BEARING: N/A	14. ELEVATION GROUND WATER		
	15. DATE BORING	STARTED: 6/6/13	COMPLETED: 6/6/13
6. THICKNESS OF OVERBURDEN: 65.0	16. ELEVATION TOP OF BORING: 3.0		
7. DEPTH DRILLED INTO ROCK: 0.0	17. TOTAL CORE RECOVERY FOR BORING: N/A		
8. TOTAL DEPTH OF BORING: 65.0	18. SIGNATURE AND TITLE OF INSPECTOR: Donnie Smith		

ELEV	DEPTH	Blows/0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						Top of marsh buggy deck at EL +3.0 feet										
						Top of water surface at approximately EL +1.0 feet										
-2.0	5.0					Top of mudline at EL -2.0 feet										
						Pt, very soft, black	100	S1				576	344	465		C_v = 2.92 ft^2/day Organic content = 54.25%; Fiber content = 12.05%
-4.0	7.0															
						Pt, soft, black	88	S2				429	236	126		
-6.0	9.0															
						CHOA, very soft, gray	100	S3				112	81	253		Organic content = 11.00%
-8.0	11.0															
						CHOA, very soft, dark gray	75	S4						193		Organic content = 8.60%
-10.0	13.0															
						CHOC, very soft, black & gray	100	S5				212	144	636		Organic content = 25%
-12.0	15.0															

0.0 2.5 5.0 7.5 10.0 12.5 15.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET
N/A	2 OF 4 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES
N 404339.10 E 3715472.32

ELEVATION TOP OF BORING
3.0

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
-14.0	17.0					ML, gray	92	S6						86		
-16.0	19.0					ML, dark gray	75	S7				40	14	41		
-18.0	21.0					CH2, very soft, gray, with sand strata and lenses	67	S8						42		
-20.0	23.0					CH2, very soft, gray, with sand strata and lenses	73	S9						43		
-25.0	28.0					CH3, very soft, dark gray, with sand strata and lenses	93	S10				57	36	60		
-30.0	33.0					CH3, very soft, gray	50	S11						108		

15.0
17.5
20.0
22.5
25.0
27.5
30.0
32.5

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A

SHEET 3 OF 4 SHEETS

PROJECT: Mid Barataria Diversion (BA-153)

COORDINATE SYSTEM: SPCS83 | HORIZONTAL: NAD83 | VERTICAL: NAVD88

LOCATION COORDINATES: N 404339.10 E 3715472.32

ELEVATION TOP OF BORING: 3.0

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CH3, very soft, gray *(continued)*	92	S12						64		
-35.0	38.0					CH4, soft, gray, with silt strata or lenses	55	S13				93	68	76		
-40.0	43.0					CH3, very soft, dark gray	75	S14				72	46	150		
-45.0	48.0					ML, loose, gray, with sand strata and lenses, with clay pockets	100	S15				27	2	31		

35.0 37.5 40.0 42.5 45.0 47.5 50.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET
N/A	4 OF 4 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES
N 404339.10 E 3715472.32

ELEVATION TOP OF BORING
3.0

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						ML, loose, gray, with sand strata and lenses, with clay pockets *(continued)*										
-50.0	53.0					CL4, soft, gray	80	S16						32		
-55.0	58.0					ML, loose, gray	78	S17						29		
-60.0	63.0					ML, sandy, medium dense, gray	75	S18	0.0	37.0	63.0			24		
-62.0	65.0															

52.5
55.0
57.5
60.0
62.5
65.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG

DIVISION: N/A	INSTALLATION: N/A	SHEET 1 OF 4 SHEETS	
1. PROJECT: Mid Barataria Diversion (BA-153)	9. COORDINATE SYSTEM: SPCS83	HORIZONTAL: NAD83	VERTICAL: NAVD88
	10. SIZE AND TYPE OF BIT: 140lb hammer, 30-inch drop		
2. HOLE NUMBER: M-3 — LOCATION COORDINATES: N 404368.84 E 3707994.47	11. MANUFACTURER'S DESIGNATION OF DRILL: Marsh Buggy, Serial # MBD001, Built 2012		
3. DRILLING AGENCY: Specialized Environmental Resources, LLC	12. TOTAL SAMPLES	DISTURBED: 0	UNDISTURBED: 19
4. NAME OF DRILLER: Terry Jeansonne	13. TOTAL NUMBER CORE BOXES: 0		
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED — DEG FROM VERTICAL: --- — BEARING: N/A	14. ELEVATION GROUND WATER		
	15. DATE BORING	STARTED: 6/5/13	COMPLETED: 6/5/13
6. THICKNESS OF OVERBURDEN: 68.0	16. ELEVATION TOP OF BORING: 5.3		
7. DEPTH DRILLED INTO ROCK: 0.0	17. TOTAL CORE RECOVERY FOR BORING: N/A		
8. TOTAL DEPTH OF BORING: 68.0	18. SIGNATURE AND TITLE OF INSPECTOR: Donnie Smith		

ELEV	DEPTH	Blows/0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						Top of marsh buggy deck at EL +5.3 feet										
						Top of water surface at approximately EL +3.3 feet										
-2.7	8.0					Top of mudline at EL -2.7 feet										
						Pt, very soft, dark gray	38	S1				571	282	1120		Organic content = 72.15%; Fiber content = 15.12%
-4.7	10.0															
						Pt, very soft, dark gray	100	S2				578	272	528		Organic content = 61%; Fiber content = 13.47%
-6.7	12.0															
						CHOB, very soft, dark gray	100	S3				167	120	415		
-8.7	14.0															
						CHOC, very soft, brown	100	S4						404		Organic content = 30.10%

0.0 2.5 5.0 7.5 10.0 12.5 15.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A

SHEET 2 OF 4 SHEETS

PROJECT: Mid Barataria Diversion (BA-153)

COORDINATE SYSTEM: SPCS83 | HORIZONTAL: NAD83 | VERTICAL: NAVD88

LOCATION COORDINATES: N 404368.84 E 3707994.47

ELEVATION TOP OF BORING: 5.3

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CHOC, very soft, brown *(continued)*										
-10.7	16.0					CHOC, very soft, black	100	S5						281		Organic content = 50.70%
-12.7	18.0					CHOA, very soft, gray, with silt lenses	100	S6						217		Organic content = 15%
-14.7	20.0					CHOA, very soft, gray, with silt lenses	75	S7				157	120	171		C_v = 0.156 ft^2/day Organic content = 9.50%; Fiber content = 13.47%
-16.7	22.0					CH2, very soft, gray, with silt lenses	75	S8				51	32	91		
-18.7	24.0					CH4, very soft, gray, with silt strata or lenses	75	S9						87		
-20.7	26.0					CH4, very soft, gray, with silt strata or lenses	75	S10						97		
-25.7	31.0					CH2, very soft, gray, with silt strata or lenses	57	S11						106		

15.0 17.5 20.0 22.5 25.0 27.5 30.0 32.5

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A		SHEET 3 OF 4 SHEETS
PROJECT: Mid Barataria Diversion (BA-153)	COORDINATE SYSTEM: SPCS83 / HORIZONTAL: NAD83 / VERTICAL: NAVD88	
LOCATION COORDINATES: N 404368.84 E 3707994.47	ELEVATION TOP OF BORING: 5.3	

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CH2, very soft, gray, with silt strata or lenses *(continued)*										
-30.7	36.0															
						CHOB, very soft, gray, with silt strata or lenses	38	S12				140	103	95		
-35.7	41.0															
						CL6, very soft, gray, with silt strata or lenses, and, with sand strata and lenses	90	S13						56		
-40.7	46.0															
						ML, medium dense, gray, with sand strata and lenses, with clay pockets	100	S14				26	2	60		
-45.7	51.0						78	S15						67		

35.0 37.5 40.0 42.5 45.0 47.5 50.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A

SHEET 4 OF 4 SHEETS

PROJECT: Mid Barataria Diversion (BA-153)

COORDINATE SYSTEM: SPCS83 | HORIZONTAL: NAD83 | VERTICAL: NAVD88

LOCATION COORDINATES: N 404368.84 E 3707994.47

ELEVATION TOP OF BORING: 5.3

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
-46.7	52.0					ML, medium dense, gray, with sand strata and lenses *(continued)*										
						ML, medium dense, gray, with clay strata or lenses	78	S16	0.0	22.0	78.0			31		
-50.7	56.0															
						CH4, very soft, dark gray, with sand strata and lenses	100	S17				87	58	71		
-55.7	61.0															
						CH4, very soft, gray, with silt strata or lenses	82	S18						71		
-60.7	66.0															
						CH4, very soft, dark gray	88	S19						65		
-62.7	68.0															

DRILLING LOG

DIVISION: N/A	INSTALLATION: N/A	SHEET 1 OF 4 SHEETS	
1. PROJECT: Mid Barataria Diversion (BA-153)	9. COORDINATE SYSTEM: SPCS83	HORIZONTAL: NAD83	VERTICAL: NAVD88
	10. SIZE AND TYPE OF BIT: 140lb hammer, 30-inch drop		
2. HOLE NUMBER: M-4 — LOCATION COORDINATES: N 404743.12 E 3700926.77	11. MANUFACTURER'S DESIGNATION OF DRILL: Marsh Buggy, Serial # MBD001, Built 2012		
3. DRILLING AGENCY: Specialized Environmental Resources, LLC	12. TOTAL SAMPLES	DISTURBED: 0	UNDISTURBED: 19
4. NAME OF DRILLER: Terry Jeansonne	13. TOTAL NUMBER CORE BOXES: 0		
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED — DEG FROM VERTICAL: --- — BEARING: N/A	14. ELEVATION GROUND WATER		
	15. DATE BORING	STARTED: 6/4/13	COMPLETED: 6/4/13
6. THICKNESS OF OVERBURDEN: 68.0	16. ELEVATION TOP OF BORING: 5.2		
7. DEPTH DRILLED INTO ROCK: 0.0	17. TOTAL CORE RECOVERY FOR BORING: N/A		
8. TOTAL DEPTH OF BORING: 68.0	18. SIGNATURE AND TITLE OF INSPECTOR: Donnie Smith		

ELEV	DEPTH	Blows/0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						Top of marsh buggy deck at EL +5.2 feet										
						Top of water surface at approximately EL +3.2 feet										
-2.8	8.0					Top of mudline at EL -2.8 feet										
						CHOC, very soft, black	25	S1						527		Organic content = 24.57%; Fiber content = 1.93%
-4.8	10.0					CHOC, very soft, black	100	S2						351		Organic content = 26.82%; Fiber content = 4.02%
-5.8	11.0					Pt, very soft, black	100	S3						449		
-6.8	12.0					Pt, very soft, black	63	S4				379	244	532		C_v = 1.0 ft^2/day
-8.8	14.0					Pt, very soft, black	67	S5				321	225	400		Organic content = 27.80%

0.0 2.5 5.0 7.5 10.0 12.5 15.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET / OF
N/A	2 OF 4 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES
N 404743.12 E 3700926.77

ELEVATION TOP OF BORING
5.2

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
-10.8	16.0					Pt, very soft, black *(continued)*										
-12.8	18.0					CHOC, very soft, gray	88	S6				192	96	403		Organic content = 19.90%
-14.8	20.0					Pt, very soft, black	63	S7						244		Organic content = 64.77%; Fiber content = 44.41%
-16.8	22.0					CL4, very soft, gray	80	S8				42	19	81		
-18.8	24.0					ML, very soft, gray, with clay pockets	65	S9						33		
-20.8	26.0					CL4, very soft, gray	21	S10						37		
-25.8	31.0					CH3, very soft, gray, with silt pockets	63	S11						44		
						CH2, very soft, gray, with silt strata or lenses	90	S12						82		

15.0 17.5 20.0 22.5 25.0 27.5 30.0 32.5

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET
N/A	3 OF 4 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
N 404743.12 E 3700926.77	5.2

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CH2, very soft, gray, with silt strata or lenses *(continued)*										
-30.8	36.0					CH3, medium, gray	85	S13						62		
-35.8	41.0					CH3, soft, gray	84	S14						113		C_v = 0.25 ft^2/day
-40.8	46.0					CH4, very soft, gray, with silt lenses	80	S15						64		
-45.8	51.0						65	S16						60		

35.0
37.5
40.0
42.5
45.0
47.5
50.0

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET
N/A	4 OF 4 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES
N 404743.12 E 3700926.77

ELEVATION TOP OF BORING
5.2

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CL4, very soft, gray, with sand strata and lenses *(continued)*										
-50.8	56.0															
						CH4, very soft, gray	88	S17						87		
-55.8	61.0															
						SM, medium dense, gray, with clay pockets	79	S18						32		
-60.8	66.0															
						CL6, stiff, gray, with silt strata or lenses	90	S19						42		
-62.8	68.0															

52.5
55.0
57.5
60.0
62.5
65.0
67.5

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG

DIVISION: N/A	INSTALLATION: N/A	SHEET 1 OF 4 SHEETS	
1. PROJECT: Mid Barataria Diversion (BA-153)	9. COORDINATE SYSTEM: SPCS83	HORIZONTAL: NAD83	VERTICAL: NAVD88
	10. SIZE AND TYPE OF BIT: 140lb hammer, 30-inch drop		
2. HOLE NUMBER: M-5 / LOCATION COORDINATES: N 408200.91 E 3709740.17	11. MANUFACTURER'S DESIGNATION OF DRILL: Marsh Buggy, Serial # MBD001, Built 2012		
3. DRILLING AGENCY: Specialized Environmental Resources, LLC	12. TOTAL SAMPLES	DISTURBED: 0	UNDISTURBED: 21
4. NAME OF DRILLER: Terry Jeansonne	13. TOTAL NUMBER CORE BOXES: 0		
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED / DEG FROM VERTICAL: --- / BEARING: N/A	14. ELEVATION GROUND WATER		
	15. DATE BORING	STARTED: 6/5/13	COMPLETED: 6/5/13
6. THICKNESS OF OVERBURDEN: 66.0	16. ELEVATION TOP OF BORING: 3.4		
7. DEPTH DRILLED INTO ROCK: 0.0	17. TOTAL CORE RECOVERY FOR BORING: N/A		
8. TOTAL DEPTH OF BORING: 66.0	18. SIGNATURE AND TITLE OF INSPECTOR: Donnie Smith		

ELEV	DEPTH	Blows/0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						Top of marsh buggy deck at EL +3.4 feet										
						Top of water surface at approximately EL +1.4 feet										
-2.6	6.0					Top of mudline at EL -2.6 feet										
						Pt, very soft, black	19	S1						567		Organic content = 49.61%; Fiber content = 8.41%
-4.6	8.0															
						Pt, very soft, black	84	S2				528	202	652		Organic content = 57.65%; Fiber content = 24.85%
-6.6	10.0															
						CHOA, very soft, dark gray	70	S3						181		Organic content = 13.40%; Fiber content = 3.05%
-8.6	12.0															
						Pt, very soft, dark gray	84	S4				238	167	341		Organic content = 30.30%
-10.6	14.0															
						Pt, very soft, dark gray	55	S5				344	221	322		C_v = 1.95 ft^2/day Organic content = 41.30%

0.0 2.5 5.0 7.5 10.0 12.5 15.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A		SHEET 2 OF 4 SHEETS
PROJECT: Mid Barataria Diversion (BA-153)	COORDINATE SYSTEM: SPCS83 / HORIZONTAL: NAD83 / VERTICAL: NAVD88	
LOCATION COORDINATES: N 408200.91 E 3709740.17	ELEVATION TOP OF BORING: 3.4	

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						Pt, very soft, dark gray *(continued)*										
-12.6	16.0					CH3, soft, gray	47	S6						58		
-14.6	18.0					CL6, soft, gray, with silt strata or lenses	79	S7						33		Organic content = 3.30%
-16.6	20.0					CL6, soft, gray, sandy	84	S8	0.0	45.0	55.0			40		
-18.6	22.0					CL6, medium, brownish - gray, with sand strata and lenses	40	S9						28		
-19.6	23.0					SP, medium dense, dark brown	40	S10								
-20.6	24.0					SM, medium dense, dark gray	29	S11	0.0	87.0	13.0			21		
-25.6	29.0					CH4, very soft, gray, with sand strata and lenses	100	S12				98	69	73		

