



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

Client: Jones Walker

Project Name: Gastal

Project Location: Morse, LA

Project No.: 1705.A37

Date: 3/8/23

Page 1 of 1

	On-Site
0750 - Left NET (mb) in truck #39 to conduct oversight of Southland's EM/GEM survey	Matt G - NET
0830 - Arrival on site	Cleve H. } Southland
- Mr. Gastal (Landowner) on site	Chad C. }
	Gastal - Landowner
	Bubba H - Farmer
0850 - Mr. Bubba Newkirk on site (Farmer)	
0900 - Chad C. & Cleve H. (Southland) on site	
0930 - Southland moved north-northwest of the production facility area to begin conducting EM survey	
- EM survey device experiencing technical difficulties	
1045 - Southland could not resolve the issues & canceling the survey for now	
- All personnel off site	
1130 - Arrive @ NET	



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Client: Jones Walker

Project Name: Gastal

Project Location: Morse, LA

Project No.: 1705.A37

Date: 3/21/23

Page 1 of 1

0800 - Left NET (M6) in truck #39 to conduct oversight of Southland's EM/6EM Survey

0840 - Arrived on site

0905 - Cleve & Chad w/ Southland arrived on site
- Mr. Danny Gastal arrived on site

0920 - Begin EM survey North-Northwest of the facility in a "Background" Area
- Field is slightly wet w/ evidence of herbiciding activities & no-till drill activities
- Coated rice seeds can be seen on the land surface

0930 - EM Survey in "Ponds 1-3" (previously identified by ~~NET~~ Southland)
- These areas contained grass/weed vegetation that has NOT been sprayed & areas have not been planted w/ rice

1300 - Completed EM Survey
- Data will be tabulated & sent to NET
- All personnel off site

On-Site
Matt G - NET
Chad }
Cleve } Southland
Gastal - Landowner



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**
Environmental Consultants

Client: _____

Project Name: GASTEL

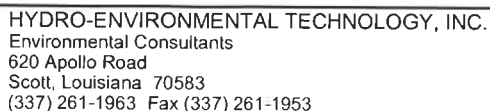
Project Location: MORSE, La

Project No.: 1705.A32

Date: 5/12/23

Page _____ of _____

@0800 - LEFT OFFICE TRUCK # 25
@0850 - ARRIVED ON SITE, DUANE P & CHAD C (SE)
ADD WH ON SITE
@0930 - BEGAN SAMPLING SE-SB01 WITH
GP 7822 DP
@1130 - SAMPLED TO 35'
- BROKE FOR LUNCH
@1230 - FINISHED LUNCH, WALKER HILL BEGAN
GROUTING THROUGH 2.25" BARRELS
@1430 - MOVED TO SE-SB02 TO SAMPLE
@1600 - SAMPLED TO 26'
- GROUTED THROUGH OUTER RODS TO
SURFACE USING APPROX 5 gal of
Grout
@1630 - LEFT SITE
@1745 - ARRIVED AT OFFICE



PROJECT NAME CASCADE
PROJECT NUMBER 1705-A37
LOCATION MORSE, LA
DRILLING METHOD GP 7822-DA
SAMPLING METHOD NT 2.25" x 4"
GROUND ELEVATION -
TOP OF CASING -
LOGGED BY DCC
REMARKS TO 12885493

DATE STARTED 5/2/23
DATE COMPLETED 5/2/23
CASING TYPE/DIAMETER
SCREEN TYPE/SLOT
SAND PACK TYPE
GROUT TYPE/QUANTITY
DEPTH TO WATER
GROUNDWATER ELEVATION

RECOVERY	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONDUCTIVITY mS/cm	PICTURE
20"	220	SPLIT	0438	802		2			0-20" CLAY, MOD SILT, TAN AND GREY, LOW MOIST, MOD D	282	1
			0440	802		4				280	
			0550	802		6			0-13" CLAY, DARK GREY AND BLACK, LOW MOIST, LOW DENSITY	280	2
28"			0955	802		8			13-28" CLAY, MOD SILT, GREY WITH RED (RO) STAIN, LOW MOIST, MOD DENSITY	282	3
			1000	802		10			0-32" CLAY, AS ABOVE	280	
39"			1002	802		12			32-39" CLAY, HIGH SILT CONTENT GREY, LOW MOISTURE, MOD DENSITY, Fe & Mn THROUGHOUT	280	5
			1019	802		14			0-38" CLAY, AS ABOVE	280	6
46"			1015	802		16			38-46" CLAY, MOD SILT, RED AND BROWN DAMP TO SATURATED, LOW DENSITY	280	7
			1025	802		18				280	
46"			1027	802		20			0-46" CLAY, AS ABOVE, LARGE Ca NODULE @ 31"	284	8
			1035	802		22			0-24" CLAY, AS ABOVE	284	9
46"			1037	802		24			24-46" CLAY, HIGH SILT CONTENT RED GREY, LOW MOIST, MOD DEN	284	10
			1045	802		26			0-10" CLAY AS ABOVE	284	11
46"			1047	802		28			10-21" CLAY, MOD SILT, RED GREY, LOW MOIST/MOD DEN	284	12
			1054	802		30			21-46" CLAY, HIGH SILT, RED GREY, LOW MOIST LOW DEN	284	13
46"			1057	802		32			0-27" CLAY, AS ABOVE, SILT INCREASING WITH DEPTH	284	14
			1105	802		34			27-46" SILT, MOD CLAY, BROWN, LOW MOIST LOW DENSITY	284	15
37"			1107	802		36			0-37" SILT, MOD CLAY, TAN, DAMP, LOW DEN	284	16
						38				284	17
									ID=35'		



HYDRO-ENVIRONMENTAL TECHNOLOGY, INC.
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620 Apollo Road
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BORING No. SE-SB02

PROJECT NAME CASTEL
PROJECT NUMBER 1305-437
LOCATION MOUSE, LA
DRILLING METHOD LP 7827
SAMPLING METHOD 2.05" x 4" DT
GROUND ELEVATION —
TOP OF CASING —
LOGGED BY DLL
REMARKS 32.17903 7.8 -92.4953056

DATE STARTED 5/12/23
DATE COMPLETED 5/12/23
CASING TYPE/DIAMETER —
SCREEN TYPE/SLOT —
SAND PACK TYPE —
GROUT TYPE/QUANTITY —
DEPTH TO WATER —
GROUNDWATER ELEVATION —

RECOVERY	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONDUCTIVITY ms/cm	PICTURE
39"			1455	1603	↓	2			0-18" CLAY, HIGH SILT, LOWEST, BROWN AND GREY LOW MOIST, MOD DENSITY, Fe Mn THROUGHOUT	1.58	1
			1458			4			18-39"	2.78	2
48"			1505			6			0-48" CLAY, MOD SILT, RED GREY, LOW MOISTURE, HIGH DENSITY, Fe Mn THROUGHOUT	1.04	3
			1507			8				1.35	4
48"			1515			10			0-18" CLAY, HIGH SILT, RED GREY, LOW MOIST, MOD DENS	1.12	5
			1517			12			18-48" SILT, MOD CLAY, RED GREY, LOW MOISTURE LOW DENSITY	0.23	6
47"			1520			14			0-40" SILT, MOD CLAY, DARK BROWN, D Amp LOW DENSITY	1.22	7
			1522			16			40-47" CLAY, MOD SILT, RED BROWN, LOW MOISTURE, HIGH DENSITY	24.0	8
49"			1530			18			0-48" CLAY, AS ABOVE	24.0	9
			1532			20				24.0	10
48"			1540			22			0-23" CLAY, AS ABOVE	24.0	11
			1542			24			23-48" CLAY, HIGH SILT, RED TAW, LOW MOISTURE, MOD DENSITY	24.0	12
28"			1545			26			0-28" SILT, MOD CLAY, RED BROWN, LOW MOIST LOW DENSITY	24.0	13
						28				24.0	
						30					
						32					
						34					
						36					
						38					

TD=26'



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BORING No. SE SB-01

PROJECT NAME CASCADE
PROJECT NUMBER 1705-A37
LOCATION MORSE LA
DRILLING METHOD GP 7822 DP
SAMPLING METHOD NT 2.25" x 4"
GROUND ELEVATION -
TOP OF CASING -
LOGGED BY DC
REMARKS ID 12885493 - 92.49501468

DATE STARTED 5/2/23
DATE COMPLETED 5/2/23
CASING TYPE/DIAMETER -
SCREEN TYPE/SLOT -
SAND PACK TYPE -
GROUT TYPE/QUANTITY -
DEPTH TO WATER -
GROUNDWATER ELEVATION -

RECOVERY	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONDUCTIVITY ms/cm	PICTURE
20"	20	SPLIT	0438	802		2			0-20" CLAY, MOD SILT, TAN AND GREY, LOW MOIST, MOD D	2.82	1
			0440	802		4				4.0	
			0550	802		6			0-13" CLAY, DARK GREY AND BLACK, LOW MOIST, LOW DENSITY	4.0	2
28"			0955	802		8			13-28" CLAY, MOD SILT, GREY WITH RED BROWN STAIN, LOW MOIST, MOD DENSITY	4.0	3
			1000	802		10			0-32" CLAY, AS ABOVE	4.0	
39"			1002	802		12			32-39" CLAY, HIGH SILT CONTENT GREY, LOW MOISTURE, MOD DENSITY, FELS AND THOUGH-OUT	4.0	5
			1013	802		14			0-33" CLAY, AS ABOVE	4.0	6
46"			1015	802		16			33-46" CLAY, MOD SILT, RED AND BROWN DANG TO GRANULATED, LOW DENSITY	4.0	7
			1025	802		18			0-46" CLAY, AS ABOVE, LARGE Ca NODULE @ 3"	4.0	8
46"			1027	802		20			0-24" CLAY, AS ABOVE	4.0	9
			1035	802		22			24-46" CLAY, HIGH SILT CONTENT RED GREY, LOW MOIST, MOD DEN	4.0	10
46"			1037	802		24				4.0	11
			1045	802		26			0-10" CLAY AS ABOVE	4.0	12
46"			1047	802		28			10-21 CLAY, MOD SILT, RED GREY, LOW MOIST/LOW DEN	4.0	
			1054	802		30			21-46" CLAY, HIGH SILT, RED GREY, LOW MOIST, LOW DEN	4.0	13
46"			1057	802		32			0-27" CLAY, AS ABOVE, SILT INCREASING WITH DEPTH	4.0	14
			1105	802		34			27-46" SILT, MOD CLAY, BROWN, LOW MOIST, LOW DENSITY	4.0	15
37"			1107	802		36			0-37" SILT, MOD CLAY, TAN, DANG, LOW DEN	4.0	16
						38				4.0	17

ID=35'



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BORING No. SE-SB02

PROJECT NAME GASTEL
PROJECT NUMBER 1705-432
LOCATION MOISE, LA
DRILLING METHOD LP 7827
SAMPLING METHOD 2.25"x4" DT
GROUND ELEVATION —
TOP OF CASING —
LOGGED BY DLL
REMARKS 30.17903 7.8 -92.4953056

DATE STARTED 5/12/23
DATE COMPLETED 5/12/23
CASING TYPE/DIAMETER —
SCREEN TYPE/SLOT —
SAND PACK TYPE —
GROUT TYPE/QUANTITY —
DEPTH TO WATER —
GROUNDWATER ELEVATION —

RECOVERY	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONDUCTIVITY ms/cm	PICTURE
39"			1455	1602		2			0-18" CLAY, HIGH SILT, LOWEST, BROWN AND GREY Low moisture, mod density, Fe Mn THROUGHOUT	1.58	1
			1452			4			18-39"	2.78	2
48"			1505			6			0-48" CLAY, mod silt, RED GREY, low moisture, HIGH DENSITY, Fe Mn THROUGHOUT	2.92	
			1507			8				1.04	3
			1515			10			0-18" CLAY, HIGH SILT, RED GREY, low moisture, mod DENS	1.35	4
48"			1517			12			18-48" silt, mod clay, RED GREY, low moisture Low DENSITY	1.12	
			1520			14			0-40" silt, mod clay, DARK BROWN, Damp Low DENSITY	0.23	5
47"			1522			16			40-47" CLAY, mod silt, RED BROWN, Low moisture, HIGH DENSITY	1.22	
			1530			18			0-48" CLAY, AS ABOVE	1.22	6
49"			1532			20				1.40	7
			1540			22			0-23" CLAY, AS ABOVE	1.40	8
49"			1542			24			23-48" CLAY, HIGH SILT, RED TAW, Low moisture, mod DENSITY	1.40	9
28"			1545			26			0-28" silt, mod clay, RED BROWN, Low moisture Low DENSITY	2.40	10
						28				2.40	11
						30				2.40	12
						32				2.40	13
						34					
						36					
						38					

TD=26'



HYDRO-ENVIRONMENTAL TECHNOLOGY, INC.
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BORING No. SE-SB03

PROJECT NAME GAFFEL
PROJECT NUMBER 1705-A37
LOCATION MORSE LA
DRILLING METHOD HP 7822
SAMPLING METHOD 2.25" x 4"
GROUND ELEVATION =
TOP OF CASING =
LOGGED BY DLL
REMARKS 30.12948083 - 92.49461776

DATE STARTED 5/3/23
DATE COMPLETED 5/3/23
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____

RECOVERY	PID (ppm)	SAMPLE TIME	SAMPLE	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONDUCTIVITY ms/cm	PICTURE
3.5		958			0			0-1.4 CLAY, MOD SILT, DARK BROWN, LOW MOIST, MOD DEN, Mn & Fe	0.35	1
		1000			4			1.4-3.5 CLAY, MOD SILT, GREY AND TAN, LOW MOIST, MOD DENSITY, Fe & Mn	0.98	2
		1005			6			0-4' CLAY, AS ABOVE	1.23	3
4.0		1007			8				1.15	4
		1019			10			0-2.4 CLAY, HIGH SILT, INCREASINGLY WITH DEPTH TAN AND RED, LOW MOISTURE, MOD DEN	1.62	5
4.0		1017			12			2.4-4.0 CLAY, HIGH SILT AS ABOVE, LEXES, TAN AND GREY, LOW MOIST, MOD/LOW DEN	1.43	6
		1025			14			0-1.0 SILT, MOD CLAY, TAN, SATURATED, LOW DEN	0.80	7
4.0		1022			16			1.0-4.0 CLAY, MOD SILT, RED AND GREY, LOW MOISTURE, HIGH DENSITY, LARGE CA @ 3.4'	1.42	8
		1035			18				1.29	9
4.0		1032			20			0-4.0 CLAY, MOD SILT, RED AND GREY	2.14	10
					22				2.01	
					24				1.94	
					26				1.28	
					28				1.05	
					30					
					32					
					34					
					36					
					38					
					40					

TD=20'



HYDRO-ENVIRONMENTAL TECHNOLOGY, INC.
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620 Apollo Road
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BORING No. SE-SB04

PROJECT NAME GASSEL
PROJECT NUMBER 1305. A37
LOCATION MOUSE LA
DRILLING METHOD LP 2822
SAMPLING METHOD 2.25" x 4
GROUND ELEVATION 1
TOP OF CASING 1
LOGGED BY Doc
REMARKS 30.12892504 - 92.49414470

DATE STARTED 5/3/23
DATE COMPLETED _____
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____

RECOVERY	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONDUCTIVITY ms/cm	PICTURE
3.5			1355			2			0-1.5 CLAY, HIGH SILT, TAN AND GREY, MINOR ORG, LOW MOIST/DEW, FIRM	0.88	1
			1357			4			1.5-3.5 CLAY, MINOR SILT, GREY & RED GREY, LOW MOISTURE, HIGH DEN	2.11	2
4.0			1305			6			0-4.0 CLAY, AS ABOVE	1.38	3
			1302			8				1.50	4
4.0			1315			10			0-1.6 CLAY, AS ABOVE	1.84	5
			1317			12			1.6-3.0 CLAY, HIGH SILT WORKING WITH DEPTH	1.49	6
4.0			1320			14			3.0-4.0 SILT	0.76	7
			1322			16			0-2.5 SILT, MINOR CLAY, BROWN SATURATED LOW DEN. CLAY 0.7-0.9'	1.38	8
4.0			1338			18			2.5-3.5 CLAY, HIGH SILT	1.48	9
			1332			20			3.5-4.0 CLAY, MINOR SILT, LOW MOIST, MESSY	1.44	10
4.0			1345			22			0-4.0 CLAY, MINOR SILT, GREY, LOW MOIST, HIGH DENSITY	2.0	11
			1343			24			0-0.5 CLAY, MOD SILT, GREY, LOW MOIST/DEW	1.89	12
						26			0.5-4.0 CLAY, HIGH SILT RED BROWN, LOW MOIST MOD DEN w/ nodules THROUGHOUT	1.93	
						28				0.92	
						30					
						32					
						34					
						36					
						38					



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620 Apollo Road
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BORING No. SE-SB05

PROJECT NAME CHARGE L
PROJECT NUMBER 1205-A35
LOCATION MORSE LA
DRILLING METHOD 1 7/8" ID
SAMPLING METHOD 2.75" x 4"
GROUND ELEVATION 1
TOP OF CASING 1
LOGGED BY DC
REMARKS 30.12876149 - 92.49463451

DATE STARTED 5/13/23
DATE COMPLETED 5/18/23
CASING TYPE/DIAMETER 3
SCREEN TYPE/SLOT 3
SAND PACK TYPE 3
GROUT TYPE/QUANTITY 3
DEPTH TO WATER 3
GROUNDWATER ELEVATION 3

RECOVERY	PID (ppm)	SAMPLE TIME	SAMPLE	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONDUCTIVITY ms/cm	PICTURE
3.5'		1450			02			0-2.4 CLAY, HIGH SILT, GREY, LOW moisture, MOD DENSITY	1.20	1
		1452			04			2.4-7.5 CLAY, MOD SILT, GREY, LOW moisture, HIGH DENSITY	2.12	2
4.0'		1458			06			0-4.0 CLAY, AS ABOVE	1.6	3
		1500			08				1.94	4
		1505			10			0-1.8 CLAY, AS ABOVE	1.88	
9.0'		1507			12			1.8-2.0 CLAY, HIGH SILT, RED GREY, LOW moisture, MOD DENSITY	2.21	5
		1510			14			2-4 CLAY, HIGH SILT, DAMP, LOW DENSITY	1.57	6
4.0'		1512			16			0-4.0 SILT, HIGH CLAY AS ALSO LEDGES, RED GREY DAMP TO SATURATED, LOW DENSITY	0.52	7
		1530			18				1.18	8
4.0'		1532			20			0-4.0 CLAY, MOD SILT, GREY, LOW moisture, HIGH DENSITY, F&M	2.40	9
		1547			22				2.52	10
					24			0-0.6 CLAY, AS ABOVE	2.22	
					26			0.6-3.2 CLAY, HIGH SILT	2.59	
					28			3.2-4.0 CLAY, MOD SILT, TAD, LOW moisture, MOD DENSITY	2.13	
					30				0.52	
					32					
					34					
					36					
					38					
					40					

TD = 24'



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BORING No. SE-SR06

PROJECT NAME GASTEL
PROJECT NUMBER 1205-437
LOCATION MOBILE, LA
DRILLING METHOD CP 7822
SAMPLING METHOD 2.25" x 4"
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY DCU
REMARKS 30.12873429 -42.4942403

DATE STARTED 5/14/23
DATE COMPLETED 5/14/23
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____

