

Survey Report

Grande Cheniere Marsh & Ridge Restoration
Project BA-173
Plaquemines Parish, LA

For:



State of Louisiana
Coastal Protection and Restoration Authority
450 Laurel Street
Baton Rouge, Louisiana 70801

By:



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July 9, 2015

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Section 1: General Project Description

Client: LA Coastal Protection and Restoration Authority

Project: Bayou Grande Cheniere Marsh and Ridge Restoration (BA-173)

Location: Bayou Grande Cheniere, West Pointe a La Hache, Louisiana

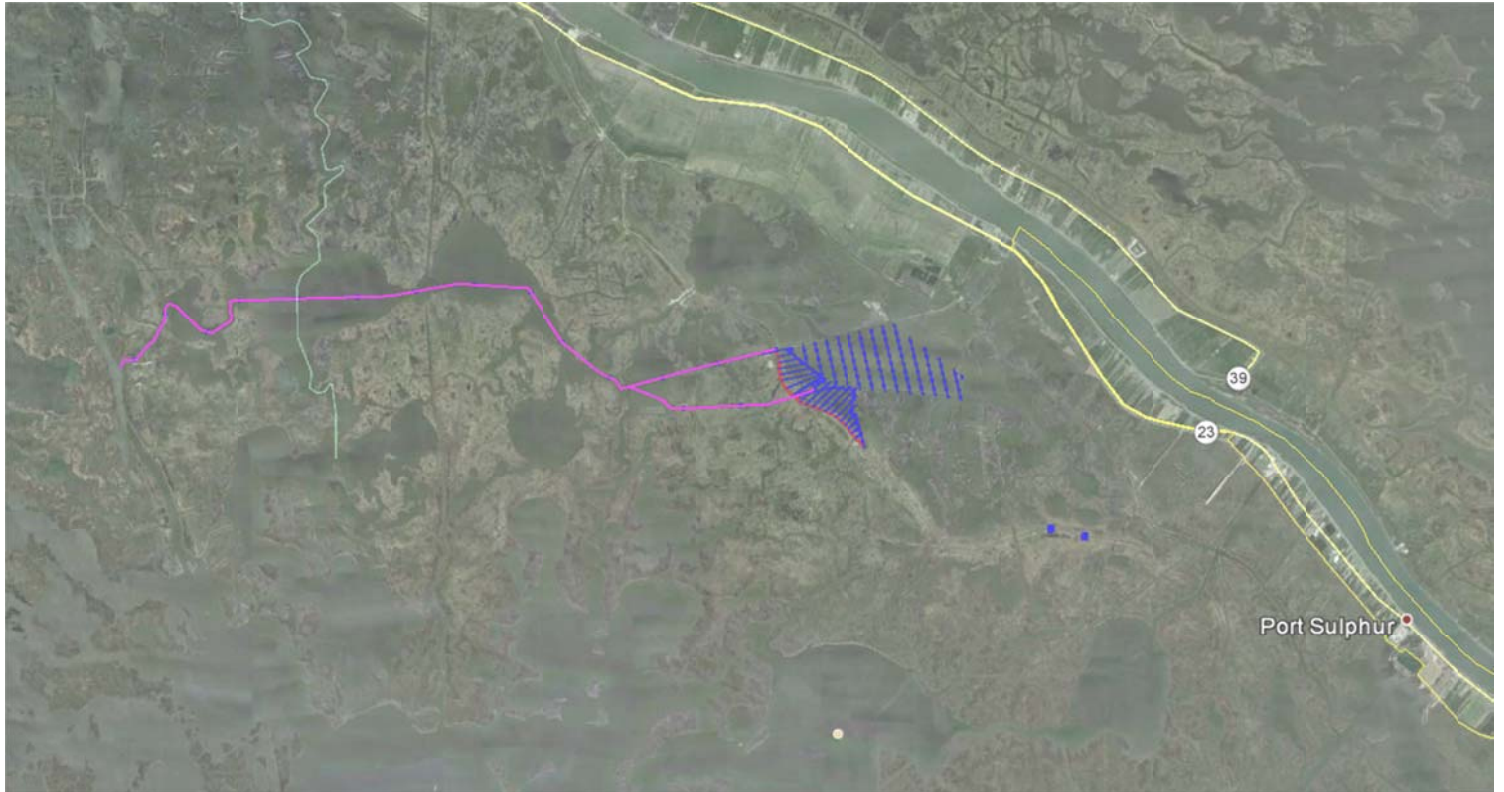
Before going to the field, a general survey plan was adopted in the office based upon the Scope of Work and prior planning during project negotiations. After establishing the most effective and efficient schedule of operations, field crews were given their assignments. All provided data, was given to the field supervisor and field crews.

EMC, Inc. (EMC) conducted a hydrographic, magnetometer and topographic survey during April through June 2015 to collect existing marsh elevations, bottom elevations for open water areas and attempt to locate any existing pipelines and/or obstructions in the area. An average marsh elevation survey was also performed at five (5) marsh elevation sites as determined by CPRA.

All datasets were collected, processed and submitted in NAD83 State Plane Louisiana South zone (1702) using U.S. Survey feet. Vertical data is referenced to NAVD88 utilizing Geoid 2012A holding control values based on the 2006.81 epoch as specified in the Scope of Work.

Control coordinates were provided to survey crews. Field crews were assigned specific tasks to avoid omissions and errors.

Section 2: Vicinity Map



Section 3: Control Establishment

Positions for the survey control are from published existing control marks which were provided by CPRA and are listed below. A Static GPS network was created from the existing control and included one other existing control point along with two (2) new iron rods set for this survey. All were used to establish control positions for the project.

RTK GPS was used to verify gage elevations used to determine the water surface correction to be applied to the hydrographic data.

Once the control data was in the office the data was converted from raw GPS format to Rinex file format using the Trimble Business Center utility Convert to Rinex. This Rinex file was then processed by NGS and their OPUS solution was as a check against the processed network solutions.

Horizontal coordinates are referenced to NAD83 State Plane Louisiana South (1702) Zone in U.S. Survey Feet and the elevations are referenced to the North American Vertical Datum of 1988 (NAVD88) using Geoid 2012A holding control values based on the 2006.81 epoch as specified in the Scope of Work. The control marks are listed below:

Provided Control:

876 1602 C TIDAL 1985	(survey disk) X= 3741375.10	Y= 388177.25	Elev. = 0.51
C 195 1964	(survey disk) X= 3780155.39	Y= 380462.01	Elev. = 1.09

Additional Control:

MVN-68 2014	(flange encased steel rod)
IR GBC-1	(3/4" x 12' rebar projecting 0.2' above ground)
IR GBC-2	(3/4" x 12' rebar projecting 0.3' above ground)

The GPS Network Reports are presented in "Section 5: Data Processing" of this document along with the Monument Data Sheets which will provide more detail for the control points used.

Sub-Section A: Staff Gages

The Staff Gage of the CRMS0260-H01 CRMS station and a newly set staff gage were used to obtain the water surface elevation each day. The gage was read each day before surveying began and then again after surveying ended for the day. This gage data was used for the tide correction for the hydrographic data collected in the Marsh Creation Areas.

At the CRMS0260-H01 CRMS station, the survey crew collected the location of the post that the staff gage was affixed to: X= 3751126.34 Y= 379176.45. Three elevations were collected at the gage: top of the post (6.44), TBM Nail in the post



(3.38) and the 3.00 mark on the gage (2.04). Daily gage readings were corrected by -0.96 before the tide corrections were applied. The survey crew could not locate a "Reset Rod" at the location shown in the scope of work. The existing gage was approximately six feet from the provided position and the entire area surrounding the gage was inundated with water.

Upon receipt of a requested location, a new temporary staff gage was set near the North end of line T6. The gage is a 4" x 4" post set at the West end of a point of marsh grass on the South side of a canal. The gage is approximately 338 feet West of the control point IR GBC-1. Gage coordinate location is: X= 3759002.17 Y= 385233.35, with the top of the post elevation being 6.10'. A 16 penny nail was driven into the post at the 4 foot mark. The zero of the gage is 0.02'. The gage was set on May 11, 2015 and the reading at 3:30pm was 0.9. This gage was utilized along with the existing staff gage for the remainder of the hydrographic soundings on the project. See below for staff gage readings for all hydrographic data collection.



CRMS0260-H01 CRMS Station Tide Gage

4/8/2015	Reading	Adjust	Actual	Time
	1.18	-0.96	0.22	9:36
	1.3	-0.96	0.34	12:05
	1.45	-0.96	0.49	14:23
4/9/2015	Reading	Adjust	Actual	Time
	1.56	-0.96	0.6	12:49
	1.66	-0.96	0.7	15:00
4/10/2015	Reading	Adjust	Actual	Time
	1	-0.96	0.04	8:30
	1.4	-0.96	0.44	14:00
4/11/2015	Reading	Adjust	Actual	Time
	0.6	-0.96	-0.36	8:00
	0.75	-0.96	-0.21	11:10
	1	-0.96	0.04	14:35
5/26/2015	Reading	Adjust	Actual	Time
	1.57	-0.96	0.61	12:48
	1.5	-0.96	0.54	15:13
5/27/2015	Reading	Adjust	Actual	Time
	1.55	-0.96	0.59	8:00
	1.78	-0.96	0.82	11:56
5/28/2015	Reading	Adjust	Actual	Time
	1.7	-0.96	0.74	8:13
	1.8	-0.96	0.84	11:55
	1.78	-0.96	0.82	13:10

New Temporary Staff Gage

Reading	Adjust	Actual	Time
0.48	0.02	0.5	11:45
0.5	0.02	0.52	15:10
Reading	Adjust	Actual	Time
0.62	0.02	0.64	7:47
0.8	0.02	0.82	11:56
Reading	Adjust	Actual	Time
0.7	0.02	0.72	7:40
0.8	0.02	0.82	13:45

Sub-Section B: Benchmark Forms



VICINITY MAP

Scale: NTS

Reproduced from Google Earth

Station Name: 876 1602C TIDAL

Monument Location: TO REACH THE STATION FROM MYRTLE GROVE GO SOUTHEAST ON STATE HIGHWAY 23 TO MILE MARKER 45.7. TURN RIGHT AND GO EAST FOR 8 KM (4.95 MI) ON LAKE JUDRY PEREZ ROAD TO A FIRE STATION ON THE RIGHT AND THE BENCH MARK ON THE LEFT. MARK IS A STANDARD NOS DISK CRIMPED TO A STEEL ROD DRIVEN 22 METERS (72 FT) INTO THE GROUND AND ENCASED IN A 5-INCH PVC PIPE SURROUNDED BY CONCRETE. 29 METERS (95.2 FT) NORTH FROM THE NORTH CORNER OF THE FIRE STATION, 21.8 METERS (71.4 FT) EAST FROM A POWER POLE AND 0.5 METERS (1.8 FT) SOUTHWEST FROM A WITNESS POST.

Monument Description:

NGS TIDAL STATION

Stamping: 1602C 1985

Survey Date: April 9, 2015

Monument Established By:

NOS

NAD 83 (2011) Epoch 2010.00 Geodetic Position

Lat. 29°33'33.83236"N

Long. 89°53'05.03561"W

NAD 83 (2011) Epoch 2010.00 Datum LSZ (1702) U.S. Feet

N= 388177.250

E= 3741375.100

NAVD88 (2011) Epoch 2006.81 VTDP Geoid 12A Elev.

Elevation = 0.51 usft (0.155 mtrs.)

Ellipsoid Height = -80.562 usft (24.555 mtrs.)

Geoid Height = 0.00 usft (0.000 mtrs.)



Adjusted Position Established by EMC, Inc. for the Coastal Protection and Restoration Authority of Louisiana



VICINITY MAP Scale: NTS

Reproduced from Google Earth

Station Name: C 195

Monument Location: THE STATION IS ON THE PROTECTED SIDE OF THE MISSISSIPPI RIVER LEVEE. FROM THE INTERSECTION OF HWY 23 AND POINTE LA HACHE FERRY RD GO APPROXIMATELY 0.9 MILES SOUTH EAST TO THE INTERSECTION OF HWY 23 AND DIAMOND RD ON THE LEFT, TURN ONTO DIAMOND RD AND PROCEED APPROXIMATELY 2.2 MILES TO THE MARK ON THE RIGHT.

MARK IS 26 FEET SOUTHWEST OF THE CENTER LINE OF DIAMOND RD, 27 FEET NORTH OF A POWER POLE AND 93 FEET NORTHWEST OF THE CENTER LINE OF NORRIS LN. MARK IS A BRONZE DISK SET IN THE TOP OF A CONCRETE POST WHICH PROJECTS 2 INCHES.

Monument Description:

NGS Monument

Stamping: C 195 1964

Survey Date: April 9, 2015

Monument Established By:

USCGS

NAD 83 (2011) Epoch 2010.00 Geodetic Position

Lat. 29°32'12.40356"N

Long. 89°45'47.15528"W

NAD 83 (2011) Epoch 2010.00 Datum LSZ (1702) U.S. Feet

N= 380462.010

E= 3780155.390

NAVD88 (2011) Epoch 2006.81 VTDP Geoid 12A Elev.

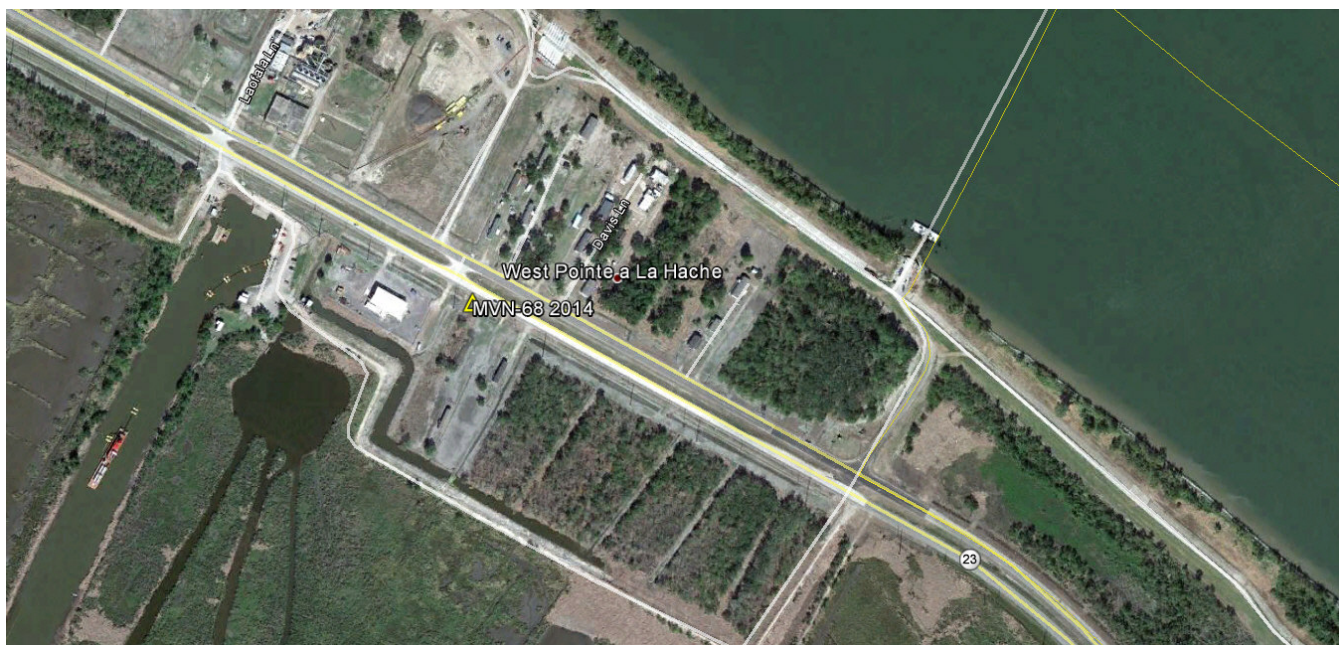
Elevation = 1.09 usft (0.332 mtrs.)

Ellipsoid Height = -79.404 usft (24.202 mtrs.)

Geoid Height = 0.00 usft (0.000 mtrs.)



Adjusted Position Established by EMC, Inc. for the Coastal Protection and Restoration Authority of Louisiana



VICINITY MAP Scale: NTS

Reproduced from Google Earth

Station Name: MVN-68

Monument Location: TO REACH THE MARK FROM THE INTERSECTION OF THE SOUTHWEST EDGE OF THE SOUTH BOUND LANE OF HWY 23 AND THE ACCESS ROAD FOR POINTE a La HACHE FERRY, PROCEED NORTHWEST ALONG EDGE OF SAID ROAD FOR 1450 FT TO MARK ON THE LEFT. MARK IS 24 FT SOUTHWEST OF THE SOUTHWEST EDGE OF HWY 23, 59.8 FT EAST OF A POWER POLE, 68 FT NORTHEAST OF A LARGE ALUMINUM POWER POLE.

Monument Description:

Stainless steel rod in sleeve (10FT+ or 3.048M+)

Stamping: MVN-68 2014

Survey Date: April 9, 2015

Monument Established By:

EMC, Inc. for USCOE

NAD 83 (2011) Epoch 2010.00 Geodetic Position

Lat. 29°34'09.92604"N

Long. 89°48'07.96110"W

NAD 83 (2011) Epoch 2010.00 Datum LSZ (1702) U.S. Feet

N= 392163.970

E= 3767559.987

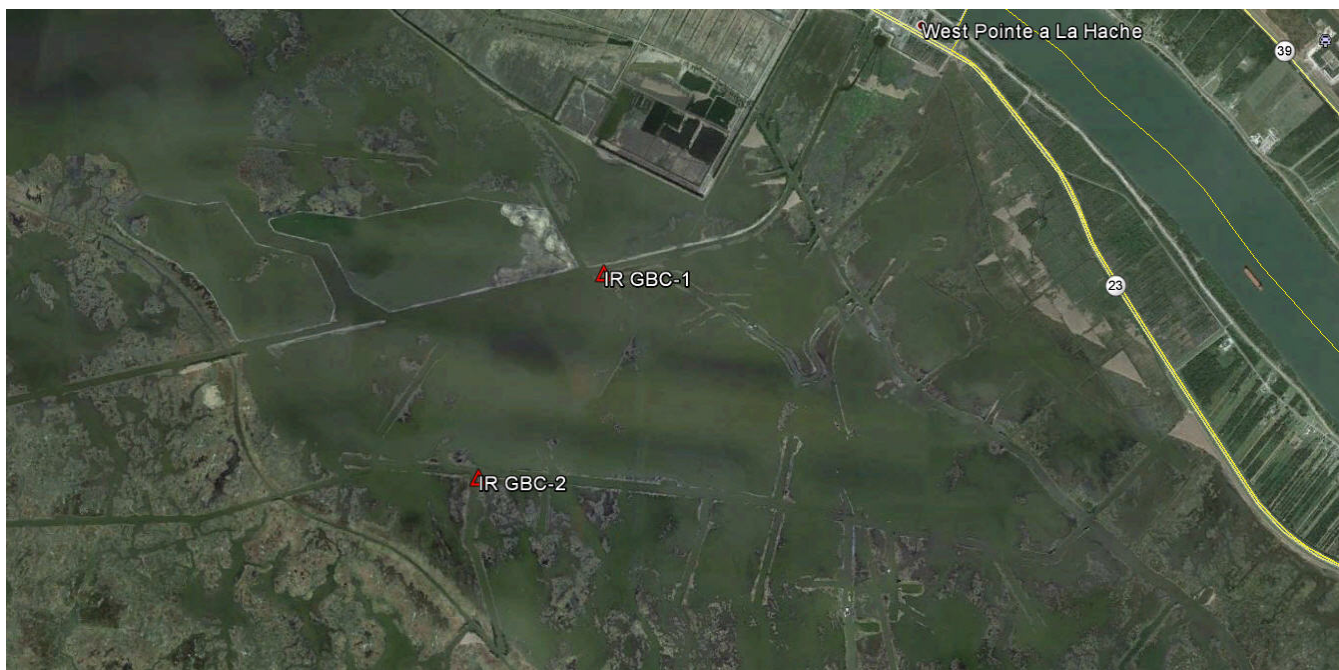
NAVD88 (2011) Epoch 2006.81 VTDP Geoid 12A Elev.