15.0 17.5 20.0 22.5 25.0 27.5 30.0 32.5

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A

SHEET 3 OF 4 SHEETS

PROJECT: Mid Barataria Diversion (BA-153)

COORDINATE SYSTEM: SPCS83 | HORIZONTAL: NAD83 | VERTICAL: NAVD88

LOCATION COORDINATES: N 408200.91 E 3709740.17

ELEVATION TOP OF BORING: 3.4

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
-30.6	34.0					CH4, very soft, gray, with sand strata and lenses *(continued)*										
-31.6	35.0					SP, medium dense, gray	84	S13	0.0	96.0	4.0			18		
-35.6	39.0					CH2, very soft, gray, with silt lenses	84	S14						59		
-40.6	44.0					SM, loose, gray, with clay strata or lenses	95	S15	0.0	72.0	28.0			20		
-41.6	45.0					ML, very loose, dark gray	75	S16				26	3	36		
-45.6	49.0					CL6, very soft, gray, with silt and sandy silt strata and lenses	75	S17						23		C_v = 1.25 ft^2/day
						CL4, soft, gray, with silt strata or lenses	100	S18						34		

35.0 37.5 40.0 42.5 45.0 47.5 50.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET / OF
N/A	4 / 4 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES
N 408200.91 E 3709740.17

ELEVATION TOP OF BORING
3.4

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CL4, soft, gray, with silt strata or lenses *(continued)*										
-50.6	54.0															
						CL6, very soft, brownish - gray, with silt strata or lenses	100	S19						52		
-55.6	59.0															
						ML, loose, gray, with shell fragments	100	S20				28	5	69		
-60.6	64.0															
						CL6, soft, gray, with sand strata and lenses	100	S21						29		
-62.6	66.0															

52.5
55.0
57.5
60.0
62.5
65.0

DRILLING LOG

DIVISION: N/A	INSTALLATION: N/A	SHEET 1 OF 4 SHEETS	
1. PROJECT: Mid Barataria Diversion (BA-153)	9. COORDINATE SYSTEM: SPCS83	HORIZONTAL: NAD83	VERTICAL: NAVD88
	10. SIZE AND TYPE OF BIT: 140lb hammer, 30-inch drop		
2. HOLE NUMBER: M-6 / LOCATION COORDINATES: N 408967.19 E 3705245.15	11. MANUFACTURER'S DESIGNATION OF DRILL: Marsh Buggy, Serial # MBD001, Built 2012		
3. DRILLING AGENCY: Specialized Environmental Resources, LLC	12. TOTAL SAMPLES	DISTURBED: 0	UNDISTURBED: 18
4. NAME OF DRILLER: Terry Jeansonne	13. TOTAL NUMBER CORE BOXES: 0		
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED / DEG FROM VERTICAL: --- / BEARING: N/A	14. ELEVATION GROUND WATER		
	15. DATE BORING	STARTED: 6/4/13	COMPLETED: 6/4/13
6. THICKNESS OF OVERBURDEN: 66.0	16. ELEVATION TOP OF BORING: 3.0		
7. DEPTH DRILLED INTO ROCK: 0.0	17. TOTAL CORE RECOVERY FOR BORING: N/A		
8. TOTAL DEPTH OF BORING: 66.0	18. SIGNATURE AND TITLE OF INSPECTOR: Donnie Smith		

ELEV	DEPTH	Blows/0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						Top of marsh buggy deck at EL +3.0 feet										
						Top of water surface at approximately EL +1.0 feet										
-3.0	6.0					Top of mudline at EL -3.0 feet										
-5.0	8.0					Pt, very soft, black	65	S1						1263		Organic content = 32.43%; Fiber content = 51.43%
-7.0	10.0					Pt, very soft, black	65	S2				675	342	677		Organic content = 47%; Fiber content = 51.30%
-9.0	12.0					CHOC, very soft, black, with peat	65	S3				437	365	395		Organic content = 22.3%
-11.0	14.0					CHOC, very soft, dark gray, with peat	80	S4						249		Organic content = 17.6%
						Pt, very soft, black		S5				761	551	555		Organic content = 48.27%; Fiber content = 37.24%

0.0 2.5 5.0 7.5 10.0 12.5 15.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET / OF
N/A	2 / 4 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES
N 408967.19 E 3705245.15

ELEVATION TOP OF BORING
3.0

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
-13.0	16.0					Pt, very soft, black *(continued)*										
-15.0	18.0					CH4, very soft, gray, with organics	80	S6						159		
-17.0	20.0					CH4, very soft, gray, with organics	95	S7				95	66	99		C_v = 0.007 ft^2/day Organic content = 3.1%
-19.0	22.0					CH4, very soft, gray, with silt pockets, and organics	95	S8				104	74	59		
-21.0	24.0					CH4, very soft, gray	95	S9				97	67	87		
-26.0	29.0					CH4, very soft, gray, with silt pockets	95	S10						100		
						CH3, very soft, gray, with silt pockets	80	S11				55	31	98		

15.0 17.5 20.0 22.5 25.0 27.5 30.0 32.5

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A

SHEET 3 OF 4 SHEETS

PROJECT: Mid Barataria Diversion (BA-153)

COORDINATE SYSTEM: SPCS83 | HORIZONTAL: NAD83 | VERTICAL: NAVD88

LOCATION COORDINATES: N 408967.19 E 3705245.15

ELEVATION TOP OF BORING: 3.0

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
-31.0	34.0					CH3, very soft, gray, with silt pockets *(continued)*										
						CH4, very soft, gray	100	S12						136		
-36.0	39.0															
						CH4, very soft, gray, with shell fragments		S13								
-41.0	44.0															
						CH4, very soft, gray, with silt pockets	100	S14						72		
-46.0	49.0															
						CH4, very soft, gray, with silt pockets	95	S15						71		

35.0 37.5 40.0 42.5 45.0 47.5 50.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET
N/A	4 OF 4 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
N 408967.19 E 3705245.15	3.0

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CH4, very soft, gray, with silt pockets *(continued)*										
-51.0	54.0					CH4, very soft, gray, trace organics, and, with silt pockets	80	S16				60	36	131		
-56.0	59.0					CH4, very soft, gray, with shell fragments, with silt pockets	100	S17						79		
-61.0	64.0					CH4, very soft, gray, with silt pockets		S18						67		
-63.0	66.0															

52.5
55.0
57.5
60.0
62.5
65.0

DRILLING LOG

DIVISION: N/A	INSTALLATION: N/A	SHEET 1 OF 4 SHEETS	
1. PROJECT: Mid Barataria Diversion (BA-153)	9. COORDINATE SYSTEM: SPCS83	HORIZONTAL: NAD83	VERTICAL: NAVD88
	10. SIZE AND TYPE OF BIT: 140lb hammer, 30-inch drop		
2. HOLE NUMBER: M-7 / LOCATION COORDINATES: N 412368.94 E 3701306.41	11. MANUFACTURER'S DESIGNATION OF DRILL: Marsh Buggy, Serial # MBD001, Built 2012		
3. DRILLING AGENCY: Specialized Environmental Resources, LLC	12. TOTAL SAMPLES	DISTURBED: 0	UNDISTURBED: 18
4. NAME OF DRILLER: Terry Jeansonne	13. TOTAL NUMBER CORE BOXES: 0		
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED / DEG FROM VERTICAL: --- / BEARING: N/A	14. ELEVATION GROUND WATER		
	15. DATE BORING	STARTED: 6/3/13	COMPLETED: 6/3/13
6. THICKNESS OF OVERBURDEN: 66.0	16. ELEVATION TOP OF BORING: 3.7		
7. DEPTH DRILLED INTO ROCK: 0.0	17. TOTAL CORE RECOVERY FOR BORING: N/A		
8. TOTAL DEPTH OF BORING: 66.0	18. SIGNATURE AND TITLE OF INSPECTOR: Donnie Smith		

ELEV	DEPTH	Blows/0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						Top of marsh buggy deck at EL +3.7 feet										
						Top of water surface at approximately EL +1.7 feet										
-2.3	6.0					Top of mudline at EL -2.3 feet										
						Pt, very soft, dark gray	84	S1				591	380	531		Fiber content = 9.79%
-4.3	8.0															
						CHOC, very soft, dark gray	70	S2				267	170	298		Organic content = 33.50%; Fiber content = 4.96%
-6.3	10.0															
						CHOB, very soft, dark gray	57	S3						164		Organic content = 8.54%
-8.3	12.0															
						CHOB, very soft, dark gray	56	S4				169	93	183		Organic content = 8.06%
-10.3	14.0															
						CHOB, very soft, dark gray	79	S5						175		

0.0 2.5 5.0 7.5 10.0 12.5 15.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A

SHEET 2 OF 4 SHEETS

PROJECT: Mid Barataria Diversion (BA-153)

COORDINATE SYSTEM: SPCS83 | HORIZONTAL: NAD83 | VERTICAL: NAVD88

LOCATION COORDINATES: N 412368.94 E 3701306.41

ELEVATION TOP OF BORING: 3.7

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CHOB, very soft, dark gray *(continued)*										
-12.3	16.0					Pt, very soft, dark gray	66	S6				746	368	722		Organic content = 36.94%
-14.3	18.0					CH4, very soft, gray, with organics	58	S7				75	46	106		C_v = 0.087 ft^2/day Organic content = 6.10%; Fiber content = 54.96%
-16.3	20.0					CL4, very soft, gray, with organics	85	S8				35	16	35		
-18.3	22.0					CL4, very soft, gray	85	S9				33	12	31		With 3-inch sand layer
-20.3	24.0					CH3, very soft, gray	88	S10						92		
-25.3	29.0					CH4, very soft, gray, with organics	98	S11				81	49	79		

15.0 17.5 20.0 22.5 25.0 27.5 30.0 32.5

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A

SHEET 3 OF 4 SHEETS

PROJECT: Mid Barataria Diversion (BA-153)

COORDINATE SYSTEM: SPCS83 | HORIZONTAL: NAD83 | VERTICAL: NAVD88

LOCATION COORDINATES: N 412368.94 E 3701306.41

ELEVATION TOP OF BORING: 3.7

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
-30.3	34.0					CH4, very soft, gray, with organics *(continued)*										
						CH4, very soft, gray, with organics	79	S12				108	77	119		C_v = 0.027 ft^2/day
-35.3	39.0					CH2, very soft, gray, with organics	88	S13						71		
-40.3	44.0					CH2, very soft, gray, with silt strata or lenses	79	S14				56	35	49		
-45.3	49.0					CH4, very soft, gray	95	S15						116		With 2-inch silt layer

35.0 37.5 40.0 42.5 45.0 47.5 50.0

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET
N/A	4 OF 4 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
N 412368.94 E 3701306.41	3.7

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CH4, very soft, gray *(continued)*										
-50.3	54.0					CH3, very soft, gray, with shells, with sand strata and lenses	79	S16						61		
-55.3	59.0					CH3, very soft, gray	75	S17				64	45	42		With 2-inch silt layer C_v = 0.015 ft^2/day
-60.3	64.0					CH3, very soft, gray	92	S18						68		
-62.3	66.0															

52.5
55.0
57.5
60.0
62.5
65.0

DRILLING LOG

DIVISION: N/A	INSTALLATION: N/A	SHEET 1 OF 4 SHEETS	
1. PROJECT: Mid Barataria Diversion (BA-153)	9. COORDINATE SYSTEM: SPCS83	HORIZONTAL: NAD83	VERTICAL: NAVD88
	10. SIZE AND TYPE OF BIT: 140lb hammer, 30-inch drop		
2. HOLE NUMBER: M-8 / LOCATION COORDINATES: N 416275.15 E 3698723.06	11. MANUFACTURER'S DESIGNATION OF DRILL: Marsh Buggy, Serial # MBD001, Built 2012		
3. DRILLING AGENCY: Specialized Environmental Resources, LLC	12. TOTAL SAMPLES	DISTURBED: 1	UNDISTURBED: 17
4. NAME OF DRILLER: Terry Jeansonne	13. TOTAL NUMBER CORE BOXES: 0		
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED / DEG FROM VERTICAL: --- / BEARING: N/A	14. ELEVATION GROUND WATER		
	15. DATE BORING	STARTED: 6/3/13	COMPLETED: 6/3/13
6. THICKNESS OF OVERBURDEN: 66.0	16. ELEVATION TOP OF BORING: 4.2		
7. DEPTH DRILLED INTO ROCK: 0.0	17. TOTAL CORE RECOVERY FOR BORING: N/A		
8. TOTAL DEPTH OF BORING: 66.0	18. SIGNATURE AND TITLE OF INSPECTOR: Donnie Smith		

ELEV	DEPTH	Blows/0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						Top of marsh buggy deck at EL +4.2										
						Top of water surface at approximately EL +2 feet										
-1.8	6.0					Top of mudline at EL -1.8 feet										
						Pt, very soft, black	59	S1						669		Organic content = 29.95%; Fiber content = 54.96%
-3.8	8.0															
						Pt, very soft, gray	56	S2				574	342	453		Fiber content = 17.65%
-5.8	10.0															
						CHOC, very soft, dark gray	66	S3				274	218	236		C_v = 0.018 ft^2/day; Organic content = 12.51%
-7.8	12.0															
						CHOB, very soft, dark gray	66	S4						195		Organic content = 12.09%
-9.8	14.0															
						CHOB, very soft, dark gray	94	S5				268	181	297		

0.0 2.5 5.0 7.5 10.0 12.5 15.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A

SHEET 2 OF 4 SHEETS

PROJECT: Mid Barataria Diversion (BA-153)

COORDINATE SYSTEM: SPCS83 | HORIZONTAL: NAD83 | VERTICAL: NAVD88

LOCATION COORDINATES: N 416275.15 E 3698723.06

ELEVATION TOP OF BORING: 4.2

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CHOB, very soft, dark gray *(continued)*										
-11.8	16.0					Pt, very soft, dark gray	75	S6						458		
-13.8	18.0					Pt, very soft, dark gray	40	S7				360	284	136		With 3-inch clay layer Fiber content = 12.80%
-15.8	20.0					CH4, very soft, gray, with organics	75	S8						81		Organic content = 2.66%
-17.8	22.0					CH4, very soft, gray	73	S9				75	47	64		
-19.8	24.0					CH4, very soft, gray	80	S10						79		
-24.8	29.0					CH4, very soft, gray, trace silt, and organics	60	S11						80		

15.0 17.5 20.0 22.5 25.0 27.5 30.0 32.5

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A		SHEET 3 OF 4 SHEETS
PROJECT: Mid Barataria Diversion (BA-153)	COORDINATE SYSTEM: SPCS83 / HORIZONTAL: NAD83 / VERTICAL: NAVD88	
LOCATION COORDINATES: N 416275.15 E 3698723.06	ELEVATION TOP OF BORING: 4.2	

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
-29.8	34.0					CH4, very soft, gray, trace silt, and organics *(continued)*										
						CH4, very soft, gray, with organics	94	S12				101	72	40		With 2-inch sand layer
-34.8	39.0					ML, clayey, medium dense, gray, with sand	75	S13				25	6	30		
-39.8	44.0					SM, medium dense, gray, with clay seams and pockets	75	S14						30		
-44.8	49.0					SC, medium dense, gray	84	S15						30		C_v = 0.010 ft^2/day

35.0 37.5 40.0 42.5 45.0 47.5 50.0

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET
N/A	4 OF 4 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
N 416275.15 E 3698723.06	4.2

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						SC, medium dense, gray *(continued)*										
-51.8	56.0															
		11				SC, medium dense, gray		S16								
		8														
		10														
			18	17												
-54.8	59.0															
						CH2, soft, gray	75	S17				59	38	43		
-59.8	64.0															
						CH3, medium, gray	92	S18						65		
-61.8	66.0															