RECOVERY	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONDUCTIVITY ms/cm	PICTURE
			0140	3XEND 1x402 1x1602		2			0-1.8 CLAY, HIGH SILT, TAN AND GRAY, TAN AND GRAY, LOW MOIST / SED	2.38	1
2			0942	↓		4			1.8-3.2 CLAY, MOD SILT, GRAY WITH BLACK LOW MOISTURE, MOD DENSITY	2.40	2
			0955	1602		6			0-4.0 CLAY, AS ABOVE BLACK SAND 0-1'	2.4	3
10			0957	1602		8				2.4	4
			1005	1602		10			0-1.8 CLAY, HIGH SILT INCREASING WITH DEPTH, GRAY, LOW MOIST / DENSITY	2.4	5
7			1007	1602		12			1.8-3.2 SILT, MOD CLAY, TAN, LOW MOISTURE LOW DENSITY	2.5	6
			1015	3XEND 1x402 1x1602		14			0-3.3 SILT, AS ABOVE	2.4	7
10			1017	↓		16			3.3-4.0 CLAY, MOD SILT, TAN AND GRAY LOW MOISTURE, HIGH DENSITY	2.4	8
			1030	1602		18			0-4.0 CLAY, AS ABOVE, LARGE CALC 2.7'	2.4	9
0			1032	1602		20				2.4	10
			1045	1602		22			0-2.0 CLAY, AS ABOVE	2.4	11
1.7			1047	1602		24			2.0-3.8 CLAY, HIGH SILT, INCREASING WITH DEPTH TAN AND BROWN, LOW MOIST / DENS	2.4	12
						26			3.8-4.0 SILT, BROWN, LOW DENSITY, LOW MOISTURE	2.63	13
2						28			0-2.0 SILT, AS ABOVE	2.4	14
						30			2.0-2.6' CLAY, MOD SILT, RED BROWN, LOW MOIST, MOD DENS	2.6	15
						32			2.6-3.7 SILT, MOD CLAY, RED BROWN, LOW MOIST / DENS	2.68	16
						34					
						36					
						38					
						40					
						42					
						44					
						46					
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HYDRO-ENVIRONMENTAL TECHNOLOGY, INC.
Environmental Consultants
620 Apollo Road
Scott, Louisiana 70583
(337) 261-1963 Fax (337) 261-1953

BORING No. SE-SB07

PROJECT NAME GASTEL
PROJECT NUMBER 1305.437
LOCATION MORSE, LA
DRILLING METHOD LP 7822
SAMPLING METHOD 2.25" x 4"
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY See
REMARKS 30.12871397 -92.49501698

DATE STARTED 5/14/23
DATE COMPLETED 5/18/23
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____

RECOVERY	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONDUCTIVITY ms/cm	PICTURE
35'			1230			2			0-1.5 CLAY, HIGH SILT, DARK BROWN, LOW MOIST, MOD DRY	106	1
			1232			4			1.5-3.5 CLAY, MOD SILT GREY	148	2
40'			1240			6			0-4.0 CLAY, AS ABOVE, HIGH Fe NODULES	159	3
			1242			8				172	4
35'			1245			10			0-2.5 CLAY, AS ABOVE	131	5
			1247			12			2.5-3.9 CLAY, HIGH SILT, INTERMEDIATELY DRY, DEPTH, LIKEY MOD RED GREY, LOW moisture MOD REDSILTY	142	6
40'			1250			14			0-4.0 SILT MOD SILT, BROWN, SATURATED LOW DENSITY	120	7
			1252			16				374	8
40'			1255			18			0-4.0 CLAY, AS ABOVE	64	9
			1257			20				221	10
40'			1300			22			0-4.0 CLAY, AS ABOVE	172	11
			1312			24				182	12
						26					
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BORING No. SE-SB08

PROJECT NAME CHASEE
PROJECT NUMBER 1305-A38
LOCATION MORSE, LA
DRILLING METHOD LP 3822
SAMPLING METHOD 2.25" x 41
GROUND ELEVATION /
TOP OF CASING /
LOGGED BY DC
REMARKS 30.1291769 -92.45503436

DATE STARTED 5/14/23
DATE COMPLETED 5/14/23
CASING TYPE/DIAMETER /
SCREEN TYPE/SLOT /
SAND PACK TYPE /
GROUT TYPE/QUANTITY /
DEPTH TO WATER /
GROUNDWATER ELEVATION /

RECOVERY	PID (ppm)	SAMPLE TIME	SAMPLE	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONDUCTIVITY ms/cm	PICTURE
		1345			2			0-1.8 CLAY, HIGH SILT, GREY, LOW MOIST, MOD DENSITY	0.42	1
3.3		1348			4			1.8-3.3 CLAY, MOD SILT, GREY, LOW MOIST MOD DENSITY	3.70	2
		1350			6			0-4.0 CLAY, AS ABOVE	1.52	3
4.0		1352			8			0-0.8 CLAY, MOD SILT, INCREASED WITH DEPTH TAN AND GREY, LOW MOIST, MOD DENSITY	1.60	4
		1400			10			0.8-4.0 SILT, MOD	1.75	5
4.0		1402			12				1.45	6
		1405			14			0-4.0 SILT, MOD CLAY, TAN AND BROWN SATURATED, LOW DENSITY	1.85	7
4.0		1427			16				1.22	8
		1415			18			0-4.0 CLAY, MOD SILT, TAN AND GREY LOW MOISTURE, HIGH DENSITY	0.53	9
4.0		1417			20				2.57	10
		1425			22			0-4.0 CLAY, AS ABOVE	3.82	11
4.0		1427			24				2.5	12
					26				1.52	13
					28				1.45	14
					30					
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BORING No. SE-SB09

PROJECT NAME LAKE
PROJECT NUMBER 1205-437
LOCATION NORSE, LA
DRILLING METHOD CD 7822
SAMPLING METHOD 2.25" x 4"
GROUND ELEVATION —
TOP OF CASING —
LOGGED BY DCL
REMARKS 30.1289057 - 92.49514912

DATE STARTED 5/4/23
DATE COMPLETED 5/4/23
CASING TYPE/DIAMETER —
SCREEN TYPE/SLOT —
SAND PACK TYPE —
GROUT TYPE/QUANTITY —
DEPTH TO WATER —
GROUNDWATER ELEVATION —

RECOVERY	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT/BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONDUCTIVITY ms/cm	PICTURE
2.5			1505			2			0-1.8 CLAY, HIGH SILT, DARK GREY, LOW MOIST	1.13	1
			1508			4			MOD BED 1.8-2.5 CLAY, MOD SILT, DARK GREY, LOW MOISTURE,	1.96 1.52	2
4.0			1515			6			0-4.0 CLAY, AS ABOVE	1.28	3
			1517			8				1.87	4
4.0			1520			10			0-4.0 CLAY, HIGH SILT	1.52	5
			1522			12				1.20	6
4.0			1530			14			0-3.7 SILT, RED BROWN, DAMP TO SATURATED LOW DENSITY	3.27	7
			1532			16			3.7-4.0 CLAY, MOD SILT, RED BROWN - LOW MOIST	2.4	8
4.0			1540			18			0-4.0 CLAY, AS ABOVE	2.4	9
			1542			20				2.4	10
4.0			1550			22			0-2.3 CLAY, AS ABOVE 2.3-3.5 CLAY, HIGH SILT INCREASINGLY WITH DEPTH TAN DAMP, LOW DEN	2.5	11
2.5			1552			24			3.5-4.0 SILT	1.26	12
			1610			26			0-2.4 SILT, AS ABOVE	3.26 2.4 2.52	13
						28					
						30					
						32					
						34					
						36					
						38					

TD = 26'



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**
Environmental Consultants

SOUTHLAND OS

Client: _____

Project No.: 1705 A37

Project Name: GASTEL

Date: 5/3/23

Project Location: MORSE, La

Page _____ of _____

00630 - LEFT OFFICE, TRUCK #25
00730 - ARRIVED ON SITE
• SOUTHLAND: CHAD C. / CLEV H.
• WH DRILLERS
00900 - SETUP ON SE-SB03
01040 - GROUTED TO 20' / 10941
01255 - SETUP ON SE-SB04
01400 - SAMPLED TO 24'
- GROUTED TO SURFACE / 10941
01500 - LEFT SITE
01600 - ARRIVED AT OFFICE

* ALL BATHS GROUTED THROUGH 3.25' BARRELS



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620 Apollo Road
Scott, Louisiana 70583
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BORING No. SE-SB03

PROJECT NAME GASTEL
PROJECT NUMBER 1705-A37
LOCATION MORSE LA
DRILLING METHOD HP 7822
SAMPLING METHOD 2.25" x 4"
GROUND ELEVATION =
TOP OF CASING =
LOGGED BY DLL
REMARKS 10.12948083 - 92.49461776

DATE STARTED 5/3/23
DATE COMPLETED 5/3/23
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____

RECOVERY	PID (ppm)	SAMPLE TIME	SAMPLE	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONDUCTIVITY ms/cm	PICTURE
3.5		958			0			0-1.4 CLAY, MOD SILT, DARK BROWN, LOW MOIST, MOD DEN, Mn & Fe	0.35	1
		1000			4			1.4-3.5 CLAY, MOD SILT, GREY AND TAN, LOW MOIST, MOD DENSITY, Fe & Mn	0.98	2
		1005			6			0-4' CLAY, AS ABOVE	1.23	3
4.0		1007			8				1.15	4
		1019			10			0-2.4 CLAY, HIGH SILT, INCREASINGLY WITH DEPTH TAN AND RED, LOW MOISTURE, MOD DEN	1.62	5
4.0		1017			12			2.4-4.0 CLAY, HIGH SILT AS ABOVE, LEXES, TAN AND GREY, LOW MOIST, MOD/LOW DEN	1.43	6
		1025			14			0-1.0 SILT, MOD CLAY, TAN, SATURATED, LOW DEN	0.80	7
4.0		1022			16			1.0-4.0 CLAY, MOD SILT, RED AND GREY, LOW MOISTURE, HIGH DENSITY, LARGE CA @ 3.4'	1.42	8
		1035			18				1.29	9
4.0		1032			20			0-4.0 CLAY, MOD SILT, RED AND GREY	2.14	10
					22				2.01	
					24				1.94	
					26				1.28	
					28				1.05	
					30					
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					36					
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TD=20'



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BORING No. SE-SB04

PROJECT NAME GASSEL
PROJECT NUMBER 1305. A37
LOCATION MOUSE LA
DRILLING METHOD LP 2822
SAMPLING METHOD 2.25" x 4
GROUND ELEVATION 1
TOP OF CASING 1
LOGGED BY Dec
REMARKS 30.12892504 - 92.49414470

DATE STARTED 5/3/23
DATE COMPLETED _____
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____

RECOVERY	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONDUCTIVITY ms/cm	PICTURE
3.5			1355			2			0-1.5 CLAY, HIGH SILT, TAN AND GREY, MINOR ORG, LOW MOIST/DEW, FIRM	0.88	1
			1357			4			1.5-3.5 CLAY, MINOR SILT, GREY & RED GREY, LOW MOISTURE, HIGH DEN	2.11	2
4.0			1305			6			0-4.0 CLAY, AS ABOVE	1.38	3
			1302			8				1.50	4
4.0			1315			10			0-1.6 CLAY, AS ABOVE	1.84	5
			1317			12			1.6-3.0 CLAY, HIGH SILT WORKING WITH DEPTH	1.49	6
4.0			1320			14			3.0-4.0 SILT	0.76	7
			1322			16			0-2.5 SILT, MINOR CLAY, BROWN SATURATED LOW DEN. CLAY 0.7-0.9'	1.38	8
4.0			1338			18			2.5-3.5 CLAY, HIGH SILT	1.48	9
			1332			20			3.5-4.0 CLAY, MINOR SILT, LOW MOIST, MESSY	1.44	10
4.0			1345			22			0-4.0 CLAY, MINOR SILT, GREY, LOW MOIST, HIGH DENSITY	2.0	11
			1343			24			0-0.5 CLAY, MOD SILT, GREY, LOW MOIST/DEW	1.89	12
						26			0.5-4.0 CLAY, HIGH SILT RED BROWN, LOW MOIST	1.93	
						28			MOD DEN w/ nodules THROUGHOUT	0.92	
						30					
						32					
						34					
						36					
						38					



HYDRO-ENVIRONMENTAL TECHNOLOGY, INC.
Environmental Consultants
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BORING No. SE-SB05

PROJECT NAME CHARGE
PROJECT NUMBER 1205-A35
LOCATION NORSE LA
DRILLING METHOD 1 7/8" ID
SAMPLING METHOD 2.75" x 4"
GROUND ELEVATION 1
TOP OF CASING 1
LOGGED BY DC
REMARKS 30.12876149 - 92.49463451

DATE STARTED 5/13/23
DATE COMPLETED 5/14/23
CASING TYPE/DIAMETER 3
SCREEN TYPE/SLOT 3
SAND PACK TYPE 3
GROUT TYPE/QUANTITY 3
DEPTH TO WATER 3
GROUNDWATER ELEVATION 3

RECOVERY	PID (ppm)	SAMPLE TIME	SAMPLE	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONDUCTIVITY ms/cm	PICTURE
3.5'		1450			02			0-2.4 CLAY, HIGH SILT, GREY, LOW moisture, MOD DENSITY	1.20	1
		1452			04			2.4-7.5 CLAY, MOD SILT, GREY, LOW moisture, HIGH DENSITY	2.12	2
4.0'		1458			06			0-4.0 CLAY, AS ABOVE	1.6	3
		1500			08				1.94	4
		1505			10			0-1.8 CLAY, AS ABOVE	1.88	
9.0'		1507			12			1.8-2.0 CLAY, HIGH SILT, RED GREY, LOW moisture, MOD DENSITY	2.21	5
		1510			14			2-4 CLAY, HIGH SILT, DAMP, LOW DENSITY	1.57	6
4.0'		1512			16			0-4.0 SILT, HIGH CLAY AS ALSO LEDGES, RED GREY DAMP TO SATURATED, LOW DENSITY	0.52	7
		1530			18				1.18	8
4.0'		1532			20			0-4.0 CLAY, MOD SILT, GREY, LOW moisture, HIGH DENSITY, F&M	2.40	9
		1547			22				2.52	10
					24			0-0.6 CLAY, AS ABOVE	2.22	
					26			0.6-3.2 CLAY, HIGH SILT	2.59	
					28			3.2-4.0 CLAY, MOD SILT, TAD, LOW moisture MOD DENSITY	2.13	
					30				0.52	
					32					
					34					
					36					
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					40					

TD = 24'



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**
Environmental Consultants

SOUTHLAND
OS

Client: _____

Project No.: 1705.A32

Project Name: GASTEL

Date: 5/4/23

Project Location: MORSE, Ca

Page _____ of _____

Q0630 - LEFT OFFICE TRUCK # 40
Q0730 - ~~LEFT~~ ~~DI~~ ARRIVED ON SITE
- SAME PERSONNEL AS 5/3/23
Q0830 - SETUP ON SE-SB06
Q1100 - SAMPLED TO 27'
Q1230 - SETUP AND BEGAN SAMPLING,
SE-SB07
Q1330 - SAMPLED TO 23'
Q1345 - SETUP AND BEGAN SAMPLING, SE-SB08
TO 28'
Q1430 - FINISHED SAMPLING
Q1500 - SETUP ON SE-SB09
Q1630 - SAMPLED 26'
Q1700 - LEFT SITE

* WH GROUTED ALL BODILY THROUGH 2.25" BARRELS, USING APPROX 15 gal OF GROUT



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BORING No. SE-SR06

PROJECT NAME GASTEL
PROJECT NUMBER 1205-437
LOCATION MOBILE, LA
DRILLING METHOD CP 7822
SAMPLING METHOD 2.25" x 4"
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY DCU
REMARKS 30.12873429 -42.4942403

DATE STARTED 5/14/23
DATE COMPLETED 5/14/23
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____

RECOVERY	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONDUCTIVITY ms/cm	PICTURE
				3XEND 0140 1x402 1x1602		2			0-1.8 CLAY, HIGH SILT, TAN AND GRAY, TAN AND GRAY, LOW MOIST / SED	2.38	1
3.2			0942	↓		4			1.8-3.2 CLAY, MOD SILT, GRAY WITH BLACK LOW MOISTURE, MOD DENSITY	2.40	2
			0955	1602		6			0-4.0 CLAY, AS ABOVE BLACK SAND 0-1'	2.4	3
4.0			0957	1602		8				2.4	4
			1005	1602		10			0-1.8 CLAY, HIGH SILT INCREASING WITH DEPTH, GRAY, LOW MOIST / DENSITY	2.4	5
3.7			1007	1602		12			1.8-3.2 SILT, MOD CLAY, TAN, LOW MOISTURE LOW DENSITY	2.5	6
			1015	3XEND 1x402 1x1602		14			0-3.3 SILT, AS ABOVE	2.4	7
4.0			1017	↓		16			3.3-4.0 CLAY, MOD SILT, TAN AND GRAY LOW MOISTURE, HIGH DENSITY	2.4	8
			1030	1602		18			0-4.0 CLAY, AS ABOVE, LARGE CALC 2.7'	2.4	9
4.0			1032	1602		20				2.4	10
			1045	1602		22			0-2.0 CLAY, AS ABOVE	2.4	11
4.0			1047	1602		24			2.0-3.8 CLAY, HIGH SILT, INCREASING WITH DEPTH TAN AND BROWN, LOW MOIST / DENS	2.4	12
						26			3.8-4.0 SILT, BROWN, LOW DENSITY, LOW MOISTURE	2.63	13
3.7						28			0-2.0 SILT, AS ABOVE	2.4	14
						30			2.0-2.6' CLAY, MOD SILT, RED BROWN, LOW MOIST, MOD DENS	2.6	15
						32			2.6-3.7 SILT, MOD CLAY, RED BROWN, LOW MOIST / DENS	2.6	16
						34					
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HYDRO-ENVIRONMENTAL TECHNOLOGY, INC.
Environmental Consultants
620 Apollo Road
Scott, Louisiana 70583
(337) 261-1963 Fax (337) 261-1953

BORING No. SE-SB07

PROJECT NAME GASTEL
PROJECT NUMBER 1305.437
LOCATION MORSE, LA
DRILLING METHOD CP 7822
SAMPLING METHOD 2.25" x 4"
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY See
REMARKS 30.12871397 -92.49501698

DATE STARTED 5/14/23
DATE COMPLETED 5/18/23
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____

RECOVERY	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONDUCTIVITY ms/cm	PICTURE
35'			1230			2			0-1.5 CLAY, HIGH SILT, DARK BROWN, LOW MOIST, MOD DRY	106	1
			1232			4			1.5-3.5 CLAY, MOD SILT GREY	148	2
40'			1240			6			0-4.0 CLAY, AS ABOVE, HIGH Fe NODULES	159	3
			1242			8				172	4
35'			1245			10			0-2.5 CLAY, AS ABOVE	131	5
			1247			12			2.5-3.9 CLAY, HIGH SILT, INTERMEDIATELY DRY, DEPTH, LIKEY MOD RED GREY, LOW moisture MOD REDSILT	142	6
40'			1250			14			0-4.0 SILT MOD SILT, BROWN, SATURATED LOW DENSITY	120	7
			1252			16				374	8
40'			1255			18			0-4.0 CLAY, AS ABOVE	64	9
			1257			20				221	10
40'			1300			22			0-4.0 CLAY, AS ABOVE	172	11
			1312			24				192	12
						26					
						28					
						30					
						32					
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BORING No. SE-SB08

PROJECT NAME CRASSEL
PROJECT NUMBER 1305-A38
LOCATION MORSE, LA
DRILLING METHOD LP 3822
SAMPLING METHOD 2.25" x 41
GROUND ELEVATION 1
TOP OF CASING 1
LOGGED BY DC
REMARKS 30.1291769 -92.45503436

DATE STARTED 5/14/23
DATE COMPLETED 5/14/23
CASING TYPE/DIAMETER 1
SCREEN TYPE/SLOT 1
SAND PACK TYPE 1
GROUT TYPE/QUANTITY 1
DEPTH TO WATER 1
GROUNDWATER ELEVATION 1

RECOVERY	PID (ppm)	SAMPLE TIME	SAMPLE	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONDUCTIVITY ms/cm	PICTURE
		1345			2			0-1.8 CLAY, HIGH SILT, GREY, LOW MOIST, MOD DENSITY	0.42	1
3.3		1348			4			1.8-3.3 CLAY, MOD SILT, GREY, LOW MOIST MOD DENSITY	3.70	2
		1350			6			0-4.0 CLAY, AS ABOVE	1.52	3
4.0		1352			8			0-0.8 CLAY, MOD SILT, MODERATE WITH DEPTH TAN AND GREY, LOW MOIST, MOD DENSITY	1.60	4
		1400			10			0.8-4.0 SILT, MOD	1.75	5
4.0		1402			12				1.45	6
		1405			14			0-4.0 SILT, MOD CLAY, TAN AND BROWN SATURATED, LOW DENSITY	1.85	7
4.0		1427			16				1.22	8
		1415			18			0-4.0 CLAY, MOD SILT, TAN AND GREY LOW MOISTURE, HIGH DENSITY	0.53	9
4.0		1417			20				2.57	10
		1425			22			0-4.0 CLAY, AS ABOVE	3.82	11
4.0		1427			24				2.5	12
					26				1.52	13
					28				1.72	14
					30				1.52	15
					32				1.45	16
					34				1.42	17
					36					
					38					
					40					