Elevation = 1.26 usft (0.383 mtrs.)

Ellipsoid Height = -79.723 usft (24.230 mtrs.)



Adjusted Position Established by EMC, Inc. for the Coastal Protection and Restoration Authority of Louisiana



VICINITY MAP Scale: NTS

Reproduced from Google Earth

Station Name: IR GBC-1

Monument Location: MARK IS IN THE MARSH WEST OF POINTE A LA HACHE, LOUISIANA. MARK IS APPROXIMATELY 10,000 FEET WESTERLY OF BOAT RAMP, 312 FEET EAST OF POINT OF MARSH GRASS AND 35 FEET BACK OF SOUTH TOP BANK OF CANAL.

Monument Description:

Rebar 3/4" x 12' projecting 0.2'

Stamping: NONE

Survey Date: April 9, 2015

Monument Established By:

EMC, Inc. for USCOE

NAD 83 (2011) Epoch 2010.00 Geodetic Position

Lat. 29°33'02.96405"N

Long. 89°49'42.10696"W

NAD 83 (2011) Epoch 2010.00 Datum LSZ (1702) U.S. Feet

N= 385290.369

E= 3759335.991

NAVD88 (2011) Epoch 2006.81 VTDP Geoid 12A Elev.

Elevation = 0.96 usft (0.292 mtrs.)

Ellipsoid Height = -79.870 usft (24.344 mtrs.)



Adjusted Position Established by EMC, Inc. for the Coastal Protection and Restoration Authority of Louisiana



VICINITY MAP Scale: NTS

Reproduced from Google Earth

Station Name: IR GBC-2

Monument Location: MARK IS IN THE MARSH WEST OF POINTE A LA HACHE, LOUISIANA. MARK IS APPROXIMATELY 17,000 FEET WESTERLY OF BOAT RAMP, 37 FEET BACK OF SOUTH TOP BANK OF CANAL AND 34 FEET EAST OF TOP BANK OF CANAL.

Monument Description:
Rebar 3/4" x 12' projecting 0.3'

Stamping: NONE

Survey Date: April 9, 2015

Monument Established By:
EMC, Inc. for USCOE

NAD 83 (2011) Epoch 2010.00 Geodetic Position

Lat. 29°32'07.10973"N
Long. 89°50'21.53921"W

NAD 83 (2011) Epoch 2010.00 Datum LSZ (1702) U.S. Feet

N= 379603.248
E= 3755927.133

NAVD88 (2011) Epoch 2006.81 VTDP Geoid 12A Elev.

Elevation = 1.32 usft (0.402 mtrs.)
Ellipsoid Height = -79.355 usft (24.187 mtrs.)



Adjusted Position Established by EMC, Inc. for the Coastal Protection and Restoration Authority of Louisiana

Section 4: Data Collection

The surveys were conducted with an array of electronic surveying equipment. First our crew set and recovered control points then ran GPS sessions on the control points within the planned network using Trimble R8 GNSS model 3 GPS systems on fixed two meter tripods.

The crews then utilized an Odom Echotrac single beam hydrographic system using DGPS positioning to gather the bottom elevation data in the open water areas. Tide corrections were collected via readings from existing and set staff gages. All open water areas were collected prior to filling in transect data with conventional survey methods.

RTK/GPS data collection was performed with Trimble R8 base stations and R6 rovers. The RTK survey was based upon control values provided by the GPS control network. Field data came into the office in raw GPS (.dat) files, data collector file format (.dc & .job), field books and GPS Log Sheets that verified the control used. RTK was used to obtain elevation data on all portions of transects that were too shallow for soundings or exposed ground areas.

Magnetometer data was collected using a Geometric 883 within the requested limits in an attempt to horizontally locate pipelines or obstructions within the survey limits. Bar checks and layback lines were taken to calibrate hydrographic equipment. See below for control points used on the project.

Point Name	Northing	Easting	Elevation
8761602C TIDAL	388177.25	3741375.10	0.51
C 195	380462.01	3780155.39	1.09
IR GBC-1	385290.37	3759335.99	0.96
IR GBC-2	379603.25	3755927.13	1.32
MVN-68	392163.97	3767559.99	1.26

Sub-Section A: Average Marsh Elevation Sites

Five (5) marsh elevation sites were selected on-site by CPRA personnel to be used to obtain an "Average Marsh Elevation". The survey crew collected a minimum of twenty elevations at each of the areas specified by the on-site field inspector. The horizontal location of each of the elevations was collected in the manner prescribed by the on-site inspector. Upon the completion of the data processing, the coordinates were averaged for each site and the results are shown below:

Average Marsh Elevation Information

Site #1 Y= 381933.45 X= 3749329.75	Average Elev.= 0.65
Site #2 Y= 379550.42 X= 3750781.81	Average Elev.= 0.54
Site #3 Y= 376941.98 X= 3752647.75	Average Elev.= 0.82
Site #4 Y= 374914.99 X= 3746846.35	Average Elev.= 0.46
Site #5 Y= 380020.02 X= 3747887.20	Average Elev.= 0.49

Sub-Section B: Magnetometer Anomaly Data

The initial magnetometer transect data was post-processed in the office. Targets were reviewed along with conventional data which showed signage and all significant magnetic anomalies were targeted for further investigation. Field crews were tasked with collecting further investigation lines around significant anomalies, noting any features encountered and probing to attempt to locate and identify features if possible. All field information was compiled into the table as shown. The amplitudes shown reflect the peak to peak gamma change at the location of the anomaly. The duration shown reflects the distance along the trackline that the magnetic anomaly exists.

Section 5: Data Processing

The field data was processed utilizing an array of computer programs. The GPS session files were taken into Trimble Business Center version 3.50 software, where the GPS data was processed. Rod heights, point codes and controlling base station coordinates were verified. Upon completion of all checks, the network baselines were processed and a network adjustment was done and corrected coordinates were output in a comma separated file (.csv) along with the network adjustment reports (.pdf). These coordinates were the control values for the job.

Trimble Business Center version 3.50 software was also used to process the topographic RTK/GPS data. Rod heights, point codes and controlling base station coordinates were verified. Upon completion of all checks, a comma separated file (.csv) was exported.

HyPack 2014 hydrographic software was used to process the hydrographic and magnetometer data. The HyPack software is where the hydrographic data was edited for spikes and erroneous soundings. This is also when the tide correction is applied. Edited HyPack files were saved containing the xyz edited data. This data was combined with the topographic RTK data in AutoCAD to produce profiles of each individual topographic transect.

The edited magnetometer data was saved to a northing, easting gamma format comma separated file (.csv). Magnetometer data was reviewed for significant magnetic anomalies. When anomalies were found during processing, subsequent investigation lines were taken in the field and processed to verify that an anomaly was present and an attempt to locate the source of the anomaly was made. In some cases, anomalies were found to be small pieces of metal or wire and were discarded from the investigation list. All significant anomalies are shown on the survey plats, whether or not the source was identifiable.

All exported ACSII data files were combined in AutoCAD Civil 3D 2015 where the plan view map, profiles, and appropriate tabled information were created.

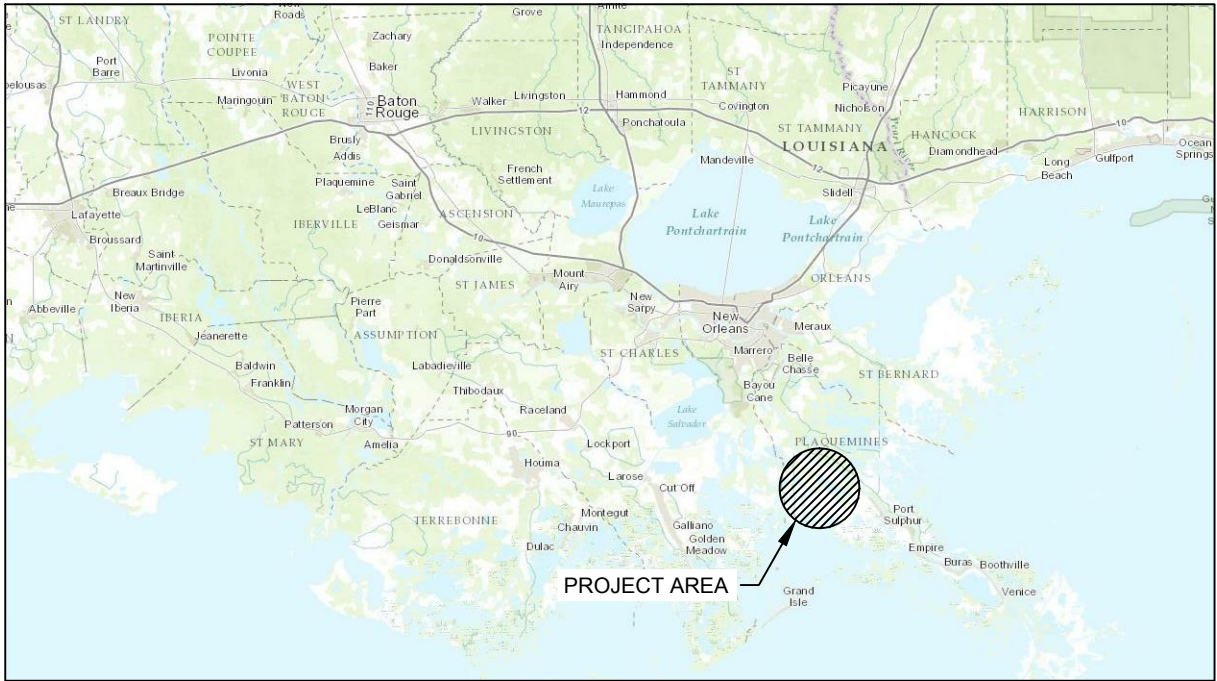
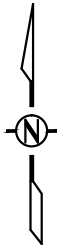
Section 6: Survey Drawings

STATE OF LOUISIANA
COASTAL PROTECTION AND RESTORATION AUTHORITY

INDEX TO SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	CONTROL LAYOUT
3	MAGNETOMETER SURVEY LAYOUT
4	MAGNETOMETER ACCESS LAYOUT
5	PIPELINE SURVEY LAYOUT
6	PIPELINE PROFILE SHEET
7	SURVEY LAYOUT
8	ACCESS LAYOUT
9	PROFILE SHEET
10	PROFILE SHEET
11	PROFILE SHEET
12	PROFILE SHEET
13	PROFILE SHEET

BAYOU GRANDE CHENIER
MARSH AND RIDGE RESTORATION
TOPOGRAPHIC, BATHYMETRIC, AND MAGNETOMETER SURVEY LAYOUT
BA-173
PLAQUEMINES PARISH



REV.	DATE	DESCRIPTION	BY



COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		BAYOU GRANDE CHENIER MARSH AND RIDGE RESTORATION		TITLE SHEET
		STATE PROJECT NUMBER: BA-173		DATE: JULY 2015
DRAWN BY: JP		DESIGNED BY:		SHEET 1 OF 13
		APPROVED BY:		



CONTROL POINT COORDINATES						
STATION NAME	NORTHING	EASTING	AVE. ELEV.	STAMPING	LATITUDE	LONGITUDE
867 1602C TIDAL	388177.25	3741375.10	0.51	1602C 1985	N29°33'33.83236"	W89°55'05.03561"
C 195	380462.01	3780155.39	1.09	C 195 1964	N29°32'12.40356"	W89°45'47.15528"
IR GBC-1	385290.37	3759335.99	0.96		N29°33'02.96405"	W89°49'42.10696"
IR GBC-2	379603.25	3755927.13	1.32		N29°32'07.10973"	W89°50'21.53921"
MVN-68	392163.97	3767559.99	1.26	MVN-68 2014	N29°34'09.92604"	W89°48'07.96110"

LEGEND	
	CONTROL POINT
	GAGE



REV.	DATE	DESCRIPTION	BY

EMC, Inc.
SPECIALISTS IN SURVEYING & MAPPING
Web Address: <http://www.emcsurvey.com>
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CENTER POINT, LA * PUNTA GORDA, FL * HOUSTON, TX

COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		BAYOU GRANDE CHENIER MARSH AND RIDGE RESTORATION	CONTROL LAYOUT
		STATE PROJECT NUMBER: BA-173	
DRAWN BY: JP		FEDERAL PROJECT NUMBER: BA-173	DATE: JULY 2015
DESIGNED BY:		APPROVED BY:	SHEET 2 OF 13

LAKE JUDGE
PEREZ

Magnetic Anomaly Investigation Table					
Investigation No.	Northing (ft.)	Easting (ft.)	Description	Peak to Peak Amplitude	Duration (ft.)
I2	379199.90	3761397.50	Piece of Wire / Cable	196.60	49.6
I9	379753.70	3758183.00	Unable to locate Source	156.40	64.8
I10	379551.50	3757233.10	Scrap Iron from old boat	1110.70	153.1
I11	380184.40	3757076.40	Crab Pot	290.40	51.5
I13	384448.50	3755041.60	Old Wire	405.00	146.5
I15	380328.10	3754979.50	Crab Trap near Pipeline	279.50	122.6
I16	380051.60	3754012.40	Small Piece of Metal near Pipeline	1502.10	102.1
I17	379715.60	3754087.70	Crab Trap	536.60	82.4
I18	383749.90	3752108.60	Scrap Iron from Boat	925.50	117.8
I19	383534.80	3751137.00	Crab Trap	215.50	110.8
I20	379786.40	3753049.00	Crab Trap near Pipeline	922.90	156.6
I21	381473.40	3751638.70	Unable to locate Source	1736.20	262.8
I22	379506.10	3752074.00	Crab Trap near Pipeline	1116.30	110.2
I23	379112.50	3752158.10	Piece of Cable	1020.70	124.1
I25	383209.40	3754934.20	Unable to locate Source	342.90	113.4
I27	381473.00	3751659.40	Crab Pot	1863.80	250.6
I30	381085.70	3754362.00	Crab Pot / Scrap Iron	200.10	137.5
I35	380645.40	3761263.20	Scrap Metal	122.50	88.7
I36	379000.80	3763020.40	Steel Plate	134.50	155.4
I37	378684.40	3750819.20	Scrap Iron from Boat	2653.00	103.5
I40	378960.80	3755675.70	Scrap Iron from Boat	754.70	74.4
I43	378818.10	3751200.20	Unable to locate Source	926.10	130.2
I100	382176.40	3756592.80	Crab Trap	38.80	94.2
I101	382741.50	3758517.60	Unable to locate Source / minimal return on investigation lines	45.80	175.3
I102	379271.30	3762412.00	Scrap Iron	86.80	31.2
I103	380151.40	3755013.60	Piece of Cable / Concrete Rebar Form	117.40	166.5
I104	378029.90	3755512.20	Wire / Cable	106.90	146.2
I105	375037.10	3756248.60	Crab Trap	86.90	22.5
I106	377998.30	3755479.30	Wire / Cable	86.60	147.6
I107	379438.80	3753124.30	Piece of Chain	61.80	49
I108	381347.70	3750628.00	Crab Trap	97.30	60.3
I109	374750.00	3756567.20	Crab Trap	203.40	222.9
I110	379589.50	3761160.50	Cable	182.80	581.5
I111	379200.00	3763840.00	Scrap Iron	28.10	79.8
I112	380224.70	3752151.70	Scrap Iron	21.40	50
I115	382960.50	3749005.00	Barge	4084.50	120.4
I116	383006.30	3749206.70	Barge	4201.80	119.2
I221	382854.20	3748945.40	Crab Trap	330.20	24.8
I222	382205.10	3749130.50	Crab Trap	234.00	69
I223	381034.80	3749218.60	Wire Basket / Cable	238.10	46.2
I224	375495.70	3755880.80	Crab Trap	213.90	95.1
I225	374966.90	3756377.30	Crab Traps	192.80	103.6
I44	385026.50	3759005.30	Shell Pipeline	250.70	140.1
I26	384416.40	3759824.50	Shell Pipeline	373.10	131.9
I3	384092.20	3760255.40	Shell Pipeline	1038.50	145.1
I4	383959.20	3760286.00	Shell Pipeline	219.30	87.1
I28	383645.90	3760873.30	Shell Pipeline	426.60	151.1
I5	383296.80	3761342.90	Shell Pipeline	901.50	78.7
I29	382828.60	3761984.20	Shell Pipeline	458.00	159.3
I6	382278.00	3762737.30	Shell Pipeline	340.80	184.7
I33	382076.00	3762989.90	Shell Pipeline	556.10	149.9
I7	381373.10	3763950.40	Shell Pipeline	780.60	256.1
I34	381296.70	3764057.40	Shell Pipeline	370.90	301.2
I226	383596.40	3760094.00	Gulf South Pipeline	324.20	158.4
I1	382639.00	3759569.40	Gulf South Pipeline	688.60	110.8
I31	382267.30	3759380.80	Gulf South Pipeline	117.60	234
I8	381447.60	3758809.50	Gulf South Pipeline	1304.30	128.1
I227	381172.40	3757857.50	Gulf South Pipeline	815.70	95.8
I12	380881.70	3756909.90	Gulf South Pipeline	1222.90	114.9
I14	380618.00	3755936.20	Gulf South Pipeline	772.50	151.9
I15	380328.10	3754979.50	Gulf South Pipeline	279.50	122.6
I16	380051.60	3754012.40	Gulf South Pipeline	1502.10	102.1
I20	379786.40	3753049.00	Gulf South Pipeline	922.90	156.6
I22	379506.10	3752074.00	Gulf South Pipeline	1116.30	110.2
I24	379244.50	3751132.00	Gulf South Pipeline	212.20	105.9