52.5 55.0 57.5 60.0 62.5 65.0

DRILLING LOG

DIVISION: N/A	INSTALLATION: N/A	SHEET 1 OF 5 SHEETS	
1. PROJECT: Mid Barataria Diversion (BA-153)	9. COORDINATE SYSTEM: SPCS83	HORIZONTAL: NAD83	VERTICAL: NAVD88
	10. SIZE AND TYPE OF BIT: 140lb hammer, 30-inch drop		
2. HOLE NUMBER: M-9 / LOCATION COORDINATES: N 420217.86 E 3704783.23	11. MANUFACTURER'S DESIGNATION OF DRILL: Marsh Buggy, Serial # MBD001, Built 2012		
3. DRILLING AGENCY: Specialized Environmental Resources, LLC	12. TOTAL SAMPLES	DISTURBED: 1	UNDISTURBED: 22
4. NAME OF DRILLER: Terry Jeansonne	13. TOTAL NUMBER CORE BOXES: 0		
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED / DEG FROM VERTICAL: --- / BEARING: N/A	14. ELEVATION GROUND WATER		
	15. DATE BORING	STARTED: 6/1/13	COMPLETED: 6/1/13
6. THICKNESS OF OVERBURDEN: 85.0	16. ELEVATION TOP OF BORING: 3.9		
7. DEPTH DRILLED INTO ROCK: 0.0	17. TOTAL CORE RECOVERY FOR BORING: N/A		
8. TOTAL DEPTH OF BORING: 85.0	18. SIGNATURE AND TITLE OF INSPECTOR: Donnie Smith		

ELEV	DEPTH	Blows/0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						Top of marsh buggy deck at EL +3.9 feet										
						Top of water surface at approximately EL +1.9 feet										
-1.1	5.0					Top of mudline at EL -1.1 feet										
						CHOB, very soft, gray	55	S1				173	81	445		Organic content = 18.49%; Fiber content = 15.46%
-3.1	7.0															
						Pt, very soft, black	100	S2				479	309	389		C_v = 0.002 ft^2/day Organic content = 26.20%
-5.1	9.0															
						CHOC, very soft, dark gray	70	S3				226	146	187		Organic content = 4.91%; Fiber content = 16.08%
-7.1	11.0															
						CH4, very soft, dark gray	70	S4				103	64	88		With 3-inch sand layer and wood
-9.1	13.0															
						CL4, very soft, gray	70	S5						42		
-11.1	15.0															

0.0 2.5 5.0 7.5 10.0 12.5 15.0

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET
N/A	2 OF 5 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES
N 420217.86 E 3704783.23

ELEVATION TOP OF BORING
3.9

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CL4, very soft, gray	70	S6						58		With 1-inch sand layer
-13.1	17.0															
						CH3, very soft, gray, with sand strata and lenses	70	S7				77	48	85		
-15.1	19.0															
						CHOA, soft, gray	70	S8				129	77	178		With 4-inch peat layer Organic content = 18.69%
-17.1	21.0															
						CH3, very soft, gray, with silt strata or lenses	79	S9				72	48	73		
-19.1	23.0															
						CH3, very soft, gray, with organics	80	S10						81		
-24.1	28.0															
						CH3, very soft, gray	67	S11						80		
-29.1	33.0															

15.0 17.5 20.0 22.5 25.0 27.5 30.0 32.5

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET
N/A	3 OF 5 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES
N 420217.86 E 3704783.23

ELEVATION TOP OF BORING
3.9

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CH4, very soft, gray *(continued)*	80	S12				79	52	83		C_v = 0.010 ft^2/day
-34.1	38.0					CH4, very soft, gray, with organics	34	S13						82		And 3-inch peat layer
-39.1	43.0					CH4, very soft, gray, with organics	95	S14						67		
-44.1	48.0					CH4, very soft, gray, with silt strata or lenses	72	S15						87		

35.0
37.5
40.0
42.5
45.0
47.5
50.0

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET
N/A	4 OF 5 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
N 420217.86 E 3704783.23	3.9

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CH4, very soft, gray, with silt strata or lenses *(continued)*										
-49.1	53.0					CH4, very soft, gray, with silt lenses	73	S16				77	53	70		
-54.1	58.0					CH4, very soft, gray, with silt strata or lenses	75	S17						91		
-59.1	63.0					CH4, very soft, gray, with silt lenses	53	S18						63		And 1-inch sand layer
-64.1	68.0					CH4, soft, gray, with silt lenses	79	S19				85	59	60		

52.5 55.0 57.5 60.0 62.5 65.0 67.5

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET 5 OF 5 SHEETS
N/A	

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
N 420217.86 E 3704783.23	3.9

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CH4, soft, gray, with silt lenses *(continued)*										
-69.1	73.0					CH4, very soft, gray, with silt lenses								62		With 1-inch silt layer
-74.1	78.0					CH2, soft, gray, with silt strata or lenses	80	S20						27		With 3-inch sand layer
-79.1	83.0					CH2, very soft, gray, with silt strata or lenses	79	S21						62		
-81.1	85.0															

70.0
72.5
75.0
77.5
80.0
82.5
85.0

DRILLING LOG

DIVISION: N/A	INSTALLATION: N/A	SHEET 1 OF 5 SHEETS	
1. PROJECT: Mid Barataria Diversion (BA-153)	9. COORDINATE SYSTEM: SPCS83	HORIZONTAL: NAD83	VERTICAL: NAVD88
	10. SIZE AND TYPE OF BIT: 140lb hammer, 30-inch drop		
2. HOLE NUMBER: M-10 / LOCATION COORDINATES: N 418806.46 E 3706525.47	11. MANUFACTURER'S DESIGNATION OF DRILL: Marsh Buggy, Serial # MBD001, Built 2012		
3. DRILLING AGENCY: Specialized Environmental Resources, LLC	12. TOTAL SAMPLES	DISTURBED: 0	UNDISTURBED: 22
4. NAME OF DRILLER: Terry Jeansonne	13. TOTAL NUMBER CORE BOXES: 0		
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED / DEG FROM VERTICAL: --- / BEARING: N/A	14. ELEVATION GROUND WATER		
	15. DATE BORING	STARTED: 5/31/13	COMPLETED: 5/31/13
6. THICKNESS OF OVERBURDEN: 85.0	16. ELEVATION TOP OF BORING: 3.8		
7. DEPTH DRILLED INTO ROCK: 0.0	17. TOTAL CORE RECOVERY FOR BORING: N/A		
8. TOTAL DEPTH OF BORING: 85.0	18. SIGNATURE AND TITLE OF INSPECTOR: Donnie Smith		

ELEV	DEPTH	Blows/0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						Top of marsh buggy deck at EL +3.8 feet										
						Top of water surface at approximately EL +1.8 feet										
-1.2	5.0					Top of mudline at EL -1.2 feet										
						CHOC, very soft, dark gray	19	S1				244	194	282		Organic content = 20.21%; Fiber content = 23.64%
-3.2	7.0															
						Pt, very soft, black	48	S2				513	419	496		Fiber content = 10.93%
-5.2	9.0															
						CHOA, very soft, gray	46	S3				139	84	164		Organic content = 4.94%; Fiber content = 4.52%
-7.2	11.0															
						CL4, soft, gray	42	S4				38	17	41		C_v = 0.076 ft^2/day
-9.2	13.0															
						CL6, very soft, brown & gray, with sand lenses	50	S5				41	17	96		
-11.2	15.0															

0.0 2.5 5.0 7.5 10.0 12.5 15.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A

SHEET 2 OF 5 SHEETS

PROJECT: Mid Barataria Diversion (BA-153)

COORDINATE SYSTEM: SPCS83 | HORIZONTAL: NAD83 | VERTICAL: NAVD88

LOCATION COORDINATES: N 418806.46 E 3706525.47

ELEVATION TOP OF BORING: 3.8

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
-13.2	17.0					CL6, very soft, gray	44	S6						84		With 3-inch shell and sand layer
-15.2	19.0					CL6, very soft, gray	35	S7				46	22	44		Organic content = 1.19%
-17.2	21.0					CL4, soft, gray, with shell fragments	48	S8						43		
-19.2	23.0					CL6, very soft, gray	42	S9						69		With 1-inch sand layer
-24.2	28.0					CL4, very soft, gray, with sand lenses	92	S10				43	18	45		
-29.2	33.0					CL6, very soft, gray	44	S11						57		

15.0 17.5 20.0 22.5 25.0 27.5 30.0 32.5

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A

SHEET 3 OF 5 SHEETS

PROJECT: Mid Barataria Diversion (BA-153)

COORDINATE SYSTEM: SPCS83 | HORIZONTAL: NAD83 | VERTICAL: NAVD88

LOCATION COORDINATES: N 418806.46 E 3706525.47

ELEVATION TOP OF BORING: 3.8

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CL6, very soft, gray *(continued)*	75	S12						72		
-34.2	38.0															
						CH4, very soft, gray	96	S13				77	47	66		
-39.2	43.0															
						CH3, very soft, gray	34	S14				67	39	97		C_v = 0.006 ft^2/day
-44.2	48.0															
						CL6, very soft, gray, with shell fragments	40	S15						65		And 5-inch sand layer

35.0 37.5 40.0 42.5 45.0 47.5 50.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET
N/A	4 OF 5 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
N 418806.46 E 3706525.47	3.8

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CL6, very soft, gray, with shell fragments *(continued)*										
-49.2	53.0					CL6, very soft, gray, with shell fragments	63	S16								With 4-inch sand layer
-54.2	58.0					CH4, very soft, gray	49	S17				96	61	64		With ½-inch sand layer
-59.2	63.0					CH4, soft, gray, with shell fragments	45	S18						67		
-64.2	68.0					CH4, medium, gray	52	S19						55		

52.5
55.0
57.5
60.0
62.5
65.0
67.5

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A

SHEET 5 OF 5 SHEETS

PROJECT: Mid Barataria Diversion (BA-153)

COORDINATE SYSTEM: SPCS83 | HORIZONTAL: NAD83 | VERTICAL: NAVD88

LOCATION COORDINATES: N 418806.46 E 3706525.47

ELEVATION TOP OF BORING: 3.8

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CH4, medium, gray *(continued)*										
-69.2	73.0					CH4, very soft, gray	48	S20				88	59	55		C_v = 0.008 ft^2/day
-74.2	78.0					CH3, medium, gray, with silt lenses	56	S21						60		
-79.2	83.0					CH3, soft, gray, with silt lenses	45	S22						59		
-81.2	85.0															

70.0 72.5 75.0 77.5 80.0 82.5 85.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG

DIVISION: N/A	INSTALLATION: N/A	SHEET 1 OF 4 SHEETS	
1. PROJECT: Mid Barataria Diversion (BA-153)	9. COORDINATE SYSTEM: SPCS83	HORIZONTAL: NAD83	VERTICAL: NAVD88
	10. SIZE AND TYPE OF BIT: 140lb hammer, 30-inch drop		
2. HOLE NUMBER: M-11 / LOCATION COORDINATES: N 417024.79 E 3705493.81	11. MANUFACTURER'S DESIGNATION OF DRILL: Marsh Buggy, Serial # MBD001, Built 2012		
3. DRILLING AGENCY: Specialized Environmental Resources, LLC	12. TOTAL SAMPLES	DISTURBED: 0	UNDISTURBED: 18
4. NAME OF DRILLER: Terry Jeansonne	13. TOTAL NUMBER CORE BOXES: 0		
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED / DEG FROM VERTICAL: --- / BEARING: N/A	14. ELEVATION GROUND WATER		
	15. DATE BORING	STARTED: 5/28/13	COMPLETED: 5/28/13
6. THICKNESS OF OVERBURDEN: 65.0	16. ELEVATION TOP OF BORING: 3.1		
7. DEPTH DRILLED INTO ROCK: 0.0	17. TOTAL CORE RECOVERY FOR BORING: N/A		
8. TOTAL DEPTH OF BORING: 65.0	18. SIGNATURE AND TITLE OF INSPECTOR: Donnie Smith		

ELEV	DEPTH	Blows/0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						Top of marsh buggy deck at EL +3.1 feet										
						Top of water surface at approximately EL +1.1 feet										
-1.9	5.0					Top of mudline at EL -1.9 feet										
						Pt, very soft, dark gray	63	S1				517	375	279		C_v = 0.021 ft^2/day
-3.9	7.0															
						CHOC, very soft, dark gray	66	S2				253	189	228		
-5.9	9.0															
						CHOC, very soft, gray	66	S3						205		Organic content = 11.67%
-7.9	11.0															
						Pt, very soft, dark gray	92	S4				393	229	422		Organic content = 23.20%; Fiber content = 21.95%
-9.9	13.0															
						CHOC, very soft, dark gray	67	S5						253		
-11.9	15.0															

0.0 2.5 5.0 7.5 10.0 12.5 15.0

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET / OF
N/A	2 OF 4 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES
N 417024.79 E 3705493.81

ELEVATION TOP OF BORING
3.1

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
-13.9	17.0					Pt, very soft, dark gray	88	S6				494	273	635		Organic content = 21.60%
-15.9	19.0					CL4, very soft, gray, with organics	73	S7				40	19	91		Organic content = 2.55%
-17.9	21.0					CH3, very soft, gray	84	S8						96		
-19.9	23.0					CH2, very soft, gray, with shell fragments	79	S9						149		
-24.9	28.0					CH4, very soft, gray, with sand lenses, with shells	63	S10				84	58	110		C_v = 0.22 ft^2/day Organic content = 2.55%
-29.9	33.0					CH4, very soft, gray	59	S11				83	51	83		

15.0 17.5 20.0 22.5 25.0 27.5 30.0 32.5

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A

SHEET 3 OF 4 SHEETS

PROJECT: Mid Barataria Diversion (BA-153)

COORDINATE SYSTEM: SPCS83 | HORIZONTAL: NAD83 | VERTICAL: NAVD88

LOCATION COORDINATES: N 417024.79 E 3705493.81

ELEVATION TOP OF BORING: 3.1

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CH2, very soft, gray *(continued)*	59	S12						88		
-34.9	38.0					CH2, medium, tan & gray	95	S13						45		With 5-inch clayey sand layer
-36.4	39.5					SC, loose, gray & tan										
-36.9	40.0					CH2, very soft, gray										With 2-sand layer and organics
							55	S14						89		
-44.9	48.0					CH4, very soft, gray, with sand strata and lenses	98	S15				87	51	79		

35.0 37.5 40.0 42.5 45.0 47.5 50.0

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET
N/A	4 OF 4 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
N 417024.79 E 3705493.81	3.1

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
-49.9	53.0					CH4, very soft, gray, with sand strata and lenses *(continued)*										
-54.9	58.0					CH3, soft, gray	63	S16						65		
-59.9	63.0					CL4, very soft, gray	63	S17				33	13	67		With 3-inch clayey sand layer
-61.9	65.0					CH2, very soft, gray	92	S18						38		

52.5 55.0 57.5 60.0 62.5 65.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG

DIVISION: N/A	INSTALLATION: N/A	SHEET 1 OF 5 SHEETS	
1. PROJECT: Mid Barataria Diversion (BA-153)	9. COORDINATE SYSTEM: SPCS83	HORIZONTAL: NAD83	VERTICAL: NAVD88
	10. SIZE AND TYPE OF BIT: 140lb hammer, 30-inch drop		
2. HOLE NUMBER: M-12	LOCATION COORDINATES: N 417422.43 E 3708225.45	11. MANUFACTURER'S DESIGNATION OF DRILL: Marsh Buggy, Serial # MBD001, Built 2012	
3. DRILLING AGENCY: Specialized Environmental Resources, LLC		12. TOTAL SAMPLES	DISTURBED: 0 / UNDISTURBED: 22
4. NAME OF DRILLER: Terry Jeansonne		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG FROM VERTICAL: ---	BEARING: N/A	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 5/30/13 / COMPLETED: 5/30/13
6. THICKNESS OF OVERBURDEN: 85.0		16. ELEVATION TOP OF BORING: 3.3	
7. DEPTH DRILLED INTO ROCK: 0.0		17. TOTAL CORE RECOVERY FOR BORING: N/A	
8. TOTAL DEPTH OF BORING: 85.0		18. SIGNATURE AND TITLE OF INSPECTOR: Donnie Smith	