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620 Apollo Road
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BORING No. SE-SB09

PROJECT NAME LAKE
PROJECT NUMBER 1205-437
LOCATION NORSE, LA
DRILLING METHOD LD 7822
SAMPLING METHOD 2.25" x 4"
GROUND ELEVATION —
TOP OF CASING —
LOGGED BY DCL
REMARKS 30.1289057 - 92.49514912

DATE STARTED 5/4/23
DATE COMPLETED 5/4/23
CASING TYPE/DIAMETER —
SCREEN TYPE/SLOT —
SAND PACK TYPE —
GROUT TYPE/QUANTITY —
DEPTH TO WATER —
GROUNDWATER ELEVATION —

RECOVERY	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT/BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONDUCTIVITY ms/cm	PICTURE
2.5			1505			2			0-1.8 CLAY, HIGH SILT, DARK GREY, LOW MOIST	1.13	1
			1508			4			MOD BED 1.8-2.5 CLAY, MOD SILT, DARK GREY, LOW MOISTURE,	1.96 1.52	2
4.0			1515			6			0-4.0 CLAY, AS ABOVE	1.28	3
			1517			8				1.87	4
4.0			1520			10			0-4.0 CLAY, HIGH SILT	1.52	5
			1522			12				1.20	6
4.0			1530			14			0-3.7 SILT, RED BROWN, DAMP TO SATURATED LOW DENSITY	3.27	7
			1532			16			3.7-4.0 CLAY, MOD SILT, RED BROWN - LOW MOIST	2.4	8
4.0			1540			18			0-4.0 CLAY, AS ABOVE	2.4	9
			1542			20				2.4	10
4.0			1550			22			0-2.3 CLAY, AS ABOVE 2.3-3.5 CLAY, HIGH SILT INCREASINGLY WITH DEPTH TAN DAMP, LOW DEN	2.5	11
2.5			1552			24			3.5-4.0 SILT	1.26	12
			1610			26			0-2.4 SILT, AS ABOVE	2.4	13
						28				2.5	
						30					
						32					
						34					
						36					
						38					

TD = 26'



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**
Environmental Consultants

SOUTHLAND OS

Client : _____

Project No.: 1705.437

Project Name: GASTEL

Date: 3/3/23

Project Location: MORSE, La

Page _____ of _____

- @0630 - LEFT OFFICE TRUCK # 40
@0730 - ARRIVED ON SITE, SAME PERSONNEL AS
- SAME PERSONNEL AS 5/4
- ICON RETURNED SE-5309. SOUTHLAND WILL ATTEMPT TO SET A TEMPORARY WELL. [12-17']
@1100 - WH ATTEMPTED TO SET A WELL, BUT LOST E-POINT
- GROUTED TO SURFACE USING 10% OF GROUT
@1130 - LEFT ~~THE~~ SITE
@1230 - ARRIVED AT OFFICE



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**
Environmental Consultants

Client: Jones Walker

Project No.: 1705.A37

Project Name: Giastal

Date: 6-13-2023

Project Location: Morse, LA

Page 1 of 2

- 0745 - EM left HET in #40 on site
- 0830 - Arrive on site. 84°F, partly cloudy. Eric Montesano - HET
- 0845 - All personnel on site. Duane Piranio - SE
- WHE mob to SE-CPT01 w/ Jack Womble } WHE
GP2060 CPT rig. Ryan Owens }
- Tracked from well pad around rice fields.
- 0925 - Began drilling SE-CPT01 location. Pushing EC/HPT probe w/ 1.5" x 5' 1.5" x 4' barnels.
- 1000 - Completed drilling to 50' BLS.
- Pulled probe + all pipe out of hole. Drilled 1.5" x 4' rods w/ point to TD. Poured grout through pipe + removed as they filled. Grouted to surface.
- L7 Used ~ 6 gal.
- 1130 - Completed grouting SE-CPT01
- Mob to SE-CPT02 location.
- 1210 - Began drilling EC/HPT w/ 1.5" x 4' rods as above.
- 1230 - Completed drilling to 47.70' BLS
- Pulled probe + all pipe out of hole.
- Drilled 1.5" pipe to 47' BLS. Grouted through rods. Removed as they filled. Used ~ 6 gal.
- Completed grouting SE-CPT02.
- SE-CPT01 (30.12930541, -92.49456989)
- SE-CPT02 (30.12872707, -92.49474749)
- 1330 - Mob to SE-CPT03 location.
- 1345 - Began drilling w/ GP2060 CPT pushing 1.5" x 4' rods + EC/HPT probe attached.
- 1400 - Completed drilling to 33.95' BLS.
- Pulled probe + all pipe out of hole. Grouted same way as above. Used ~ 4.5 gal.
- 1500 - Mob to SE-SB04 location. Began drilling.





**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

Client: Jones Walker

Project Name: Gastal

Project Location: Morse, LA

Project No.: 1705.A37
1705.A2

Date: 6-13-23

Page 2 of 2

- 1520 - Drilled EC/HPT probe to 27.35' BLS.
- Probe + all pipe out of hole.
- Grouted same as above. Used ~4.5 gal.
1600 - Completed grouting SE-SB SE-CPT04.

SE-CPT03 (30.12835199, -92.49433405)

SE-CPT04 (30.12839897, -92.49525505)

1620 - All personnel off site.

1650 - Arrive @ HET

EM



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

Client: Jones Walker

Project Name: Gastal

Project Location: Morse, LA

Project No.: 1705-A37

Date: 6-14-23

Page 1 of 2

- 0650 - EM left HET in #40 on site
- 0730 - Arrive on site. 84°F, sunny. Eric Montesano - HET
- Mob to ~~SE-CPT06~~ Duane Piranio - SE
SE-CPT05 location. Jack Womble } WHE
(30.1290413, -92.4953261) Ryan Owens }
- 0800 - Began drilling ~~at~~ EC/HPT probe
w/ GP2060 CPT.
- 0820 - Completed drilling to 40.60' w/ EC/HPT probe.
- Pulled all pipe + probe out of hole. Re-entered
w/ 1.5" x 4' w/ point attached, + drilled to TD.
Grouted through rods + removed as they filled.
Grouted to surface.
- Completed grouting SE-CPT05. Used ~ 6 gal.
- Mob to SE-CPT06 location
- 0910 - Began drilling SE-CPT06 w/ GP2060 CPT pushing
EC/HPT probe. (30.1292341, -92.4958032)
- 0935 - Completed drilling to 40.65' BLS
- Pulled probe + pipe.
- Grouted same method as above. Used ~ 6 gal.
- 1030 - Mob to SE-CPT07 location.
(30.1298967, -92.4958786)
- 1040 - Began drilling EC/HPT probe.
- 1055 - Completed drilling. TD: 27.45' BLS.
- Pulled probe + pipe out of hole.
- Grouted same way as above. Used ~ 3 gal.
- Mob to SE-CPT08 location.
(30.1306881, -92.4933067)
- 1255 - Began drilling EC/HPT probe.
- 1305 - Completed drilling to 27.50' BLS.
- Pulled probe + pipe. Grouted same way as
above. Used ~ 3 gal.
- Mob to SE-CPT09 location





**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

Client: Jones Walker

Project Name: Castal

Project Location: Morse, LA

Project No.: 1705-A37

Date: 6-14-23

Page 2 of 2

- SE-CPT09 (30.1288720, -92.4944212)

1410 - Began drilling HPT/EC probe.

1420 - Completed drilling. TD: 27.65' BLS.

- Pulled all pipe + probe out of hole.

- Grouted through ^{EM} 1.5" x 4' rods same as above. Used ~ 3 gal.

- Mob to ~~SE-SB10~~^{EM} location

SE-CPT10

(30.1297097, -92.4965777)

1510 - Began drilling EC/HPT probe.

1525 - Completed drilling. TD: 30.85'

- Pulled all pipe + probe out of hole.

1545 - Grouted to surface. Same method as above.

- Tracked GP 2060 CPT to well pad / staging area

1600 - All personell off site.

1645 - Arrive @ HET

EM



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**
Environmental Consultants

Client: Jones Walker

Project No.: 1705.A37

Project Name: Gastal

Date: 6-15-23

Project Location: Morse, LA

Page 1 of 2

- 0700 - EM left HET in # 40 on site
- 0745 - Arrive on site. 87°F, Sunny Eric Montesano - HET
- 0800 - All personnel on site. Duane Piranio } SE
- WHE tracking GP 7822 NT to Cleveland Jack Womble } WHE
 - Set up on SE-SB10 location. Ryan Owens }
(30.12922761, -92.49585525)
- 0820 - Began drilling 2'1/4" x 4' dual tube to soil sample.
- 0945 - Completed drilling. See boring log.
LT TD: 40' BLS.
- Pulled all pipe out of hole. 2'1/4 rods w/ point in same hole to 39' BLS. 1" trim pipe to TD. Punched out point. Poured grout through 1" PVC until PVC + 2'1/4 rods filled. Removed as they filled. Grouted to surface.
 - Completed grouting SE-SB10.
- 1145 - Mob to SE-SB11 location. Began soil sampling.
(30.12902836, -92.49586634)
- See boring log.
- 1210 - Completed logging + sampling. Grouted borehole to surface same method as above. TD: 28' BLS.
- 1310 - Mob to SE-SB12 location. Began drilling.
(30.12839936, -92.49525511)
- See boring log.
- 1340 - Completed logging + sampling SE-SB12.
TD: 20' BLS.
- Grouted to surface using same method as above.
- 1420 - Mob to SE-SB13 location. Began drilling.
(30.12943364, -92.49512398)
- See boring log. (EM)





**HYDRO-ENVIRONMENTAL
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Environmental Consultants

Client: Jones Walker

Project Name: Gastal

Project Location: Morse, LA

Project No.: 1705-A37

Date: 6-15-23

Page 2 of 2

1500 - Completed logging + sampling SE-SB13 location. TD: 20' BUS.

- WHE grouted to surface using same method as above.

1610 - All personell off site.

1645 - Arrive @ HET

EM



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BORING No. SE-SB10

PROJECT NAME Gastal
PROJECT NUMBER 1705-A37
LOCATION Morse, LA
DRILLING METHOD GP 7822DT
SAMPLING METHOD 2 1/4" x 4' dual tube
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY Eric Montesano
REMARKS 30.12922761, -92.49585525

DATE STARTED 6-15-23
DATE COMPLETED 6-15-23
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____
TOTAL DEPTH 40' BLS

Recovery	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
39"				(2-4) 0835 802	X	2	CL		0-39" Clay, min silt, brown, low moist, low dense, Fe stain	0.97
						4				1.32
						6	CL		0-48" Clay, brown, low moist, mod dense to high dense, Fe stain, Mn stain.	1.27
48"				0840 802	X	8				1.48
						10	CL		6-22" Clay, min silt increasing w/ depth, low moist, low dense, brown + gray.	1.65
						12	ML		22-48" Silt, min VFG sand, brown, damp, low dense	1.25
48"				0845 802	X	14			0-12" Silt, min VFG sand, high moist, low dense, brown	1.65
						16	CL		12-31" Clay, brown, low moist, high dense	1.44
						18			31-42" Silty Clay, brown, low moist, low dense	1.45
42"				0855 802	X	20			0-48" Clay, brown + gray, low moist, mod dense, Fe stain	2.20
						22	CL			24
						24				24
48"				0900 802	X	26			0-26" SAA	3.67
						28	CL		26-48" Silty Clay, brown, low moist, low dense, Ca frags @ bot.	2.84
						30				2.36
						32	CL		0-30" SAA	3.90
48"				0915 802	X	34			30-48" Silt, min clay, brown, low moist, low dense	2.52
						36	ML			24
						38			6-26" SAA	3.01
						40	CL		26-48" Silty Clay, brown, damp, low dense	24
48"				0920 802	X	42			0-46" SAA	0.77
						44	ML		46-36" Clayey Silt, brown, med-high moist, low dense, Clay lens @ 35-36"	0.74
						46			36-45" Sandy Silt, brown, damp, low dense	2.50
						48	CL		45-48" Clay, gray, low moist, low dense	24
48"				0930 802	X	50			0-11" Sandy Silt, brown, damp, low dense	3.0
						52	ML		11-40" Silt, gray + brown, med-high moist, low dense, clayey @ top, sandy @ bot.	0.90
40"				0935 802	X	54				0.67
						56				0.28
				0938 802	X	58				
						60				



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BORING No. SE-SB11

PROJECT NAME Castal
PROJECT NUMBER 1705-A37
LOCATION Morse, LA
DRILLING METHOD GP 7822 DT
SAMPLING METHOD 2 1/4" x 4" dual tube
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY Eric Montesano
REMARKS 30.12902836, -92.49586634

DATE STARTED 6-15-23
DATE COMPLETED 6-15-23
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____
TOTAL DEPTH 28' BLS

Recovery	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
30"				2-4 NO SPLIT	X	2	CL	///	0-30" Clay, gray w/ orange Fe stain, Mn stain, low moist, low-mod dense	1.47
			1055			4				1.65
						6			0-48" SAA, mix silt @ bottom.	1.52
48"			1100	6-8 8oz	X	8	CL	///		1.68
						10				1.35
						12			0-13" Silty Clay, gray, Fe stain, low moist, low dense	2.13
48"			1105	10-12 8oz	X	12	ML	///	13-37" Silt, mix clay, brown + gray, Fe staining, clamp, low dense	1.45
						14			37-48" Clay, silty @ 39-42", Fe stain, Mn stain, gray + orange brown, low dense, low moist	0.69
						16			0-7" Clay, gray, low moist, mod dense, Fe stain, Mn stain	1.90
46"			1110	14-16 8oz	X	16	ML	///	7-46" Clayey Silt, brown, clamp, clay lens @ 16-19", 23-26", low dense	1.78
						18				1.25
						20			0-4" Silty Clay, brown, low moist, low dense	1.03
48"			1115	18-20 8oz	X	20	CL	///	4-48" Clay, red-brown, low moist, mod-high dense	1.26
						22				1.31
						24			0-48" Clay, gray w/ Fe staining, low moist, mod dense	1.48
48"			1120	22-24 8oz	X	24	CL	///		1.51
						26				1.55
						28			0-36" Silty Clay, brown + gray, low moist, low dense, Fe stain	1.47
36"			1130	26-28 8oz	X	28	CL	///		0.78
						30				0.64
						32				0.68
						34				
						36				
						38				
						40				



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BORING No. SE-SB12

PROJECT NAME Gastail
PROJECT NUMBER 1705.A37
LOCATION Morse, LA
DRILLING METHOD GP 7822 DT
SAMPLING METHOD 2'14" x 4' dual tube
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY Eric Montesano
REMARKS 30.12839936, -92.49525511

DATE STARTED 6-15-23
DATE COMPLETED 6-15-23
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____
TOTAL DEPTH 20' BLS

Recovery	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
42"				1315	2'-4' 8oz	2	CL		0-42" Clay, brown, low moist, mod dense, Fe stain, Mn stain, Ca frags	0.96
						4				1.83
						6	CL		0-32" SAA	1.90
48"				1320	6'-8' 8oz	8	CL		32-40" Silty Clay, brown, Fe stain, Mn stain, low moist, low dense	0.80
						10	ML		40-48" Silt, brown, low moist, low dense	1.80
						12	CL		0-8" SAA	0.84
40"				1325	10'-12' 8oz	14	CL		8-18" Silty Clay, brown, damp, low dense	1.13
						16	ML		18-25" Clay, brown + gray, Fe stain, Mn stain, mod-high dense, low moist	2.50
						18			25-33" Silty Clay, brown, damp, low dense	0.58
						20			33-40' Silt, brown, low moist-damp, low dense	1.72
42"				1335	14'-16' 8oz	22	CL		0-24" Silty Clay, red-brown, damp, low dense, clay lens @ 16-18", Mn stain, Fe stain	1.05
						24			24-42" Clay, red brown, low moist, mod dense, Mn stain Fe stain	1.78
48"				1340	18'-20' 8oz	26	CL		0-48" Clay, red-brown + gray, low moist, low dense, Fe concretions @ 47", 1/2" silt lens @ 18" + 21"	1.49
						28				0.92
						30				1.08
						32				0.42
						34				
						36				
						38				
						40				



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BORING No. SE-SB13

PROJECT NAME Crastal
PROJECT NUMBER 1705.A37
LOCATION Morse, LA
DRILLING METHOD GP 7822 DT
SAMPLING METHOD 2'14" x 4' dual tube
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY Eric Montesano
REMARKS 30.12943364, -92.49512398

DATE STARTED 6-15-23
DATE COMPLETED 6-15-23
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____
TOTAL DEPTH 20' BLS

Recovery	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
40"				1430	2-4' 8oz X	2	CL		0-40" Clay, gray w/ orange staining - Fe, min Mn staining, low moist, low to mod dense	0.23 1.65 1.34
						4			0-43" SAA	1.32
43"				1435	6-8' 8oz X	6	CL			1.35
						8			0-48" SAA, brown + gray	1.70 1.79
48"				1440	10-12' 8oz X	10	CL			1.63
						12			0-3" SAA	1.87 1.30
38"				1445	14-16' 8oz X	14	ML		3-38" Silt, brown, low moist, low dense	0.44
						16	ML		0-18" Silt, min clay, red-brown, sat to high moist, low dense	0.78 1.85
44"				1450	18-20' 8oz X	18	CL		18-44" Clay, silty @ top decrease w/ depth, brown + gray, low moist, mod-high dense, Ca frags	1.53 1.71
						20				
						22				
						24				
						26				
						28				
						30				
						32				
						34				
						36				
						38				
						40				



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**
Environmental Consultants

Client: B Jones Walker

Project Name: Castal

Project Location: Morse, LA

Project No.: 1705.A37

Date: 6-16-23

Page 1 of 2

- 0700 - EM left HET in #40 on site
- 0740 - Arrive on site. 79°F, cloudy. Eric Montesano - HET
- 0800 - All personell on site. Duane Piranio] SE
- WHE mob GP 7822 DT to the SE-SB14 location. Cleveland] WHE
- 0825 - Began drilling 2 1/4" x 4' dual tube to soil sample. Jack Womble] WHE
- Drilled to 20' BLS. TD: 20' BLS. Ryan Owens] WHE
- 0910 - Completed logging + sampling.
- ↳ See boring log.
- All 2 1/4 out of hole. Point in + drilled to 20' BLS. 1" PVC trim pipe to TD. Grouted to surface through trim + 2 1/4's. Removed both as they filled. Used ~ gal.
- 0945 - Mob to SE-SB15 location.
- 0950 - Began drilling 2 1/4" x 4' dual tube.
- ↳ See boring log.
- SE-SB14 (30.12974734, -92.49535176)
- SE-SB15 (30.13063258, -92.49484969)
- 1040 - Completed logging + sampling SE-SB15 location. TD: 20' BLS.
- WHE grouted same way as above.
- 1030 - Completed grouting SE-SB15 location.
- Mob to SE-SB16 location w/ GP 7822 DT.
- 1100 - Began drilling 2 1/4" x 4' dual tube.
- SE-SB16 (30.12982845, -92.49343422)
- 1140 - Completed logging + sampling SE-SB16. TD: 16' BLS.
- WHE grouted to surface using same method as above. Used ~ 3.5 gal.





**HYDRO-ENVIRONMENTAL
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Client: Jones Walker

Project No.: 1705.A37

Project Name: Grasta

Date: 6-16-23

Project Location: Morse, LA

Page 2 of 2

- 1240 - Mob to SE-SB01 location. Previously logged to 35' BLS w/ larger rods than 2 1/4" x 4".
- Will attempt to log below 35' BLS. 35 previously was refusal.
- 1245 - Began drilling SE-SB01 w/ GP7822 DT pushing 2 1/4" x 4" dual tube w/ expendable point attached.
- Drilled to 32' BLS w/ point. Began soil sampling.
 - Sampled to 46' BLS.
- 1420 - Completed logging + sampling SE-SB01 location.
- WHE pulled all pipe out of hole. Re-entered same hole w/ 2 1/4" + 1" PVC trim. Grouted to surface same way as above.
- 1435 - Completed grouting SE-SB01 location.
- ↳ Used ~ 8 gal. EM ~ 10 gal
 - WHE mob rig to staging area @ well pad, + loaded materials
- 1445 - All personnel off site.
- 1530 - Arrive @ HET

EM



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BORING No. SE-SB01

PROJECT NAME Gastal
PROJECT NUMBER 1705.A37
LOCATION Morse, LA
DRILLING METHOD GP 7822 BT
SAMPLING METHOD 2 1/4" x 4' dual tube
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY Eric Montesano
REMARKS 30.12885030, -92.49501872

DATE STARTED 6-16-23
DATE COMPLETED 6-16-23
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____
TOTAL DEPTH 46' BLS

Recovery

LITHOLOGIC DESCRIPTION

E.C.