LEGEND

MAGNETOMETER SURVEY TRANSECT

MAGNETIC ANOMALY



REV.	DATE	DESCRIPTION	BY



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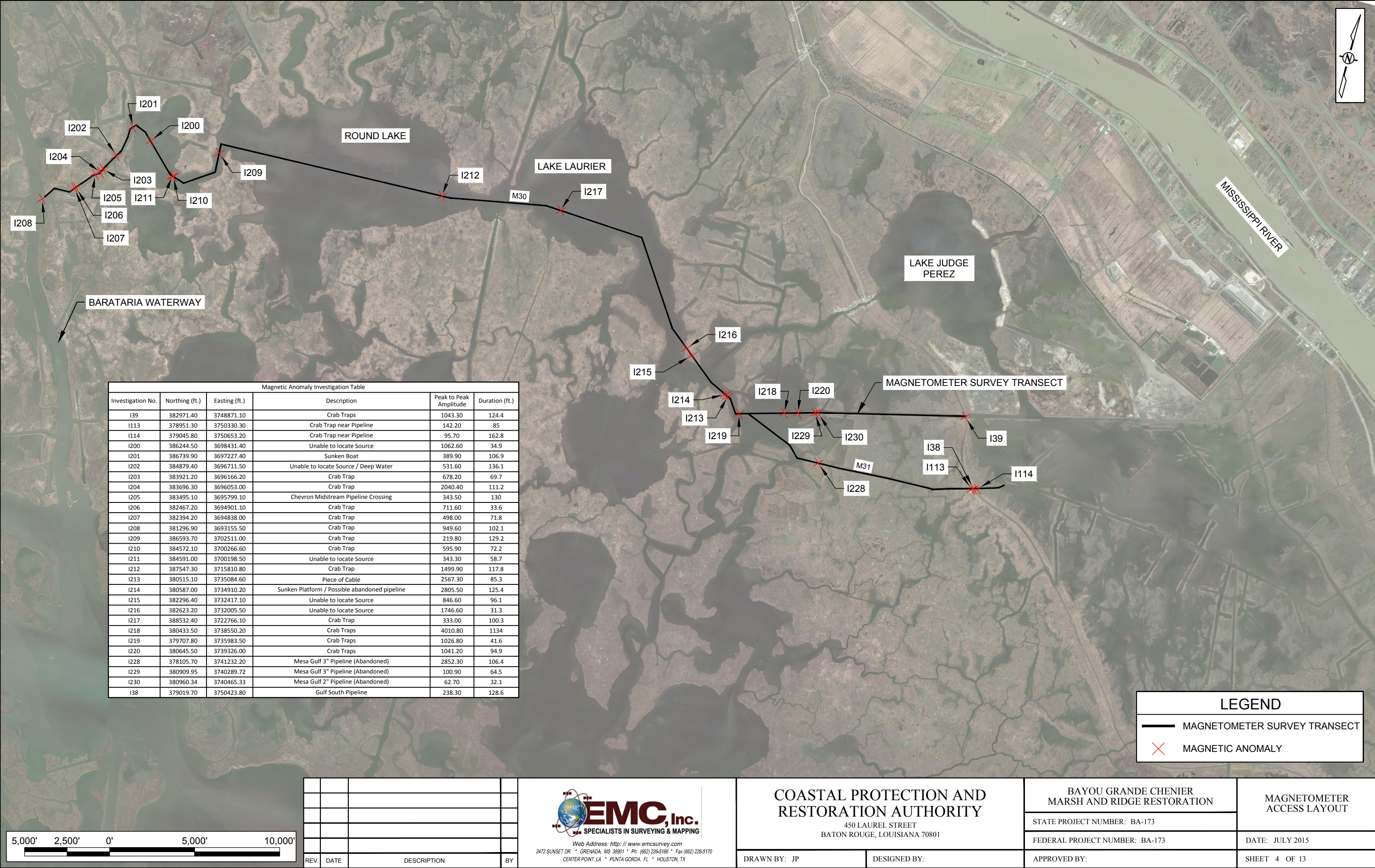
COASTAL PROTECTION AND RESTORATION AUTHORITY

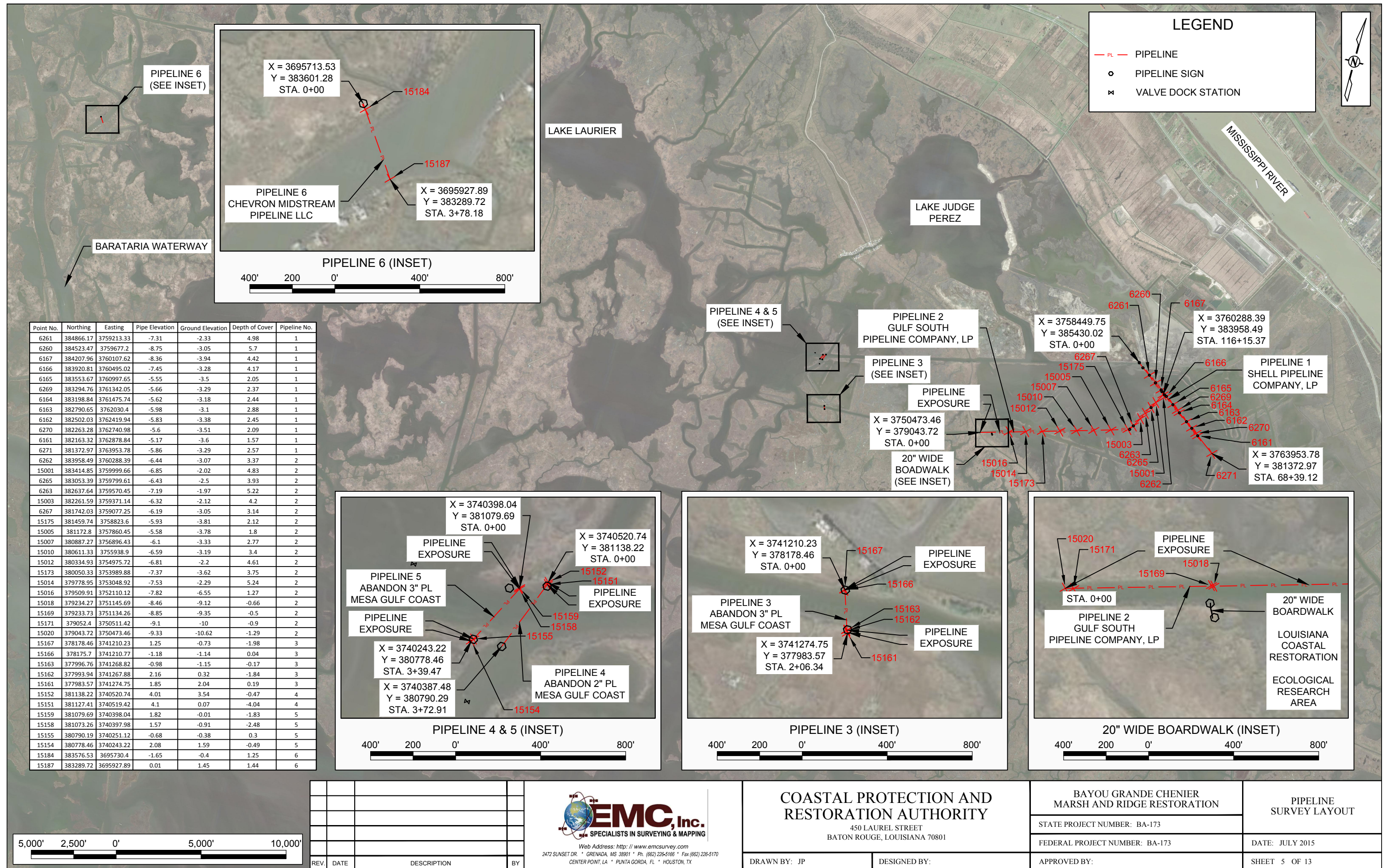
450 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

DRAWN BY: JP

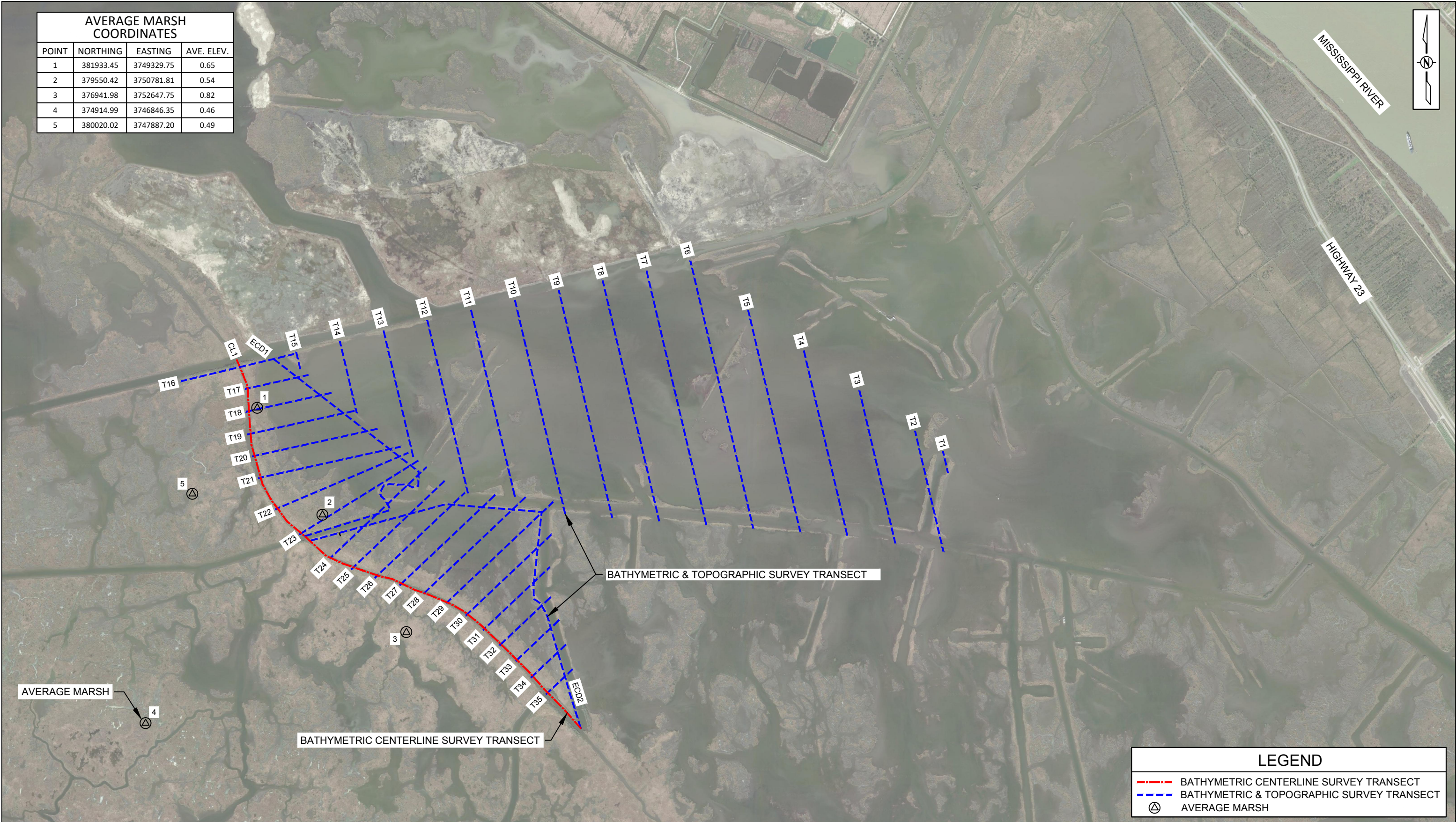
DESIGNED BY:

BAYOU GRANDE CHENIER MARSH AND RIDGE RESTORATION	MAGNETOMETER SURVEY LAYOUT
STATE PROJECT NUMBER: BA-173	
FEDERAL PROJECT NUMBER: BA-173	DATE: JULY 2015
APPROVED BY:	SHEET 3 OF 13





AVERAGE MARSH COORDINATES			
POINT	NORTHING	EASTING	AVE. ELEV.
1	381933.45	3749329.75	0.65
2	379550.42	3750781.81	0.54
3	376941.98	3752647.75	0.82
4	374914.99	3746846.35	0.46
5	380020.02	3747887.20	0.49



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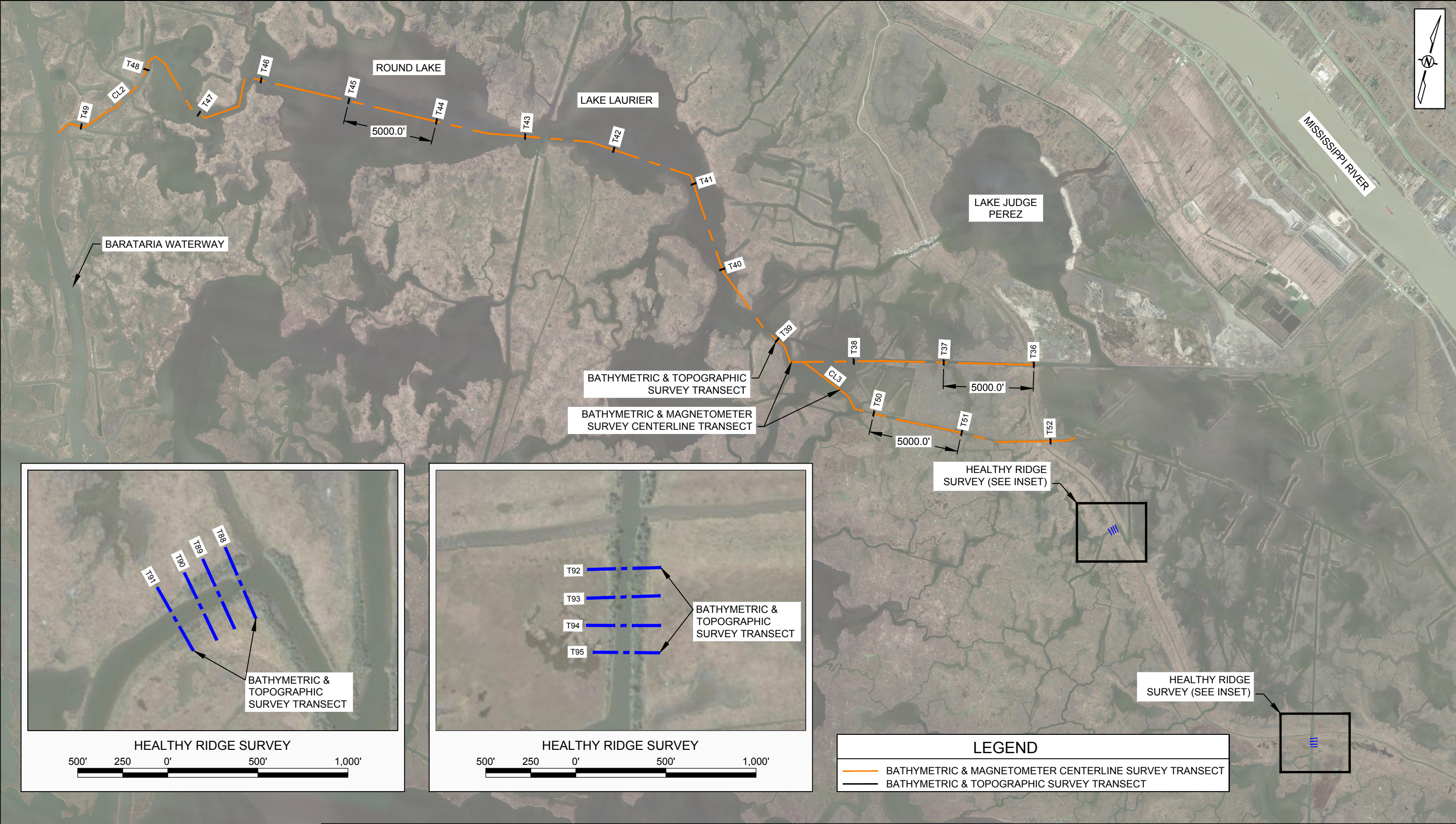
COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

DRAWN BY: JP

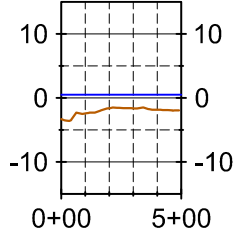
DESIGNED BY:

BAYOU GRANDE CHENIER MARSH AND RIDGE RESTORATION	SURVEY LAYOUT
STATE PROJECT NUMBER: BA-173	
FEDERAL PROJECT NUMBER: BA-173	DATE: JULY 2015
APPROVED BY:	SHEET 7 OF 13

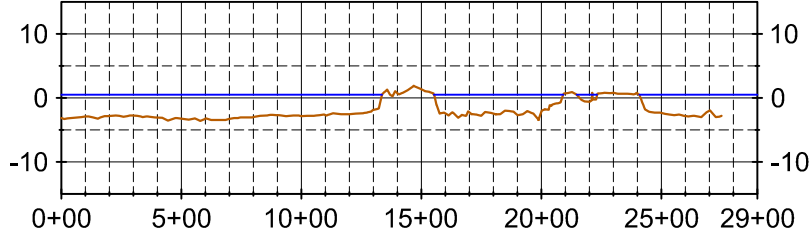


 5,000'2,500'0'5,000'10,000' 					 Web Address: http://www.emcsurvey.com 2472 SUNSET DR. * GRENADA, MS 38901 * Ph. (662) 226-5166 * Fax (662) 226-5170 CENTER POINT, LA * PUNTA GORDA, FL * HOUSTON, TX	COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		BAYOU GRANDE CHENIER MARSH AND RIDGE RESTORATION		ACCESS LAYOUT	
							STATE PROJECT NUMBER: BA-173				
								FEDERAL PROJECT NUMBER: BA-173		DATE: JULY 2015	
								DRAWN BY: JP		DESIGNED BY:	
REV.		DATE		DESCRIPTION		BY					

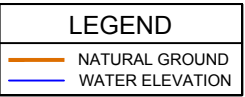
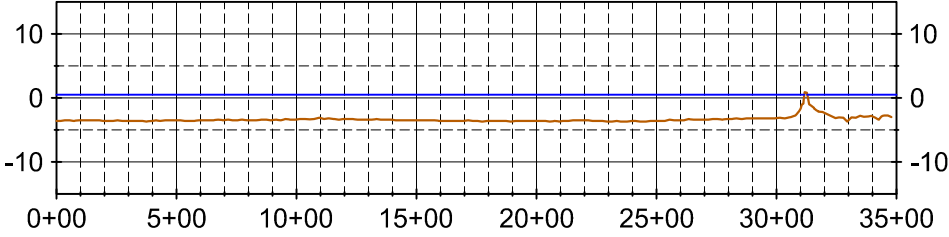
T1 PROFILE