ELEV	DEPTH	Blows/0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						Top of marsh buggy deck at EL +3.3 feet										
-1.7	5.0					Top of water surface at approximately EL +1.3 feet Top of mudline at EL -1.7 feet										
-3.7	7.0					CHOC, very soft, dark gray	75	S1				345	272	324		
-5.7	9.0					Pt, very soft, brown	84	S2				397	330	542		C_v = 0.003 ft^2/day Organic content = 17.89%; Fiber content = 17.87%
-7.7	11.0					CHOC, very soft, brown	70	S3				310	237	235		
-9.7	13.0					CHOB, very soft, dark gray	60	S4				162	113	216		Organic content = 10%; Fiber content = 2.69%
-11.7	15.0					CHOB, very soft, dark gray	46	S5				169	133	81		Organic content = 3.34%

0.0 2.5 5.0 7.5 10.0 12.5 15.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A

SHEET 2 OF 5 SHEETS

PROJECT: Mid Barataria Diversion (BA-153)

COORDINATE SYSTEM: SPCS83 | HORIZONTAL: NAD83 | VERTICAL: NAVD88

LOCATION COORDINATES: N 417422.43 E 3708225.45

ELEVATION TOP OF BORING: 3.3

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
-13.7	17.0					CH4, very soft, gray, with shell fragments	75	S6						66		
-15.7	19.0					Pt, very soft, black	95	S7				425	197	61		
-17.7	21.0					CL6, very soft, gray	70	S8						87		with 6-inch peat layer
-19.7	23.0					CL6, very soft, gray	95	S9						123		with 5-inch organic clay layer
-24.7	28.0					CL4, soft, gray	95	S10				30	9	49		with 6-inch sand layer and shell fragments
-29.7	33.0					CL6, very soft, gray, with silt lenses	79	S11						49		
							29	S12								

15.0 17.5 20.0 22.5 25.0 27.5 30.0 32.5

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET / OF
N/A	3 OF 5 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES
N 417422.43 E 3708225.45

ELEVATION TOP OF BORING
3.3

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CL6, soft, gray, with silt strata or lenses *(continued)*						42	22	49		with 6-inch silt layer C_v = 0.046 ft^2/day
-34.7	38.0					CH3, very soft, gray	95	S13				76	46	63		
-39.7	43.0					CH2, very soft, gray	92	S14						38		
-44.7	48.0					SC, loose, gray	63	S15						27		

35.0
37.5
40.0
42.5
45.0
47.5
50.0

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A

SHEET 4 OF 5 SHEETS

PROJECT: Mid Barataria Diversion (BA-153)

COORDINATE SYSTEM: SPCS83 | HORIZONTAL: NAD83 | VERTICAL: NAVD88

LOCATION COORDINATES: N 417422.43 E 3708225.45

ELEVATION TOP OF BORING: 3.3

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						SC, loose, gray *(continued)*										
-49.7	53.0					CH3, soft, gray	88	S16				64	44	58		
-54.7	58.0					CL6, very soft, gray, with silt lenses	54	S17						47		
-59.7	63.0					CH3, soft, gray	88	S18				76	49	62		
-64.7	68.0					CH3, very soft, gray	92	S19						64		

52.5 55.0 57.5 60.0 62.5 65.0 67.5

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET
N/A	5 OF 5 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
N 417422.43 E 3708225.45	3.3

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CH3, very soft, gray *(continued)*										
-69.7	73.0					CH3, soft, gray, with silt lenses	84	S20						50		
-74.7	78.0					CH3, very soft, gray	38	S21						65		
-79.7	83.0					CH3, very soft, gray, with silt strata or lenses	88	S22						66		
-81.7	85.0															

70.0
72.5
75.0
77.5
80.0
82.5
85.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG

DIVISION: N/A	INSTALLATION: N/A	SHEET 1 OF 5 SHEETS	
1. PROJECT: Mid Barataria Diversion (BA-153)	9. COORDINATE SYSTEM: SPCS83	HORIZONTAL: NAD83	VERTICAL: NAVD88
	10. SIZE AND TYPE OF BIT: 140lb hammer, 30-inch drop		
2. HOLE NUMBER: M-13 / LOCATION COORDINATES: N 416148.71 E 3709771.96	11. MANUFACTURER'S DESIGNATION OF DRILL: Marsh Buggy, Serial # MBD001, Built 2012		
3. DRILLING AGENCY: GeoEngineers, Inc.	12. TOTAL SAMPLES	DISTURBED: 0	UNDISTURBED: 22
4. NAME OF DRILLER: Terry Jeansonne	13. TOTAL NUMBER CORE BOXES: 0		
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED / DEG FROM VERTICAL: --- / BEARING: N/A	14. ELEVATION GROUND WATER		
	15. DATE BORING	STARTED: 5/29/13	COMPLETED: 5/29/13
6. THICKNESS OF OVERBURDEN: 85.0	16. ELEVATION TOP OF BORING: 3.5		
7. DEPTH DRILLED INTO ROCK: 0.0	17. TOTAL CORE RECOVERY FOR BORING: N/A		
8. TOTAL DEPTH OF BORING: 85.0	18. SIGNATURE AND TITLE OF INSPECTOR: Donnie Smith		

ELEV	DEPTH	Blows/0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						Top of marsh buggy deck at EL +3.5 feet										
						Top of water surface at approximately EL +1.5 feet										
-1.5	5.0					Top of mudline at EL -1.5 feet										
						Pt, very soft, black	21	S1				488	413	458		Organic content = 11.92%; Fiber content = 40.18%
-3.5	7.0					Pt, very soft, brown & black	44	S2						448		With 2-inch clay layer and 5-inch clay layer. Organic content = 17.84%; Fiber content = 13.53%
-5.5	9.0					CHOC, very soft, brown & black	48	S3				260	209	185		With 2-inch clay layer. Organic content = 4.75%; Fiber content = 13.43%
-7.5	11.0					CHOA, very soft, gray	46	S4				151	112	168		
-9.5	13.0					CH4, very soft, gray	48	S5						123		Organic content = 4.85%; Fiber content = 21.95%
-11.5	15.0															

0.0 2.5 5.0 7.5 10.0 12.5 15.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A		SHEET 2 OF 5 SHEETS
PROJECT: Mid Barataria Diversion (BA-153)	COORDINATE SYSTEM: SPCS83 / HORIZONTAL: NAD83 / VERTICAL: NAVD88	
LOCATION COORDINATES: N 416148.71 E 3709771.96	ELEVATION TOP OF BORING: 3.5	

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CHOA, very soft, dark gray	50	S6						290		
-13.5	17.0															
						CH4, very soft, gray, with organics	46	S7				89	65	74		C_v = 0.058 ft^2/day
-15.5	19.0															
						CH4, very soft, tan & gray	48	S8						94		
-17.5	21.0															
						SM, medium dense, gray	92	S9						53		
-19.5	23.0															
						SC, loose, gray, with silt	42	S10				27	7	48		
-24.5	28.0															
						CL4, sandy, very soft, gray, with silt lenses	70	S11						61		
-29.5	33.0															

15.0 17.5 20.0 22.5 25.0 27.5 30.0 32.5

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A

SHEET 3 OF 5 SHEETS

PROJECT: Mid Barataria Diversion (BA-153)

COORDINATE SYSTEM: SPCS83 | HORIZONTAL: NAD83 | VERTICAL: NAVD88

LOCATION COORDINATES: N 416148.71 E 3709771.96

ELEVATION TOP OF BORING: 3.5

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CH3, very soft, gray, with shell fragments *(continued)*	75	S12				64	41	75		And 4-inch silt layer
-34.5	38.0					CL6, very soft, gray, with shell fragments	31	S13						52		And 2-inch silt layer
-39.5	43.0					CL6, very soft, gray, with silt lenses, and, with shell fragments	75	S14						81		
-44.5	48.0					CH4, very soft, gray	88	S15				82	59	67		With 1-inch sand layer C_v = 0.047 ft^2/day

35.0 37.5 40.0 42.5 45.0 47.5 50.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A

SHEET 4 OF 5 SHEETS

PROJECT: Mid Barataria Diversion (BA-153)

COORDINATE SYSTEM: SPCS83 | HORIZONTAL: NAD83 | VERTICAL: NAVD88

LOCATION COORDINATES: N 416148.71 E 3709771.96

ELEVATION TOP OF BORING: 3.5

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CH4, very soft, gray *(continued)*										
-49.5	53.0					CH4, very soft, gray	75	S16				84	57	73		With 3-inch sand layer
-54.5	58.0					CH2, very soft, gray, with silt lenses	88	S17						70		With 2-inch sand layer
-59.5	63.0					CH3, very soft, gray, with shell fragments	75	S18						55		And 2-inch sand layer
-64.5	68.0					CH3, soft, gray, with silt lenses	57	S19				79	53	53		

52.5 55.0 57.5 60.0 62.5 65.0 67.5

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET
N/A	5 OF 5 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
N 416148.71 E 3709771.96	3.5

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CH3, soft, gray, with silt lenses *(continued)*										
-69.5	73.0					CH3, very soft, gray	88	S20						54		
-74.5	78.0					CH3, soft, gray	100	S21						63		
-79.5	83.0					CH3, soft, gray	92	S22						54		
-81.5	85.0															

70.0
72.5
75.0
77.5
80.0
82.5
85.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG

DIVISION: N/A	INSTALLATION: N/A	SHEET 1 OF 5 SHEETS	
1. PROJECT: Mid Barataria Diversion (BA-153)	9. COORDINATE SYSTEM: SPCS83	HORIZONTAL: NAD83	VERTICAL: NAVD88
	10. SIZE AND TYPE OF BIT: 140lb hammer, 30-inch drop		
2. HOLE NUMBER: M-14 — LOCATION COORDINATES: N 414356.45 E 3712010.97	11. MANUFACTURER'S DESIGNATION OF DRILL: Marsh Buggy, Serial # MBD001, Built 2012		
3. DRILLING AGENCY: Specialized Environmental Resources, LLC	12. TOTAL SAMPLES	DISTURBED: 1	UNDISTURBED: 26
4. NAME OF DRILLER: Terry Jeansonne	13. TOTAL NUMBER CORE BOXES: 0		
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED — DEG FROM VERTICAL: --- — BEARING: N/A	14. ELEVATION GROUND WATER		
	15. DATE BORING	STARTED: 5/22/13	COMPLETED: 5/23/13
6. THICKNESS OF OVERBURDEN: 83.0	16. ELEVATION TOP OF BORING: 2.5		
7. DEPTH DRILLED INTO ROCK: 0.0	17. TOTAL CORE RECOVERY FOR BORING: N/A		
8. TOTAL DEPTH OF BORING: 83.0	18. SIGNATURE AND TITLE OF INSPECTOR: Donnie Smith		

ELEV	DEPTH	Blows/0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						Top of marsh buggy deck at EL +2.5 feet										
-0.5	3.0					Top of water surface at approximately EL +0.5 feet Top of mudline at EL -0.5 feet										
-2.5	5.0					Pt, very soft, black & dark gray	63	S1						673		Organic content = 26%; Fiber content = 37.46%
-4.5	7.0					Pt, very soft, dark gray, trace organics and clay	63	S2				505	378	567		C_v = 0.026 ft^2/day Organic content = 27.3%
-6.5	9.0					CHOC, very soft, dark gray, with organics	63	S3						266		Organic content = 17.7%
-8.5	11.0					CHOB, very soft, gray	75	S4						218		
-10.5	13.0					CHOC, very soft, gray, with organics	75	S5				206	149	142		
-11.5	14.0					CH4, very soft, gray, with silt strata or lenses	63	S6								
-12.5	15.0					ML, very loose, gray, with clay strata or lenses						32	2	37		

0.0 2.5 5.0 7.5 10.0 12.5 15.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET / OF
N/A	2 OF 5 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
N 414356.45 E 3712010.97	2.5

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
-13.5	16.0					CL4, very soft, gray, with silt strata or lenses	63	S7				42	17	40		
-14.5	17.0					CL6, very soft, gray, with silt strata or lenses										
-16.5	19.0					CH4, soft, gray, with silt strata or lenses, and organics	63	S8				96	69	78		
-18.5	21.0					CH4, very soft, gray, with silt strata or lenses	63	S9						91		
-23.5	26.0					CH4, very soft, gray, with organics	63	S10				82	56	103		
-28.5	31.0					CH4, very soft, gray, with organics	75	S11						76		
						CH3, very soft, gray, with silt strata or lenses, with sand strata and lenses	75	S12				74	47	60		

15.0 17.5 20.0 22.5 25.0 27.5 30.0 32.5

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A

SHEET 3 OF 5 SHEETS

PROJECT: Mid Barataria Diversion (BA-153)

COORDINATE SYSTEM: SPCS83 | HORIZONTAL: NAD83 | VERTICAL: NAVD88

LOCATION COORDINATES: N 414356.45 E 3712010.97

ELEVATION TOP OF BORING: 2.5

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CH3, very soft, gray, with silt strata or lenses, with sand strata and lenses *(continued)*										C_v = 0.007 ft^2/day
-33.5	36.0															
-34.0	36.5					SM, loose, gray	75	S13								
						ML, sandy, loose, gray	75	S14						29		With silty clay and clay layers
-38.5	41.0															
						ML, sandy, loose, gray, with clay strata or lenses	75	S15	0.0	22.4	77.6			28		
-43.5	46.0															
						SM, loose, gray, with organics, with clay pockets	75	S16	0.0	62.2	37.8			29		
																NS

35.0 37.5 40.0 42.5 45.0 47.5 50.0

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET
N/A	4 OF 5 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES
N 414356.45 E 3712010.97

ELEVATION TOP OF BORING
2.5

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						SM, loose, gray, with organics, with clay pockets *(continued)*										
-50.5	53.0															
						SM, medium dense, gray	100	S17								
-53.5	56.0															
						SM, loose, gray, with clay strata or lenses, with silt strata or lenses, trace organics	75	S18	0.0	67.5	32.5			26		
-58.5	61.0															
						CH3, soft, gray, with silt strata or lenses, with sand strata and lenses	100	S19						48		
-59.5	62.0															
						ML, loose, gray, with sand strata and lenses	100	S20	0.0	3.9	96.1			29		
-63.5	66.0															
						CH2, soft, gray, with silt strata or lenses, with sand strata and lenses	100	S21								

52.5
55.0
57.5
60.0
62.5
65.0
67.5

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET 5 OF 5 SHEETS
N/A	

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
N 414356.45 E 3712010.97	2.5

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CH2, soft, gray, with silt strata or lenses, with sand strata and lenses *(continued)*										
-68.5	71.0					CH3, soft, gray, with silt pockets	100	S22				79	54	49		
-73.5	76.0					CH4, medium, gray, with silt strata or lenses	100	S23								
-78.5	81.0					CH4, medium, gray	100	S24						54		
-80.5	83.0															

70.0
72.5
75.0
77.5
80.0
82.5

DRILLING LOG

DIVISION: N/A	INSTALLATION: N/A	SHEET 1 OF 4 SHEETS	
1. PROJECT: Mid Barataria Diversion (BA-153)	9. COORDINATE SYSTEM: SPCS83	HORIZONTAL: NAD83	VERTICAL: NAVD88
	10. SIZE AND TYPE OF BIT: 140lb hammer, 30-inch drop		
2. HOLE NUMBER: M-15 / LOCATION COORDINATES: N 411688.90 E 3709461.58	11. MANUFACTURER'S DESIGNATION OF DRILL: Marsh Buggy, Serial # MBD001, Built 2012		
3. DRILLING AGENCY: Specialized Environmental Resources, LLC	12. TOTAL SAMPLES	DISTURBED: 0	UNDISTURBED: 20
4. NAME OF DRILLER: Terry Jeansonne	13. TOTAL NUMBER CORE BOXES: 0		
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED / DEG FROM VERTICAL: --- / BEARING: N/A	14. ELEVATION GROUND WATER		
	15. DATE BORING	STARTED: 5/24/13	COMPLETED: 5/24/13
6. THICKNESS OF OVERBURDEN: 64.0	16. ELEVATION TOP OF BORING: 2.5		
7. DEPTH DRILLED INTO ROCK: 0.0	17. TOTAL CORE RECOVERY FOR BORING: N/A		
8. TOTAL DEPTH OF BORING: 64.0	18. SIGNATURE AND TITLE OF INSPECTOR: Donnie Smith		