Previously sampled to 35' BLS.
Began sampling @ 32' BLS.

1330

34-36
8oz

X

34

36

CL

ML

ML

CL

0-25" Silty Clay, brown, low moist to damp, low dense

25-45" Silty, brown, low moist, low dense, silty clay lens @ 35-38"

0-9" SAA

9-48" Silty Clay, brown, low moist, low dense, silt lens @ 22-26"

0-19" Silty Clay, gray, low moist-damp, low dense

19-26" Gray Silty Clay + wood fragments

26-40" Silt, med VFG sand, damp, low dense

40-48" Clay, gray, low moist, low dense

0-5" Silty Clay, gray + brown, low moist, low dense

5-13" Silty Sand, VFG, brown, sat, low dense

13-38" Clay, min silt, brown + gray, low moist, low dense

38-41" Silty Sand, VFG, brown, sat, low dense

TD: 46' BLS

1335

38-40
8oz

X

38

40

CL

1400

40-42
No SPLIT

X

40

42

1405

42-44
8oz

X

42

44

1415

44-46
8oz

X

44

46



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BORING No. SE-SB14

PROJECT NAME Crestal
PROJECT NUMBER 1705-A37
LOCATION Morse, LA
DRILLING METHOD GP 7822 DT
SAMPLING METHOD 2 1/4" x 4' dual tube
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY _____
REMARKS Eric Montescano
30.12974734, -92.49535176

DATE STARTED 6-16-23
DATE COMPLETED 6-16-23
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____
TOTAL DEPTH 26' BLS

Recovery	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
44"				0830 2-4' 802	X	2	CL	///	0-44" Clay, brown + gray, low moist, mod-high dense, Fe stain, Mn stain, 1/4" gravel @ 43"	0.39 2.05
						4				1.42
48"				0835 6-8' 802	X	6	CL	///	0-48" Clay, gray + yellow brown, low moist, mod dense, Fe stain, Mn stain	1.48 1.44
						8				1.80
48"				0840 10-12' 802	X	10	CL	///	0-28" Clay, orange + gray, low moist, mod dense, Fe stain, Mn stain	1.80
						12			28-48" Clay, min silt increase w/ depth, gray, Fe + Mn stain @ top, low moist, mod dense	1.74 1.78
						14	CL	///	0-4" SAA, low dense	1.50
43"				0850 14-16' 802	X	14	ML	///	4-14" Silty Clay, brown, damp, low dense	0.92
						16	CL	///	14-27" Silt, red brown, damp, low dense	0.77
						18			27-43" Silty Clay, red brown + gray, low moist, low dense silt lens @ 41-43"	0.72
37"				0900 18-20' 802	X	18	CL	///	0-18" Silty Clay, brown, low moist, low dense, Mn stain, Fe stain	0.85
						20			18-37" Clay, brown + gray, low moist, mod dense, Ca frags Fe stain	1.20
						22				
						24				
						26				
						28				
						30				
						32				
						34				
						36				
						38				
						40				



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BORING No. SE-SB15

PROJECT NAME Gastal
PROJECT NUMBER 1705.A37
LOCATION Morse, LA
DRILLING METHOD GP 7822 DT
SAMPLING METHOD 2 1/4" x 4' dual tube
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY Eric Montesano
REMARKS 30.13063258, -92.49484969

DATE STARTED 6-16-23
DATE COMPLETED 6-16-23
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____
TOTAL DEPTH 20' BLS

Recovery	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
36"			1010	2-4' 8oz	X	2	CL	///	0-36" Clay, min silt, brown, low moist, low dense, min Fe stain	0.26
						4				0.22
						6	CL	///	0-41" Clay, yellow brown + gray, low moist, low to mod dense, Fe stain, Mn stain	1.18
41"			1015	6-8' 8oz	X	8				1.67
						10	CL	///	0-40" SAA, 40-48" Silty Clay, brown, low moist, Mn stain, low - mod dense	1.90
48"			1020	10-12' 8oz	X	12				1.89
						14	ML		0-26" Silt, min clay, clay @ top, red brown, damp, low dense, clay lens @ 13-17", gray	1.76
43"			1025	14-16' 8oz	X	16	CL	///	26-43" Clay, silty @ 26-29", red brown + gray, low moist, low - mod dense, Fe stain, Mn stain	0.95
						18	CL	///	0-48" Clay, red-brown + gray, low moist, mod - high dense, Ca frags, Fe stain, Mn stain @ top	0.73
48"			1035	18-20' 8oz	X	20				0.33
						22				0.93
						24				1.11
						26				1.80
						28				1.45
						30				
						32				
						34				
						36				
						38				
						40				



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BORING No. SE-SB16

PROJECT NAME Gastal
PROJECT NUMBER 1705-A37
LOCATION Morse, LA
DRILLING METHOD GP 7822 DT
SAMPLING METHOD 2 1/4" x 4' dual tube
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY Erik Montesano
REMARKS 30.12982845, -92.49343422

DATE STARTED 6-16-23
DATE COMPLETED 6-16-23
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____
TOTAL DEPTH 16' BLS

Recovery	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
36"				1110	2-4' X	2	CL	///	0-36" Clay, gray, low moist, mod dense, Fe stain, Mn stain	0.18
				1110	4-6' X	4				1.09
				1115	6-8' X	6	CL	///	0-40" Clay, gray + yellow brown, low moist, mod dense, Fe stain, Mn stain, silty @ 29-40"	1.48
40"				1115	8-10' X	8				1.61
				1125	10-12' X	10	CL	///	0-16" Clay, brown + gray, low moist, low dense, silty 0-5", Fe stain, Mn stain	1.36
48"				1125	12-14' X	12			16-48" Silty Clay, red brown, low moist, low dense to mod dense, silt lens @ 36-38", 43-48"	1.15
				1130	14-16' X	14	CL	///	0-46" Clay, red-brown + gray, low moist, mod dense, silty @ 0-6", silt lens @ 20-24", dry, Fe stain, Mn stain	1.56
46"				1130	16-18' X	16				0.72
						18				0.85
						20				1.63
						22				1.75
						24				
						26				
						28				
						30				
						32				
						34				
						36				
						38				
						40				



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BORING No. MW-01

PROJECT NAME INASAL
PROJECT NUMBER 1705-A37
LOCATION MORRIS, LA
DRILLING METHOD GP 7822 DP
SAMPLING METHOD DT 2.25" x 4"
GROUND ELEVATION -
TOP OF CASING -
LOGGED BY NC
REMARKS 30.1289092 - 92.4451451

DATE STARTED 9/5/23
DATE COMPLETED 9/5/23
CASING TYPE/DIAMETER PVC 11"
SCREEN TYPE/SLOT -
SAND PACK TYPE -
GROUT TYPE/QUANTITY -
DEPTH TO WATER -
GROUNDWATER ELEVATION -

PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	
					2			NOT LOGGED	
					4				
					6				
					8				
					10			NOT LOGGED	
					12				
					14			0-3.1' SILT, mod CLAY, RED GREY, DAMP LOW DENSITY	1
					16				2
					18			0-4.0 CLAY, mod SILT, BROWN AND RED GREY, LOW moisture, mod DENSITY	3
4.0					20				4
					22			0-1.9 CLAY, RED ABOVE	5
3.8					24			1.9-2.3 SILT, mod CLAY, RED GREY	6
					26			2.3-2.8 CLAY	2
4.0					28			CLAY, HIGH SILT, RED GREY, DAMP, LOW DENSITY	8
					30			0-0.8 CLAY, AS ABOVE	9
3.9					32			0.8-3.4 SILT,	10
					34				
					36				
					38				
					40				



**HYDRO-ENVIRONMENTAL
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Client: _____

Project Name: GASEL

Project Location: MORSE, Ca

Project No.: 1705.A37

Date: 9/5/23

Page _____ of _____

- @ 1000 - LEFT OFFICE, TRUCK # 39
- @ 1100 - ARRIVED ON SITE, SOUTHLAND PERSONNEL:
- CHAD C
 - DUANE P
 - WALKER HILL WITH 7822 GP
- SETUP ON MW-01 LOCATION AND BEGAN LOGGING FROM 16'
- @ 1230 - SAMPLED TO 32', WH BEGAN SETTING 10' PRE-PACKED WELL
- MOVED OVER APPROX 3' PUSHED TO 16' WITH EXPENDABLE POINT, SET 10' OF PRE-PACKED SCREEN
- 2' OF SAND/BENTONITE IN BOTH WELLS
- BEGAN RESAMPLING 0-2 INTERVAL ON PREVIOUS LOCATIONS
- SB10(0-2)
 - SB11(0-2)
 - SB12(0-2)
 - SB13(0-2)
 - SB14(0-2)
- @ 1600 - FINISHED SAMPLING, BODIES GROUNDED TO SURFACE, USED APPROX 1 gal OF GROUT
- @ 1630 - LEFT SITE
- @ 1730 - ARRIVED AT OFFICE



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Environmental Consultants

Client : _____

Project Name: GASSEL

Project Location: MORSE, La

Project No.: 1705.437

Date: 9/6/23

Page _____ of _____

- @ 0730 - LEFT OFFICE, TRUCK #39
- @ 0815 - ARRIVED ON SITE
- CHAD L
 - LAKEW } SOUTLAND
 - CONTINUED SAMPLING 0-2 ON.
 - SB-16 (0-2)
 - SB-17 (0-2)
 - SB-18 (0-2)
 - ~~SB-19 (0-2)~~
- @ 1100 - SETUP ON NEW BOREHOLE SB-19
- @ 1200 - SAMPLED SB-19 TO 20', GROUTED THROUGH SAMPLE BARRELS APPRX 10gal
- BROKE FOR LUNCH
- @ 1300 - FINISHED LUNCH
- SETUP TO BEGIN SAMPLING SB-20
- @ 1400 - SAMPLED SB-20 TO 20', GROUTED TO SURFACE 10gal
- @ 1530 - BEGAN SAMPLING SB-21
- @ 1630 - SAMPLED SB-21 TO 22', GROUTED TO SURFACE USING APPRX 10gal OF GROUT
- WH GROUTED NESTED MW-01 WELLS TO SURFACE
- MW-01 [4-16'] → APPRX 15gal of GROUT
- MW-01 [22-32'] → APPRX 30gal of GROUT
- @ 1730 - LEFT SITE



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BORING No. MLD-01

PROJECT NAME LAASAL
PROJECT NUMBER 1205-A37
LOCATION MORLEY, LA
DRILLING METHOD GP 7827
SAMPLING METHOD DI 2.25" x 4"
GROUND ELEVATION 30.1289097
TOP OF CASING -92.451441
LOGGED BY NC
REMARKS

DATE STARTED 9/5/23
DATE COMPLETED 9/5/23
CASING TYPE/DIAMETER PVC 11"
SCREEN TYPE/SLOT -
SAND PACK TYPE -
GROUT TYPE/QUANTITY -
DEPTH TO WATER -
GROUNDWATER ELEVATION -

PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	
					2			NOT LOGGED	
					4				
					6				
					8				
					10			NOT LOGGED	
					12				
					14			0-3.1' SILT, mod CLAY, RED GREY, DAMP LOW DENSITY	1
					16				2
					18			0-4.0 CLAY, mod SILT, BROWN AND RED GREY, LOW moisture, mod DENSITY	3
4.0					20				4
					22			0-1.9 CLAY, RES ABOVE	5
3.8					24			1.9-2.3 SILT, mod CLAY, RED GREY	6
					26			2.3-2.8 CLAY	7
4.0					28			CLAY, HIGH SILT, RED GREY, DAMP, LOW DEN SITY	8
					30			0-0.8 CLAY, AS ABOVE	9
3.9					32			0.8-3.4 SILT,	10
					34				
					36				
					38				
					40				



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BORING No. _____

SE-SB-19

PROJECT NAME LAKE
PROJECT NUMBER 1705-A37
LOCATION MOBILE LA
DRILLING METHOD HP 2822
SAMPLING METHOD DT 2.25x4'
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY _____
REMARKS 30.128454 - 92.493152

DATE STARTED 9/10/23
DATE COMPLETED 9/10/23
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____

PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	
			1120	X	02			0-3.9 CLAY, MOD SILT, BROWN, LOW MOIST	NA 1
3.4'			1122	X	04			MOD DENSITY	1.11 2
					06			0-3.9 CLAY, AS ABOVE	0.573
3.9'			1130	X	08				1.75 4
					10			0-4.0 CLAY,	2.01 5
4.0'			1140	X	12			2.0-4.0 SILT, MOD CLAY, TAD, DAMP, LOW DENSITY	1.625 6
					14			0-4.0 CLAY, MOD SILT, RED BROWN, LOW	0.78 7
4.0'			1145	X	16			MOIST, MOD DENSITY	0.5 8
					18			0-4.0 CLAY, AS ABOVE	1.04 9
4.0'			1150	X	20				1.62 10
					22				2.45 11
					24				2.36 12
					26				2.24 13
					28				1.87 14
					30				
					32				
					34				
					36				
					38				
					40				



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BORING No. SE-SB-20

PROJECT NAME GASSEL
PROJECT NUMBER 1305-437
LOCATION MORHE 20
DRILLING METHOD LP 12842
SAMPLING METHOD DI 2.25"x41
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY _____
REMARKS 30.129219 - 98.4942

DATE STARTED 9/6/23
DATE COMPLETED 9/10/23
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____

PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	
		1405		X	2			0-3.6 CLAY, MOD SILT, RED GRAY, LOW	2.09 1
3.6'		1407		X	4			MOISTURE, MOD DENSITY	1.77 2
					6			0-3.5 CLAY, AS ABOVE	1.58 3
3.5'		1415		X	8				1.91 4
					10			0-2.3 SILT, MOD CLAY, BROWN AND RED, LOW -	1.73 5
4.0'		1425		X	12			MOISTURE, LOW DENSITY	1.00 6
					14			2.3-4.0 CLAY,	1.01 7
4.0'		1435		X	16			0-4.0 CLAY, AS ABOVE, SILT [02-05]	1.75 8
					18				1.92 9
3.5'		1442		X	20			0-2.5 CLAY, AS ABOVE	2.04 10
					22			2.5-3.5 SILT	1.18 11
					24				0.76 12
					26				
					28				
					30				
					32				
					34				
					36				
					38				
					40				



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Environmental Consultants
91 Apollo Road
Scott, Louisiana 70583
(337) 261-1963 Fax (337) 261-1953

BORING No. SE-SB-21

PROJECT NAME LA 5522
PROJECT NUMBER 1705-A32
LOCATION MOBILE, LA
DRILLING METHOD LP 7822
SAMPLING METHOD 225" x 4" IS
GROUND ELEVATION -
TOP OF CASING -
LOGGED BY DUE
REMARKS 30.1292092 - 47.4965772

DATE STARTED 9/6/27
DATE COMPLETED -
CASING TYPE/DIAMETER -
SCREEN TYPE/SLOT -
SAND PACK TYPE -
GROUT TYPE/QUANTITY -
DEPTH TO WATER -
GROUNDWATER ELEVATION -

PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	
		1540		X	2			0-3.5' SILT, MOD SILT CONTENT, RED GREY, LOW MOISTURE, MOD DENSITY, SILT INCR-EASION WITH DEPTH	0.99 1
3.5		1542		X	4				0.63 2
				X	6			0-0.8 CLAY, AS ABOVE	1.42 3
4.0		1545		X	8			0.8-2.2' SILT, MOD CLAY, GREY, SAND, LOW DENSITY	1.55 4
				X	10			2.2-4.0 CLAY	1.84 5
3.2		1555		X	12			0-0.5 CLAY, AS ABOVE	1.9 5
				X	14			0.5-1.4' SILT, MOD CLAY	0.65 6
		1610		X	16			1.4-1.8 CLAY	1.09 6
6.0		1612		X	18			1.8-3.7 SILT, RED, SAT, LOW DEN, CLAY LENSES [3.0-33']	3.67 2
				X	20			0-1.5 CLAY	1.25 8
8.6		1620		X	22			1.5-2.6 SILT	1.69 8
				X	24			2.6-2.0 CLAY	0.69 9
2.0		1625		X	26			2.0-6.0 SILT	2.69 10
				X	28			0-1.3 SILT, AS ABOVE	2.4 10
				X	30			1.3-3.6 CLAY, RED GREY, LOW MOISTURE, HIGH DENSITY	2.53 11
				X	32			0-2.0 CLAY, MOD SILT, GREY, LOW MOISTURE, MOD DENSITY	1.35 12
				X	34				
				X	36				
				X	38				
				X	40				



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BORING No. _____

SE-SB-19

PROJECT NAME LA 55 FL
PROJECT NUMBER 1305 AS7
LOCATION MOBILE LA
DRILLING METHOD LP 2822
SAMPLING METHOD DI 2.25x4'
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY _____
REMARKS 30.128454 - 92.493152

DATE STARTED 9/16/23
DATE COMPLETED 9/16/23
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____

PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	
			1120	X	02		///	0-3.9 CLAY, MOD SILT, BROWN, LOW MOIST	NA 1
8.4'			1122	X	04		///	MOD DENSITY	1.11 2
					06			0-3.9 CLAY, AS ABOVE	0.57 3
3.9'			1130	X	08				1.75 4
					10			0-4.0 CLAY,	2.01 5
4.0'			1140	X	12			2.0-4.0 SILT, MOD CLAY, TAN, DAMP, LOW DENSITY	1.62 5
					14			0-4.0 CLAY, MOD SILT, RED BROWN, LOW	0.78 6
4.0'			1145	X	16			MOIST, MOD DENSITY	0.52 6
					18			0-4.0 CLAY, AS ABOVE	1.04 7
4.0'			1150	X	20				1.62 7
					22				2.45 8
					24				2.36 9
					26				2.24 10
					28				1.87
					30				
					32				
					34				
					36				
					38				
					40				



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BORING No. SE-SB-20

PROJECT NAME GASSEL
PROJECT NUMBER 1305-A37
LOCATION MORHE 2A
DRILLING METHOD LP 12842
SAMPLING METHOD DI 2.75" x 41
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY _____
REMARKS 30.129719 - 98.4942

DATE STARTED 9/6/23
DATE COMPLETED 9/16/23
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____

PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	
		1405	X		2			0-3.6 CLAY, MOD SILT, RED GRAY, LOW	2.09 1
3.6		1407	X		4			MOISTURE, MOD DENSITY	1.77 2
					6			0-3.5 CLAY, AS ABOVE	1.02 3
3.5		1415	X		8				1.58 4
					10			0-2.3 SILT, MOD CLAY, BROWN AND RED, LOW -	1.73 5
7.0		1425	X		12			MOISTURE, LOW DENSITY	1.00 6
					14			2.3-4.0 CLAY,	1.01 7
4.0		1435	X		16			0-4.0 CLAY, AS ABOVE, SILT [0.2-0.5]	1.75 8
					18			0-2.5 CLAY, AS ABOVE	1.92 9
35		1440	X		20			2.5-3.5 SILT	2.14 10
					22				1.98 11
					24				2.04 12
					26				1.18 13
					28				0.76 14
					30				
					32				
					34				
					36				
					38				
					40				



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BORING No. SE-SB-21

PROJECT NAME LA 5522
PROJECT NUMBER 1705-A32
LOCATION MOBILE, LA
DRILLING METHOD LP 7822
SAMPLING METHOD 2.25" x 4' IS
GROUND ELEVATION -
TOP OF CASING -
LOGGED BY DCE
REMARKS 30.1292092 - 42.4965772

DATE STARTED 9/6/27
DATE COMPLETED -
CASING TYPE/DIAMETER -
SCREEN TYPE/SLOT -
SAND PACK TYPE -
GROUT TYPE/QUANTITY -
DEPTH TO WATER -
GROUNDWATER ELEVATION -

PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	
3.5		1540		X	2			0-3.5' SILT, MOD SILT CONTENT, RED GREY, LOW MOISTURE, MOD DENSITY, SILT INCREASES WITH DEPTH	0.99 0.63
		1542		X	4				0.39
				X	6			0-0.8 CLAY, AS ABOVE	1.42
4.0		1545		X	8			0.8-2.2' SILT, MOD CLAY, GREY, SAND, LOW DENSITY	1.55
				X	10			2.2-4.0 CLAY	2.84
3.9		1555		X	12			0-0.5 CLAY, AS ABOVE	1.9
		1610		X	14			0.5-1.4' SILT, MOD CLAY	0.65
		1612		X	16			1.4-1.8 CLAY	1.09
4.0				X	18			1.8-3.9 SILT, RED, SAT, LOW DEN, CLAY LENSES [3.0-3.3']	3.67
3.6		1620		X	20			0-1.5 CLAY	1.25
		163		X	22			1.5-2.6 SILT	1.62
2.0				X	24			2.6-3.0 CLAY	0.68
				X	26			3.0-5.0 SILT	2.48
				X	28			0-1.3 SILT, AS ABOVE	2.8
				X	30			1.3-3.6 CLAY, RED GREY, LOW MOISTURE, HIGH DENSITY	2.53
				X	32			0-2.0 CLAY, MOD SILT, GREY, LOW MOISTURE, MOD DENSITY	1.35
				X	34				
				X	36				
				X	38				
				X	40				



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

Client: Jones Walker

Project Name: Gastal

Project Location: Morse, UT

Project No.: 1705.A37

Date: 9-19-23

Page 1 of 1

0805 SH left office in Truck #40
0845 Arrived @ tank battery near Southland wells
0900 Chad Cary + Laihen Demary (Southland)
Arrive on site
0920 hope to MW1 monitor wells to measure WL
MW-1 (22-32) WL = N/A (Dry) TD = 34.83'
MW-1 (6-16') WL = N/A (Dry) TD = 18.95'
(30.1289097 - 92.4951491)
1000 Unable to sample wells, loaded up, left site
1045 Arrived @ office



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

Client: Jones Walker

Project Name: Gastal

Project Location: Morse, LA

Project No.: 1705-A37

Date: 10-3-23

Page 1 of 1

0815	SH left office in Truck #38
0900	Arrived at site near Southland's mw-1 met w/ Laiken Demany (Southland)
0910	moved to mw-1 to gauge water level mw-1 (22-32') WL = N/A (Dry)
0930	mw-1 (6-16') WL = N/A (Dry)
1015	loaded up, left site Arrived back at office.