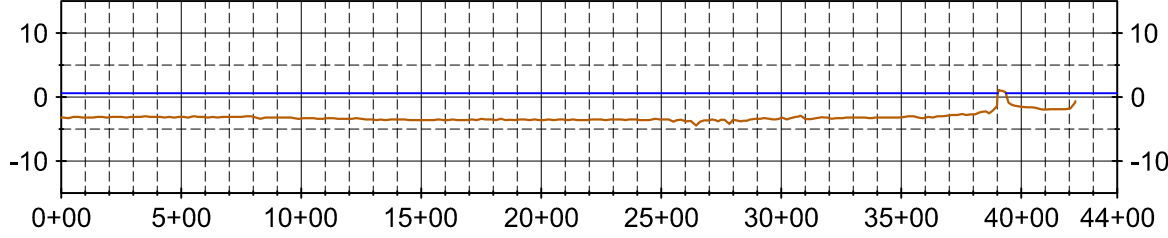
T2 PROFILE



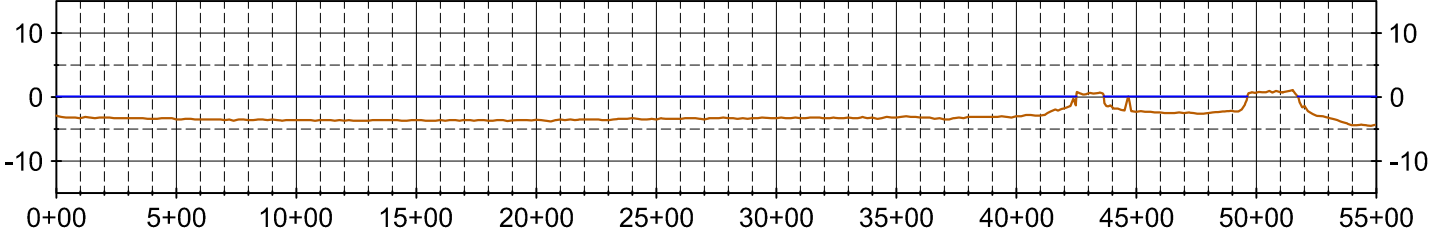
T3 PROFILE



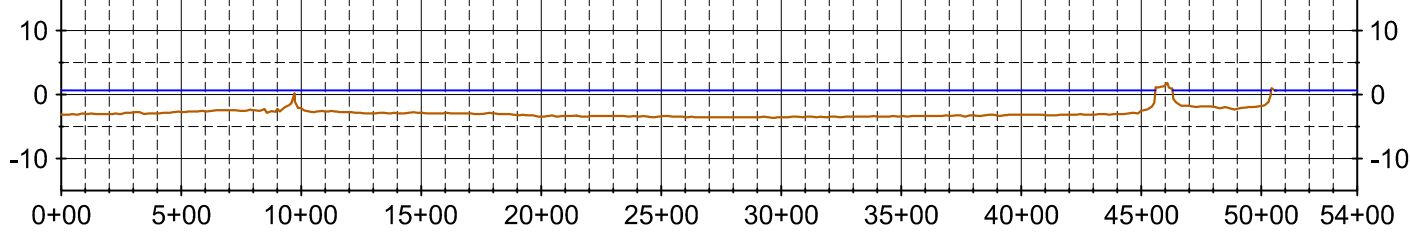
T4 PROFILE



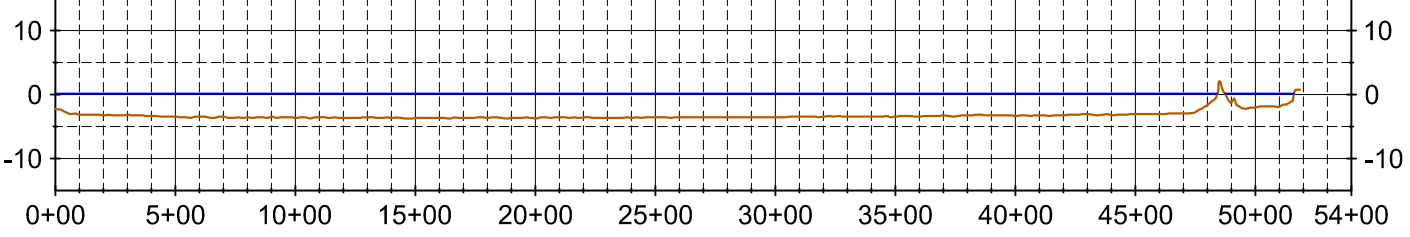
T8 PROFILE



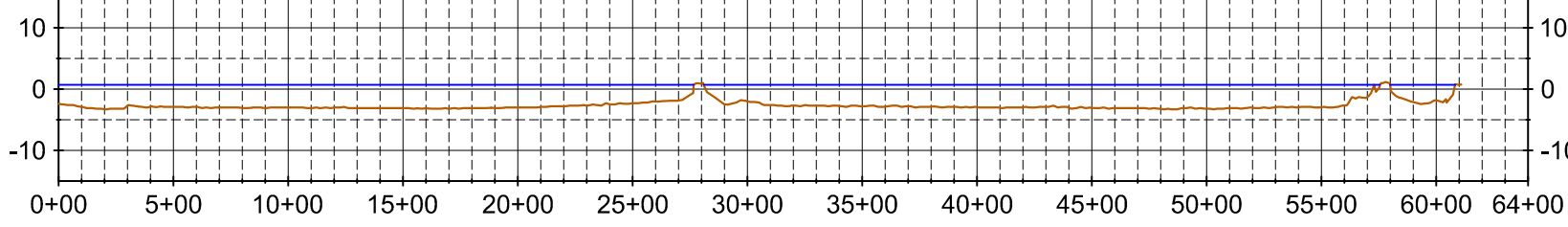
T5 PROFILE



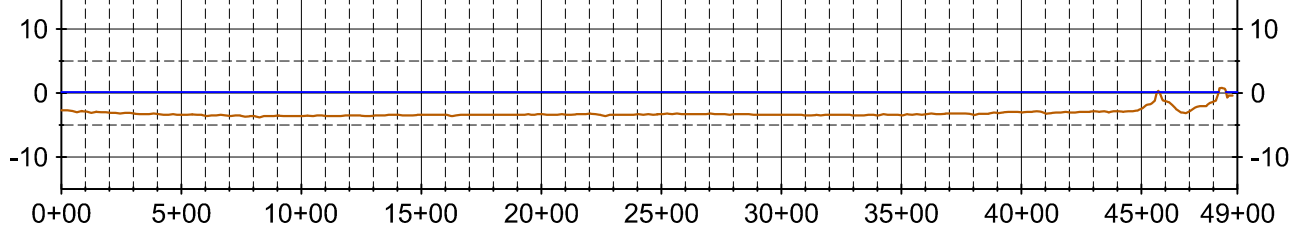
T9 PROFILE



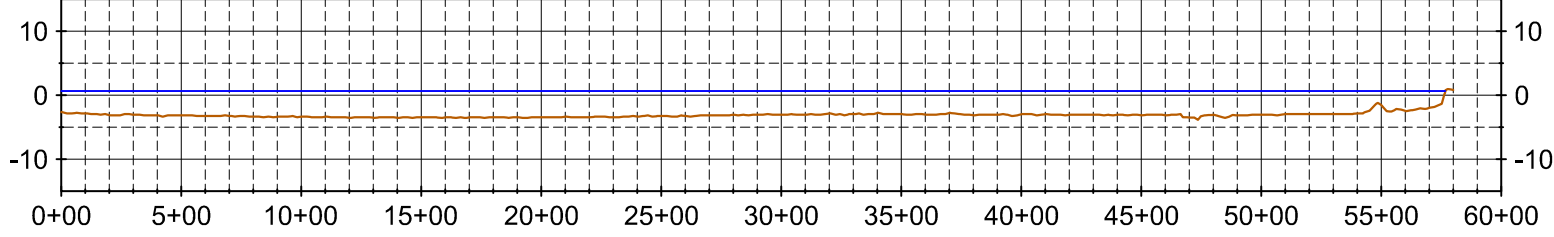
T6 PROFILE



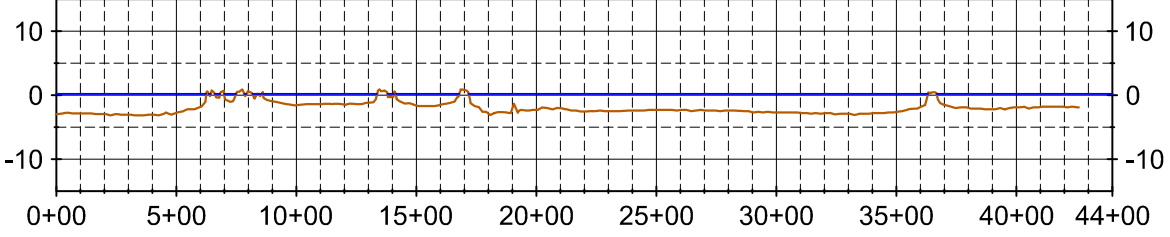
T10 PROFILE



T7 PROFILE



T11 PROFILE



HORIZONTAL SCALE

800'

400'

0'

800'

1600'

VERTICAL SCALE

30'

15'

0'

30'

60'

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COASTAL PROTECTION AND RESTORATION AUTHORITY

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BATON ROUGE, LOUISIANA 70801

DRAWN BY: JP

DESIGNED BY:

BAYOU GRANDE CHENIER MARSH AND RIDGE RESTORATION

STATE PROJECT NUMBER: BA-173

FEDERAL PROJECT NUMBER: BA-173

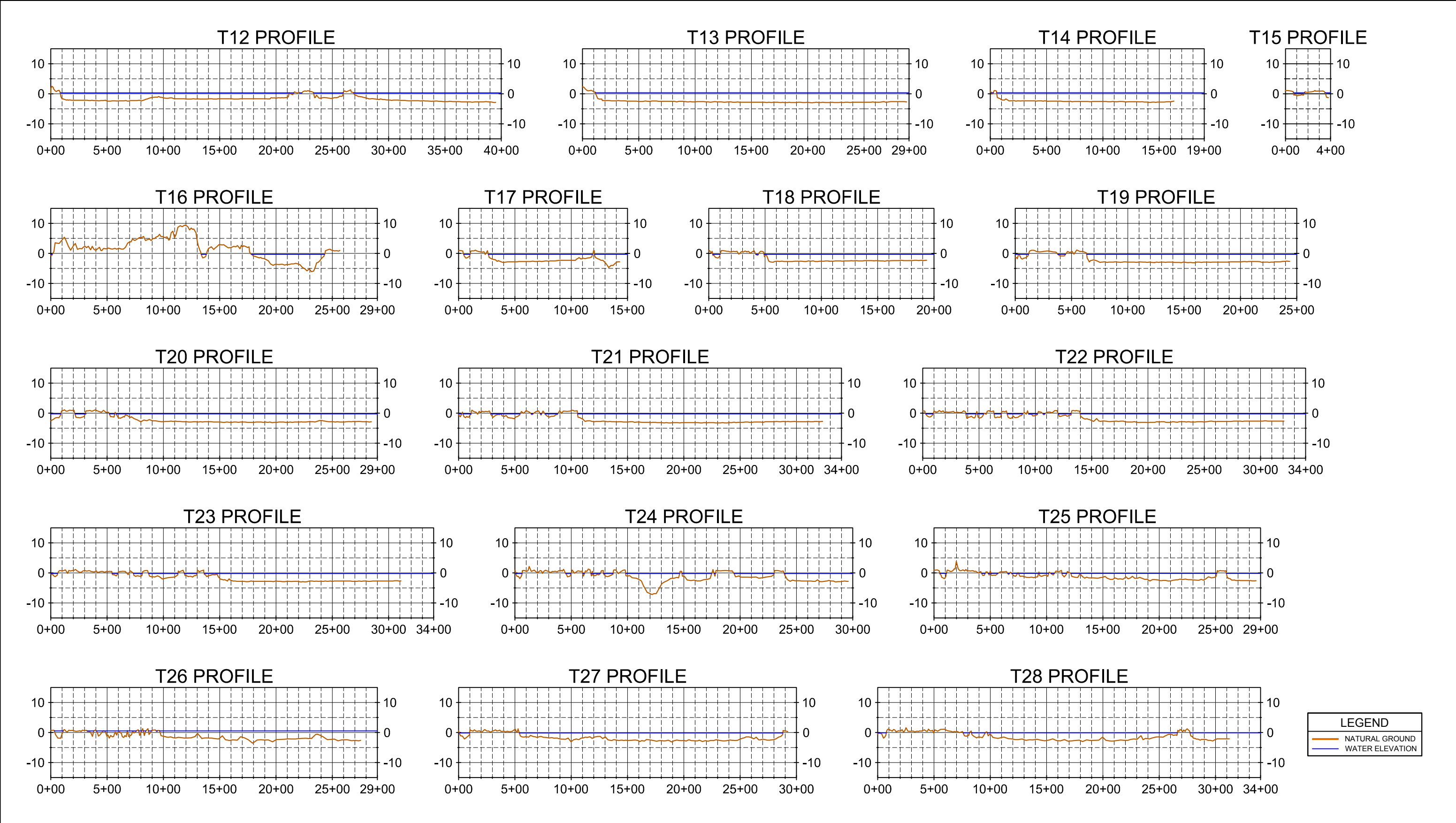
APPROVED BY:

PROFILE SHEET

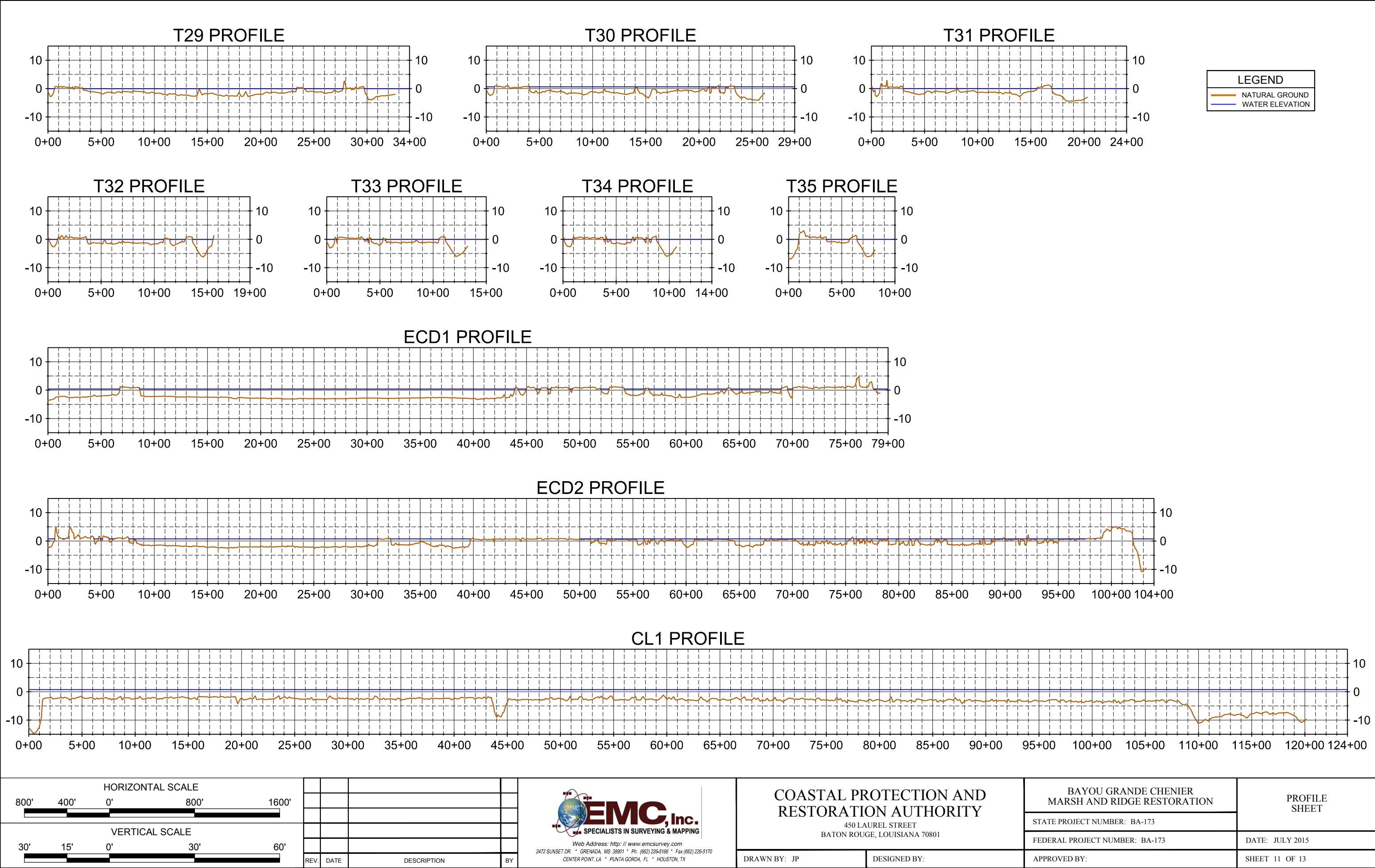
DATE: JULY 2015

SHEET 9 OF 13

25



HORIZONTAL SCALE 800'400'0'800'1600'		VERTICAL SCALE 30'15'0'30'60'		</	
--	--	---	--	---	--



HORIZONTAL SCALE

VERTICAL SCALE

REV.	DATE	DESCRIPTION	BY

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BATON ROUGE, LOUISIANA 70801

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DESIGNED BY:

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STATE PROJECT NUMBER: BA-173