ELEV	DEPTH	Blows/0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						Top of marsh buggy deck at EL +2.5 feet										
						Top of water surface at approximately EL +0.5 feet										
-1.5	4.0					Top of mudline at EL -1.5 feet										
						Pt, very soft, dark gray		S1				365	239	435		Organic content = 25.11%; Fiber content = 10.08%
-3.5	6.0					CHOC, very soft, dark gray, with peat		S2				408	297	344		Organic content = 32.4%
-5.5	8.0					CHOC, very soft, dark gray, with peat		S3						365		Organic content = 31.4%
-7.5	10.0					CHOC, very soft, dark gray, with peat		S4						333		Organic content = 29.4%
-9.5	12.0					Pt, very soft, black		S5						562		Organic content = 8.5%
-11.5	14.0					Pt, very soft, black & brown, trace organics and clay		S6				820	263	562		Organic content = 44.8%

0.0 2.5 5.0 7.5 10.0 12.5 15.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A		SHEET 2 OF 4 SHEETS
PROJECT: Mid Barataria Diversion (BA-153)	COORDINATE SYSTEM: SPCS83 / HORIZONTAL: NAD83 / VERTICAL: NAVD88	
LOCATION COORDINATES: N 411688.90 E 3709461.58	ELEVATION TOP OF BORING: 2.5	

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						Pt, very soft, black & brown, trace organics and clay *(continued)*										
-13.5	16.0					CL6, very soft, gray, with sand strata and lenses, and, with silt strata or lenses		S7				47	20	108		
-15.5	18.0					CH4, very soft, gray, with silt strata or lenses		S8				104	79	81		
-17.5	20.0					CH4, very soft, gray		S9						138		C_v = 0.24 ft^2/day
-19.5	22.0					CH4, very soft, gray, with silt pockets		S10				71	50	84		
-24.5	27.0					CH3, very soft, gray, with silt pockets		S11						59		
-29.5	32.0					CH4, very soft, gray, with sandy silt strata and pockets		S12						83		
-30.5	33.0															

15.0 17.5 20.0 22.5 25.0 27.5 30.0 32.5

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A

SHEET 3 OF 4 SHEETS

PROJECT: Mid Barataria Diversion (BA-153)

COORDINATE SYSTEM: SPCS83 | HORIZONTAL: NAD83 | VERTICAL: NAVD88

LOCATION COORDINATES: N 411688.90 E 3709461.58

ELEVATION TOP OF BORING: 2.5

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CL4, soft, gray, with sandy silt strata and pockets *(continued)*		S13	0.0	49.1	50.9			39		
-34.5	37.0					CL4, soft, gray, with sand strata and lenses, and, with silt strata or lenses		S14				35	13	32		
-39.5	42.0					SM, loose, gray, with clay strata or lenses		S15	0.0	29.8	70.2			24		
-40.5	43.0					CH2, very soft, gray, with sand strata and lenses, and, with silt strata or lenses		S16								
-44.5	47.0					ML, sandy, very loose, gray, with clay pockets, and		S17				33	7	35		

35.0 37.5 40.0 42.5 45.0 47.5 50.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A		SHEET 4 OF 4 SHEETS
PROJECT: Mid Barataria Diversion (BA-153)	COORDINATE SYSTEM: SPCS83 / HORIZONTAL: NAD83 / VERTICAL: NAVD88	
LOCATION COORDINATES: N 411688.90 E 3709461.58	ELEVATION TOP OF BORING: 2.5	

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
-49.5	52.0															
						CL4, very soft, gray		S18								
-54.5	57.0															
						CH4, very soft, gray, trace silt		S19				90	64	67		C_v = 0.06 ft^2/day
-59.5	62.0															
						CH4, very soft, gray, with silt strata or lenses		S20						61		
-61.5	64.0															

52.5
55.0
57.5
60.0
62.5

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG

DIVISION: N/A	INSTALLATION: N/A	SHEET 1 OF 5 SHEETS	
1. PROJECT: Mid Barataria Diversion (BA-153)	9. COORDINATE SYSTEM: SPCS83	HORIZONTAL: NAD83	VERTICAL: NAVD88
	10. SIZE AND TYPE OF BIT: 140lb hammer, 30-inch drop		
2. HOLE NUMBER: M-16 / LOCATION COORDINATES: N 412964.27 E 3714146.36	11. MANUFACTURER'S DESIGNATION OF DRILL: Marsh Buggy, Serial # MBD001, Built 2012		
3. DRILLING AGENCY: Specialized Environmental Resources, LLC	12. TOTAL SAMPLES	DISTURBED: 0	UNDISTURBED: 22
4. NAME OF DRILLER: Terry Jeansonne	13. TOTAL NUMBER CORE BOXES: 0		
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED / DEG FROM VERTICAL: --- / BEARING: N/A	14. ELEVATION GROUND WATER		
	15. DATE BORING	STARTED: 5/21/13	COMPLETED: 5/21/13
6. THICKNESS OF OVERBURDEN: 85.0	16. ELEVATION TOP OF BORING: 3.1		
7. DEPTH DRILLED INTO ROCK: 0.0	17. TOTAL CORE RECOVERY FOR BORING: N/A		
8. TOTAL DEPTH OF BORING: 85.0	18. SIGNATURE AND TITLE OF INSPECTOR: Donnie Smith		

ELEV	DEPTH	Blows/0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						Top of marsh buggy deck at EL +3.1 feet										Organic content = 13.40% Fiber content = 9.65%
						Top of water surface at approximately EL +1.1 feet										
-1.9	5.0					Top of mudline at EL -1.9 feet										
						CHOB, very soft, black & gray, with peat	63	S1				255	194	225		
-3.9	7.0															
						CHOB, very soft, black & gray, with clay seams and pockets, and, with peat	63	S2				279	220	200		Organic content = 13.4%
-5.9	9.0															
						CHOA, very soft, gray & dark gray, with organics	63	S3				158	122	190		C_v = 0.018 ft^2/day Organic content = 7.17%; Fiber content = 8.34%
-7.9	11.0															
						CH4, very soft, gray, trace organics	75	S4						102		
-9.9	13.0															
						CH4, very soft, gray, with shells	100	S5						106		
-11.9	15.0															

0.0 2.5 5.0 7.5 10.0 12.5 15.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET / OF
N/A	2 / 5 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES
N 412964.27 E 3714146.36

ELEVATION TOP OF BORING
3.1

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CH3, very soft, gray, with shells	88	S6				59	36	79		With layer of very loose gray sandy silt with clay
-13.9	17.0															
						SM, loose, gray, with clay pockets	63	S7	0.0	55.8	44.2			31		
-15.9	19.0															
						CH4, very soft, gray, with silt pockets, with clay pockets	63	S8						62		
-17.9	21.0															
						CH3, very soft, gray, with shells, and organics	75	S9						68		
-19.9	23.0															
						CH3, very soft, gray, with shells, and organics	75	S10				76	49	68		
-24.9	28.0															
						CH3, very soft, gray, with silt lenses, and, trace organics	88	S11				77	53	68		C_v = 0.011 ft^2/day Organic content = 4.30%
-29.9	33.0															

15.0 17.5 20.0 22.5 25.0 27.5 30.0 32.5

DRILLING LOG (Cont Sheet)

INSTALLATION: N/A

SHEET 3 OF 5 SHEETS

PROJECT: Mid Barataria Diversion (BA-153)

COORDINATE SYSTEM: SPCS83 | HORIZONTAL: NAD83 | VERTICAL: NAVD88

LOCATION COORDINATES: N 412964.27 E 3714146.36

ELEVATION TOP OF BORING: 3.1

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CH3, very soft, gray, with silt pockets, trace organics *(continued)*	100	S12				68	41	57		Organic content = 4.80%
-34.9	38.0															
						ML, sandy, medium dense, gray, with clay pockets	63	S13	0.0	43.4	56.6					
-39.9	43.0															
						CH4, soft, gray	75	S14						43		With layers of sandy silt
-44.9	48.0															
						CH2, medium, gray, with sandy silt strata and pockets, and organics	63	S15						40		

35.0 37.5 40.0 42.5 45.0 47.5 50.0

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET / OF
N/A	4 / 5 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
N 412964.27 E 3714146.36	3.1

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CH2, medium, gray, with sandy silt strata and pockets, and organics *(continued)*										
-49.9	53.0					CH2, soft, gray, with sand strata and lenses, trace organics	100	S16				58	37	45		
-54.9	58.0					CH4, medium, gray, with silt strata or lenses	75	S17						58		
-59.9	63.0					CH4, medium, gray, with silt strata or lenses	100	S18				90	60	61		
-64.9	68.0					CH4, soft, gray, with silt strata or lenses	100	S19				87	57	53		

52.5 55.0 57.5 60.0 62.5 65.0 67.5

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET
N/A	5 OF 5 SHEETS

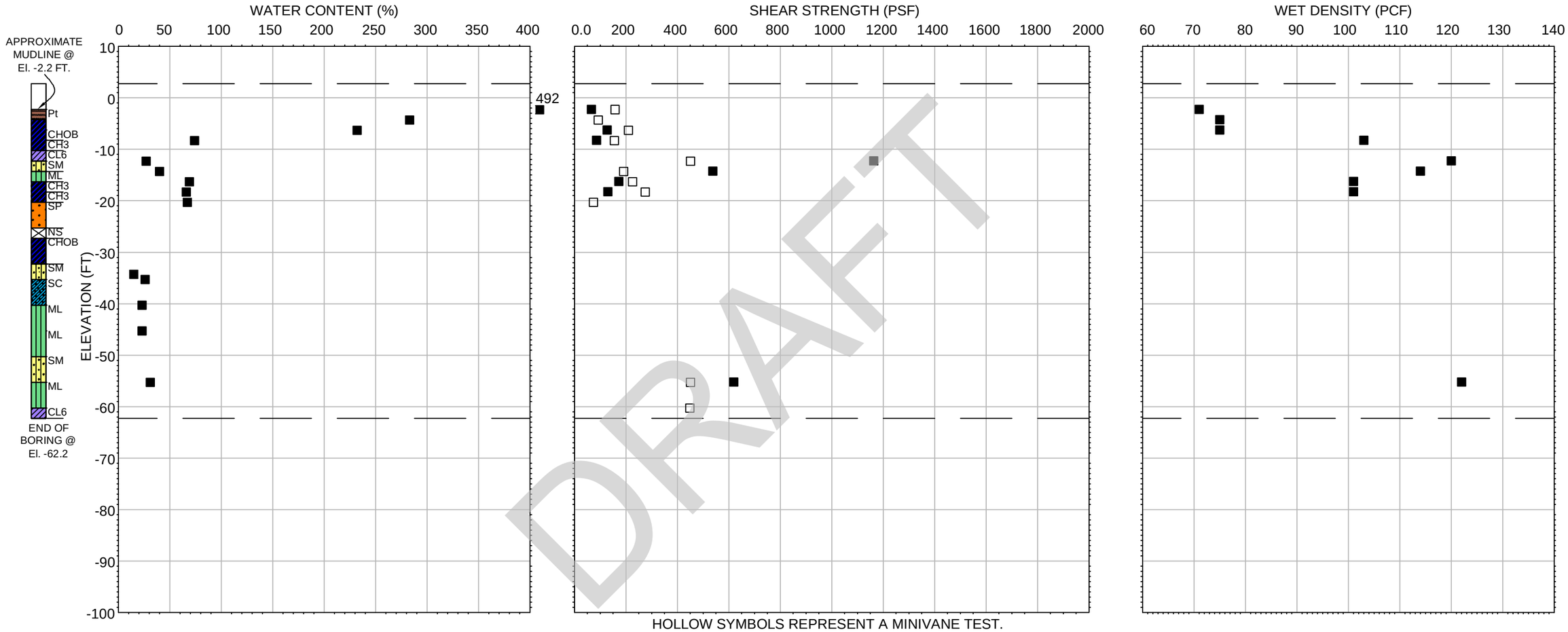
PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mid Barataria Diversion (BA-153)	SPCS83	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
N 412964.27 E 3714146.36	3.1

ELEV	DEPTH	Blows/ 0.5 ft	N_f	N_{60}	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	Laboratory: Gravel	Sand	Fines	LL	PI	MC	ASTM Class	REMARKS
						CH4, soft, gray, with silt strata or lenses *(continued)*										
-69.9	73.0					CH4, soft, gray, with silt strata or lenses	100	S20						57		
-74.9	78.0					CH3, soft, gray, with silt strata or lenses	100	S21				74	50	46		
-79.9	83.0					CH4, soft, gray, with silt strata or lenses	100	S22						50		
-81.9	85.0															

70.0
72.5
75.0
77.5
80.0
82.5
85.0

ACE 1836-A (DRILLING LOG)-MVN-NOTES MID-BARATARIA DIVERSION 1.3.14 (2).GPJ USACE WITH RAPID CPT 2013_04_21.GDT 1/24/14



LEGEND

M-1

CL, CH, ML, SM, SP, SC, PT

Notes:
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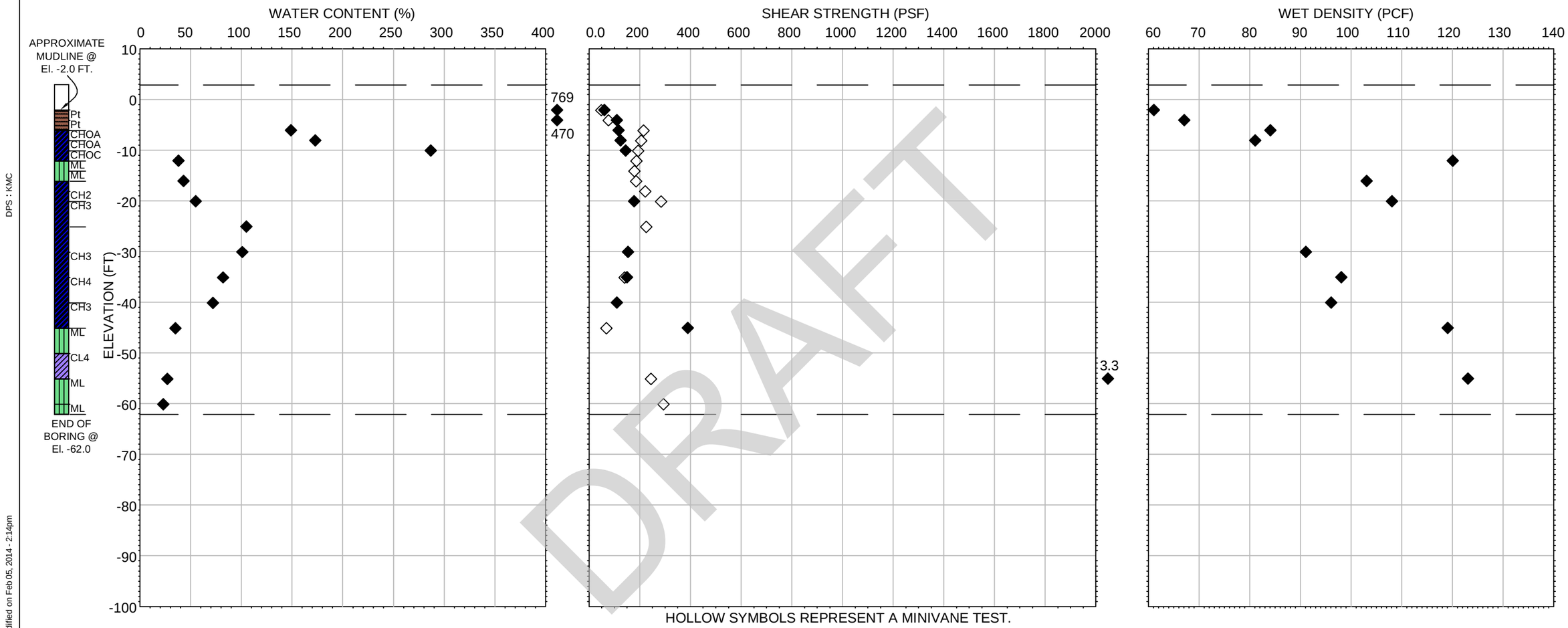
DESIGN CHARTS
M-1