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

Southland Invest.

Client: Jones Walker

Project No.: 1705. A37

Project Name: Gastal

Date: 10-17-23

Project Location: Morse, LA

Page 1 of 1

0805	St left office in truck #39
0850	Arrived on site, met w/ Laihen Demany (Southland)
0910	mobe to mw-1 to gage water level
	mw-1 (22-32') WL = N/A (Dry)
	mw-1 (0-16') WL = N/A (Dry)
	Loaded equipment
0930	Left site
1010	Arrived @ office



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

Southland Invest.

Client: Jones Walker

Project No.: 1705.A37

Project Name: Gastal

Date: 12.12.23

Project Location: Morse, LA

Page 1 of 1

0800	SH left office in Truck #33
0845	Arrived on site, met w/ Laiken D. (Southland)
0910	moved to MW-1 to gauge water levels
	MW-1 (22-32') WL- N/A (Dry)
	MW-1 (6-16') WL- N/A (Dry)
0930	Southland then took sample of drummed waste disposal for soil characterization.
	Loaded equipment
1000	Left site
1040	Arrived back @ office



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

Client: Jones Walker

Project Name: Gastal

Project Location: Morse, LA

Project No.: 1705.A37

Date: 01-09-24

Page 1 of 1

0800	St left office in truck #36
0845	Arrived on site
	Met w/ Laiken D. Southland
	Moved to MW-1 to gauge water levels
	MW-1 (22-32') TD - 34.87 WL - N/A (Dry)
	MW-1 (6-16') TD - 18.95 WL - N/A (Dry)
0955	Left site
1040	Arrived back @ office



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

Southland
Oversight

Client: Jones Walker

Project Name: Gastal

Project Location: Morse, LA

Project No.: 1705.A37

Date: 2-20-24

Page 1 of 1

0800	SH Left office in Truck #36
0840	Arrived on site
0855	ERS - Environmental Response Services Arrived on site to pick up (2) 50 gallon drums on site
0900	Laihen D. (Southland) arrived on site move to MW1 monitor well locations to measure TD + WL
	MW-1 (22-32') WL = N/A (Dry) TD = 34.83'
	MW-1 (6-16') WL = N/A (Dry) TD = 18.95'
0935	Left site
1010	Arrived at office



State: LA	Parish: Acadia	Section:	Township:	Range:	Date: 1/28	Location: H-01
Project/Site: Gasket			Investigator(s): Greene			
Latitude: 30° 7.730931921		Longitude: 92° 29.58169300		Datum: NAD83		Other Info:

HERBACEOUS SPECIES- [plot size = 5 feet radius]			ROOT ZONE INTERPRETATION		
Smooth Rwh			Depth BLS (Inches)	Root Mass Abundance	Remarks
			0-2	Abundant	Effective Root Zone
			2-4	Many	
			4-6	Common	
			6-14	Sparse	
			14-24	Very sparse to none	

SOIL PROFILE PROPERTIES

Soil Type: Midland

Depth BLS (inches)	Matrix		Redox Features				Texture	Horizon	Remarks	N-Value
	Color (moist)	%	Color (moist)	%	Type	Loc				
0-10	10YR 5/2	70	5YR 3/4	30			S:L	Ap		.75
10-24	10YR 4/1	60	10YR 5/4	40			S:C	Bt		<.70

Additional Colors:

Restrictive Layer(if observed): Type: Plow Pan Depth (inches): 7

Remarks: .5" water - saturated

hand auger to 24"



State: LA	Parish: Acadia	Section:	Township:	Range:	Date: 1/28	Location: H-02
Project/Site: Gastal			Investigator(s): Green			
Latitude: 30° 7.73077560		Longitude: 92° 29.58353204		Datum: NAD83		Other Info:

HERBACEOUS SPECIES- [plot size = 5 feet radius]		ROOT ZONE INTERPRETATION		
		Depth BLS (Inches)	Root Mass Abundance	Remarks
• Switch / Panic grass		0-2	Abundant	Effective Root Zone
		2-4	Many	
		4-8	Common	
		8-11	Sparse	
		11-24	VSP to none	

SOIL PROFILE PROPERTIES

Soil Type: Same as H-01 - Midland										
Depth BLS	Matrix		Redox Features				Texture	Horizon	Remarks	N-Value
(inches)	Color (moist)	%	Color (moist)	%	Type	Loc				
0-10	10YR 5/2	70	5YR 3/4	30			S:L	Ap		.75
10-24	10YR 4/1	60	10YR 5/4	40			S:L			L70

Additional Colors:

Restrictive Layer(if observed):	Type: Plow pan	Depth (inches): 7
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Remarks:

.5" water - saturated
hand auger to 24"

0-2" layer of super saturated silt



State: LA	Parish: Acadia	Section:	Township:	Range:	Date: 1/28	Location: H-03
Project/Site: GaStal			Investigator(s): Green			
Latitude: 30° 7.19437740		Longitude: 29° 58.723833'		Datum: NAD83		Other Info:

HERBACEOUS SPECIES- [plot size = 5 feet radius]		ROOT ZONE INTERPRETATION		
	Bermuda	Depth BLS (Inches)	Root Mass Abundance	Remarks
		0-2	Abundant	Effective Root Zone
		2-5	Many	
		5-9	Common	
		9-12	Sparse	
		12-22	V. sp to none	

SOIL PROFILE PROPERTIES

Soil Type: Midland										
Depth BLS	Matrix		Redox Features				Texture	Horizon	Remarks	N-Value
(inches)	Color (moist)	%	Color (moist)	%	Type	Loc				
0-7.5	10YR 5/2	70	5YR 3/3	30			SiL	Ap		.75
7.5-17	10YR 4/2	60					SiL	B ⁺ 1		L.70
17-22	10YR 6/2	60	10YR 4/6	40			SiL	B+2		L.70

Additional Colors:

Restrictive Layer(if observed):	Type: Plow Pan	Depth (inches): 7
---------------------------------	----------------	-------------------

Remarks: Moist Soil

Shovel to 29" to make face

20 X 20 X 24" 2" water bottom of hole



State: LA	Parish: Acadia	Section:	Township:	Range:	Date: 1/28	Location: H-04
Project/Site: Gastal			Investigator(s): Green			
Latitude: 30° 7.78622631		Longitude: 92° 29.75474816		Datum: NAD83		Other Info:

HERBACEOUS SPECIES- [plot size = 5 feet radius]		ROOT ZONE INTERPRETATION		
	Bermuda	Depth BLS (Inches)	Root Mass Abundance	Remarks
		0-1.5	Abundant	Effective Root Zone
		1.5-5	Many	
		5-9	Common	
		9-13	Sparse	
		13-22	V. sp to none	

SOIL PROFILE PROPERTIES

Soil Type: Crowley

Depth BLS (inches)	Matrix		Redox Features				Texture	Horizon	Remarks	N-Value
	Color (moist)	%	Color (moist)	%	Type	Loc				
0-8	10YR 5/2									.75
8-22	10YR 6/2								Fe & Mn	4.70

Additional Colors:

Restrictive Layer(if observed): Type: Plow pan Depth (inches): 7

Remarks: Water came up to Surface of Hole
Hard auger 14-22"



State: LA	Parish: Acadia	Section: 32	Township: 10S	Range: 01W	Date: 1/28/24	Location: R-01
Project/Site: Garta 1705. 437			Investigator(s): M. Green			
Latitude: 30° 7.93522585'		Longitude: 92° 29.56217535'		Datum: NAD83		Other Info:

HERBACEOUS SPECIES- [plot size = 5 feet radius]				ROOT ZONE INTERPRETATION		
Rice				Depth BLS (Inches)	Root Mass Abundance	Remarks
				0-1	Abundant	Effective Root Zone
				1-3	Many	
				3-6	Common	
				6-9	Spars	
				9-20	v. Spars to Non	

SOIL PROFILE PROPERTIES

Soil Type: Crowley										
Depth BLS	Matrix		Redox Features				Texture	Horizon	Remarks	N-Value
(inches)	Color (moist)	%	Color (moist)	%	Type	Loc				
0-6.5	10YR 4/2	70	10YR 4/6	30			SIL	Ap		.75
6.5-9	10YR 5/2	100					SIC	E		4.70
9-20	10YR 6/2	80	10YR 5/8	20	8	m	SIC	At	Fe & Mn cre. sions Increase clay content	4.70

Additional Colors:

Restrictive Layer(if observed): Type: Plow Pan Depth (inches): 6

Remarks:
• Rice stubble height 14 inches
• water Depth 12"



State: LA	Parish: Acadia	Section:	Township:	Range:	Date: 1/28/24	Location: R-02
Project/Site: Gaston			Investigator(s): M. Green			
Latitude: 30° 7.95761122'		Longitude: 92° 29.5315671'		Datum: NAD83		Other Info:

HERBACEOUS SPECIES- [plot size = 5 feet radius]		ROOT ZONE INTERPRETATION		
Rice		Depth BLS (Inches)	Root Mass Abundance	Remarks
		0-1	Abundant	Effective Root Zone
		1-3	Many	
		3-6	Common	
		6-9	Spars	
		9-19	U. sp to none	

SOIL PROFILE PROPERTIES

Soil Type: Crowley										
Depth BLS (inches)	Matrix		Redox Features				Texture	Horizon	Remarks	N-Value
	Color (moist)	%	Color (moist)	%	Type	Loc				
0-6	10YR 5/2	70	10YR 4/3	30			Sil	Ap		.75
6-8	10YR 5/1	100					Sil	E		<.70
8-19	10YR 6/2	80	10YR 6/2	20			Sil	At	↑ clay; Fe, Mn conc.	<.70

Additional Colors:		
Restrictive Layer(if observed):	Type: Plow Pan	Depth (inches): 6

Remarks: Rice stubble height 15"
Water depth 11.5" top of slope in



State: LA	Parish: Acadia	Section:	Township:	Range:	Date: 1/28/24	Location: R-03				
Project/Site: GASTAL			Investigator(s): Greene							
Latitude: 30° 7.81701243'		Longitude: 92° 29.47287005'		Datum: NAD83		Other Info:				
HERBACEOUS SPECIES- [plot size = 5 feet radius]										
Rice			ROOT ZONE INTERPRETATION							
			Depth BLS (Inches)	Root Mass Abundance	Remarks					
			0-1.5	Abundant	Effective Root Zone					
			1.5-3.5	Many						
			3.5-7	Common						
			7-9	Sparse						
			9-16	V. Sp to none						
SOIL PROFILE PROPERTIES										
Soil Type: Midland										
Depth BLS	Matrix		Redox Features				Texture	Horizon	Remarks	N-Value
(inches)	Color (moist)	%	Color (moist)	%	Type	Loc				
0-6.5	10YR 6/2	70	10YR 4/6	30			Siol	Ap		.75
6.5-16	10YR 5/2	100					SiC	Bt		L-70
Additional Colors:										
Restrictive Layer(if observed):		Type: Mowpua		Depth (inches): 7						
Remarks: • 12.5" water • 17" rice stubble										



State: LA	Parish: Acadia	Section:	Township:	Range:	Date: 1/28/25	Location: R-04
Project/Site: GASTAL			Investigator(s): Green			
Latitude: 30° 7.77035657		Longitude: 92° 29.47782700		Datum: NAD83		Other Info:

HERBACEOUS SPECIES- [plot size = 5 feet radius]

Rice

ROOT ZONE INTERPRETATION

Depth BLS (Inches)	Root Mass Abundance	Remarks
0-1	Abundant	Effective Root Zone
1-3	Many	
3-6	Common	
6-8	Sparse	
8-18	V SP to none	

SOIL PROFILE PROPERTIES

Soil Type: Mid low

Depth BLS (inches)	Matrix		Redox Features				Texture	Horizon	Remarks	N-Value
	Color (moist)	%	Color (moist)	%	Type	Loc				
0-6	10YR 5/2	80	10YR 5/2	80			SIL	Ap		.75
6-18	10YR 4/2	80	10YR 6/2	80			SIC	Bt		L.70

Additional Colors:

Restrictive Layer(if observed): Type: Plow pan Depth (inches): 7

Remarks:

water - 11"
stubble height 17"



State: LA	Parish: Acadia	Section:	Township:	Range:	Date: 1/28/15	Location: R-05
Project/Site: GASTAL			Investigator(s):			
Latitude: 30° 7.70544409'		Longitude: 92° 29.50929811'		Datum: NAD83		Other Info: bare

HERBACEOUS SPECIES- [plot size = 5 feet radius]				ROOT ZONE INTERPRETATION		
Rice				Depth BLS (Inches)	Root Mass Abundance	Remarks
				0-1.5	Abundant	Effective Root Zone
				1.5-3.5	Many	
				3.5-6	Common	
				6-9	Sparse	
				9-19	✓ SP to none	

SOIL PROFILE PROPERTIES

Soil Type: Midland										
Depth BLS	Matrix		Redox Features				Texture	Horizon	Remarks	N-Value
(inches)	Color (moist)	%	Color (moist)	%	Type	Loc				
0-6	10YR 5/2	80	10YR 5/2	20			SIL	Ap		.75
6-19	10YR 4/2	80	10YR 6/2	20			SIC	Bt		4.70

Additional Colors:

Restrictive Layer(if observed):	Type: Plow Pan	Depth (inches): 7
---------------------------------	----------------	-------------------

Remarks: water - 12"
Stubble - 14"



State: LA	Parish: Acadia	Section:	Township:	Range:	Date: 1/28	Location: S-01				
Project/Site: Gastal			Investigator(s): Green							
Latitude: 30° 7.7859950 30° 7.78502936		Longitude: 92° 29.5994164 92° 29.58948749		Datum: NAD83		Other Info:				
HERBACEOUS SPECIES- [plot size = 5 feet radius]			ROOT ZONE INTERPRETATION							
Bacharis			Depth BLS (Inches)	Root Mass Abundance	Remarks					
Aster			0-2	Abundant	Effective Root Zone					
30.12975 -92.49315			2-4	Many						
			4-10	Common						
			10-13	Sparse						
			13-28	VSP to none						
SOIL PROFILE PROPERTIES										
Soil Type: Midland - Same										
Depth BLS	Matrix		Redox Features				Texture	Horizon	Remarks	N-Value
(inches)	Color (moist)	%	Color (moist)	%	Type	Loc				
0-6	10YR 5/2	70	5YR 3/4	30	C	m	S:1	Ap		.75
6-12	10YR 4/2	100					Sic	B61	Fe & Mn	1.70
12-28	10YR 6/3	60	10YR 4/6	40	C	m	Sic	B62		1.70
Additional Colors:										
Restrictive Layer(if observed):		Type:		Depth (inches):						
Remarks: Hand auger 19-28" .5" water										



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

Client: Jones Walker

Project Name: Gastal

Project Location: Morse, LA

Project No.: 1705. A37

Date: 1/28/25

Page 1 of 1

0755 - Left HET (mb/H4) in #31 w/ Gator + 16" trailer
to conduct Root Zone Investigation

0835 - Arrived on site

0840 - Onayre P on site

0855 - Arrived @ R-01

0935 - Arrived @ R-02

1010 - Arrived @ R-03

1040 - Arrived @ R-04

1110 - Arrived @ R-05

1220 - Arrived @ H-01

1250 - Arrived @ H-02

1325 - Arrived @ H-03

1355 - Arrived @ S-01 → Could not complete study on 1st attempt - move over

1420 - Arrived @ NEW S-01

1455 - Arrived @ H-04

1520 - Completed all Root Zone Investigation Location

- All data located on HET Root Zone Data Sheets

1535 - Left site

On-Site

Matt G

Anta L } NET

Onayre P. Southern

* Set - Aride Veg: Bermuda, Rush, Panic Grass, Aster, Blue Stem,
Flax Sedge, Groundsel, Indigo

* North - west portion of property - worked ground in prep for rice planting

* Eastern portion of property - Rice stubble

* 3 Cuts near AQI - Set-Aride - natural veg

Matt



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31 Apollo Road
Scott, Louisiana 70583
(337) 261-1963 Fax (337) 261-1953

BORING No

B-1

PROJECT NAME Crastal
PROJECT NUMBER 1705.A37
LOCATION Morse, LA
DRILLING METHOD Marsh Master - Geoprobe
SAMPLING METHOD 2.25 x 4" Dual Tube
GROUND ELEVATION —
TOP OF CASING —
LOGGED BY Terry W.
REMARKS 30.128732, -92.494692

DATE STARTED 2/25/25
DATE COMPLETED 2/25/25
CASING TYPE/DIAMETER —
SCREEN TYPE/SLOT —
SAND PACK TYPE —
GROUT TYPE/QUANTITY Portland Cement
DEPTH TO WATER —
GROUNDWATER ELEVATION —
TOTAL DEPTH 44' BLS

Page 1 of 2

Recovery

LITHOLOGIC DESCRIPTION

PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	LOG
0			1602	X	2			0-21" silty clay, gray brown, low moist, med dens, fe, mg	4.41
0					4				9.55
0	1015				6			0-6" silty clay, as above	8.60
0					8			6-28" clay, gray brown, orange, low moist, med-high dens, fe	8.75
0	1020				10			0-20" clay, as above	7.99
0					12			20-41" silt, mic clay, low moist, low dens, brown	4.93
0	1025				14			41-42" clay, med silty, gray, low moist, med dens	9.01
0			1602	X	16			0-1" silt, brown, low moist	11.40
0					18			2-2" clay, gray, low moist, med dens	9.00
3.0	1030		1602	X	20			3-22" silt, brown, saturated, low dens	9.78
0					22			22-44" clayey silt, brown, damp, low dens	10.05
0.5	1040				24			44-48" clay, brown red, low moist, high dens	5.08
1.6					26			0-48" clay, red brown, low moist, high dens, 16-17" concretions	10.05
0	1055				28			0-31" clay, mic silt, gray greenish, low moist, high dens, mg	8.78
1.6			1602	X	30			31-46" silt, mic clay, brown, low moist, low dens	1.31
0	1105				32			0-29" silt, as above clay lens @ 14-16"	7.47
0					34			29-35" clay, gray, low moist, med-high dens	0.41
0.5	1115				36			35-38" silt, vfg sand, low moist, low dens	1.05
0					38			0-25" silt, as above	4.97
0	1120				40			25-28" clayey silt, brown, low moist, med dens	0.92
0					42			28-34" clay, gray, low moist, med-high dens	
0					44			34-47" silt, brown, low moist, low dens, clay lens @ 42-44"	
0					46			0-47" silt, light brown, as above, vfg sand	
0					48			0-6" silt, as above	
0					50			6-11" clay, gray, low moist, med dens	
0	1130		1602	X	52			11-30" silty sand, fine grain, low moist, low dens	



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BORING No. B-1

PROJECT NAME _____
PROJECT NUMBER _____
LOCATION _____
DRILLING METHOD _____
SAMPLING METHOD _____
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY _____
REMARKS _____

DATE STARTED 2/25/25
DATE COMPLETED 2/25/25
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____
TOTAL DEPTH _____

Page 2 of 2

Recovery

PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
0					42			0-31" Silty, brown, sand, low bands (Sat 19-30")	0.61
0					42			31-41" Silty clay, gray brown, low resist, sand bands	
0		12.05	16.08	X	44			41-44" Silty brown, low resist, low bands	1.35
					44			TD = 44' BLS	
					46				
					48				
					50				
					52				
					54				
					56				
					58				
					60				
					62				
					64				
					66				
					68				
					70				
					72				
					74				
					76				
					78				
					80				



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BORING No.