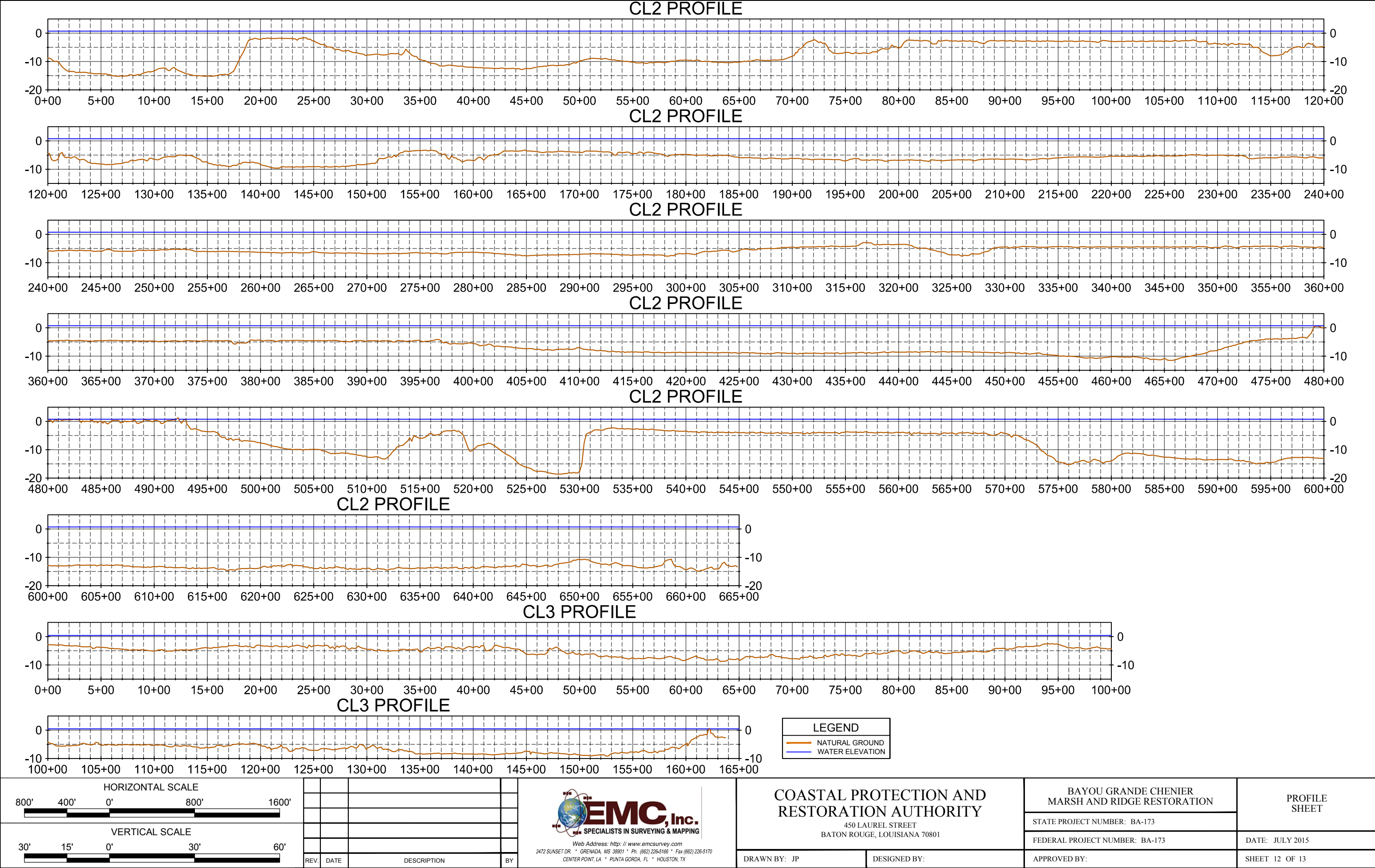
FEDERAL PROJECT NUMBER: BA-173

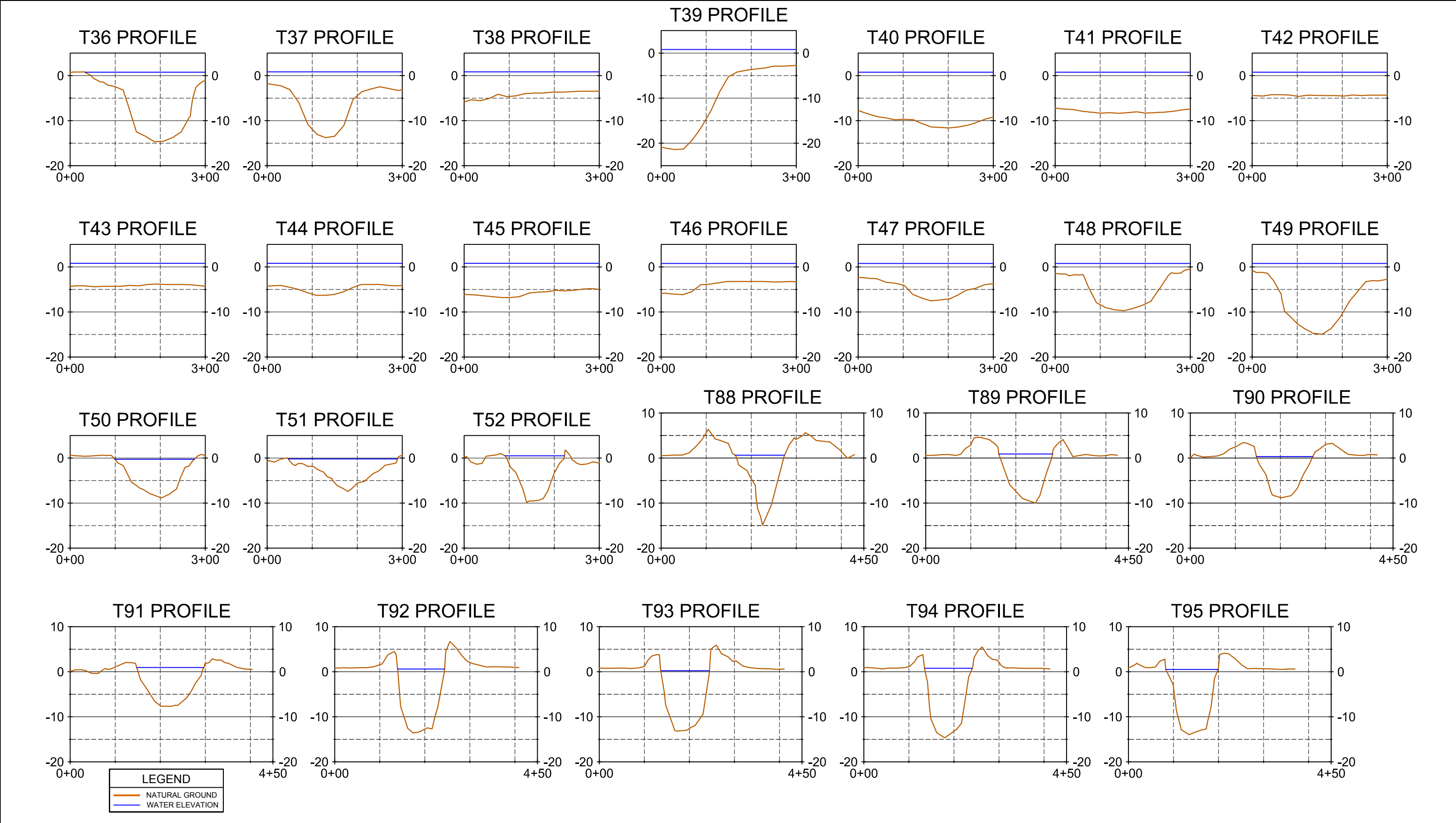
APPROVED BY:

PROFILE SHEET

DATE: JULY 2015

SHEET 11 OF 13





HORIZONTAL SCALE

200' 100' 0' 200' 400'

VERTICAL SCALE

20' 10' 0' 20' 40'

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COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

DRAWN BY: JP

DESIGNED BY:

BAYOU GRANDE CHENIER MARSH AND RIDGE RESTORATION

STATE PROJECT NUMBER: BA-173

FEDERAL PROJECT NUMBER: BA-173

APPROVED BY:

PROFILE SHEET

DATE: JULY 2015

SHEET 13 OF 13

Section 7: Field Notes

BAYOU GRANDE CHENIER

MARSH AND RIDGE RESTORATION

BA-173

TOPOGRAPHIC, BATHYMETRIC, MAGNETOMETRIC

PLAQUEMINES PARISH, LA

APRIL 2015

CONTRACT NO:

SURVEY BY: E.M.C. INC.
GRENADE, MS.

ITEM: BA-173

SURVEY BY: R. HUTCHINSON SR
R. HUTCHINSON SR
C. PETTIT

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64	BASE SETUP, CHECK
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69	LINE T-17
70	PROFILE ON SMALL ISLAND
71	LINE T-50 TO T-52

Gage Readings

GAGE
READING

TIME

1.18

09:36

1.30

12:05

1.45

14:23

04/08/15¹

DATE

APRIL 08, 2015

" "

" " "

HDPo Lines $\frac{C}{L}$ Profile

File: BB098^A-CL1.RAW

BB098-CL1A.RAW

BB098-CL1B.RAW

AZ-310

331

344

Description

Center line profile

04/08/15 2

Line $\frac{C}{L}$ 3

$\frac{C}{L}$ Profile Hydro

File: BB09A - CL3 - RAW

BB09A - CL3A - RAW

BB09A - ~~CL3~~ CL3B - RAW

BB09A - CL3C - RAW

04/08/15

3

Hydro Line

T-1

File: BB09A-T1.RAW

Hydro Line T-2

File: BB09A-T2.RAW

File: BB09A-T3.RAW

File: ~~BB0~~ BB09A-T2A.RAW

File: BB09A-T3A.RAW

BB09A-T3B.RAW

BB09A-T3C.RAW

04/08/15

4

Need RTK

DELETE *

Need RTK

* DELETE *

Need RTK

Hydro Lines
Gage Readings

Gage Reading	Time
1.56	12:49
1.66	15:00

04/09/15 ⁵

DATE:

APRIL 09, 2015

"

"

Hydro Lines

Line T-4

File: BB099-T4
BB099-T4A

Line T-5

File: BB099-T5
BB099-T5A

Line T-6

File: BB099-T6
BB099-T6A
BB099-T6B
BB099-T6C

File: BB09-T7

04/09/15

6

NEEDS SOME RTK

NEEDS RTK

NEEDS RTK

* Delete

as

GAGE READINGS

GAGE
READING

Time

1.0

8:30

1.4

14:00

04/10/15

7

DATE

APR. 10, 2015

APR. 10, 2015

Hydro Lines

Line T-8

~~Free~~

File

BB100-T8, RAW

BB100-T8A, RAW

BB100-T8B, RAW

Line T9

BB100-T9, RAW

BB100-T9A, RAW

Line T10

BB100-T10, RAW

BB100-T10A, RAW

04/10/15

100

Needs Rtk

Needs some Rtk

Needs A Little Rtk

Hydra Lines

Line T-11

File

BB100-T11, RAW

BB100-T11A, RAW

BB100-T11B, RAW

BB100-T11D, RAW

BB100-T11E, RAW

Line ~~T-11~~ T-12

File :

BB100-T12, RAW

BB100-T12A, RAW

BB100-T12B, RAW

BB100-T12C, RAW

04/10/15 ²

* DELETE * NEED TO RTK

* DELETE * NEED TO RTK

NEEDS RTK

NOTE: DELETE BB100-T11C

NEED RTK

Hydra Lines

LINE T-13

File

BB100 T13. RAW

BB100 - T13A. RAW

File

BB100 - T14. RAW

BB100 - T14A. RAW

File.

BB100 - T15. RAW

BB100 - T15A. RAW

04/10/15

10

NEED RTK

NEED RTK

NEED RTK

Hydra Lines

Line ECA 1

File:

BB100 - ECD1. RAW

BB100 - ECD1A. RAW

04/10/15

11

NEED PTK ON ISLAND

Gage Reading

Gage
Reading

Time

0.6

08:00

0.75

11:10

1.0

14:35

04/11/15

13

DATE:

APR. 11, 2015

APR. 11, 2015

04/11/15

Hydro Lines

Line T-16

File BB101 - T16

Line T-17

File BB101 - T17
BB101 - T17A

Line T-18

File BB101 - T18

Line T-19

File BB101 - T19

13

89/11/15

HITS LAND

NEEDS RTK ON LAND
NEEDS RTK ON ISLAND

NEED RTK ACROSS LAND

NEED RTK ACROSS LAND

Hydro Lines

Line T-20

File BB101-T20.RAW

Line T-21

File BB101-T21.RAW

Line T22

File BB101-T22.RAW

Line T-23.

File BB101-T23.RAW

04/11/15

NEED RTK ACROSS LAND

NEED RTK ACROSS LAND

NEED RTK ACROSS LAND

NEED RTK ACROSS LAND BETWEEN ISLANDS

Hydro Lines

Line T24

File BB101 - T24 ~~XDELETE X~~
BB101 - T24 A. RAW
BB101 - T24 B. RAW
BB101 - T24 C. RAW

Line T25

File BB101 - T25. RAW
BB101 - T25 A. RAW
~~BB101 - T25 B. RAW~~

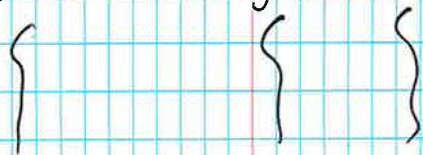
Line T26

File BB101 - T26. RAW

04/11/15

15

~~NEED~~ NEED RTK ON RIDGES, ISLANDS



NEED RTK ACROSS RIDGES, ISLANDS

NEED SOME RTK

Hydro Lines

Line T27

File BB101 - T27.RAW

Line T-28

File BB101 - T28.RAW

Line T-29

File BB101 - ~~T29~~ T29 - Raw
BB101 - T29A. RAW

04/11/15

NEEDS RTK ON RIDGES & ISLANDS

NEEDS RTK ON RIDGES & ISLANDS

NEEDS RTK ON RIDGES & ISLANDS

Hydro Lines

Line T-30

File BB101-T30.RAW * Delete * NEED RTK ON LAND
BB101-T30A.RAW

Line T-31

File BB101-T31.RAW

NEED RTK ON BANKS

Line T-32

File BB101-T32.RAW

64/11/15

Hydro Lines

Line - 33

File BB101 - T33. RAW

Needs RTK ON BANKS

Line T-34

File BB101 - T34. RAW

Need RTK on BANKS

Line T-35

File BB101 - T35

~~HAS~~ NEED RTK ON BANK

04/11/15

RTK BASE Setup

BASE @ ZRGLB-1

TRIMBLE RB No

ANT HT. 2.000 METERS

N-385290.369 E-3759335.991 EL. 0.957

CHECK ON ZRGLB-2

PUB N-379603.248 E-3755927.133 EL. 1.320

FAD N-379603.257 E-3755927.142 EL. 1.337

FAD N.

FILE: ~~GB~~ GRC-HC

04/14/15

ROVER UNIT

TRIMBLE RB No

ANT HT 2.000 METERS

Gage CRMS 0260 - H01

Pt No	Code	ANT HT
-------	------	--------

101	POST	6.562 ^{0.00}
-----	------	----------------------------------

102	NAIL	6.562
-----	------	-------

103	Gage	
-----	------	--

Gage Reading	Time
-----------------	------

1.10	08:300
------	--------

File: GBC - HC

04/13/15

20

~~File~~ DESCRIPTION

TOP OF 4" X 4" POST

TOP OF 60 D NAIL

SHOT AT 3.00 FT MARK OF GAGE

PHOTO No 5046

Line T-1

AT No	Core	ANALYT
X104-125	SND	6.562

~~LINE T-2~~

08/18/15

21

DESCRIPTION

SHOT IN OPEN WATER

RTK BASE SETUP

Base C ZR GBC-1
TRIMBLE RB No 5257
ANT HT. 2.000 METERS

CHECK ON ZR GBC-2

PUB N. 3796 03.248 E 3755927.133 EL. 1.320

END N. 3796 03.259 E 3755927.107 EL. 1.305

END N. 3796 03.229 E 3755927.109 EL. 1.285

FILE: 5257/1²²₂₀

START:

END:

File:

04/22/15

ROVER UNIT

TRIMBLE RB No 0906

ANT HT 2.000

PT 500

PT ~~756~~ 755

IR GBC-1

IR GBC-1 is a $\frac{3}{4}$ "
IRON ROD 12.0 FT IN
LENGTH. Set 0.2 FT.
ABOVE GROUND. LOCATED
312 FT EAST OF POINT
OF MARSH GRASS.
1000.0 FT. WEST OF BOAT
RAMP. 35. FT BACK OF
SOUTH TIE OF CANAL

HANA HELD POSITION

LAT - 29-33-03.0

LONG 89-49-42.2

23

04/22/15



IR GBC-2

IR GBC-2 is a $\frac{3}{4}$ "
IRON ROD 12. FT IN
LENGTH. SET 0.3 FT
ABOVE GROUND SET 37.0
SOUTH OF TDL OF CANAL
AND 34 FT EAST OF TDL
OF CANAL.