Mid Barataria Diversion (BA-153) Project
Plaquemines Parish, Louisiana

GeoEngineers

Figure E-17



LEGEND

M-2

CL, CH, ML, SM, SP, SC, PT

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DESIGN CHARTS
M-2

Mid Barataria Diversion (BA-153) Project
Plaquemines Parish, Louisiana

GeoEngineers

Figure E-18

DPS : KMC
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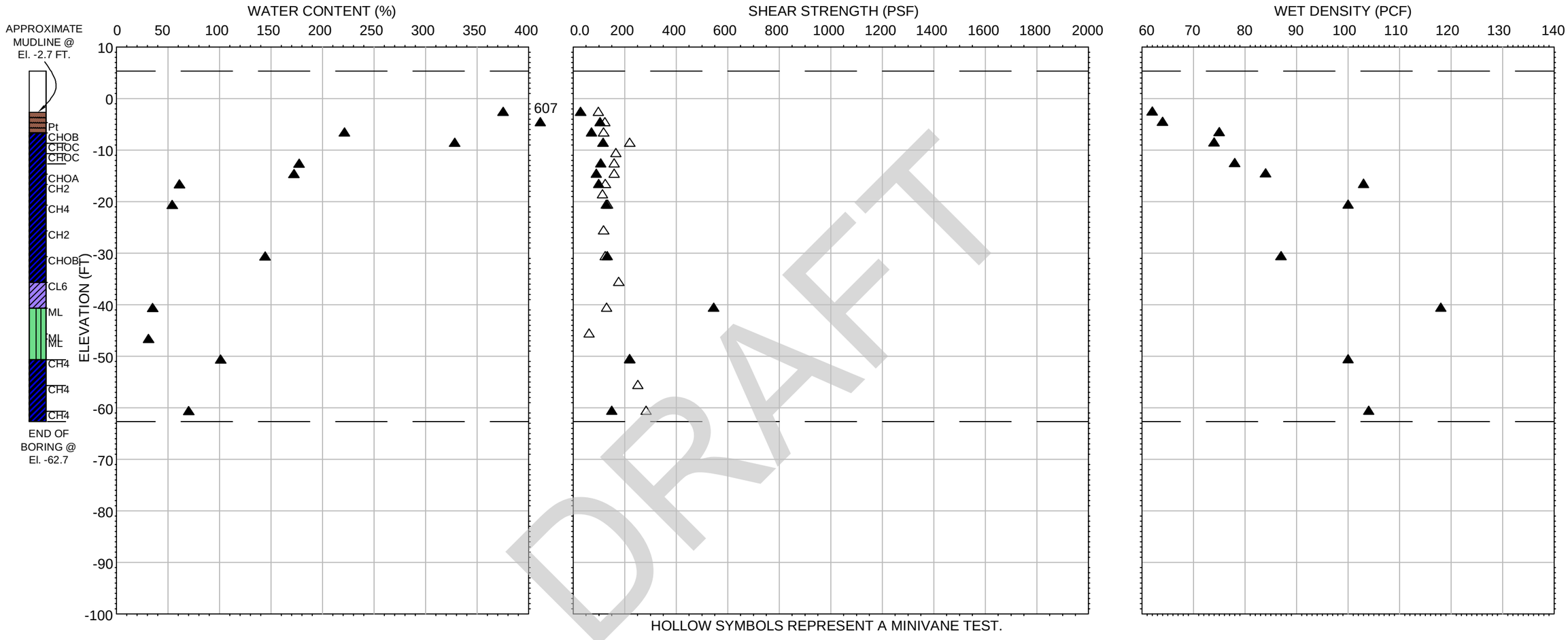

LEGEND

M-3

CL, CH, ML, SM, SP, SC, PT

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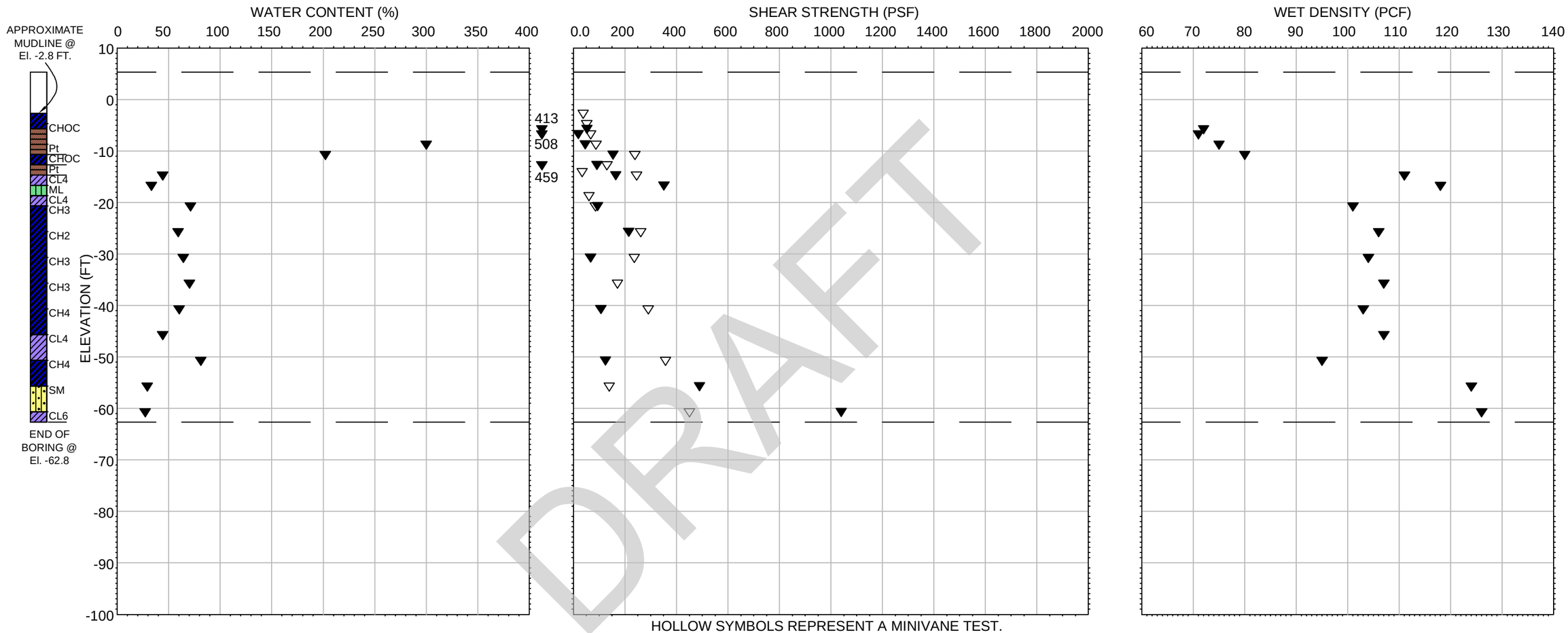
DESIGN CHARTS
M-3

Mid Barataria Diversion (BA-153) Project
Plaquemines Parish, Louisiana

GeoEngineers

Figure E-19

DPS : KMC
P:\18\18274001\00\CAD\GRAPH-Marsh - DATA.dwg\TAB:M3 modified on Feb 05, 2014 - 2:14pm



LEGEND

M-4

CL SP

CH SC

ML PT

SM

Notes:
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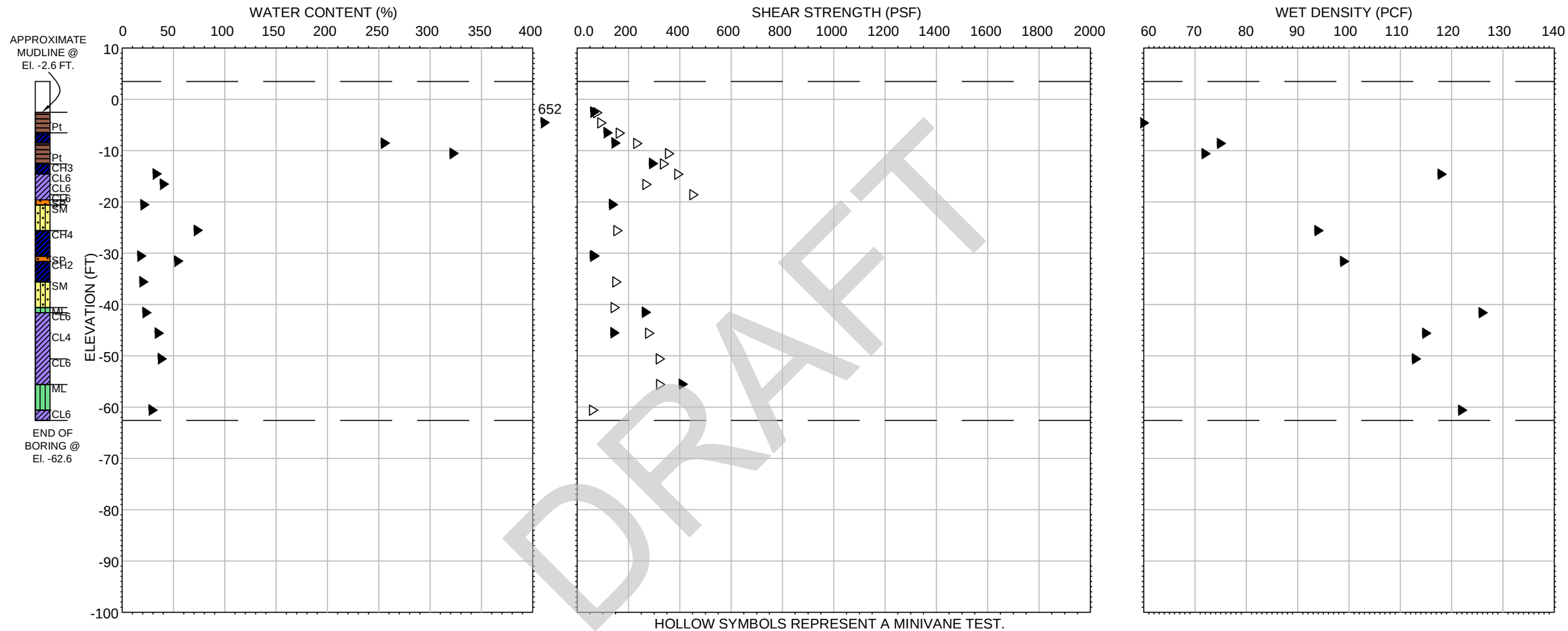
DESIGN CHARTS
M-4

Mid Barataria Diversion (BA-153) Project
Plaquemines Parish, Louisiana

GeoEngineers

Figure E-20



LEGEND

M-5

CL, CH, ML, SM, SP, SC, PT

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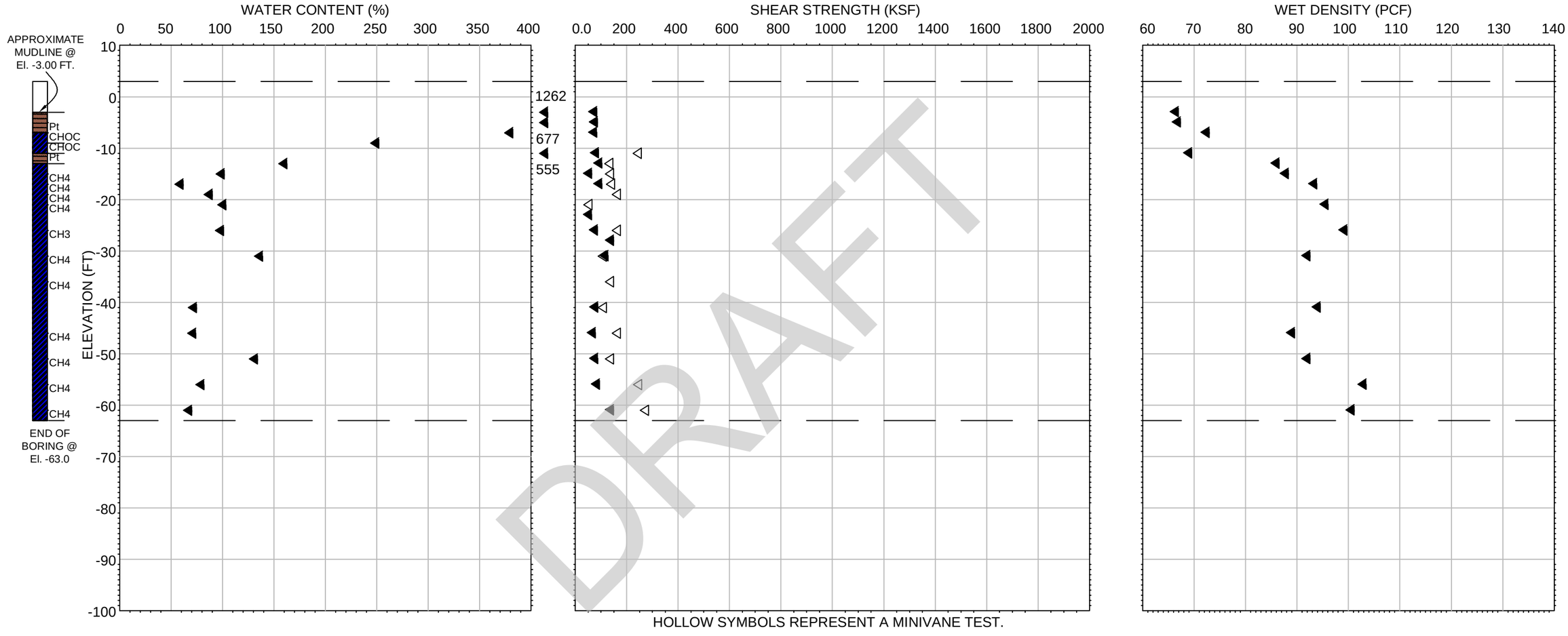
DESIGN CHARTS
M-5

Mid Barataria Diversion (BA-153) Project
Plaquemines Parish, Louisiana

GeoEngineers

Figure E-21



LEGEND

M-6

CL, CH, ML, SM, SP, SC, PT

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DESIGN CHARTS
M-6

Mid Barataria Diversion (BA-153) Project
Plaquemines Parish, Louisiana

GeoEngineers

Figure E-22

DPS : KMC
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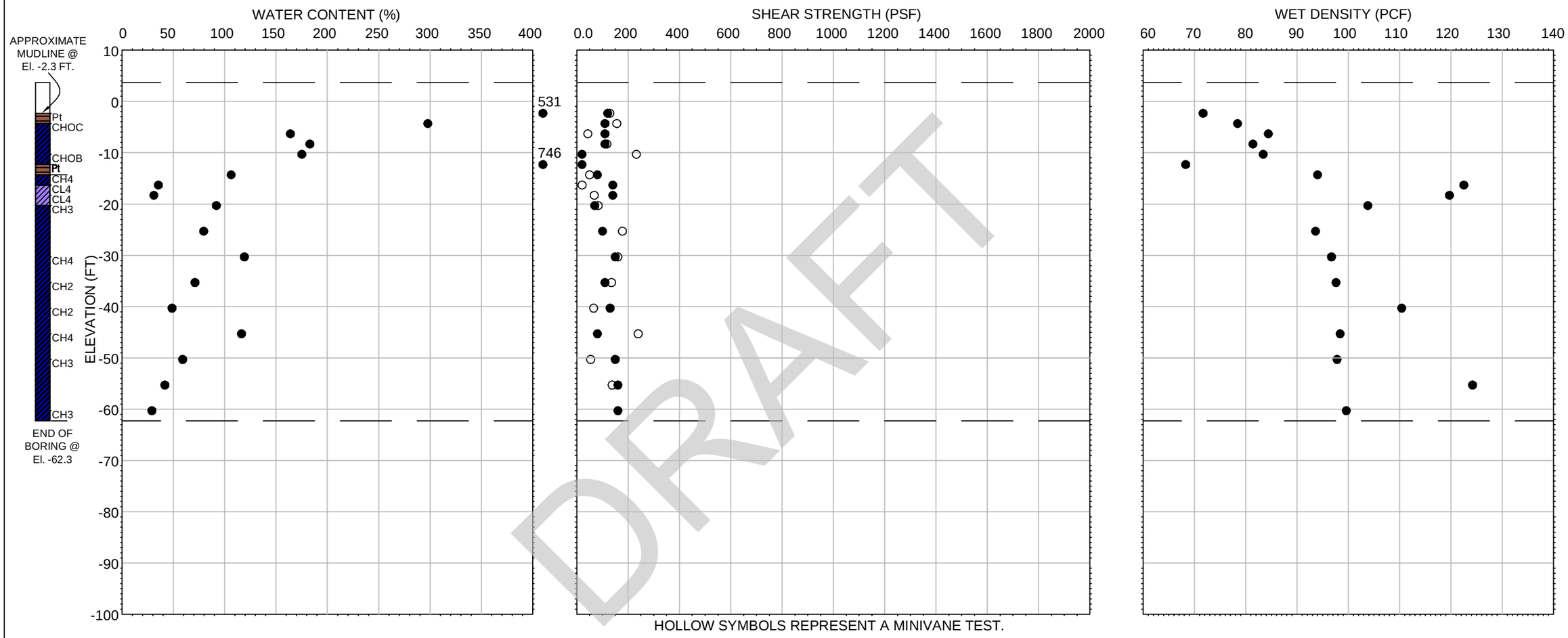