SE-SB-06R

PROJECT NAME

CRISTAL

PROJECT NUMBER

1705-A37

LOCATION

Morse, LA

DRILLING METHOD

Marsh Master - Geoprobe

SAMPLING METHOD

2.25 x 4' Dual Tube

GROUND ELEVATION

TOP OF CASING

LOGGED BY

Tom W.

REMARKS

30.12873479, -92.4947403

DATE STARTED

2/25/25

DATE COMPLETED

2/26/25

CASING TYPE/DIAMETER

SCREEN TYPE/SLOT

SAND PACK TYPE

GROUT TYPE/QUANTITY

Portland Cement

DEPTH TO WATER

GROUNDWATER ELEVATION

TOTAL DEPTH

8' BS

Recovery

PHD (ppm)

SCREENED
INTERVAL

SAMPLE
TIME

SAMPLE ID

EXTENT

DEPTH
(FT BLS)

U.S.C.S.

GRAPHIC
LOG

LITHOLOGIC DESCRIPTION

L.C.

previously logged on 5/4/23

1405 1608 X

1410 1608 X

TD-8' BLS



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**
Environmental Consultants

Client : _____

Project Name: CRISTAL

Project Location: Morse, LA

Project No.: 1705.A37

Date: 2/25/25

Page 1 of 1

0800	left office , Tom W. & Andy S.	<u>ONSITE</u>
0915	Arrived onsite , Along Pugh Ave Held Team and talked about scope of work Reviewed proposed locations	<u>HET</u> Tom W. Andy S. Ken C. Hunter L.
1000	HET Set up on <u>B-1</u> w/ marsh master Geoprobe (2.25x4' Dual Tube) - Logged & sampled drillers to 44' BLS - refusal Grouters to surface through barrels ~15 gallons	<u>Southland</u> Drew P. Cody
1230	Break for lunch	
1330	Returned from lunch - pushed additional 4' boreholes for additional soil volume @ <u>B-1</u>	
1400	HET set up on <u>SE-SB-06R</u> w/ marsh master - Geoprobe pushed to 8' BLS , sampled 4-6' + 6-8' for Arsenic Grouters to surface through barrels HET then used marsh master - Geoprobe to collect surface soil samples @ <u>B-2, B-3, B-4, & B-5</u> each location HET collected 0-1' & 1-2' BLS @ each boring locations - sampled for arsenic Each borehole was grouted to surface	
1420	<u>EC</u> data B-2 (0-1') 0.81 (1-2') 1.61	
1445	B-3 (0-1') 2.00 (1-2') 2.14	
1500	B-4 (0-1') 1.18 1.18 (1-2') 2.47 2.47 B-5 (0-1') 1.87 (1-2') 2.65	
1600	offsite	
1700	Arrived @ office	



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BORING No

B-6

PROJECT NAME

PROJECT NUMBER

LOCATION

DRILLING METHOD

SAMPLING METHOD

GROUND ELEVATION

TOP OF CASING

LOGGED BY

REMARKS

DATE STARTED

DATE COMPLETED

CASING TYPE/DIAMETER

SCREEN TYPE/SLOT

SAND PACK TYPE

GROUT TYPE/QUANTITY

DEPTH TO WATER

GROUNDWATER ELEVATION

TOTAL DEPTH

2/26/25

2/26/25

Portland Cement

48' BLS

1 of 2

Recovery

PHD (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	
6					2			0-7" silty clay, brown, low moist, med trans	2.65
0					4			7-24" clay, med silt, brown, low moist, med trans, med trans	2.70
0	1000				6			0-48" clay, brown gray, low moist, high trans, med trans	1.89
0					8				2.09
0	1005				10			0-33" clay, gray, low moist, med-high trans, fe	2.30
0					12			33-48" silt, brown, low moist, low trans, clay lens @ 44-47"	1.58
0	1010				14			0-8" silty clay, brown, low moist, med trans	2.83
0					16			8-11" clay, brown gray, low moist, high trans	2.58
0	1015				18			11-29" silt, brown sat, low trans, clay lens @ 20-21"	2.14
0					20			27-38" clay, med silt, gray brown, low moist, high trans	2.38
0	1020				22			0-47" clay, as above, silt lens @ 44" & 47"	1.75
0					24			0-76" silty clay, gray brown, low moist, med trans	1.97
0	1025				26			16-24" silt, brown, low moist, low trans	0.13
0					28			24-30" silt, med clay, brown, low moist, med trans	0.46
0	1030				30			30-34" clay, brown, low moist, high trans	1.67
0					32			34-42" silt, brown, low moist, low trans	0.66
0	1040				34			0-47" silt, brown, low moist, low trans	2.09
0					36			0-12" silt, brown, low moist, low trans	0.91
0	1050				38			12-19" clay, brown, low moist, high trans	1.54
0					40			19-39" silt, brown, low moist, sat @ 20-27", low trans	1.92
0								0-12" silt, as above	
0								12-24" silty clay, gray brown, low moist, med trans, med trans	
0								24-38" silt, med vfg sand, brown, low moist, low trans	
0								0-10" silty clay, gray brown, low moist, med trans	
0								10-13" silty sand, vfg, low moist, low trans	
0								13-18" clay, gray, low moist, med trans	
0								18-24" silt, sat, gray, low trans	
0								24-48" clay, gray, low moist, med-high trans	



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BORING No. B-6

PROJECT NAME Castal
PROJECT NUMBER 1705.A37
LOCATION Morse, LA
DRILLING METHOD Marsh Master - Neoprobe
SAMPLING METHOD 2.25 x 4" Dual Tube
GROUND ELEVATION —
TOP OF CASING —
LOGGED BY Tammy W.
REMARKS —

DATE STARTED 2/26/25
DATE COMPLETED 2/26/25
CASING TYPE/DIAMETER —
SCREEN TYPE/SLOT —
SAND PACK TYPE —
GROUT TYPE/QUANTITY Portland Cement
DEPTH TO WATER —
GROUNDWATER ELEVATION —
TOTAL DEPTH 48' BLS

page 2 of 2

Recovery

PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
0			1602	X	42			0-24" clay, gray, low moist, med dens, silty sand lens @ 5-6"	2.26
0		1105			44			24-30" sand, fg. gray, low moist, low dens	2.15
0					46			30-40" clay, gray/brown, low moist, med dens, sand lens @ 38-39"	1.65
0		1115	1602	X	48			0-9" silty sand, vfg. gray, low moist, low dens	1.55
					50			9-31" clay, gray, low moist, med dens, silt lens @ 19-21"	
					52			31-38" silt, brown, sat, low dens	
					54			TH = 48' BLS	
					56				
					58				
					60				
					62				
					64				
					66				
					68				
					70				
					72				
					74				
					76				
					78				
					80				



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BORING No. _____

B 7

PROJECT NAME Crustal
PROJECT NUMBER 1705-A37
LOCATION marsh, LA
DRILLING METHOD marsh master - auger
SAMPLING METHOD 2.25" x 4" Dual Tube
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY TODD W.
REMARKS 30.1285491, -92.494413

DATE STARTED 2/26/25
DATE COMPLETED 2/26/25
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY Portland Cement
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____
TOTAL DEPTH 46' 3" US

page 1 of 2

Recovery

LITHOLOGIC DESCRIPTION

PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT DEPTH (FT BLS)	USCS	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	LOG
0				2			0-12" silty clay, gray brown, low moist, med dens	0.67
0				4			12-25" clay, gray brown, low moist, med-high dens, med	2.00
0			1315 1602	6			0-39" clay, gray, low moist, med-high dens, med	1.50
0				8				1.73
0			1320	10			0-39" clay, as above, silty clay @ 24-39"	1.73
0				12			39-44" silt, brown, low moist, low dens	1.64
0			1325	14			0-10" silt, as above	1.70
0			1602	16			10-26" clay, med silt, gray brown, low moist, med dens	1.60
0				18			26-47" silty silt, brown, med to low moist, low dens	2.07
0			1330	20			0-42" clay, gray brown, low moist, med-high dens, ca, silt	2.14
0				22			concretion @ 26"	2.00
0			1335 1602	24			0-47" clay, as above, silt lens @ 41" & 46-47"	1.51
0				26				0.38
0			1340	28			0-47" silt, brown, low moist, low dens, silty clay lens @ 38-41"	0.75
0				30				0.62
0			1345	32			0-28" silt, as above, clay lens @ 19-20" & 24-26"	1.48
0				34			28-42" silty clay, gray, low moist, med dens	0.06
0			1350 1602	36			0-36" silt, brown gray, low moist, low dens	1.08
0				38			36-40" clay, gray, low moist, med dens	1.08
0			1355	40			40-45" wood, damp	0.31
0				42			45-48" silt, brown, low moist, low dens	
0			1405	44			0-42" silt, as above, clay lens @ 11-12", wood @ 12-14" & 20-22"	



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BORING No. B-7

PROJECT NAME CRASH
PROJECT NUMBER 1703-ABT
LOCATION Morse, LA
DRILLING METHOD _____
SAMPLING METHOD _____
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY _____
REMARKS _____

DATE STARTED 2/26/25
DATE COMPLETED 2/26/25
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY Portland Cement
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____
TOTAL DEPTH _____

Page 2 of 2

Recovery

PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
0					42			0-48" Silt, graybrown, sat, lardens	0.64
0		1410			44				0.40
0		1415	1682	X	46			0-24" Silt. As above	0.57
					48			TD = 46' BLS	
					50				
					52				
					54				
					56				
					58				
					60				
					62				
					64				
					66				
					68				
					70				
					72				
					74				
					76				
					78				
					80				



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**
Environmental Consultants

Client: _____

Project Name: CASTAL

Project Location: MOREE, CA

Project No.: 1705.437

Date: 2/26/25

Page 1 of 1

0800	Left office, Todd & Andy	<u>Onsite</u>
0900	Onsite @ Mary Pech Rd. Hello T&S and discussed scope of work Southland onsite (Cory)	Todd W. Andy S. Hunter C. Ken C.
0950	HET set up on <u>B-6</u> w/ marsh master snooper (2.25 x 4' dual tube) pushed to 48' BCS ^{refusal} logger and sampled <u>Southland</u> Soil - see boring log for details HET grouted to surface <u>B-6</u> through barrels Break for lunch ~15 gallon grout	<u>Cory</u>
1300	HET set up on <u>B-7</u> w/ marsh master pushed to 46' BCS (refusal) logger & sampled Soil - see boring log for details HET grouted <u>B-7</u> to surface through barrels Cleaned up area; loaded trucks	
1530	Left site	
1645	Arrived @ office	



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BORING No

B-4

PROJECT NAME Castal
PROJECT NUMBER 1705-A37
LOCATION Marsh, LA
DRILLING METHOD Marsh Master - Geoprobe
SAMPLING METHOD 2.25 x 4" Dual Tubes
GROUND ELEVATION —
TOP OF CASING —
LOGGED BY TODD W.
REMARKS 30.128443, -92.495245

DATE STARTED 2/27/25
DATE COMPLETED 2/27/25
CASING TYPE/DIAMETER —
SCREEN TYPE/SLOT —
SAND PACK TYPE —
GROUT TYPE/QUANTITY Portland Cement
DEPTH TO WATER —
GROUNDWATER ELEVATION —
TOTAL DEPTH 38.8' BLS

page 1 of 1

Recovery

LITHOLOGIC DESCRIPTION

PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	REMARKS
0				X	2			0-28" clay, min silt, graybrown, low moist, med dens	191
0				X	4				2.00
0	1305				6			0-40" clay, min silt, graybrown, low moist, med-high dens	2.12
0				X	8				2.83
0	1310	1602			10			0-12" silty clay, brown, low moist, med dens	4.69
0					12			12-36" silt, min clay, brown, low moist, low dens	1.26
0	1315				14			36-41" clay, graybrown, low moist, high dens	1.07
0					16			41-47" silt as above	1.87
0					18			0-23" silt, as above, sat, low dens	1.93
0	1320	1602			20			23-35" clay, brown gray, low moist, med-high dens	1.69
0				X	22			0-48" clay, min silt, graybrown, low moist, high dens, fe	1.60
0	1325	1602			24				0.88
0					26			0-11" silt, brown, low moist, low dens, min clay	0.25
0					28			11-24" clay, min silt, brown gray, low moist, med-high dens	0.23
0	1330				30			24-37" silt, brown, low moist, low dens	1.61
0					32			0-45" silt, brown, low moist, low dens	1.72
0	1340				34				0.02
0					36			0-21" silt, min clay, sat, brown, low dens, clay lens @ 9-12"	0.16
0					38			21-32" clay, gray, low moist, med dens	
0	1345	1602			40			32-41" silt, brown, low moist, low dens	
0								0-4" silt, as above	
0								4-22" clay, gray, low moist, med dens	
0	1355	1602						22-35" silt, brown, low moist, low dens	
0								0-16" silt, brown, ^{min} dry sand, low moist, low dens	
0	1415	1602						TD=38.8' BLS	



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Environmental Consultants
31 Apollo Road
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BORING No. _____

B-5

PROJECT NAME Crystal
PROJECT NUMBER 1705.437
LOCATION Marje, LA
DRILLING METHOD Marsh Master - (no probe)
SAMPLING METHOD 2.25 x 4" Dual Tubes
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY Tony W.
REMARKS 30.12888, -92.495077

DATE STARTED 2/27/05
DATE COMPLETED 2/27/05
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY Portland Cement
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____
TOTAL DEPTH 51.5' GCS

page 1 of 2

Recovery

LITHOLOGIC DESCRIPTION

PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	USCS	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	LOG
0				X	2			0-17" Silty clay, gray brown, low moist, med dens, fe	2.68
0			0940		4				3.15
0					6			0-37" clay, med silt, gray brown, low moist, med dens, fe	3.11
0			0945		8				3.36
0					10			0-23" clay to silty clay, gray brown, low moist, med dens, fe	3.91
0			0950		12			23-27" silt, brown, low moist, low dens	4.10
0			1602	X	14			0-13" silt, brown to greenish gray, sat, low moist	5.23
0			0955	X	16			13-33" clayey silt, brown gray, low moist, med, low dens	8.81
0					18			33-42" clay, gray brown, low moist, med-high dens	10.67
0			1000	X	20			0-47" clay, as above	10.76
0					22				8.21
0			1005		24			0-24" clay, gray to brown, low moist, med-high dens	8.63
0					26			24-41" silt, med clay, brown gray, low moist, low dens	8.79
0			1010		28			0-14" clay to silty clay, brown, low moist, med dens	8.73
0.7			1602	X	30			14-43" silt, med clay, brown to gray, low moist, low dens	10.1
0			1015		32			0-15" silty clay, gray brown, low moist, med dens, med clay silt	10.1
0					34			15-34" silt, gray brown, low moist, low dens, med clay lens throughout	10.1
1.2			1025	X	36			0-13" silt, brown, above	10.1
0					38			13-24" silty clay, gray brown, low moist, med dens	10.1
0			1030		40			24-47" silt, gray, sat to med moist, low dens	10.1
0								0-48" silt, gray, sat, low dens	10.1



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(337) 261-1963 Fax (337) 261-1953

BORING No. B-5

PROJECT NAME _____
PROJECT NUMBER _____
LOCATION _____
DRILLING METHOD _____
SAMPLING METHOD _____
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY _____
REMARKS _____

DATE STARTED 2/27/25
DATE COMPLETED 2/27/25
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____
TOTAL DEPTH _____

page 2 of 2

Recovery

PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
0					42			0-21" Sandy Silt, vfg, gray/brown, gatt, low den	3.61
0					44			21-47" Clay, med Silt, gray, low moist, med den	4.11
0	1640				46			0-11" clay, as above	3.72
0					48			11-33" Sand, vfg, brown, silt, low den, clay lenses @ 24-27" med silt	3.42
0	1645				50			0-17" clay, med silt, gray, low moist, med den	7.65
0					52			17-23" Silty Sand, vfg, brown, damp, low den	1.65
0								23-32" clay, as above	1.67
0	1650							32-44" Silty Sand, vfg, brown, damp, low den	1.65
								TD = 51.5' BLS	
								* Resumed drilling on 3/3/25. GP 7822 DT 2.25" Dual tube Sampling @ 55' BLS. - EU	
					52			Silty Sand, brown, saturated, low dense, UFG	2.31
	1035				54			0-4.0'	0.90
					56				
					58				
					60				
					62				
					64				
					66				
					68				
					70				
					72				
					74				
					76				
					78				
					80				



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

Client : JONES WALKER

Project Name: FIATL

Project Location: MORRIS, CA

Project No.: 1705.A37

Date: 2/27/25

Page 1 of 1

0810	Left office in truck #44, Todd W. & Andy S.	<u>onsite</u>
0900	Arrived onsite near Pugh Ave Southland (Cory) onsite Held town and talked about scope of work	Todd W. Ken C. Andy S. Hunter C.
0940	HET set up on B-5 w/ marsh master - auger probe (2.25 x 4' metal tubes) pushed to 51.5' BGS (refusal) <u>Southland</u> loggers + sampled soil then grouted borehole to surface through barrels, used ~15 gallons of grout - see boring log for details <u>Cory</u>	
1200		
1300	HET set up on B-4 w/ marsh master - auger probe pushed to 38.5' BGS (refusal), loggers and sampled soil - see boring log for details grouted <u>B-4</u> borehole to surface through barrels cleaned up area - all soil cutting were put into 55-gallon drum	
1530	offsite	
1630	At office, UNLOAD samples & equipment	



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BORING No. B-8

PROJECT NAME Crestal
PROJECT NUMBER 1705-A37
LOCATION Morse, LA
DRILLING METHOD Geoprobe - Marsh Water
SAMPLING METHOD 2.25 x 4" Dual Tube
GROUND ELEVATION —
TOP OF CASING —
LOGGED BY Tony W.
REMARKS 30129438, -92.4961424