HAPA HELA POSITION

LAT 29-32-07.1
LONG 89-50-21.5

29

04/22/15



Line T-2 R7k

PT No	CODE	AUT HE
X501	SND	6.56L
X502	WE	"
X503	TBK	"
X504	MSH	"
X527	TBK	"
X528	WE	"
544 529	WE SND	"
544	WE	"
545	TBK	"
546	MSH	"
553	TBK MSH	"
554	WE MSH	"
558	TBK	"
559	WE	"
560-627	SND	"

04/22/15

25

Description

SOUNDING
 W/E @ Edge OF GRASS
 TBK MARSH
 NS
 TBK CANAL
 W/E "
 SHOT IN CANAL
 W/E "
 TBK CANAL
 NS MARSH
~~TBK~~ "
~~W/E @ LAKE MARSH~~
 TBK LAKE
 W/E W/E
 SHOT IN LAKE

Line T-3 Rtk

PT No Code ANTH

X628 SNA 6.562

X630 WE "

X631 TRK "

633 WE "

X634 SNA "

X649 WE "

X650 TRK "

X651 WASH "

File:

04/22/18

26

Description

SHOT IN LAKE

W/E "

TRK "

W/E "

SHOT IN LAKE

W/E & LAND

TRK

~~WASH GRASS~~

04/22/15

PT NO	COOR	ANT HT
X651	SNA	6.562
X654	W/E	6.562
X656	TBK	"
X652	W/E	"
X653	SNA	"
X659	W/E	"
X660	TBK	"
X661	W/E	"
X663	TBK	"
X664	W/E	"
X665-80	SNA	"

Description

~~SHOT IN LAKE~~~~W/E~~ ^{TBK} ISLAND~~TBK~~ W/E TBK ISLAND

W/E @ ISLAND

SHOT IN CANAL

W/E @ ISLAND

TBK "

W/E IN GRASS

TBK LAKE

W/E

SHOT IN LAKE

Line T-5 RTR

PT NO	CODE	ACTION
X630	SHO	G.562
X681	WE	"
682-83	TBK	"
684	WE	"
685	SHO	"
690	WE	"
691	TBK	"
692	MSH	"
698	TBK	"
699	WE	"
700	SHO	"
708	WE	"
709	TBK	"
710-11	MSH	"
712	TBK	"

28

04/22/15

DESCRIPTION

SHOT IN LAKE
W/E @ ISLAND
TBK "
W/E @ "
SHOT IN LAKE
W/E @ ISLAND
TBK "
NG BRUSH
TBK
W/E
SHOT IN CANAL
W/E @ ISLAND
TBK "
SHOT ON ISLAND
TBK "

Line T-6 R7K

04/22/15

PT No Code ANTH

X713 SHD 6.562

X718 WE "

X719 TBK "

X720 XSM "

X722 TBK "

X723 WE "

X724 SNA "

X740 WE "

X741 TBK "

X742 MSA "

X744 TBK "

X745 WE "

X746-⁵⁴~~55~~ SNA "

Description

SHOT IN CANAL

W/E @ ISLAND

TBK "

SHOT ON ISLAND

TBK "

W/E @ "

SHOT IN LAKE

W/E @ ISLAND

TBK @ "

SHOT ON ISLAND

TBK ISLAND

W/E "

SHOT IN LAKE

RTK BASE SETUP

BASE @ IR GBC-1

TRIMBLE R8 No 5257

ANT HT 2.000 METERS

CHECK ON IR GBC-2

PUB N. 379603.248 E. 3755927.133 EL 1.320

END N. 379603.277 E. 3755927.150 EL 1.305

END N. 379603.219 E. 3755927.112 EL 1.354

File: 5257 1130

START: 13:03

END: 18:56

File: GRANDCHENIER

04/23/15

Rover unit

TRIMBLE R8 No 0906

ANT HT 2.000 METERS

PT 756

PT 970

RTK Line T-7 RTK

PT NO	COORD	ANT HT
X757	SND	6.562
X758	WE	"
X759	TBK	"
X760	MSH	"
X762	TBK	"
X763	WE	"
X764-68	SND	"

File: GRAND CHENIER

04/23/15

31

DESCRIPTION

SHOT IN LAKE

W/E "

TBK ISLAND

MSH ON "

TBK ISLAND

W/E "

SHOT IN CANAL

Line T-8 RTR

File: GRANO CHENIER

04/23/15

PTNO CODE ANT HT

Description

x769 SNO 6.562

SHOT IN LAKE

x777 WE

W/E @ ISLAND

x778 TBK

TBK "

x779 MSH

N₃ MARSH GRASS

x787 TBK

TBK ISLAND

x788 WE

W/E "

x789 SNO

SHOT IN CANAL

x807 WE

W/E @ ISLAND

x808 TBK

TBK "

x809 MSH

N₃ MARSH GRASS

823 TBK

TBK ISLAND

824 WE

W/E "

825-831 SNO

SHOT IN CANAL

v

Line T.S. RTK

ALT Cd CADC ALT

X832 SNA 6.562

88838 WE MSH "

840 WE "

841 TBK "

842 MSH "

843 TBK "

844 WE "

845-51 SHD "

878 SHD "

882 WE "

882 TBK "

884 MSH "

885 TBK "

File: GRAND CHONICK

04/23/15

Description

SHOT IN CANAL

W/E @ ISLAND @ MARSH GRASS

W/E @ ISLAND

TBK @ "

SHOT ON ISLAND

TBK "

W/E @ "

SHOT IN LAKE

SHOT IN CANAL

W/E @ ISLAND

TBK @ "

MS MARSH

TBK ISLAND

LINE T-10 RTR

PT No	CODE	ANT HT
852	SNA	6.562
857-59	MSH	"
860	SHD	"
868	WE	"
870	TRK	"
871	MSH	"
872	TRK	"
874	WE	"
875, 877	SNA	"

FILE: GRANA LHERIER

04/03/15

39

DESCRIPTION

SHOT IN LAKE

EDGE GRASS IN WATER

MSH

W/E @ ISLAND

TRK ISLAND

MSH MSH

TRK ISLAND

W/E @

SHOT IN FLOODED MARSH

Line T-11 Rtk

FILE: GRANA CHENIER

04/23/15

35

AT No	Code	ANT FT
-------	------	--------

Description

X886	SND	6.562
------	-----	-------

SHOT IN CANAL

X892	WE	"
------	----	---

W/E @ ISLAND

X893	TBK	"
------	-----	---

TBK @ "

X894	MSH	"
------	-----	---

NG IN MARSH GRASS

X896	TBK	"
------	-----	---

TBK @ ISLAND

X897	WE	"
------	----	---

W/E @ "

X898	SND	"
------	-----	---

SHOT IN LAKE

X907	WE	"
------	----	---

W/E @ ISLAND

X908	TBK	"
------	-----	---

TBK @ ISLAND

X909	MSH	"
------	-----	---

MSH NG IN GRASS

X910	TBK	"
------	-----	---

TBK @ ISLAND

X911	WE	"
------	----	---

WE @ "

X912	SND	"
------	-----	---

SHOT IN OLD CHANNEL

X927	MSH WE MSH	"
------	-----------------------	---

EDGE MARSH GRASS

928	MSH	"
-----	-----	---

NG MARSH ON ISLAND

X935	TBK	"
------	-----	---

TBK @ ISLAND

X936	W/E	"
------	-----	---

W/E

X937	SND	"
------	-----	---

SHOT IN LAKE

966-969	MSH	"
---------	-----	---

EDGE MARSH GRASS @ W/E

RTK BASE SETUP

~~LINE 771 CONT'D~~ RTK

AT NO CODE ANT HT

BASE @ IR GCB-1
Trimble R8 No 5257
ANT HT 2.000 METERS

CHECK ON IR GCB-1

PUB N-379603.248 E-3755927.133 EL 1.320
FWD N-379603.284 E-3755927.149 EL 1.305
END N-379603.260 E-3755927.149 EL 1.272

FILE: 52571140

START: 13:01

END :

36

FILE: GRAM CHENIER

24
04/23/15

DESCRIPTION

ROVER UNIT

Trimble R8 No 0906
ANT HT 2.000 METERS

PT 971

AT 1326

Line T-11 CONTO RTR

PT NO CAGE ANT HT

x972 SNA 6.562

x975 WE "

x976 TDR "

x977 MSH "

x984 TDR "

x985 WE "

x986 → 993 JNO "

File: GRAND CHENIER

04/24/15

Description

SHOT IN SHALLOW WATER BETWEEN ISLANDS

W/E @ ISLAND

TDR "

N/S MARSH

TDR ISLAND

W/E "

SHOT IN LAKE

Line T-12 RTR

AT NO	CODE	AUT HT
X994	SNA	6.562.
X999	WE	"
X1006	TBK	"
X1001	NS	"
1008	TBK	"
1009	WE	"
1010	SNO	"
1048	WE	"
1049	TBK	"
1050	MSH	"
1063	TBK	"
1064	WE	"
1065	SNO	"
1082	WE	"
1083	TBK	"
1084	MSH	"
1091	TBK	"
1092	WE	"
1093	SNO	"

File: GRAND CHENIER

09/24/15

Description

SHOT IN CANAL
 W/E C ISLAND
 TBK C "
 NS ON ISLAND
 TBK @ ISLAND
 W/E "
 SHOT IN LAKE
 W/E C ISLAND
 TBK ISLAND
 NS ON MARSH ISLAND
 TBK OLD CANAL
 WE " "
 SHOT " "
 WE C ISLAND
 TBK @ "
 NS ON MARSH ISLAND
 TBK ISLAND
 W/G
 SHOT IN SHALLOW WATER

Line T-13 Rtk

Pt No	Code	ANT #
1108	SND	6.562
1113	WE	"
1114	TBK	"
1115	NS	"
1126	TBK	"
1127	WE	"
1128-29	SND	"

T-14 Rtk

1130	SND	6.562
1132	WE	"
1133	TBK	"
1134	NS	"
1142	TBK	"
1143	WE	"
1144-51	SND	"

File: GRAND CHENIER 04/24/15

Description

SHOT IN LAKE
 W/E @ ISLAND
 TBK "
 NS IN BRUSH ON ISLAND
 TBK ISLAND
 W/E
 SHOT IN CANAL

SHOT IN CANAL
 WE @ ISLAND
 TBK "
 NS IN BRUSH ON ISLAND
 TBK OF ISLAND
 WE @ "
 SHOT IN LAKE

Line T-15 RTK

File: GRAND CHERIER

04/24/05

PT NO	CODE	ANT AT
1152	SND	6,562
1157	WE	"
1158	TBK	"
1159	NG	"
1170	TBK	"
1171	WE	"
1172	SND	"
1180	WE	"
1181	TBK	"
1182	NG	"
1188	TBK	"
1189	WE	"
1190	SND	"

Description

SHOT IN LAKE
 W/E C ISLAND
 TBK C "
 NG IN BRUSH ON ISLAND
 TBK OF POCKET/BAY
 WE " "
 SND IN POCKET
 W/E IN "
 TBK OF POCKET
 NG IN BRUSH ON ISLAND
 TBK OF ISLAND
 W/E " "
 SHOT IN CANAL

Line T-16

PT No	Code	ANT HT
X1192-01	SNA	6.562
X1202	WE	"
X1203	TBK	"
X1204	SND	"
1211	WE	"
1212	TBK	"
1213-1222	NJ	"

1223	NJ	"
1224	TBK	"
1225	WE	"
1226	SND	"
1231	WE	"
1232	TBK	"

File: GRANO CHENIER

04/29/15

DESCRIPTION

SHOT IN LAKE
W/E C ISLAND
TBK ISLAND
SHOT IN LAKE
~~W/E~~ W/E C ISLAND
TBK ISLAND
NJ IN BRUSH ON ISLAND

NJ IN BRUSH
TBK CANAL
W/E C
SHOT IN CANAL
W/E OF CANAL
TBK CANAL

LINE T-17 RTK

FILE: ~~BOGANO~~ CHENIER

09/24/15

42

PZ NO CODE ANZ HT

DESCRIPTION

X1233 MSH 6.562

NG MARSH

1237 TBK

TBK CANAL

1238 WE

W/E "

1239 SNA

SHOT IN CANAL

X1244 WE

WE C CANAL

X1245 TBK

TBK

X1246 MSH

NG MARSH

1257 TBK

TBK LAKE

1258 WE

W/E "

1259-66 SNA

SHOT IN LAKE

Line T-18 DTK

File: GRAND CHENIER

04/24/15

PT H₆ Caca ANT W7

DESCRIPTION

1267 TDK 6,562

TDK OF ISLAND

1268 WE "

W/E " "

1269-73 SNO "

SHOT IN LAKE

1274 MSH "

MS MARSH

1299 TDK "

TDK CANAL

1300 WE "

W/E "

1301 SHO "

SHOT IN CANAL

1306 WE "

WE C CANAL

1307 TDK "

TDK CANAL

1308-9 MSH "

MARSH

Line T-19

PT NO	CODE	ANT HT
1312	TBK	6.568
1313	WE	"
1314	SNA	"
1324	WE	"
1325	TBK	"
1326		

File: GRAND CHENIER

04/24/15

44

Description

TBK CANAL
 W/E "
 SH/T IN CANAL
 W/E e "
 TBK "
 MARSH

RTK BASE SETUP

BASE @ IR GBC-1
Trimble RB No 5257
ANT HT 2.000 METERS

CHECK ON GBC-2

PUG N. 379603.248 E. 3755927.133 EL 1.320
FWD N. 379603.268 E. 3755927.135 EL 1.335
FWD N. 379603.249 E. 3755927.140 EL 1.253

File: ~~429~~52576150

START: 13:11

File: FWD:

FILE: GRAND CAVERN

04/25/15

ROVER UNIT

Trimble RB No. 0906
ANT HT 2.000 METERS

AT 1327

PZ 1491

Line T-16 CONT'D

AT NO	CODE	AMT HT
-------	------	--------

X1328-46	Ng	5.85
----------	----	------

File: GRAND CAENIER

04/25/15

DESCRIPTION

Ng in BRUSH

Line T-20 RTK

PT No	Code	ANZAD
X1347	TBK	6.562
1348	WE	"
1349	SND	"
X1358	WE	"
X1359	TBK	"

File: GRAND CHENIER

04/25/15

Description

TBK CANAL
 W/E "
 SHOT IN CANAL
 W/E CANAL
 TBK "

Line T-21 RTK

X1360	TBK	6.562
1361	WE	"
1362	SND	"
1371	WE	"
1372	TBK	"

TBK CANAL
 WE
 SHOT IN CANAL
 WE
 TBK "

Line T-22 RTK

1373	TBK	6.562
1374	WE	"
1375	SND	"
1381	WE	"
1382	TBK	"

TBK CANAL
 W/E "
 SHOT IN CANAL
 W/E
 TBK "

Line T-23 RTR

RTNO	CODE	AMT HT
X1383	TBK	6.562
X1384	WE	"
X1385	SND	"
1392	WE	"
1393	TBK	"

Line T-24 RTR

1394	MSH	6.562
X1395	TBK	"
1396	WE	"
1397	SND	"
1403	WE	"
1404	TBK	"

T-25 RTR

1405	TBK	6.562
1406	WE	"
1407	SND	"
X1412	WE	"
1414	TBK	"
1415-19	MSH	"

File: GRAND CHENIER

04/25/15

48

Description

TBK CANAL

W/E "

SHOT "

W/E "

TBK "

ASH MARSH

TBK CANAL

W/E C "

SHOT IN CANAL

W/E "

TBK "

TBK CANAL

W/E "

SHOT IN CANAL

W/E "

TBK "

N₃ MARSH

Line T-26

PT NO.	CODE	AMT
X1420	MSH	6.562
X1424	TBK	"
X1425	WE	"
X1426	SNA	"
1431	WE	"
1432	TBK	"

Line T-27

X1433	MSH	6.562
1434	TBK	"
1435	WE	"
1436	SNA	"
1437	WE	"
1445	TBK	"

Line T-28

X1446	TBK	6.562
1447	WE	"
1448	SNA	"
X1455	WE	"
1456	TBK	"

File: GRAND CHENIER

04/25/15

49

Description

NS MARSH
TBK CANAL
WE
SHOT IN CANAL
W/E
TBK "

NS MARSH
TBK CANAL
WE "
SHOT IN CANAL
WE
TBK

TBK CANAL
WE
SHOT IN CANAL
W/E
TBK "

Line T-29 RTK

PT No	Code	ALT HT
X1458	TBK	6.562
X1458	WE	"
1459	SND	"
1466	WE	"
1467	TBK	"

Line T-30 RTK

X1468	TBK	6.562
1468	WE	"
1470	SND	"
1477	WE	"
1478	TBK	"

Line T-31 RTK

X1479	TBK MSH	6.562
X1480	TBK	"
1481	WE	"
1482	SND	"
1489	WE	"
1490	TBK	"

File: GRASS CHENIER

04/25/15

150

Description

TBK CANAL

W/E "

SHOT IN CANAL

WE "

TBK "

TBK CANAL

W/E "

SHOT IN "

W/E

TBK CANAL

NS MARSH

TBK CANAL

WE C "

SHOT IN "

WE C CANAL

TBK "

RTK BASE Setup

~~PT No~~ CODE ~~ANT HT~~

BASE Q ZR GBC-1
Trimble RB No 5257
ANT HT 2.000 meters

Check on ZR GBC-2

PUB. N. 379603.248 E. 3755927.133 EL 1.320
END N. 379603.246 E. 3755927.146 EL 1.293
END N. 379603.317 E. 3755927.166 EL 1.264

File: 52571160

START: 13:05

END :

File: GRANA CHENICA

26
24/25/15

~~Description~~

Power unit
Trimble RB No. 0906
ANT HT. 2.000 meters

PT 1492

PT 1970

Line T-32

RTK

PT No	LOC	ANT HT
X1493	MSH TBK	6.562
X1494	TBK	"
X1495	WE	"
X1496	SND	"
1503	WE	"
1504	TBK	"

Line - T-33

RTK

1505	TBK	6.562
1506	WE	"
1507	SND	"
1514	WE	"
1515	TBK	"

Line T-34

RTK

1516	MSH	6.562
1517	TBK	"
1518	WE	"
1519	SND	"
1527	WE	"
1528	TBK	"

File: GRANO CHENIER

04/26/15

Description

NG MARSH

TBK CANAL

W/E "

SHOT IN CANAL

WE " "

TBK "

TBK CANAL

WE "

SHOT IN CANAL

WE "

TBK "

NG MARSH

TBK CANAL

W/E "

SHOT IN CANAL

WE "

TBK "

Line T-35 RTK

Pt No	CODE	ALT HT
X1529	TBK	6.562
X1530	WE	"
X1531	SND	"
1536-41	SND	10.52
1542	MSH	6.562
1543	WE	"
1544	SND	"
1561	WE	"
1562	TBK	"
1563	NS	"
1567	TBK	"
1568	WE	"
1569	SND	"

File: GRAMP CHENIER

04/26/15

DESCRIPTION

TBK @ CANAL. @ EDGE BRUSH
 W/E @ "
 SHOT IN CANAL
 " "
 EDGE MARSH GRASS
 W/E IN MARSH
 SHOT IN FLOODED MARSH
 W/E
 TBK MARSH
 NS IN BRUSH
 TBK CANAL
 W/E @ "
 SHOT IN CANAL

Line T-34 CONT'D

PT NO	CODE	AMT NT
X1570	SNA	6.562
X1571	WE	"
X1572	TAK	"
X1573	NS	"
X1575	MSH	"
X1576	WE	"
X1577	MSH	"
X1597	WE	"
X1598	SND	"
X1614	WE	"
X1615	TAK	"

File: GRAND CHENIER

04/26/15

DESCRIPTION

SHOT IN CANAL

W/E

TAK

SHOT IN MARSH

EDGE MARSH

W/E @ MARSH

SHOT IN MARSH WATER, GRASS

W/E OF OPEN MARSH WATER

SHOT IN WATER OF MARSH

W/E @ GRASS LINE

TAK MARSH @ GRASS LINE

Line T-33 RTR

File: GRAND CHENIER

04/26/15

55

PTNO CODE ANTH

Description

X1616 TRK 6.562

TRK MARSH @ GRASS LINE

X1617 WE "

W/E MARSH @ " 9

1618 SNO "

SHOT IN MARSH WATER

1628 WE "

W/E @ ISLAND

1629 MSH "

IN MARSH GRASS

1631 WE "

W/E @ ISLAND

1632 SNA "

SHOT IN OPEN WATER

1670 WE "

W/E OF MARSH

1671 TRK "

TRK "

1672 NS "

NS IN BRUSH

1675 TRK "

TRK CANAL

1676 WE "

W/E "

1677 SNO "

SHOT IN CANAL

Line T-32 RTR

PT No	COND	ANT HT
1678	SHD	6.562
1679	TBK WE	"
1680	NG TBK	"
1681	NS	"
1686	TBK	"
1687	WE	"
1688	SND	"
169 1700	MSH	"
1704	SHD	"
1752	WE	"
1753	TBK	"