LEGEND

- M-7
- CL
- CH
- ML
- SM
- SP
- SC
- PT

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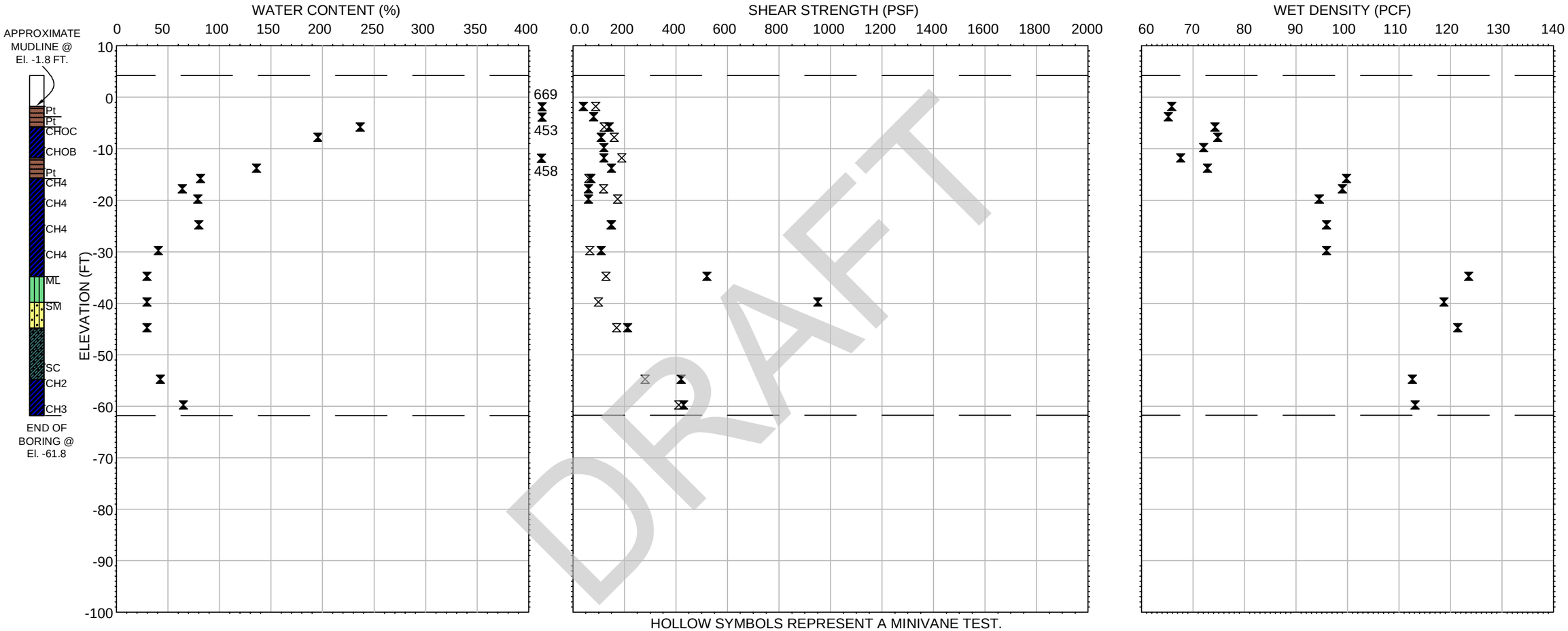
DESIGN CHARTS
M-7

Mid Barataria Diversion (BA-153) Project
Plaquemines Parish, Louisiana

GeoEngineers

Figure E-23



LEGEND

M-8

CL, CH, ML, SM, SP, SC, PT

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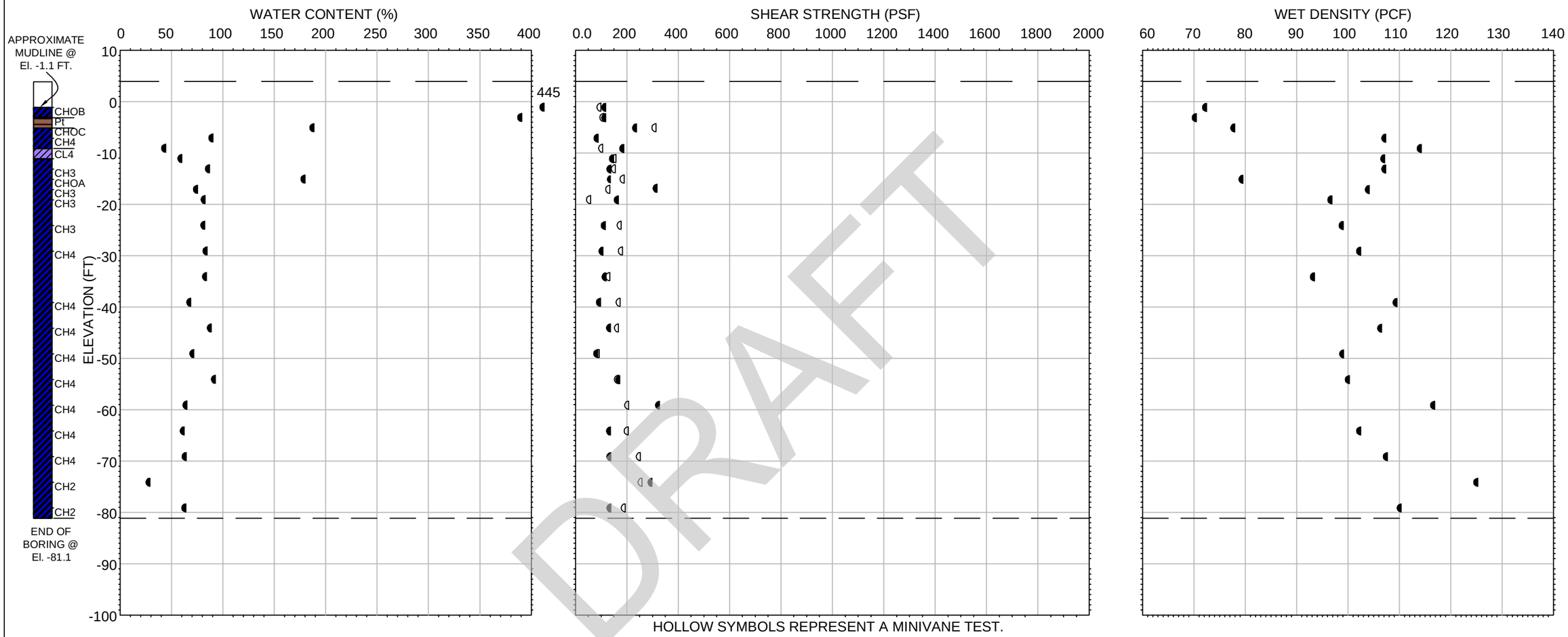
DESIGN CHARTS
M-8

Mid Barataria Diversion (BA-153) Project
Plaquemines Parish, Louisiana

GeoEngineers

Figure E-24



LEGEND

M-9
CL
CH
ML
SP
SC
PT
SM

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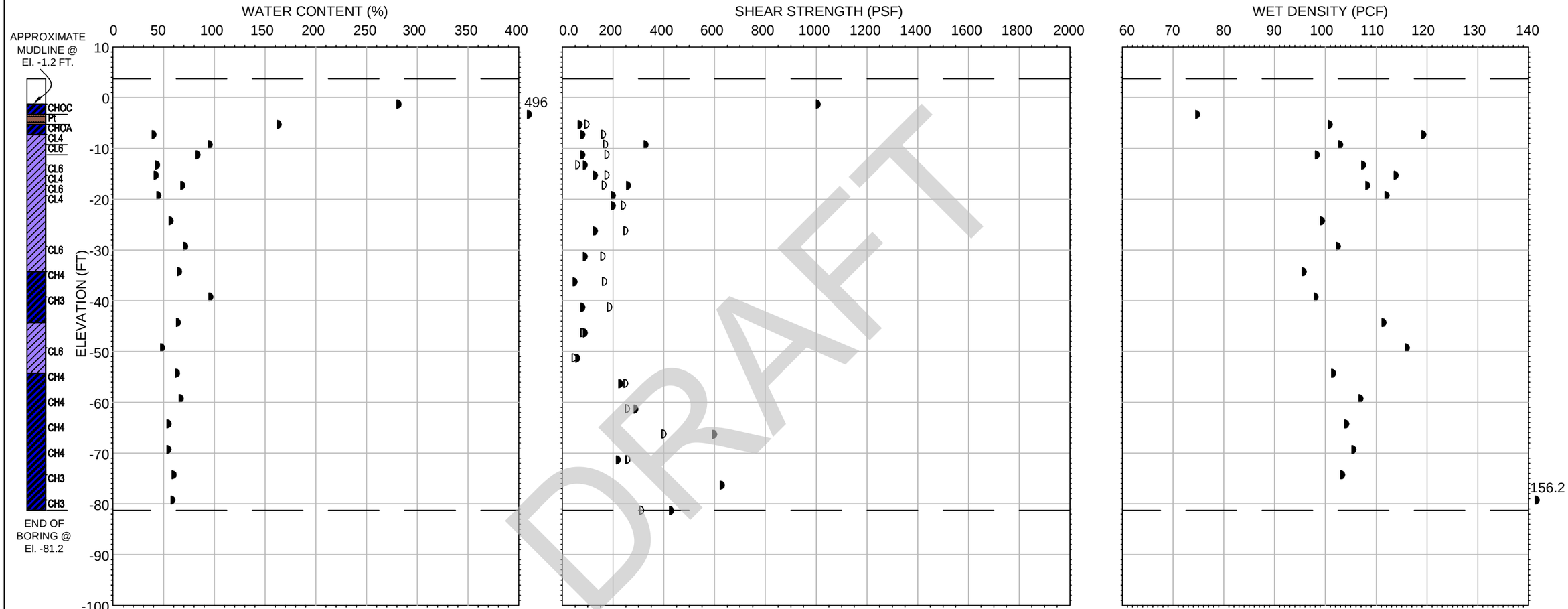
DESIGN CHARTS
M-9

Mid Barataria Diversion (BA-153) Project
Plaquemines Parish, Louisiana

GeoEngineers

Figure E-25

DPS : KMC
P:\18\18274001\00\CAD\GRAPH-Marsh - DATA.dwg\TAB:M9 modified on Feb 05, 2014 - 2:17pm



LEGEND

M10

CL SP

CH SC

ML PT

SM

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DESIGN CHARTS
M10

Mid Barataria Diversion (BA-153) Project
Plaquemines Parish, Louisiana

GeoEngineers

Figure E-26

DPS : KMC

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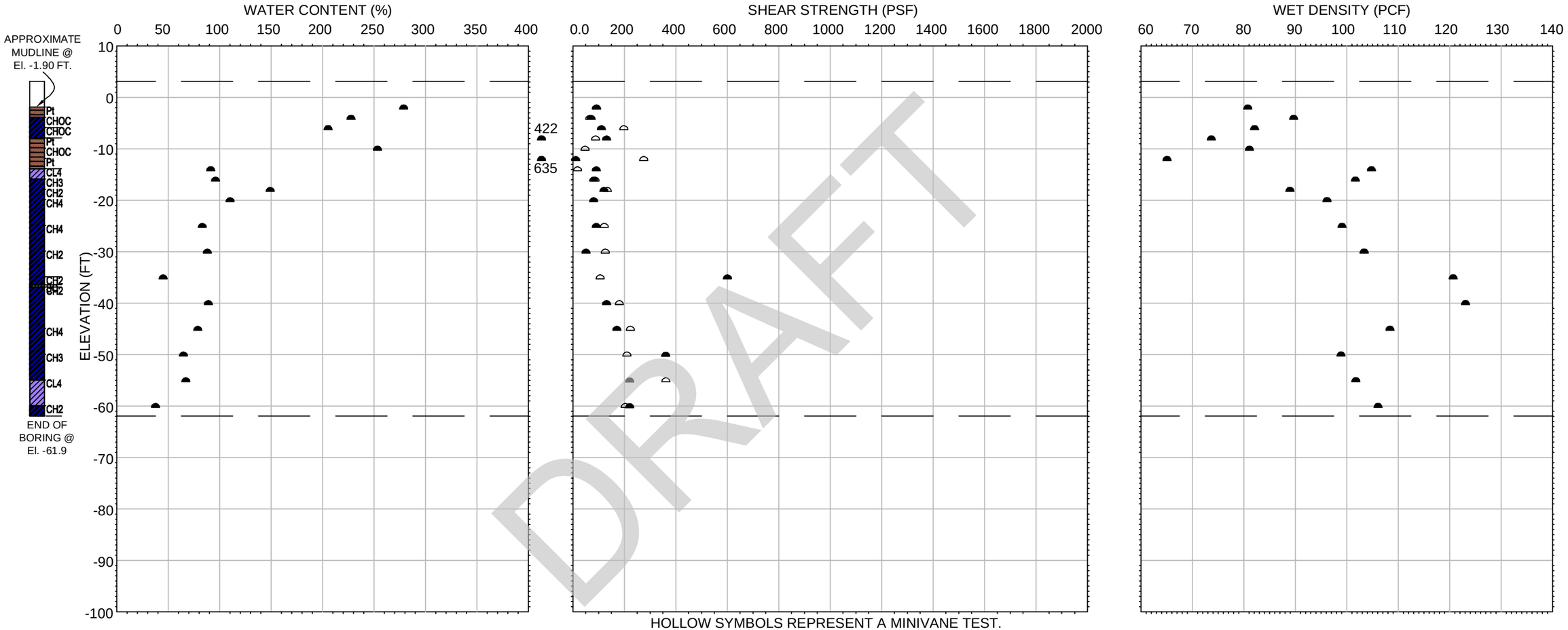