DATE STARTED 2/28/25
DATE COMPLETED 2/29/25
CASING TYPE/DIAMETER —
SCREEN TYPE/SLOT —
SAND PACK TYPE —
GROUT TYPE/QUANTITY Portland Cement
DEPTH TO WATER —
GROUNDWATER ELEVATION —
TOTAL DEPTH 44' BLS

page 1 of 2

Recovery

LITHOLOGIC DESCRIPTION

PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	LOG
0					2			0-13" silty clay, gray brown, low moist, med dens, fa	0.29
0	0950				4				0.84
0					6			0-47" clay, gray brown, low moist, med-high dens, min	1.53
0	0950				8				1.76
0					10			0-27" silty clay, gray brown, low moist, med-high dens	1.33
0					12			27-36" clay, gray brown, low moist, high dens	2.37
0	1000	1602			14			36-43" silt, brown, med clay, low moist, low dens	2.04
0					16			0-24" clay, gray brown, low moist, med-high dens, clayey silt	1.73
0	1005				18			24-30" silt, brown, med moist, low dens	1.94
0					20			30-37" clay, brownish, low moist, med-high dens	2.12
0	1602				22			0-48" clay, gray brown, low moist, high dens, silt lens @ 46"	1.90
0	1015				24				0.97
0					26			0-7" clay, brown, low moist, med dens, min silt	1.49
0					28			7-23" clayey silt, brown, low moist, low dens, clay lens @ 15-16"	1.85
0	1025				30			23-47" silt, brown, low moist, low dens, min clay @ 30-47"	1.73
0					32			0-14" silty clay, brown, low moist, med dens, silt @ 11-14"	0.05
0	1602				34			14-24" clay, gray brown, low moist, med-high dens, ca	0.19
0	1030				36			24-29" silt, min clay, low moist, low dens	0.30
0					38			29-36" clay, as above	0.51
0					40			36-42" silt, as above	0.48
0	1035							0-44" silt, very sand, low moist, low dens	0.16
0									
0	1040	1602						0-44" silt, as above, damp	
0									
0	1045							0-41" silt, sat, gray brown, low dens, min very sand	



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BORING No. B-8

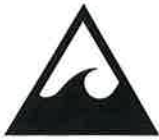
PROJECT NAME _____
PROJECT NUMBER _____
LOCATION _____
DRILLING METHOD _____
SAMPLING METHOD _____
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY _____
REMARKS _____

DATE STARTED 2/28/25
DATE COMPLETED 2/28/25
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____
TOTAL DEPTH 44' BLS

page 2 of 2

Recovery

PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
0					42			0-21" silt, as above, vfy sand, clay lens @ 13-17" (24%)	0.93
0		1100	1602	X	44			21-46" clay, gray, calcareous, mod dens, silt lens @ 27-30"	1.31
					46			TD = 44' BLS	
					48				
					50				
					52				
					54				
					56				
					58				
					60				
					62				
					64				
					66				
					68				
					70				
					72				
					74				
					76				
					78				
					80				



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

Client : James Walker

Project No.: 1706.937

Project Name: GAstal

Date: 2/28/25

Project Location: Morse, LA

Page 1 of 1

0800	left office in truck #44, Tom W. & Andy S.	<u>onsite</u>
0900	Arrived onsite near Pugh Ave Held TISM and discussed scope of work	Tom W. Hunter L Kear C. Andy S.
0950	HET set up on B-8 w/ marsh master Greprobe (2.25 x 4' Dual Tubes) pushed to 44' BLS (refusal) Logged and sampled soil Soil boring log for details grouted borehole to surface through barrels All soil cuttings were placed in a 55-gallon drum cleaned up area	<u>Southland</u> Diane P.
1330	Left site	
1430	Arrived at office; unloaded supplies & equipment loaded Greprobe	



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BORING No. B-1

PROJECT NAME Glacial
PROJECT NUMBER 1705-A37
LOCATION Morse, LA
DRILLING METHOD HP 7822 DT
SAMPLING METHOD 2'1/4" x 4" Dual Tube
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY _____
REMARKS EM

DATE STARTED 3/3/25
DATE COMPLETED 3/3/25
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____
TOTAL DEPTH _____

Recovery	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
3.9'			1330	40-42		42	ML		0-0.9' Silt, brown, low to med moist, low dense	0.65
						42	a		0.9-1.4' Silt, min VFG sand, brown, low moist, low dense	
						44	ML		1.4-2.0' clay, brown & gray, min silt @ top, low moist, low dense, wood @ 1.7-1.9'	0.46
3.9'			1355	44-46		46	ML		2.0-3.9' Silt, brown, high moist, low dense, clay lens @ 3.3-3.4	0.20
						46			0-3.9' Silt, mix to mod VFG sand, brown, high moist, low dense	0.19
						48			3.8-3.9' sand lens @ 3.4-3.5	
3.2'			1430	48-50		50	ML		(Liner stuck in barrel, used extruder to remove) 0-1.7 Silt, brown, SAA	0.49
						50			2.5-3.2' SAA	-
						52				
						54				
						56				
						58				
						60				
						62				
						64				
						66				
						68				
						70				
						72				
						74				
						76				
						78				
						80				



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

Client: Jones Walker

Project Name: Eastal

Project Location: Morse, La

Project No.: 1705.A37

Date: 3.3.25

Page 1 of 2

0800 - EM, HH, HL left HET in #38. KL, AS
in #44 w/ GP 7822DT & goose-neck
trailer.

on site

Eric Montesano
Ken Champagne
Andy Schwartzburg
Hunter Lepretre
Hunter Hoffpauir
Duane Piranio - SE

HET

0910 - Arrive on site. Partly cloudy, ~60°F,
wind advisory this afternoon.

- AS held safety meeting. Southland
on site (DP).

- Site is saturated but not holding
water. Too wet for vehicles. Will park @
road & use equipment in an geoprobe.

- Set up on B-S location w/ Geoprobe 7822DT
pushing 2 1/4" x 4' Dual tube to sample.

↳ Previously logged to 51.5' BLS on 2.27.25
by TW. Will put discreet point in &
push to 52' BLS before sampling.

0945 - Began drilling @ B-S location.

- See boring log for details

- Drilled B-S to 56' BLS.

- Grouted borehole using portland-bentonite slurry
poured through 2 1/4 rods. Rods removed as they
filled. Used ~18 gallons.

B-S

TD = 56' BLS

- Completed grouting. Unburied 6x6 wooden blocks
from under foot of rig. Mob to B-1 location

1200
1230 - Broke for lunch

1300 - Set up on B-1 location & began drilling.
2 1/4 dual tube to sample.

- Previously drilled to 44' BLS.

Began ~~sat~~ Drilled w/ point to 40' BLS &
began sampling.





**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**
Environmental Consultants

Client: Jones Walker
Project Name: Grastal
Project Location: Morse, La

Project No.: 1705.A37
Date: 3.3.25
Page 2 of 2

- Sampled B-1 from 40' to 52'.
See boring log.

B-1 (

TD = 52' BLS

- Poured grout through 2 1/4" rods & removed as they filled. Grouted to surface.
- 48-52' push head extruder to extract the core. Not a full recovery, but all silt same as 44-48'.
- Loaded materials & all personnel off site.
- Arrive @ HET

EH



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BORING No. _____

B-S

PROJECT NAME CRISTAL
PROJECT NUMBER 1705-A37
LOCATION Morse, LA
DRILLING METHOD Circular 7622 DT
SAMPLING METHOD 5' macro-core / 2.25x4" outside
GROUND ELEVATION —
TOP OF CASING —
LOGGED BY Todd W.
REMARKS —

DATE STARTED 3/11/25
DATE COMPLETED 3/11/25
CASING TYPE/DIAMETER —
SCREEN TYPE/SLOT —
SAND PACK TYPE —
GROUT TYPE/QUANTITY Portland Cement
DEPTH TO WATER —
GROUNDWATER ELEVATION —
TOTAL DEPTH 60' BLS

Recovery

PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	B.C.
					42			previously logged and sampled on 2/27/25 and 3/3/25 and resumed @ 56' BLS	
					44				
					46				
					48				
					50				
					52				
					54				
0			1520	1602	56			0-31" clay, gray, low moist, med dens, silt lens @ 22-23", 40" med sand	1.53
0			1530	1602	58			0-23" clay, as above, med-high dens, silt lens @ 15-17" st	1.60
					60			23-29" Silty Sand, brown gray, damp, low dens	
					62			TD = 60' BLS	
					64				
					66				
					68				
					70				
					72				
					74				
					76				
					78				
					80				



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**
Environmental Consultants

Client: Juanes Walker

Project No.: 1705.437

Project Name: Fractal

Date: 3/11/25

Project Location: Murphy, LA

Page 1 of 1

0800	Left office in truck #31, Todd W. & Andy S.	HET
0900	Arrived onsite Along pugh Ave Met Tison and talked about scope of work Southland onsite (Chad C.)	Todd W. Andy S. Hunter L. MAYERS J.
1015	HET Set up on B-S w/ Geoprobe 7822 DT began drilling using 5' macro-core, pushed to SS' BLS, pin released early - pulled barrel and rods re-entered borehole, pushed to SS' BLS	Southland Chad C.
1305	Pin stuck inside rods - began pulling all rods and barrel. Re-entered again w/ macro-core pushed to SS' BLS pin stuck; pulled all rods and barrel	
1420	Re-entered same borehole w/ 2.25 x 4' Dual tubes pushed to 60' BLS, logged and sampled soil All cutting left over were placed into 55-gallon drum onsite	
1540	HET grouted borehole to surface using through barrels Used ~ 22 gallons of grout	
1645	Cleaned up Area left site	
1745	Arrived @ office	



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BORING No. B-1

PROJECT NAME Crystal
PROJECT NUMBER 1705-A37
LOCATION Morse, LA
DRILLING METHOD Geoprobe 7822 NT
SAMPLING METHOD 2.25 x 4' Dual Tube
GROUND ELEVATION —
TOP OF CASING —
LOGGED BY Terry W.
REMARKS —

DATE STARTED 3/12/25
DATE COMPLETED 3/12/25
CASING TYPE/DIAMETER —
SCREEN TYPE/SLOT —
SAND PACK TYPE —
GROUT TYPE/QUANTITY Portland Cement
DEPTH TO WATER —
GROUNDWATER ELEVATION —
TOTAL DEPTH 56' BLS

Recovery

PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
					42			previously logged and sampled	
					44				
					46				
					48				
					50				
					52			0-13" sandy silt, brown, sat, coarse, vfg	168
					54			TD = 56' BLS - flow in not logged	
					56				
					58				
					60				
					62				
					64				
					66				
					68				
					70				
					72				
					74				
					76				
					78				
					80				



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

Client: Jones Walker

Project Name: CRISTAL

Project Location: Morse, LA

Project No.: # 1705.A37

Date: 3/12/25

Page 1 of 1

0800	Left office in truck #31, Toms W. & Andy S. Stopped for fuel	<u>onsite</u> <u>HET</u>
0845	Arrived onsite Along purge Ave Held Toms and discussed scope of work Southland (Jones) onsite	Toms W. Andy S. Marcus J. Hunter L.
0915	HET Set up on B-1 w/ Geoprobe 7820 RT pushed to 54' BLS using 2.25 x 4' Dual Tube And Solid point resumed logging and sampling liner stuck @ 54' BLS ^{flow in} pulled all barrels re-entered same borehole pushed to 55' BLS (flow in); liner stuck pulled all barrels, re-entered same borehole, pushed to 56' BLS w/ point, pulled point - flow in HET grouted borehole to surface through barrels used ~ 25 gallons of grout	<u>Southland</u> <u>Jones</u>
1515	Cleaned up area - Left Site	
1615	Arrived @ office	



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BORING No. B1

PROJECT NAME Gravel
PROJECT NUMBER 1205-A37
LOCATION Morgue, LA
DRILLING METHOD Geoprobe 782207
SAMPLING METHOD 4" x 10" 2.25" Maricore
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY Aaron G.
REMARKS _____

DATE STARTED 3-13-25
DATE COMPLETED 3-13-25
CASING TYPE/DIAMETER N/A
SCREEN TYPE/SLOT N/A
SAND PACK TYPE N/A
GROUT TYPE/QUANTITY Bentonite Slurry
MEASURED DEPTH OF WELL _____
TOTAL DEPTH _____

PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
					4				
					6				
					8				
					10				
					12				
					14				
					16				
					18				
					20				
					22				
					24				
					26				
					28				
					30				
					32				
					34				
					36				
					38				
					40				
					42				
					44				
					46				
					48				
					50				
					52				
					54				
					56				
					58				
					60				
					62				
					64				
					66				
					68				
					70				
					72				
					74				
					76				
					78				
					80				
					82				
					84				
					86				
					88				
					90				
					92				
					94				
					96				
					98				
					100				



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

HET investigation
SIB installs

Client: Jones Walker

Project No.: 1705.A37

Project Name: Gastal

Date: 2-13-25

Project Location: Morse, LA

Page 1 of 1

- 0815 - Left HET office - Truck - 31 - Aaron Garcia
- Picked up Hunter L. @ Dollar General in Morse
- 0900 - Arrive on site.
- Marcus J. + Hayden W. on site & already.
- Hold safety meeting. Duane Pinaris up Southland on site.
- Rig set up on B-1 already. Began getting 40 to continue drilling deeper on B-1.
- 0930 - Started drilling @ B-1 location. HET is using 2 1/2" Macrocam rods, with HET Geoprobe 7822DT.
- 1030 - Reached 60' bts. ~5" of clay in bottom of 56-60' core. Will push again deeper.
- 1145 - TD = 64' bts. Logged and sampled. Collected 16oz Jar @ 58-60' + 62-64' intervals.
- Started pushing 2 1/2" tremie rods to TD.
- Reached 64' bts.
- Pumped bentonite/cement grout through tremie rods to TD.
- Puts Filled rods, then pulled 16' of rods from hole, then repeated process until all rods were pulled from hole + boring has full of grout.
- 1230 - Took lunch. Duane left site.
- 1330 - Returned to site. Loaded equipment.
- 1430 - Left site.
- 1530 - Returned to HET office + unloaded trucks.



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

Client: Jones Walker

Project Name: Crastal

Project Location: Morse, La

Project No.: 1705.A37

Date: 5/27/2025

Page 1 of 1

- 1245 - EM left HET in #43.
- 1315 - Arrive @ Shell station on Evangeline Highway.
- 1330 - Savage @ Shell. Mob to Morse, La.
- 1400 - Arrive on site @ southside of property. Held safety meeting. Staged equipment & sampling area.
- Mob geoprobe 7822DT to B-to location. Began pushing 2'4" x 5' dual tube to sample.
↳ See boring log
- On site
Eric Montecino] HET
Jean Dupuy]
Chad Kary - SE
Henry Felts] Savage
Jose]

B-to

TD = 55' BLS

* Will push 55-60' tomorrow.

- 1615 - Liner stuck in barrel @ 55-60' push. Will leave in ground. Pull everything tomorrow & grout.
- 1630 - All personell off site.
- 1715 - Arrive @ HET

EM



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

Client: Jones Walker

Project Name: Grastel

Project Location: Morse, La

Project No.: 1705.A37

Date: 5/28/2025

Page 1 of 1

- 0715 - EM/JD left HET in # 43 w/
2 seact Honda side x side on S.C
- 0800 - Arrive on site. Savage on site. Eric Montesano } HET
Held toolbox safety meeting &
Staged equipment. Dean Dupuy } SE
- Site got a little rain overnight. Chad Kary } Savage
partly cloudy. High chance of thunderstorms Henry Felts } Savage
- Set up on B-6. Jose
↳ Pulled SS-60' out of hole. Extruded onto
core rack & recovered.
- Trim pipe placed down to SS' BLS. Grout
was poured through trim. Removed as they
filled. Grouted to ~ 2' BLS. (Plowed Field)
Used ~ 18 gal.
- Mob to B-4 location & staged geoprobe.
↳ Previously sampled to 40' BLS. Will buzz
down w/ point & begin sampling @ 40' BLS.
- * Having to push 2-2.5' cores in order for liner
not to get stuck in kernal.
- Grouted B-4 same as above. Used ~ 20 gal.

B-6 TD = 60'

B-4 TD = 60'

- 1415 - Heavy rain & lightning. All personell sheltered
in vehicles.
- 1500 - Continued raining. All equipment out of field
for heavy rain tonight.
- 1540 - Heavy rain & lightning < 10 mi. All personell off site.
- 1620 - Arrive @ HET

EM



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

Client: Jones Walker

Project Name: Crustal

Project Location: Morse, La

Project No.: 170S.A37

Date: 5/29/2005

Page 1 of 1

- 0700 - EM/JD left HET in #43 w/ Honda 2 seat. on S.C.
- 0745 - Arrive on site. Savage on S.C.
- 0815 - All personnel on S.C. Held toolbox safety meeting. Began tracking to B-7 location.
- 0900 - While entering field from right of way, the geoprobe's left track slipped into a shallow ditch & became immobilized. An attempt to contact the landowner /and/or farmer is being made by Southland & HET.
- 1030 - A neighboring farmer, who "Routinely cuts rice for Bubba", assisted in pulling the rig out w/ a John Deere tractor.
- Mob to B-7 location & began drilling w/ 2 1/4" x 5' Dual Tube to sample.
- ↳ See boring log for details.
- Completed B-7 location. Dropped 55' of trim pipe downhole & poured grout through trim. Removed as they filled. Used ~ 22 yd.
- ⇒ B-7 ~~TD~~ TD = 60' BLS
- Loaded all materials. Cleaned up site.
- 1100 - All personnel off site.
- 1145 - Arrive @ HET

EKL



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BORING No. _____

B-9

PROJECT NAME CRABAL
PROJECT NUMBER 1705.A37
LOCATION MORSE, LA
DRILLING METHOD Auger 2822 BT
SAMPLING METHOD 2.25 x 5' Dual Tube
GROUND ELEVATION —
TOP OF CASING —
LOGGED BY TEOD W.
REMARKS 30.12922761, -92.49585525

DATE STARTED 5/30/25
DATE COMPLETED 5/30/25
CASING TYPE/DIAMETER —
SCREEN TYPE/SLOT —
SAND PACK TYPE —
GROUT TYPE/QUANTITY Portland Cement
DEPTH TO WATER —
GROUNDWATER ELEVATION —
TOTAL DEPTH 60' BLS

Recovery

PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
					42			previously logged on 6-15-23	
					44				
					46				
2.2					48			0-20" clay, min silt, gray, low moist, med dens	1.36
48" 0.8			0845 1607	X	50			20-48" sandy silt, brown, soft, low dens, vfg	0.39
					52			0-25" sandy silt, as above, clay lens @ 7.5-10.5" (1.30/EC)	0.30
36" 1.3			0930	X	54			25-36" clay, gray, med dens, low moist	1.04
46" 2.2			0955	X	56			0-46" clay, gray, low moist, med dens, sand lens @ 25-29" min silt vfg	1.46
2.3			1608	X	58			0-12" clay, gray, low moist, med dens	1.46
					60			12-31" sandy silt, brown, low moist to med, low dens, clay lens @ 26-27"	0.14
1.2					62			31-55" clay, gray, low moist, med dens, sandy silt lens @ 50-53", 36-37"	1.57
50" 1.1			1020 1607	X	64				
					66				
					68				
					70				
					72				
					74				
					76				
					78				
					80				

T₂ = 60' BLS



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

Client: Jones Walker

Project Name: Castal

Project Location: Morse, LA

Project No.: 1705-137

Date: 5/30/25

Page 1 of 1

0615 Left office in Truck # , Todd W. & Kyle F. (HET)
0720 Arrived onsite, Hello TOSM and discussed scope of work
0730 Savage (Henry & Jose) & Southland (Chad C.) onsite
Received the proposed location w/ VTY
0800 Set up Geoprobe 7822 DT @ B-9 adjacent to SE-SB-10
0812 Began drilling w/ 2.25" x 5' dual tubes pushed point to
47' BGS to begin sampling (pushing dual tubes) pushed 47-50"
BGS (liner stuck in barrel) - pulled all barrels to get liner
Re-entered same borehole w/ point - pushed to 52.5' BGS
Continued sampling / drilling
1020 TD @ 60' BGS - pulled all barrels and placed tremie pipe @ ~40' BGS
Finished logging and soil sampling - see boring log for details
grouted borehole to surface
1115 Savage off site
moved to B-10 location north of B-2
HET hand Auger to 2' BGS, then backfilling
0-2' silty clay brown & gray, damp, medium
EC PID
1.40 0.8
B-10 @ 30.1295699, -92.4951531 +/- 0.1'

1200 Cleaned up area & left site
Stopped for lunch
1400 Arrived @ office unloaded equipment & samples
1500 finished cleaning equipment & uploading field data



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

Client: Jones Walker

Project Name: Geastal

Project Location: Morse, La

Project No.: 1705.A37
8046-07

Date: 6-4-2025

Page 1 of 1

- 0715 - EM/JD left HET in #39 w/ Honda
2 seact. on site
Eric Montano } HET
Jean Dupuy }
Laiken - SE
Brandon } WHE
Dustin }
- Arrive on s.c. All personnel on s.c.
- Held toolbox safety meeting. Began
unloading equipment.
- 0830 - When attempting to pull rig off
trailer, the geoprobe would not idle up
or down at all. WHE assessed.
- 0930 - A fuse had blown. WHE changed w/ Mckenicks
from their truck.
- Mob to B-2 location & set up Geoprobe 7922i/r.
Using 2'1/4" x 4' Dual Tube to sample.
- ↳ Previously sampled as SE-SB13 to 20' BLS.
Will begin sampling @ 20' BLS.
- WHE put point in 2'1/4" & pushed to 20' BLS.
pulled point & began sampling.
- B-2 (30.129372, -92.495129)
TD = 60' BLS
- Drilled to 60' BLS w/ 2'1/4 Dual tube. Began
2' pushes @ 44' BLS.
- 1215 - Completed logging & sampling.
- 1230 - WHE prepped pipe w/ point @ 59' BLS.
Will take lunch & pick up grout.
- Drilled 2'1/4 dual tube to 60' BLS.
- Poured grout through 2'1/4 rods & removed
as they filled. Used ~ 25 gal. grout to
~ 3' BLS in (crawfish pond/rice field).
- Mob rig to B-7 location. Drilled dual
tube w/ point to 28' BLS. Will continue
tomorrow.
- 1555 - All personnel off s.c.
- 1640 - Arrive @ HET

END



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

Client: Jones Walker

Project Name: Grassal

Project Location: Morse, La

Project No.: 1705.A37
80

Date: 6/5/25

Page 1 of 2

OTIS - EN/ID left HET in #39 w/
Honda 2 seat & 16' utility trailer.