FILE: GRAND CHENIER

04/26/15

DESCRIPTION

SHOT IN CANAL
W/E @
TBK CANAL
NS IN BRUSH
TBK MARSH
W/E "
SHOT IN OPEN WATER
ON SMALL ISLAND
SHOT IN OPEN WATER
W/E @ MARSH
TBK @ MARSH

Line T-31 RTR

File: GRANA CHEWER

04/26/15

DT No CONT'D AUTH

Description

X1754 TRK 6.562

TDE MARSH

X1755 WE "

WE C "

X1756 SHD "

SHOT IN OPEN WATER

X1835 WE "

W/E OF MARSH

1836 MSH "

MARSH GRASS

1846 TRK "

TRK CANAL

1847 X/E "

W/E C "

1848 SHD "

~~SH~~ SHOT IN CANAL

Line T-30 RTH

AT No.	Code	Altitude
X1849	MSH	6.562
X1850	SND	"
X1865	MSH	"
X1866-70	MSH	"
X1871	SND	"
1897	MSH	"
1898	MSH	"
1900	SND MSH	"
1901	SND	"
1968	WE	"
1969	TBK	"

File: GRAND CHIEF

04/26/18

58

Description

(NEED TO EXTEND TO
BOTH CANALS WITH BUSSY)

MARSH @ SMALL ISLAND
SHOT IN OPEN WATER
EDGE MARSH
MS MARSH @ ISLAND
SHOT IN OPEN WATER
EDGE OF SMALL ISLAND
MS ON " "
EDGE OF " "
SHOT IN OPEN WATER
W/E @ MARSH
TBK @ "

RTK BASE SETUP

~~PT NO~~ CODE ANTH

BASE C IR GBC-1

TRIMBLE RB No 5257

ANTHT. 2.000 METERS

CHECK ON IR GBC-2

PUB N. 379603.248 E. 3755927.133 EL 1.320

FHA H. 379603.280 E. 3755927.171 EL 1.297

FUN. 378603.247 E. 3755927.140 EL 1.276

FILE: 15:51 5257 1100

START: 15:51

END;

FILE: GRAND CANYON

04/26/15

59

~~DESCRIPTION~~

ROVER UNIT

PT 1971

PT 2550

Line T-29 CONT'D

AT No	Code	AMTH
X1972	MSH	6.562
X1973	SND	1
X2079-83	MSH	1.
2084	SND	1.
2103	MSH	1

Line T-28 CONT'D RTK

2104	MSH	6.562
2105	SND	1
2173	MSH	1

60

File: ~~ART~~ GRASS CHENIER

09/28/15

DESCRIPTION

MARSH

SHOT IN OPEN WATER EXTEND TO CANAL
IN MARSH GRASS

SHOT IN OPEN WATER

EDGE MARSH GRASS. (EXTEND WITH BUZZY)

N₅ IN MARSH GRASS (EXTEND WITH BUZZY)

SHOT IN OPEN WATER

SHOT IN MARSH GRASS EXTEND TO CANAL

Line T-27 CONT'D RTK

PT NO	CODE	AMT HT
X2174	MSH	6.562
2175	SND	"
2274		
2275-79	VUE	"
2280	TBK	"
2281-83	MSH	"

Line T-26 CONT'D RTK

2284	SND	6.562
2346	MSH	"

L

FILE: GRAND CHENIER

04/28/15

DESCRIPTION

IN MARSH GRASS (EXTEND TO CANAL)
SHOT IN CANAL

W/ @ GRASS LINE
TRK OLD CHANNEL
MARSH

SHOT IN OPEN WATER (BEGAN IN LAKE)
@ MARSH @ GRASS LINE

LINE ~~25~~ T²⁵ RTK

PT NO	CODE	AMT HT
2347	MSH	6.562
2384	SND	"
2444	WE	"
2445	TOK	"
2446-49	MSH	"
2450	WE	"
2451-54	SND	"

File: GRAND CAENIER

04/28/15

62

DESCRIPTION

IN MARSH GRASS & WATER (EXTENDS TO CANAL)
 SHOT IN OPEN WATER
 W/E @ ISLAND
 TOK @ "
 IN MARSH GRASS
 W/E @ ISLAND
 SHOT IN OPEN WATER

LINE T-24 CONT'D (RTK)

AT NO	CODE	AMT/HT
2455-58	SND	6.562
2459	WE	"
2460	TBK MSH	"
2467	TBK	"
2468	WE	"
2469	SND	"
2484	WE	"
2485	TBK	"
2486	MSH	"
2491	TBK	"
2492	WE	"
2493	SND	"
2506-07	MSH	"
2508	SND	"
2526	WE	"
2527	TBK	"
2528-31	MSH	"
2532	TBK	"
2533	WE	"
2534	SND	"
2540-43	MSH	"
2544	SND	"
2549	MSH	"

FILE: GRAND CHENIER

04/28/15

63

DESCRIPTION

SHOT IN OPEN WATER
W/E C ISLAND
ACROSS MARSH @ TBK
TBK ISLAND
W/E CANAL
SHOT IN OLD CANAL
W/E C ISLAND
TBK
MS MARSH
TBK ISLAND
W/E
SHOT IN OPEN WATER
POINT OF ISLAND
SHOT ACROSS CANAL
WE C ISLAND
TBK
MARSH
TBK ISLAND
W/E
SHOT IN OPEN WATER
MARSH
SHOT IN OPEN WATER
MS E SIDE MARSH

RTK Base Setup

Base @ IR GBC-1

Trimble RB No 5257

Ant HT. 2.000 meters

Check on IR GBC-2

PUB N. 379603.248 E. 3755927.133 EL. 1.32

END N. 379603.178 E. 3755927.203 EL. 1.265

END N. 379603.243 E. 3755927.217 EL. 1.309

File: 5257#240

START: 12:50

END:

File: ~~IR~~ GRANA CHENIR

05/04/15

64

Power unit

Trimble RB No 0906

Ant HT. 2.000 meters

PT 2551

PT 273643

Line T-23

PT no	Code	ANT HT
X2552	SND	6.562
2570- 24 2644	MSH	"

Line T-22

X ²⁵ 2645	SND	6.562
X2635	MSH	"
X2636-61	MSH	"

Line T21

X2662-63	SND	6.562
X2669	Edge MSH	1
2670-		
2714		

File: GRASS CHENIER

05/04/15

Description

SHOT IN OPEN WATER & MARSH
NG IN GRASS & WATER (MARSH)

SHOT IN OPEN WATER
EDGE MARSH GRASS & WATER (MARSH)
NG MARSH

SHOT IN OPEN WATER
EDGE MARSH
NG

Line T-20

PTNO	CODE	AMTH
X2715	SNA	6.562
2732	MSH	"
X2733	MSH	"

LINE T19

X2734	SNA MSH	6.562
X2735-42	SND	"

File: GRANA LAGUER

05/04/15

DESCRIPTION

SHOT in open WATER
EDGE MARSH GRASS & WATER (MARSA)
MS " "

~~SHOT in open WATER~~ EDGE GRASS
SHOT in open WATER

RTK BASE Setup

~~PT NO~~ CODE ANT HT

BASE @ IR GBC-1
TRIMBLE RB No 5257
ANT HT 2.000 meters

CHECK ON IR GBC-2

P.O.B N-379603.248 E-3755927.133 EL 1.320
END N-379603.265 E-3755927.133 EL 1.294
END N-379603.412 E-3755927.146 EL 1.469

File: 52571250

START: 12:49

END:

File: Graws Chenier

05/05/15

~~DESCRIPTION~~

ROVER UNIT
TRIMBLE RB No 0906
ANT HT 2.000 meters

PT 2744

PT 3474

CL 1 PROFILE

PT NO	CODE	ALT HT
P2745	CL	10.52
P2747	CL	15.35
P2748	CL	10.52
P2987-84 CL		15.35
P2995	CL	10.52
P3334-	CL	15.35
3371		

FILE: GRAND CHENIER

05/05/15

Description

CL CANAL ON CL 1

"

"

"

"

"

"

"

"

Line T-17
~~ISLAND PROFILE~~

PTNO	CODC	AMT HT
X3372	SND	6.562
X3381-82	WE	"
X3383-88	SND	"

File: GRAB CHENIER 05/05/15

DESCRIPTION

SHOT IN OPEN WATER
 WE @ END OF ISLAND

ISLAND PROFILE

PT NO	CODE	ALT HT
3389	SHS	6,562
3395	WE	"
3396	NS	"
3410	WE	"
3411-13	SNO	"

FILE: GRANO CHENIER

05/05/15

70

DESCRIPTION

SHOT IN OPEN WATER @ END OF ISLAND
 W/E @ END OF ISLAND
 SHOT ON ISLAND
 W/E @ END OF ISLAND
 SHOT IN OPEN WATER

Line T-50

PNb	COOC	ANT HT
X3414	TBK	10.52
3415	WE	"
3416	SHS	"
3420	SNO	15.35
3428	WE	"
3429	TBK	"

T-51

3430	TBK	5.85 10.52
3431	WE	5.85
3432	SNO	15.35
3456	WE	"
3457	TBK	"

File: GRAND CHENIER

05/05/15

21

DESCRIPTION

TBK CANAL
W/E "
SOUNDING
"
W/E / GRASS LINE
TBK IN MARSH

TBK IN MARSH
W/E OR GRASS LINE
SHOT IN CANAL
W/E / GRASS LINE
TBK IN MARSH

Line T52

AT #	COND	ALT HT
X3458	TBK	5.85
3459	WE	"
3460	SWD	15.35
3472	WE	"
3473	TBK	"

File: GRASS CHERICR

05/05/15

DESCRIPTION

TBK
w/c / GRASS Line
SHOT in CANAL
w/c / GRASS Line
TBK in BRUSH

BAYOU GRANDE CHENIER
MARSH AND RIDGE RESTORATION

BA- 173

TOPOGRAPHIC, BATHYMETRIC, MAGNETOMETRIC

PLAQUEMINES PARISH, LA.

MAY 2015

CONTRACT No:

ITEM No: BA-173

SURVEY By: E.M.C. INC.
GRENADE, MS.

SURVEY PRY: R. HUTCHINSON SR
R. HUTCHINSON JR.
C. PETTIF

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RTK BASE SETUP

BASE C = R GBC-1
TRIMBLE RB No 5257
ANT HT 2.000 METERS

CHECK ON IR GBC-2

PT N. 379603.248 E. 3755927.133 EL. 1.320
END N. 379603.253 E. 3755927.144 EL. 1.305
END N. 379603.290 E. 3755927.169 EL. 1.246

FILE: 52571260

START: 13:03

END: 20:31

FILE: GRAND CHERIER

05/06/15

ROVER UNIT

TRIMBLE RB No. 0906
ANT HT 2.000 METERS

PT 3475

NT 3744

Line BC01

PT NO	CODE	ANT HT
3476	SNA	6.562
3488	WE	"
3489	MSH	"
3491	SNA	"
3498	MSH	"
3498	SNA W/E	"
3499	SNA	6.562
3502	MSH	"
	SNA	"
3565	WE	"
3566-83	SNA	"
3584	WE	"
3585-86	MSH	"
3587	SNA	"
3627	MSH	"
3628-31	MSH	"
3632-45	SNA	"
3646	MSH	"
3648	SNA	"
3653	MSH	"

FILE: GRANA CHENIER 05/06/15

DESCRIPTION

SHOT IN OPEN WATER
W/E / GRASS Line
NG IN GRASS
SHOT IN WATER @ GRASS Line
IN GRASS
W/E @ GRASS Line
SHOT IN WATER
MSH IN GRASS
~~SHOT IN OPEN WATER~~
Edge of GRASS AND OPEN WATER
SHOT IN OPEN WATER
W/E @ GRASS Line of ISLAND
MARSH
SHOT IN OPEN WATER
Edge GRASS @ MARSH
MARSH
SHOT IN OPEN WATER
NG IN MARSH GRASS
SHOT IN CANAL
Edge MARSH

Line EC 01 CONT'D

AT NO CODE AUTH

3654 MSA 6.562

3702 SNQ "

3707 MSA "

3713-43 SNO .

File: GRAND CHENIER

05/06/15

3

DESCRIPTION

MS IN MARSH

SHOT IN CANAL

IN GRASS

SHOT IN CANAL

RTK BASE UNIT

BASE @ SR GBC-1
Trimble RB No 5257
ANT HT 2.000 meters

CHECK ON SR GBC-2

POB N. 379603.248 E. 3755927.133 EL. 1.320
FND N. 379603.265 E. 3755927.157 EL. 1.270
FND N. 379603.276 E. 3755927.195 EL. 1.296

File: 52571270

START: 14:30

END:

File: GRAN CHENICA

05/07/15

9

ROVER UNIT

Trimble RB No 0906
ANT HT 2.000 meters

PT 3745

PT 3779

Line T-92

PT NO	CODE	ALT FT
3748	MSH	6.562
3767	TOK	"
3768	QWE	"
3769	SNJ	"
3776	WE	"
3777-	MSH	"
3800		

Line T-88

3801	MSH	6.562
3823	TOK	"
3824	SNJ WE	"
3825	WE SNJ	"
3831	WE	"
3832	TOK	"
3833-54	MSH	"

File: GRANA CHENIER

05/03/15

5

Description

NG IN MARSH ; BRUSH
 TOK CANAL IN WATER
 W/E
 SOUNDING IN CANAL
 W/E @ MARSH
 NG IN MARSH

NG IN GRASS ; LIGHT BRUSH
 CANAL
 W/E CANAL
 SHOT IN CANAL
 W/E
 TOK CANAL
 NG IN GRASS ; BRUSH

Topo Shots

PT No	Code	Height
3855	SNA	6.562
3857	W/E	"
3858	TBK	"
3859-61	Ng	"
3862	MSH	"
3863	SNA	6.562
3865	W/E	"
3866	TBK	"
3867	Ng	"
3872	MSH	"

3873 TBK "

File: GRANA Chaveira

05/07/15

C

Description

SHOT in CANAL

W/E @ CANAL

TBK CANAL

Ng in BRUSH

Ng in MARSH

SHOT in CANAL

W/E @ CANAL

TBK "

Ng in BRUSH

Ng in MARSH

TBK CANAL @ Look Point @ Intersection

SITE No. 3A

PT NO CODE AUTH

3874-13 MSH 6.562

SITE - 4A

~~3894-15~~³⁹¹⁶ MSH 6.562

SITE 5A

~~3816-35~~³⁹¹⁶ MSH 6.562

File GRA

05/07/15

2

DESCRIPTION

NG MARSH

Moved Site 3
To New Location
Called Site 3A

NG MARSH

Moved Site 4 To
New Location
Called Site 4A

NG MARSH

Moved Site 5 To
New Location
Called Site 5A

SITE 1

PT no code ANCH

3936-57 MSH 6.562

SITE 2

3958-78 MSH 6.566

File. GRAIN CHERIEA

05/07/18

8

DESCRIPTION

NS MARSH

NS MARSH

RTK BASE Setup

BASE @ IRGCB-1

Trimble R8 No 5257

ANT HT. 2.000 meters

Check on IRGCB-2

POL N-379603.248 E-3755927.137 EL. 1.320

FWD N-379603.266 E-3755927.140 EL. 1.274

FWD N-379603. E-3755927. EL.

File: 52571310

START: 19:05

END:

File GRAND CHENIER

05/11/15

9

ROVER UNIT

Trimble R8 No 0906

ANT HT. 2.000 meters

PT 3747

Gage & TBK

PT NO	CODE	ANT HT	ELEV
3748	TOP 4x4 POST	0.00	6.10 6.02
3748A	TOP 4x4 POST	0.00	6.10 6.02
3749	60 D NAIL	6.562	6.10 6.02

Gage Reading	TIME	DATE
0.9	03130	5/11/15

FROM HAND HELD POSITION

29.33-02.5

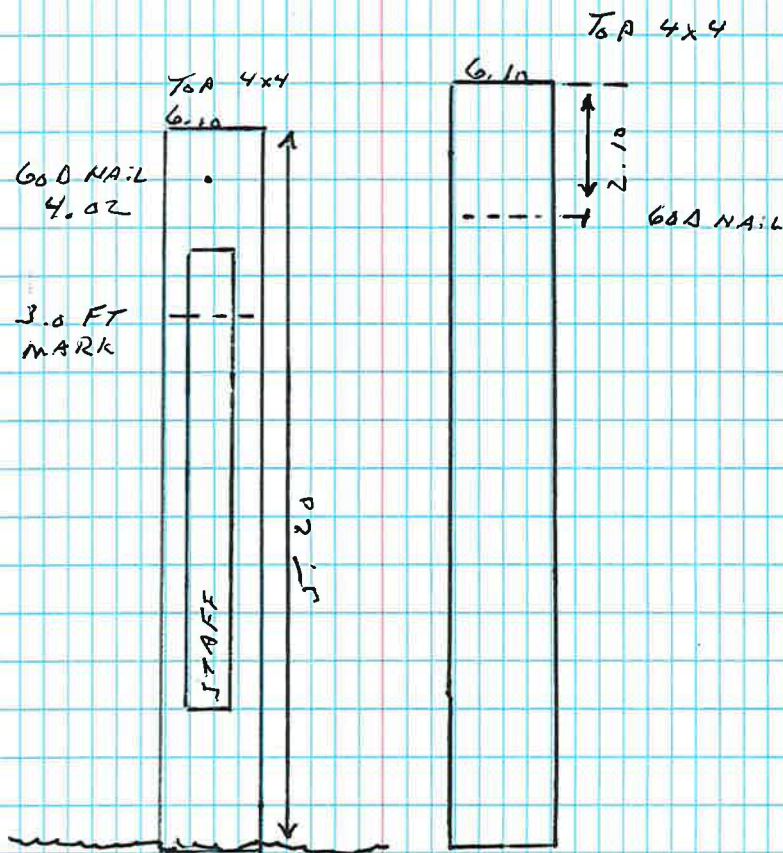
89-49-45.8

PHOTO NO. 2223
2224

FILE: GRAND CHENIER

05/11/15

DESCRIPTION



MAG Lines

05/12/15

11

Line	File Name	AZ
M5	BB132-M5-RAW	167-00
M4	BB132-M4-RAW	347-00
M4	BB132-M4A-RAW	
M3	BB132-M3-RAW	167-00
M2	BB132-M2-RAW	347-00
M1	BB132-M1-RAW	167-00
M1	BB132-M1A-RAW	167-00
M6	BB132-M1A-RAW	347-00

MAG Lines

05/13/15 12

LINE

FILE

M-7

BB133-M7.RAW

M-7

BB133-M7A.RAW

M8

BB133-M8.RAW

M8

BB133-M8A.RAW

M9

BB133-M9.RAW

M10

BB133-M10.RAW

M11

BB133-M11.RAW

Line A2

167-00

347-00

347-00

167-00

347-00

167-00

UNABLE TO GET TO
END OF LINE IN
THICK GRASS. WILL
BE COMPLETED WITH
MARSH BUGGY.