LEGEND

M-11

CL, CH, ML, SM, SP, SC, PT

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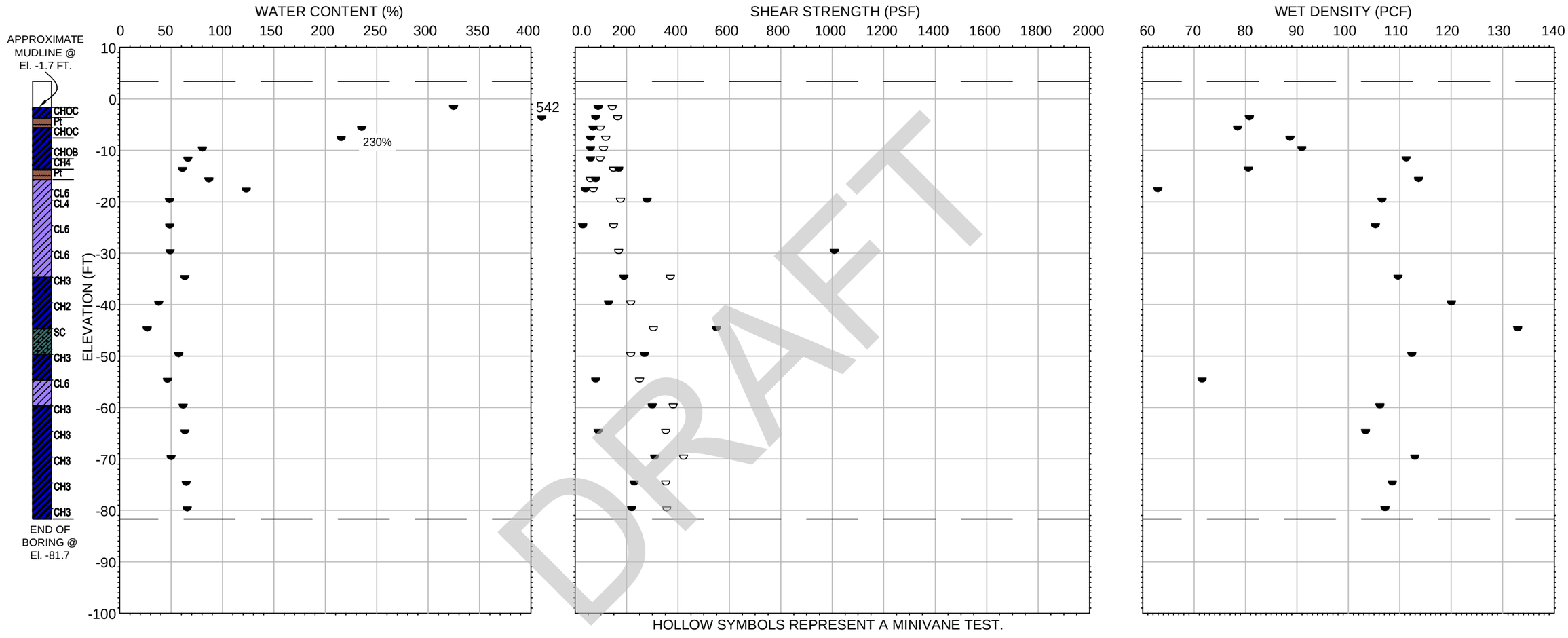
DESIGN CHARTS
M-11

Mid Barataria Diversion (BA-153) Project
Plaquemines Parish, Louisiana

GeoEngineers

Figure E-27



LEGEND

M-12

CL SP

CH SC

ML PT

SM

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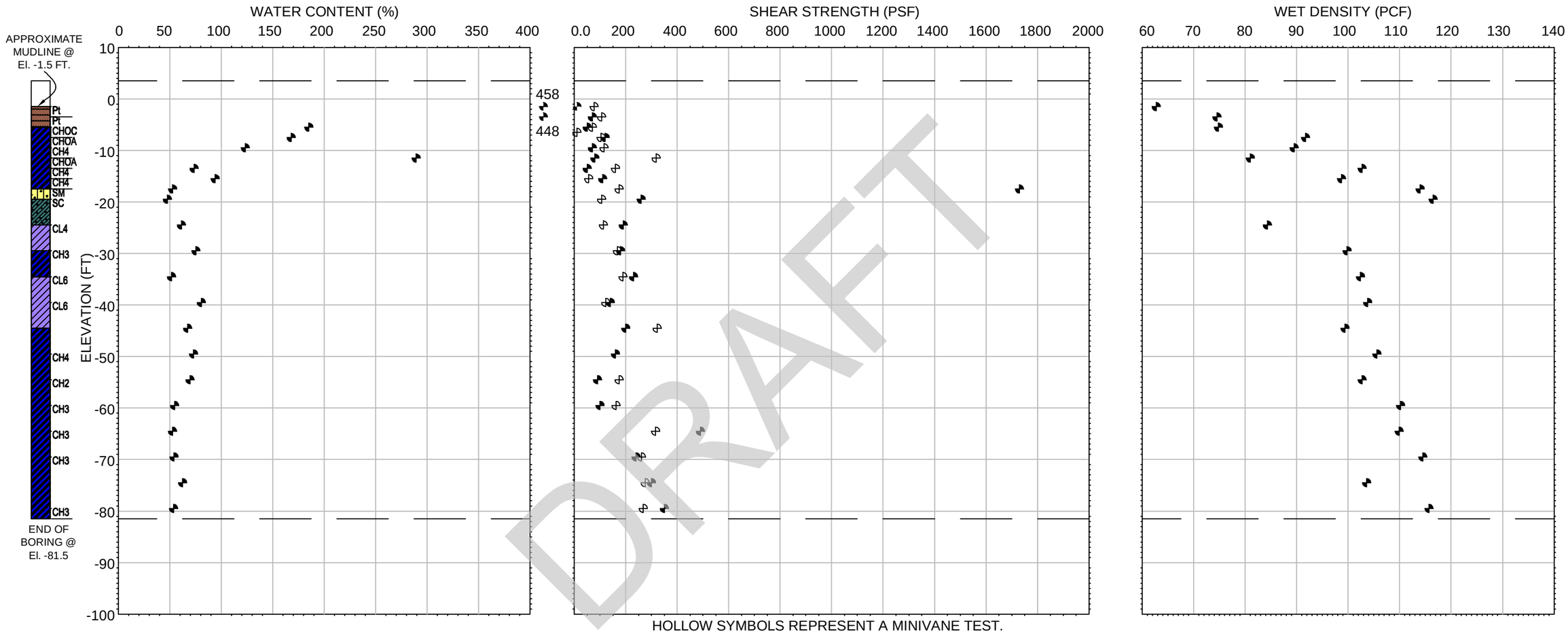
DESIGN CHARTS
M-12

Mid Barataria Diversion (BA-153) Project
Plaquemines Parish, Louisiana

GeoEngineers

Figure E-28



LEGEND

M-13

CL, CH, ML, SM, SP, SC, PT

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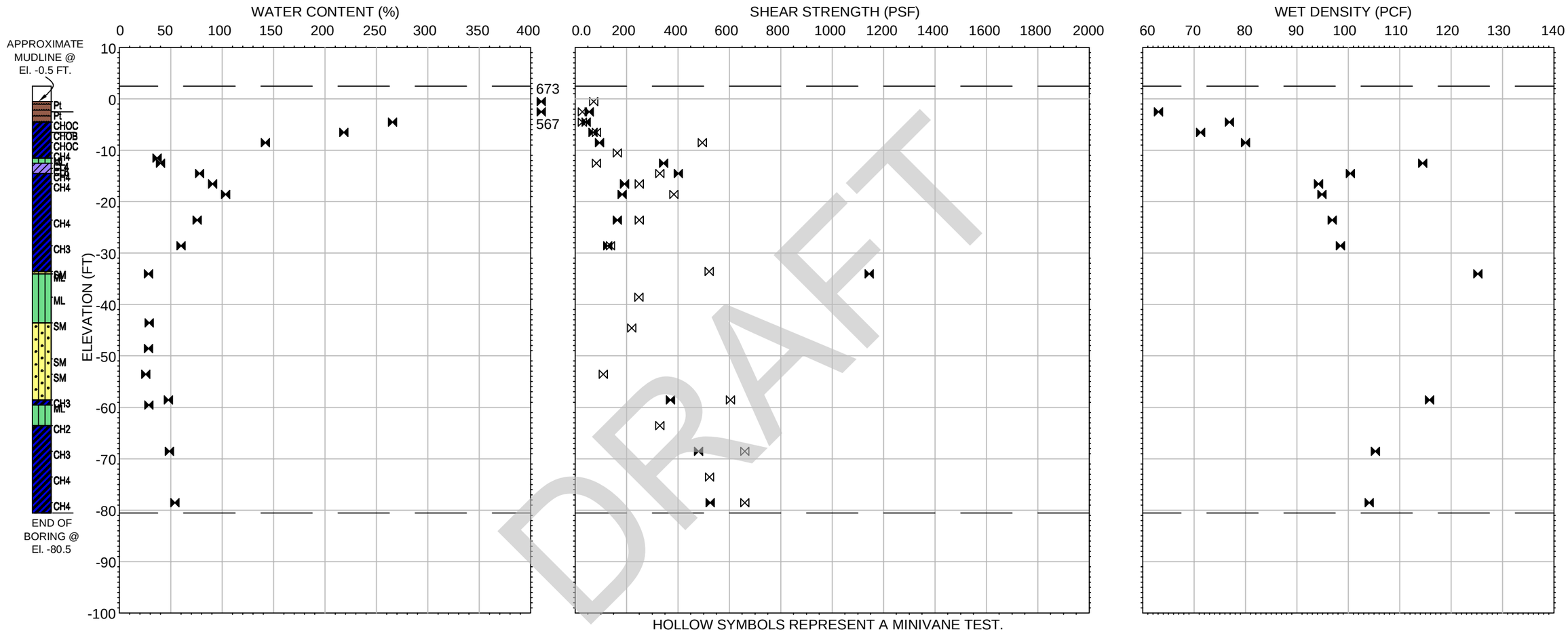
DESIGN CHARTS
M-13

Mid Barataria Diversion (BA-153) Project
Plaquemines Parish, Louisiana

GeoEngineers

Figure E-29



LEGEND

M-14

CL
CH
ML
SM
SP
SC
PT

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DESIGN CHARTS
M-14

Mid Barataria Diversion (BA-153) Project
Plaquemines Parish, Louisiana

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Figure E-30

DPS : KMC

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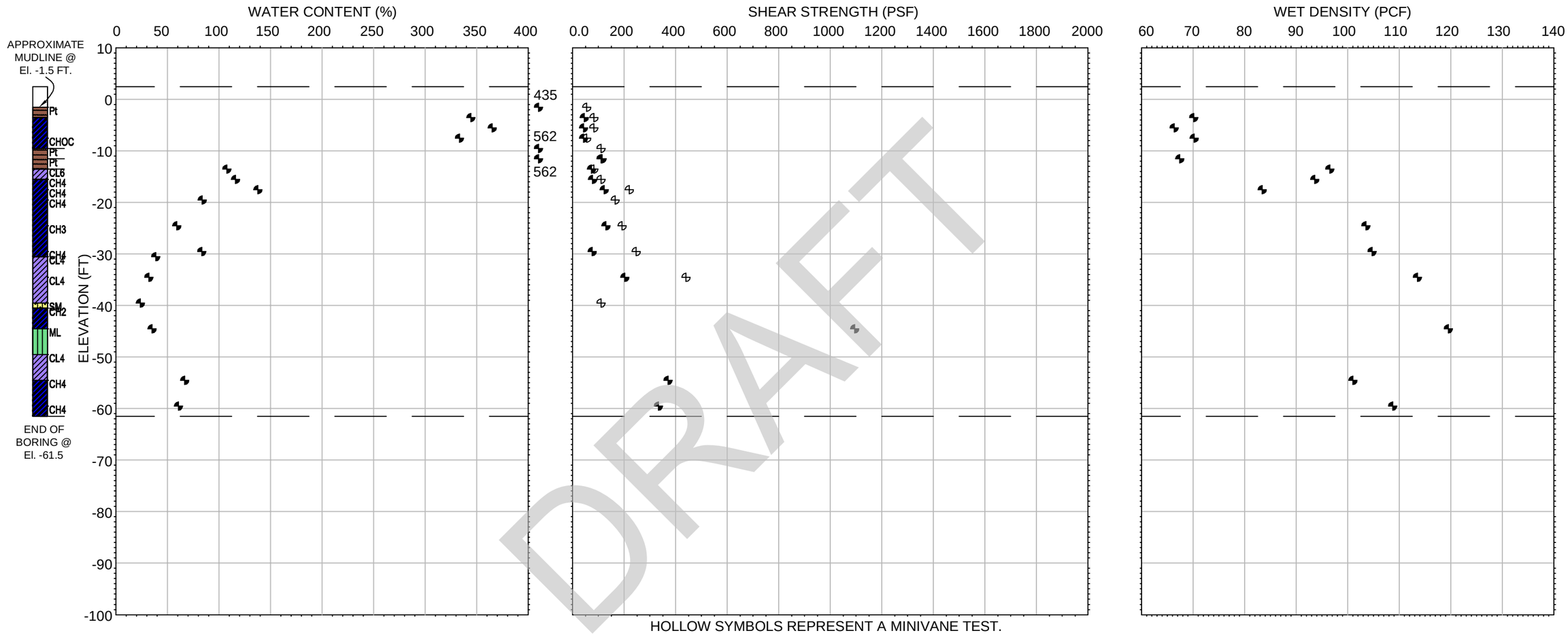

LEGEND

M-15

CL, CH, ML, SM, SP, SC, PT

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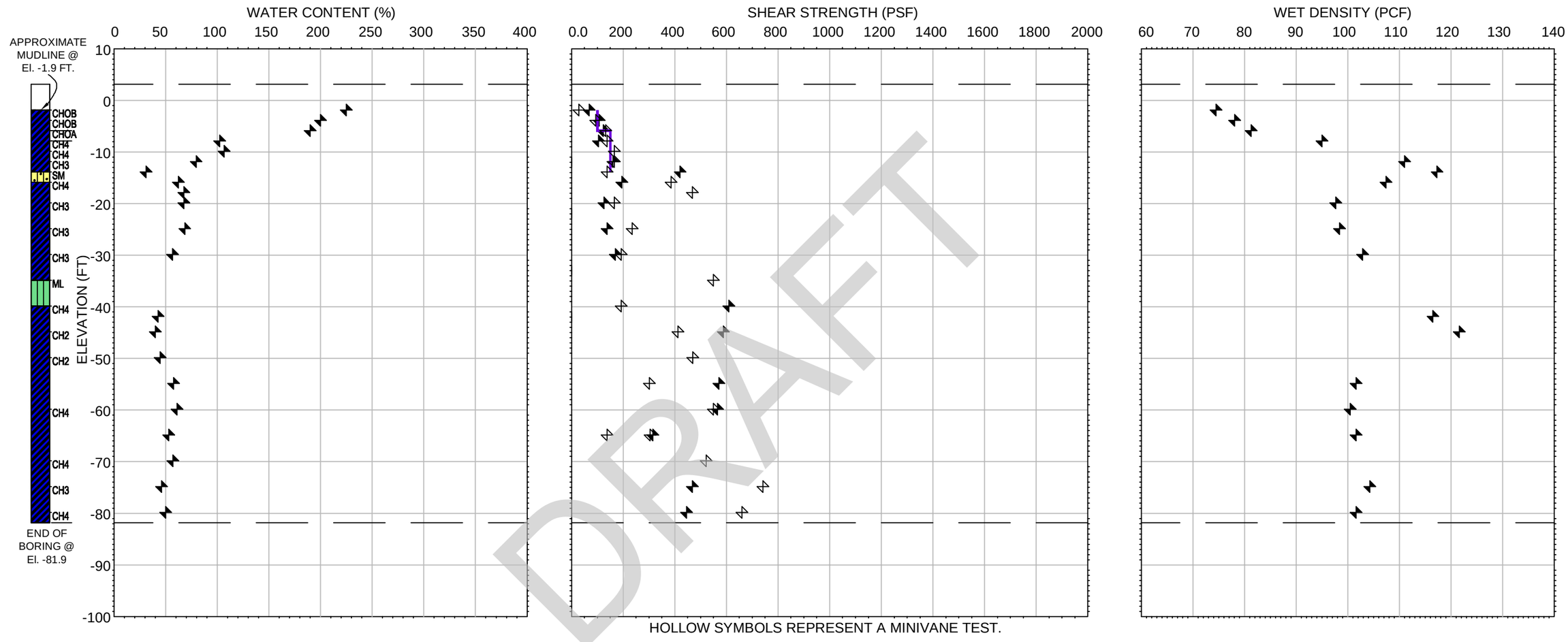
DESIGN CHARTS
M-15

Mid Barataria Diversion (BA-153) Project
Plaquemines Parish, Louisiana

GeoEngineers

Figure E-31



LEGEND

M-16

CL, CH, ML, SM, SP, SC, PT

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DESIGN CHARTS
M-16

Mid Barataria Diversion (BA-153) Project
Plaquemines Parish, Louisiana

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Figure E-32