- Arrive on s.l. WHE on s.l.
Held toolbox safety meeting.
- Mob to B-7 to continue
pushing point to 60' BCS.

Jean Dupuy] HET
Eric Montecano]
Duane Piranio - SE
Brandon] WHE
Dustin]

- Pushed B-7 to 52' BCS.
Sampled 52-60' in order to not have
issues drilling. Will begin logging @ 60' BCS
- Completed B-7 location to 68' BCS.

B-7 TD = 68' BCS

- Grouted through 2 1/4 rods. Used ~ 20 gal.
Removed as they filled. Grouted to ~ 3' BCS
in rice field.
- Mob to B-11 location. Set up geoprobe
& staged sampling area.
- Began drilling B-11. Using 2 1/4 x 4" dual
tube to sample. See boring log for
details.

B-11 (30.12824, -92.493967)
TD = 60' BCS

- Completed B-11 location. Grouted through
2 1/4 barrels, same as above.
Used ~ 18 gal.
- WHE loaded some stuff for gr in
truck. HET mob to B-10 to collect
hand auger.



**HYDRO-ENVIRONMENTAL
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Client: Jones Leiber

Project Name: Castro

Project Location: Morse, Ca

Project No.: 1705.A37

Date: 6/5/24

Page 2 of 2

1545 - Hand auger to 2' BLS @ B-10.

Sampled (0-1') @ 1530
(1-2') @ 1535

1602
Jar

Southland cap.

- Completed field work for today

B-10 (30.1295699, -92.4951531)
TD = 2'

0-2' S:ty Clay, brown, low moist, low
to med dense

1610 - All personnel off site.

~~1650~~ - Arrive @ HET
1715

EM



**HYDRO-ENVIRONMENTAL
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Environmental Consultants

Client: Jones Walker

Project Name: Gravel

Project Location: Morse, La

Project No.: 1708.A37

Date: 6/6/28

Page 1 of 1

- 0700 - EM leave HET in #39.
0745 - Arrive on s.l. WHE on s.l.
- WHE mob rig to trailer
- topped gravel to ~ 2' BUS
in all holes.
- Loaded materials.
1000 - All personell off s.l.
1045 - Arrive @ HET

on s.l.

Brandon] WHE
Dustin]
Eric - HET

EM



**HYDRO-ENVIRONMENTAL
TECHNOLOGY, INC.**

Environmental Consultants

SITE INSPECTION/DISC
DISPOSE OF IDW

Client: JONES WALKER

Project No.: 1705. A37

Project Name: GASTAL

Date: 7-22-25

Project Location: MORSE, LT

Page 1 of 1

- ARRIVE ON-SITE @ 7:55-BOOK. BART & ELLIOT (TRUCK NO. 36). P. CORDY, WASH.
- KEPT ON-SITE TO PICKUP DRUM (-1-55 GALLON STEEL) OF IDW GENERATED DURING HET'S RECENT INVESTIGATION. DRUM TO BE TRANSPORTED TO REPUBLIC/JEFF DAVIS LANDFILL IN WELSH, LT.
- SOUTHWEST COR LANDOWNER ON-SITE. DRUM STORED ON WELL-PAV JUST NORTH OF DALLAS GENERAL STORE.
- CONDUCT DRONE PHOTOS OF SITE
- LEAVE SITE AROUND 8:40. ENTA (SP)



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BORING No. B-6

PROJECT NAME Gustal
PROJECT NUMBER 1705-A37
LOCATION Morse, La
DRILLING METHOD Geoprobe 7822DT (savage)
SAMPLING METHOD 2 1/4 dual tube
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY _____
REMARKS EM

DATE STARTED 5/27/25
DATE COMPLETED 5/28/25
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____
TOTAL DEPTH 60' BLS

Recovery	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
						42			Previously drilled to 48' BLS on 2/26/25.	
						44				
						46				
						48				
	2.1		1530			48	ML		0-2.0' Silt, brown, high moist, low dense	0.38
	0.1		1545 (50-52)	1602		50	CL		0-2.2' Clay, gray, red brown @ bottom, low moist, low dense	1.43
	5.7		1550 (53-55)	1602		52	ML		2.2-3.4' Silt, min Vfg sand, brown, high moist, low dense	0.32
						54	CL		3.4-4.2' Clay, min silt, red brown, low moist, low dense, silt lens @ 3.6-3.7'	1.17
	-4.2		1555			54	ML		4.2-4.9' Silt, min to med Vfg sand, brown, silt, low dense	0.29
5/28	0		0910 (5/28/2025)			56	ML		0-2.0' Silt, mod to high	0.43
	0		0915 (58-60)	1602		58	CL		2.0-3.7' Silt, med Vfg sand, silt, low dense	1.25
						60			3.7-5.0' Clay, red brown, low moist, low dense	
						62				
						64				
						66				
						68				
						70				
						72				
						74				
						76				
						78				
						80				

BORING No. B-4

PROJECT NAME Crastal
PROJECT NUMBER 1705.A37
LOCATION Morse, La
DRILLING METHOD Geoprobe 7B22 DT
SAMPLING METHOD 2'14" X 5' Dual Tube
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY _____
REMARKS ~~Eric Montezano~~ Jean Dupuis

DATE STARTED 5/28/25
DATE COMPLETED 5/28/25
CASING TYPE/DIAMETER -
SCREEN TYPE/SLOT -
SAND PACK TYPE -
GROUT TYPE/QUANTITY Bentonite Slurry
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____
TOTAL DEPTH 60 ft

Recovery	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
0 to 40' previously logged										
0			1100	40-42 1/2"	X	42			0-6: Sand, min silt, gray, mod dens, low moist	1.48
0.2						44			6-54: Clay, min sand, gray, orange stain (27-42), low dens/moist.	1.19
0.2						46			54-60: Sandy silt, gray brown, low dens, low moist	0.15
15"	0		1130			48			0-37: Clay, gray, low dens, low moist 0-37 , low dens, silty lens: 21-23, 25	1.33
6"	0		1140	48-50 1/2"	X	48			40-45: Silt, min sand, gray + brown, low dens, wet	1.41
0			1150			50			0-15: Silt, trace sand, brownish gray, wet, low dens, 18-24: Clay lens, gray, low dens/moist.	1.40
0						52			24-36: Silt, mod sand, brownish gray, low dens, mod moist	1.45
0			1200			54			0-28: Silt, min VFG sand, brownish gray, damp, low dens.	0.23
0						56				0.26
0			1240			58			0-11: Sand, min silt, brownish gray, low dens, wet	0.27
0						60			11-15": Clay, min sand, gray, low dens, low moist.	1.34
0						62			35-42: Silt, min sand, brownish gray, low dens, low moist	0.76
0						64			silt, trace sand, brown gray, wet, low dens.	0.37
0						66				0.32
0						68				0.21
0						70				
0						72				
0						74				
0						76				
0						78				
0						80				



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BORING No. _____

B-7

PROJECT NAME Crastal
PROJECT NUMBER 1705-A37
LOCATION Morse, La
DRILLING METHOD Geoprobe 7822 BT
SAMPLING METHOD 2 1/4" X 5' Dual tube
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY _____
REMARKS Eric Montesano

DATE STARTED 5/29/2025
DATE COMPLETED _____
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____
TOTAL DEPTH _____

Recovery	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
						42				
						44				
45'						46	ML		0-1' Silt, min trace VFG sand, brown, sat, low dense	1.29
(4.8')				1210 46-48			CL		1'-4.8' Clay, gray, low moist, low dense	3.30
47.5'				(155.5)		48				2.61
(24")				1230 48-50			ML		0-2' Silt, trace sand, VFG, brown, sat, low dense	0.65
50'				1330 50-52		50			0-3.0' SAA	2.66
				1330 52-54		52	ML			1.14
52.5'				1335 53-55		54	ML		0-2' SAA	1.06
55'				1345 55-57		56	CL		2-4.7' Clay, red brown & gray, low moist, low dense	3.85
						58	ML		0-3.3' Silt, trace sand, brown, sat, low dense	4.81
57.5'						60	ML		0-1.9' SAA	4.30
60'				1355 58-60		62	CL		1.9-4.5' Clay, gray, low moist, low dense	4.66
4.0'				8755 60-62		64	CL		0-0.3' Clay, gray, low moist, low dense	5.42
				8755 62-64		66	ML		0.3-3.7' Silt, VFG fin to med sand, brown, sat, low dense	6.82
				1000 64-66		68	CL		3.7-4.0' Clay, gray, low moist, low dense	0.34 (silt)
4.0'				1010 66-68		70	CL		0-2.5' clay, red brown, low moist, low dense, min Silt @ 0.5-1.4'	1.70 (clay)
				1015 68-70		72			2.5-4.0' Clay, gray, low moist, low dense	1.27
						74				1.74
						76				
						78				
						80				



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BORING No.

B-2

pg. 1 of 2

PROJECT NAME Gastal
PROJECT NUMBER 1705.A37
LOCATION Morse, La
DRILLING METHOD Geoprobe 7822DT (WHE)
SAMPLING METHOD 2 1/4" x 4' Dual Tube
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY _____
REMARKS EM
30.129372, -92.495129

DATE STARTED 6/4/25
DATE COMPLETED 6/4/25
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____
TOTAL DEPTH 60' BLS

Recovery	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
						2			0-20' previously logged	
						4				
						6				
						8				
						10				
						12				
						14				
						16				
						18				
						20				
4.0'						22	CL	///	0-4.0' Clay, brown & gray, low moist, low dense, Fe stain, Mid Mn stain	1.72
		1015				24				1.62
4.0'						26	CL	///	0-0.2' SAA 0.2-2.9' Clay, gray, low moist, low dense, red brown @ (1.2-1.8)	1.05
		1020				28			2.9-4.0' Silty clay, gray & brown, low moist, low dense, clay lens no silt @ 3.8-4.0', silt lens @ 2.9-3.6, 2.9-3.1	0.65
4.0'						30	CL	///	0-4.0' Silty clay, silt increasing w/ depth, gray, low to mod moisture, low dense	0.14
		1025				32				0.63
4.0'						34	ML		0-2.7' Silt, mix clay, gray & brown, high moist to sat, low dense, clay lens @ 0.6-0.9'	0.78
		1030	134.30	1102		36	CL	///	2.7-4.0' Silty clay, gray, low moist, low dense, silt lens @ 3.8-4.0'	0.95
3.5'						38	ML		0-2.1' Silt, mix clay, sat, brown, low dense, clay lens @ 1-1.3'	0.79
		1035				40	ML		2.1-2.7' Wood, soft, brown & dk brown 2.7-3.1' Silt, brown, trace sand, vfg, sat, low dense 3.1-3.5' Wood, soft, brown & dk brown	0.51



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BORING No. _____

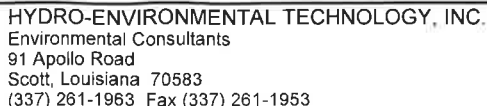
B-2

(pg. 2 of 2)

PROJECT NAME Gastaf
PROJECT NUMBER 170S-A27
LOCATION Morse, La
DRILLING METHOD GP 7822DT (WHE)
SAMPLING METHOD 2 1/4" x 4' dual tube
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY _____
REMARKS EM

DATE STARTED 6/14/2025
DATE COMPLETED 6/14/2025
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____
TOTAL DEPTH 60' BLS

Recovery	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
4'	0					42	wood CL ML		0-0.8' wood, SAA 0.8-1.3' clay, gray, low moist, low dense, mod silt 1.3-1.9' silt, brown, sat, low dense	0.72
	0		1040			44	CL		1.9-4.0' clay, gray, low moist, low dense	1.47
4'	0		1050	1602	X	46	CL ML CL		0-0.5' SAA 0.5-1.0' silt, brown, sat, low dense, trace sand, VFG 1.0-4.0' clay, gray, low moist, low dense, silt lens @ 2.2-2.3'	1.40 1.26
2.7'	0.3		1055			48	ML		0-1.8' clay, min silt, gray & red brown, low moist, low dense 1.8-2.7' silt, trace sand, VFG, red brown, high moist, low dense	1.25 0.33
2.1'	0		1105	1602	X	50	ML ML		0-0.3' SAA 0.3-0.9' clay, red brown, low moist, low dense 0.9-2.1' silt, min VFG sand, brown, sat, low dense	1.11 0.20
2.8'	0.1		1115			52	CL		0-0.5' SAA 0.5-2.8' clay, gray & red brown, low moist, low dense	1.37 1.26
3.8'	0		1130	1602	X	54	CL ML		0-2.9' clay, gray, low moist, low dense, silt lens @ 2.1-2.4' 2.9-3.8' silt, brown, min VFG sand, sat, low dense	1.34 1.41
2.1'	0		1140			56	ML		0-2.1' SAA	0.39
	0.1					58	ML		0-1.0' SAA	0.35
4'	0		1200	1602	X	60	CL		1.0-4.0' clay, gray, low moist, low dense, min silt @ 3.5-4.0'	0.84 1.26
						62				
						64				
						66				
						68				
						70				
						72				
						74				
						76				
						78				
						80				



DATE STARTED 6/5/25

DATE COMPLETED _____

CASING TYPE/DIAMETER

SCREEN TYPE/SLOT

SAND PACK TYPE

GROUT TYPE/QUANTITY

DEPTH TO WATER

GROUNDWATER ELEVATION

TOTAL DEPTH

PROJECT NAME Casta
PROJECT NUMBER 1705.A37
LOCATION Morseila
DRILLING METHOD GIP 7822 DT (water)
SAMPLING METHOD 2'14" x 4' Dual tube
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY _____
REMARKS EM

Recovery	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
3.1'	0			(2-4) 1250 1602	X	2	CL	/ / / /	0-1.1' Clay, min to mod silt, brown, low moist, low dense, grass @ top 1.1-3.1' Clay, brown & yellow brown, low moist, low dense, silt lens @ 2.5-2.7'	0.35 1.46
3.2'	0					4		/ / / /	0-3.2' Clay, gray & yellow brown, low moist, low to mod dense, Fe stain	1.11
	0.1			1255		6	CL	/ / / /		1.28
	0			(8-10) 1602	X	8		/ / / /	0-2.9' SAA 2.9-4.0' Silt, brown, low moist, low dense, clay lens @ 3.6-3.7'	1.33
4.0'	0.1			1300		10	ML			0.83
	0.2					12		/ / / /	0-2.6' Silty Clay, brown & red brown, low moist to damp in silty areas, min Mn & Fe stain, clay no silt @ 0.8-1.2 & 1.4-1.8 1.6-1.8	1.10
4.0'	0.4			1305		14	CL	/ / / /	2.6-4.0' Clay, red brown & brown, low moist, mod dense, Fe stain cu frags @ 3.5-4.0'	1.30
	0					16		/ / / /	0-4.0' Clay, red brown & brown, low moist, mod dense, Fe stain	1.24
4.0'	0.2			1315		18	CL	/ / / /		1.53
	0			(20-22) 1602	X	20		/ / / /	0-2.0' SAA, gray w/ Fe stain	1.57
4.0'	0			1325		22	CL	/ / / /	2.0-4.0' Clay, min silt increase w/ depth, low moist, low dense	0.76
	0					24		/ / / /	0-0.8' SAA	
	0					26	CL	/ / / /	0.8-2.5' Clay, red brown & gray, low moist, low to mod dense, ca frags 1.8-2.5', silt lens @ 1.6'	1.33
	0			1335		28	CL	/ / / /	2.5-4.0' Silty Clay, brown, low moist, low dense, silt lens @ 2.9-3.1, 3.8-4.0	1.00
	0					30	CL	/ / / /	0-0.3' Silt, brown, low moist, low dense	1.27
	0.9			1340		32	ML		0.3-1.2' Clay, gray, min silt, low moist, low dense 1.2-2.9' Silty Clay, brown, low moist, low dense, clay lens no silt @ 2.8-2.9	0.60
	0					34	ML		2.9-3.5' Silt, gray, low moist, low dense	0.21
4.0'	0			1355 (34-36) 1602	X	34	ML	/ / / /	0-4.0' Silt, gray & brown, low moist, low dense, clay lens @ 0.1-0.3 & 2.9-3.5'	0.83
	0					36	CL	/ / / /		
	0					38	ML		0-3.0' Silt, gray, trace sand, UG, low moist, low dense, wood @ 2.3-2.5	0.45 0.19
	0			1410		40		/ / / /		



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BORING No. B-11

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PROJECT NAME Gastal
PROJECT NUMBER 1405-A37
LOCATION Morse, LA
DRILLING METHOD GP 7822DT (LOHE)
SAMPLING METHOD 2 1/4" x 4' dual tube
GROUND ELEVATION _____
TOP OF CASING _____
LOGGED BY _____
REMARKS EM

DATE STARTED 6/5/25
DATE COMPLETED _____
CASING TYPE/DIAMETER _____
SCREEN TYPE/SLOT _____
SAND PACK TYPE _____
GROUT TYPE/QUANTITY _____
DEPTH TO WATER _____
GROUNDWATER ELEVATION _____
TOTAL DEPTH _____

Recovery	PID (ppm)	SCREENED INTERVAL	SAMPLE TIME	SAMPLE ID	EXTENT	DEPTH (FT BLS)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	E.C.
4.0'	0			1402	X	42	ML		0-2.1' Silt, brown, low moist, low dense 2.1-4.0' Silt, brown, damp to high moist, low dense	0.12
4.0'	0.1			1420	X	44	CL		0-2.2' 0-1.1' Silty clay, brown & gray, low moist, low dense 1.1-2.2' clay gray, low moist, low dense, min brown streaking	0.54
4.0'	0			1430	X	46	ML		2.2-4.0' Silt, brown, high moist to sat, low dense, trace sand increasing to min sand content at bottom	1.19
4.0'	0			1430	X	48	ML		0-3.6' Silt, trace sand, mid sand, UFG, red brown & gray, sat, low dense, clay lens 1.1-1.5'	0.56
4.0'	0			1440	X	50	ML		3.6-4.0' Sandy Silt, gray, UFG, low moist, low dense	1.03
4.0'	0			1440	X	52	CL		0-1.4' clay, gray & red brown, low moist, low dense	0.94
4.0'	0			1445	X	54	ML		1.4-1.8' Silt, brown, sat, low dense	1.45
4.0'	0			1445	X	56	CL		1.8-4.0' clay, gray & red brown, low moist, low dense	1.33
4.0'	0			1500	X	58	CL		0-3.3' clay, gray, low moist, low dense	1.19
4.0'	0			1500	X	60	CL			1.35
						62				
						64				
						66				
						28				
						30				
						32				
						34				
						36				
						38				
						40				