ISLAND ON LINE
UNABLE TO CROSS
WITH AIR BOAT

Mag Lines

Line	File Name	AZ	
M12	BB133-M12.RAW	167-00	-
M12	BB133-M12A.RAW		ISLAND ON LINE UNABLE TO CROSS WITH AIR BOAT.
M13	BB133-M13.RAW	167-00	ISLAND ON LINE UNABLE TO CROSS WITH AIR BOAT
M13	BB133-M13A.RAW		
M14	BB133-M14.RAW	167-00	
M14	BB133-M14A.RAW	6	
M15	BB133-M15.RAW		

05/13/15 13

Mag Lines

Line

File Name

M 16

BB133-M 16. RAW

M 17

BB133-M 17. RAW

M 17

BB133-M 17A. RAW

M 18

BB133-M 18. RAW

M 19

BB133-M 19. RAW

M 19

BB133-M 19A. RAW

Lay Back

05/13/15

14

Line AL

76.00

76.00

256.00

DELETE

~~256.00~~ *DELETE*

Mag Lines

Line

File Name

M19

~~134~~ 134-M19.RAW

M20

134-M20.RAW

M21

134-M21.RAW

M22

134-M22.RAW

M23

134-M23.RAW

M24

134-M24.RAW

05/14/15 ⁵

Line A2

256-00

76-00

NOTE: Line Runs
THROUGH PLOT STUDY
AREA. TOLA TO GO
AROUND THESE AREAS

256-00

256-00

76-00

256-00

Mag Lines

LINE FILE NAME

M25 134-M25.RAW

M26 134-M26.RAW

M27 134-M27.RAW

1x27 134-M27A.RAW

Lay Back Line

05/14/15 ¹⁶

Line A2

~~256-ss~~ 76-ss

256-ss

FOLLOWS CAPITAL *DELETE*

MAG Lines

Line	File Name
M10	138-M10.RAW
M10	138-M10A.RAW
M10	138-M10B.RAW
M10	138-M10C.RAW

Line	File Name
M28	138-M28.RAW

M10	138-M10B.RAW
-----	--------------

M29	138-M29- RAW ^{EXT MXT}
	138-M29 - RAW
	138-M29A - RAW

05/18/15 17

Line A2

~~XDelete~~ *
167-00

NOTE: HAA To
CUT Line SHORT
Due To TREES
AND THICK ~~BR~~
BRUSH

Followed Shore Line, TREES & Very
THICK BRUSH on Line.

Run MAG Line AROUND Tree Line.

MAG Lines

Line

File Name

M 15

138 - M 15. RAW

M 15

138 M 15A. RAW

M 14

138 - M 14. RAW

LAY BACK Line

05/18/15

18

Line AZ

76-00

" "

RTK BASE SETUP

BASE @ IR GBC-1

Trimble RB No 5257

ANT HT. 2.000 METERS

CHECK ON IR GCB-2

PUB N. 379603.248 E. 3755927.133 EL 1.320

FWD N. 379603.212 E. 3755927.061 EL 1.302

FWD N. 379603.167 E. 3755927.112 EL 1.253

File: 5257 1390

START: 12:38

END

File: GRAMA GHEWICK

05/19/15

19

ROVER UNIT

Trimble RB No 0906

ANT HT. 2.000 METERS

AT ~~3750~~ 3750

AT 4139

X-SEC. T-19

PT No Code ALT HT

3979
~~3979~~ N5H 6.562

4002

File: GRAND CHENIER 05/19/15

20

DESCRIPTION

N5 MARSH

Line MCA-4

PT No	CODE	ALT M
4003	Tbk	5.85
4004	N ₅	"
4012	MSH	"
4013-15	MSH	"
4016	WE	"
4017	SND	15.35
4019	SND	20.20
4021	SND	10.52
4025	WE	"
4026	SLP	5.85
4027	Tbk	"
4028	N ₅	"
4032	MSH	"
4032 ³ -	MSH	"

37

File: GRAND CHENIER

05/19/15

Description

Tbk CANAL

N₅ in BRUSH

Edge BRUSH @ Edge MARSH

N₅ MARSH

W/E @ CANAL

SHOT in CANAL

"

"

"

"

~~SH~~ W/E @ CANAL @ Edge BRUSH

SLOPE

Tbk CANAL

N₅ in THICK BRUSH

Edge MARSH @ Edge BRUSH

N₅ MARSH

Line MCA-3

Pt No	Code	ANZHT
4038	MSH	5.85
4043	NJ	"
4044	NJ	"
4050	TBK	"
4051	WE	"
4052	SND	15.35
4058	WE	5.95
4059	TBK	"
4060	NJ	5.85
4061	MSH NJ	"
4062-70	MSH	"

File: GRAND L Heron

05/19/15

22

Description

NJ MARSH
 Edge BRUSH
 NJ IN THICK BRUSH
 TBK @ Edge BRUSH
 W/E @ CANAL
 SHOT IN CANAL
 W/E @ CANAL
 TBK "
 NJ IN BRUSH
 NJ @ Edge BRUSH
 NJ MARSH

Line MCA 2

PTNO	CODE	AUTHT
------	------	-------

4071-76	MSH	5.85
---------	-----	------

4077	WL	"
-----------------	----	---

4080	TBK	"
------	-----	---

4080	TBK	
------	-----	--

4081	WE	"
------	----	---

4082-89	SND	15.35
---------	-----	-------

4090	WE	5.85
------	----	------

4091	TBK	5.85
------	-----	------

4092	NS	"
------	----	---

4097	WL	"
------	----	---

4098-03	MSH	5.85
---------	-----	------

File: GRAND CHENIER 05/19/85

Description

NS IN MARSH

EDGE BRUSH

NS IN BRUSH

TBK CANAL

W/E

SHOT IN CANAL

W/E @ CANAL

TBK CANAL

NS IN BRUSH

EDGE BRUSH @ EDGE MARSH

NS MARSH

Like MCA 1

PTNO CODE AUTH

4104 MSH 5.85

4112 WL "

4113 NS "

4114 TBK "

4117 WE "

4118 SNO 10.52

4128 WE 5.85

4129 TBK 5.85

4130 NS "

4134 WL "

4135-38 MSH "

FILE: GRAIN CHENIER

05/15/15

Description

NS MARSH

EDGE BRUSH

NS "

TBK CANAL

W/EC "

SHOT IN CANAL

WE @ CANAL

TBK "

NS IN BRUSH

EDGE BRUSH, EDGE MARSH

NS MARSH

RTK BASE Setup

BASE 2 = 2 GCB-2

TRIMBLE RB No 5257

ANT HT. 2.000 METERS

CHECK ON 2R GCB-1

PUB N=385290.369 E=3759335.991 EL 0.957

FWD N=385290.331 E=3759336.032 EL 1.603

FWD N=385290.370 E=3759336.057 EL 1.040

File: 5257140.0

START: 7:46

BND

File: GRANA CHERICA

05/20/15

Rover Unit

TRIMBLE RB No 0916

ANT HT. 2.000 METERS

PZ 4140

PZ 4540

MCB - 1

Pt No	Code	ANALYT
4141	MSH	5.85
4147	WL	"
4148	NS	"
4149	TBK	"
4150	WE	"
4151	SND	15.35
4155	SND	20.20
4160	WE	5.85
4161	TBK	5.85
4162	NS	"
4163	NS	10.52
4166	WL	5.85
4167-72	MSH	5.85

File: GRANA CAENIER

05/20/15

26

Description

NS MARSH
 Edge TREES
 NS BRUSH
 TBK CANAL
 W/E @ CANAL
 SHOT IN CANAL
 " "
 W/E @ CANAL
 TBK CANAL
 NS IN THICK BRUSH
 " "
 Edge BRUSH @ Edge MARSH
 NS MARSH

Line MCB-2

PT No	CODE	ANT HT
4173	MSH	5.85
4179	WL	"
4180	NS	"
4181	NS	10.54
4185	TBK	10.52
4186	WE	10.52
4187	SND	20.20
4195	WE	5.85
4196	TBK	5.85
4197	NS	5.85
4199	WL	"
4200-06	MSH	5.85

File: GROUND CANALS

05/20/15

27

Description

NS MARSH

Edge of THICK BRUSH

NS in BRUSH f THICK BUSHES

" " " "

TBK CANAL

WE @ CANAL

SHST IN CANAL

W/E @ CANAL

TBK "

NS in BRUSH

Edge THICK BRUSH

NS MARSH

MCB-3

PT No	Code	ANTH?
4207	MSH	5.85
4213	WL	"
4214	NG	"
4217	TBK	"
4218	WE	"
4219	SND	15.35
4227	"	5.85
4228	WE	"
4229	TBK	20.20
4230	NG	5.85
4231	"	15.35
4234	WL	5.85
4235-49	MSH	"

File: GRASS CREEK 05/20/15

Description

NG MARSH

EDGE THICK BRUSH

NG IN " "

TBK CANAL

W/E C "

SKAT IN CANAL

"

Waters Edge

Top Bank of Canal

NG in brush

"

Edge of Thick brush

Marsh

MCB-4

PT No	Code	Ant HT
4241	MSH	5.85
4247	WL	"
4248	NS	15.35
4252	TBK	"
4253	WE	"
4254	SND	15.35
4261	VE	10.52
4262	TBK	"
4263	NS	5.85
4265	WL	"
4266-71	NS MSH	5.85

File: GRANO CHENICA 05/20/15

Description

Shot in marsh
 Edge woods / BRUSH
 NS "
 TBK CANAL
 W/E @ "
 Shot in CANAL
 W/E @ CANAL
 TBK CANAL
 NS in THICK BRUSH
 Edge Woods / BRUSH
 NS MARSH

Line T-20

AZ No	Code	A1-TH
4272-	MSH	5.85
4300		

Line T-21

4301-12	MSH	5.85
---------	-----	------

Line T-22

4313-73	MSH	5.85
---------	-----	------

Line T-23

4374-	MSH	5.85
4405		

File: GRAND CHOUER 05/20/15

DESCRIPTION

NS MARSH

NS MARSH

NS MARSH

NS MARSH

Line T-24

PT NO	CODE	AUT HT
4406-	MSH	5.85
4440		

Line T-25

4441-71	MSH	5.85
---------	-----	------

Line T-26

4472-	MSH	5.85
-------	-----	------

4539

File: GRASS HERICA

05/20/15

31

DESCRIPTION

NS MARSH

NS MARSH

NS MARSH

RTK BASE SETUP

Base @ IR GCB-2

Trimble RB No 5257

Ant HT. 2.000 meters

Check on IR GCB-1

PUB N. 385290.369 E. 3759335.991 EL 0.957

END N. 385290.316 E. 3759335.968 EL 0.908

END N. 385290.322 E. 3759336.095 EL 0.877

File: 56571410

START: 13:00

File: GRANA CHENIER 05/21/15

Rover unit

Trimble RB No 0906

Ant HT 2.000 meters

PT 4541

PT 4872

Line T-27

PT No. 2000 ANT HT

4542-71 MSH 5.85

Line T-28

4572- MSH 5.85

4621-29

Line T-29

46³⁰~~28~~-51 MSH 5.85

Line T-30

4652-80 MSH 5.85

File: GRASS CHENIERE

05/21/15

33

DESCRIPTION

N5 MARSH

N5 MARSH

N5 MARSH

N5 MARSH

Line T-31

PT No	CODE	ALT HT
4681-	MSH	5.85
4700		

Line T-32

4701-25	MSH	5.85
486	WE	"
4811	TOK	

Line T-33

4726-54	MSH	5.85
---------	-----	------

Line T-34

4755-87	MSH	5.85
---------	-----	------

Line T-35

4788	MSH	5.85
------	-----	------

File: GRAND CARRIER 05/21/15

34

Description

MS MARSH

MS MARSH
W/C @ CANAL
TOK "

MS MARSH

MS MARSH

MSH

Line T-35 CONTD

File: GRAMP CHEVIER

05/21/15

35

PT NO	CODE	AMT HT
4802	WE	5.85
4803	TBK	"
4804	NS	"
4805	NS	15.35
4808	WL	5.85
4809	MSH	5.85

Description

W/E @ CANAL

TBK "

NS DRUSH

" "

EDGE WOODS @ EDGE MARSH

H

Line T-30

4812	NSH SNH	5.85
4813	WE	"
4814	TBK	"
4815-36	MSH	5.85

SHOT IN CANAL

W/E "

TBK "

NS MARSH

Line T-29

4837	WE	5.85
4838	TBK	"
4839-	MSH	"
4857		

W/E

TBK MARSH

NS MARSH

LINE T-²⁸~~28~~

PT NO	CORR	ALT HT
4858	SAS	5.85
4859	WE	"
4860	TBK	"
4861-71	NJH	"

File: GRAND CAENIOR 05/21/18

36

DESCRIPTION

JUST IN CANAL

~~TBK~~ CANAL W/E CANAL

TBK CANAL

NJ MARSH

RTK BASE Setup

BASE @ IR GCB-1

TRIMBLE RB No 5257

ANT HT. 2.000 METERS

CHECK ON IR GCB-2

PUB N. 379603.248 E. 3755927.133 EL 1.320

KNOW N. 379603.260 E. 3755927.176 EL 1.268

~~FROM N. 379603.260 E. 3755927.176 EL 1.268~~

FROM N. 379618.684 E. 3755947.847⁹²⁵ EL 1.690

File: 52571461

START: 15.39

File: GRAND CHEVIER

05/26/15

ROVER UNIT

TRIMBLE RB No 0906

ANT HT 2.000 METERS

4873

PT 5065

CHECK ON PT 4874 SEE PG 38

TBM / Line ECAZ

PT No Code Amt HT

4878 TBM 6.562

(ECAZ-0) ECAZ

4875 - INSH 10.52

5064

38

File: GRAND CHENIER 05/26/15

DESCRIPTION

SET 1"x2" STAKE FOR CHECK POINT
N. 379618.694 E. 3755947.891 EL. 1.644

NG MARSH

RTK BASE SETUP

BASE @ IR GBC-2
TRIMBLE R8 N5257
ANT HT. 2.000 METERS

CHECK ON PT 4874 (TBM)

EST N. 379618.694 E. 3755947.881 EL. 1.644

FWD N. 379618.671 E. 3755947.849 EL. 1.686

FWD N. 379618 E. 3755947. EL.

FILE: 52571470

START: 12:54

FILE: GRAND CHENIER 05/27/15

ROVER UNIT

TRIMBLE R8 N60306

ANT HT. 2.000 METERS

PT 5066

PT 5600

W/S ELEV.

PTH. CODE ANTH?

5067 WS 5.85

5599 WS 5.85

File: Grand Cienega

05/27/

Description

W/S C 08:01 EL 0.586

W/S C 11:54 EL 0.822

Line ECA2

PT NO	CODE	ALT HT
5068	SND	5.85
5074	WE	"
5075	TBK	"
5076-84	NG	"
5085	TBK	"
5090	NG	"
5115	TBK	"
5116	WE	"
5117	SND	"
5120	MSH	"
5121	MSH	"
5122	WE	"
5123	TBK	"
5125	MSH	"
5126	MSH	"
5163	TBK	5.85 5.85
5164	WE	"
5165	SND	5.85
5382	WE	"
5383	TBK	"

GRAND CHENIER

05/27/15

41

Description

SHOT IN CANAL

W/E C BANK

TBK CANAL

NG IN BRUSH

TBK CANAL

NG IN BRUSH (Line Follows Along TBK)

TBK OF Pocket

W/E

SHOT IN CANAL

EDGE MARSH

SHOT in FLOODED ~~MSH~~ MARSH GRASS

W/E

TBK CANAL

EDGE MARSH

NG IN MARSH GRASS

TBK CANAL

W/E - EDGE MARSH GRASS

SHOT IN EDGE OF CANAL

WE @ ISLAND

TBK ISLAND

ECOL CONT'D

FILE: GRANO CHERIE

05/27/15

42

PT No	Code	ALT HT	DESCRIPTION
5384	MSH	5.85	NG ON ISLAND
5397	TBK	"	TBK ISLAND
5398	WE	"	W/E C "
5399	SHD	"	SHOT IN SHALLOW WATER
5476	WE	"	W/E C ISLAND
5477	TBK	"	TBK "
5478	MSH	"	NG ON ISLAND
5598			

RTK BASE Setup

Base @ ZR GCD-2

Trimble RB No 5257

ANT HT 2.000 METERS

CHECK ON TBM PT 4874 (see p. 38)

EST N. 379618.694 E. 3755947.891 EL. 1.644

FND N. 379618.626 E. 3755947.886 EL. 1.694

FND N. 379618.651 E. 3755947.890 EL. 1.686

File: 5257148.0

START : 02:46

END : 18:15

File: GRANDCHENEIR

05/28/15

43

ROVER UNIT

Trimble RB No 6906

ANT HT. 2.000 METERS

PT 5600

PT 5909

W/S ELEVATION

PT No CODE ANTH

5601 WS 5.85

5908 WS 5.85

FILE: GRANO CHENIER

05/28/15

44

DESCRIPTION

W/S ELEV. 0.746 @ 07:51

W/S ELEV 0.949 13.00

Line EAC² CONTG

PT No	Code	Ant HF
5602	MSH	5.85
5635	MSH	10.52
5850	EW	10.52
5851	NG	"
5874	TBK	5.85
5875	WE	"
5876	SND	10.52
5883-87	MSND	15.35

File: GRAVY CHENIER

05/28/15

45

DESCRIPTION

NG in MARSH
 "
 EDGE WOODS
 NG WOODS
 TBK CANAL @ Edge WOODS
 W/E @ CANAL @
 SHOT IN CANAL
 " "

Line T 28

PT NO	CODE	ANT HT
-------	------	--------

5888-97	SND	10.52
---------	-----	-------

Line T-29

5888-07	SND	10.52
---------	-----	-------

Line

File: Grand Chenier

05/28/05

46

Description

SHOT IN CANAL

SHOT IN CANAL

RTK BASE SETUP

Base C IR GCB-1
Trimble RB No. 5257
ANT HT. 2.000 METERS

CHECK ON PT IR GCB-2

EST N. 379603.248 E. 3755927.137 EL. 1.320

FWD N. 379603.282 E. 3755927.140 EL. 1.266

FWD N. 379603.241 E. 3755927.124 EL. 1.287

File: 52571520

START: 13:20

END

File: RA-173- RM1

06/01/15

92

ROVER UNIT

Trimble RB No 0906
ANT HT. 2.000 METERS

PT 5910

PT 6096

Line T-2

PT No	CODE	ANZ HT
5911-45	SND	10.52

File: DA-173-RH1

06/21/15

48

Description

SHOT IN OPEN WATER

Line T-3

5946-61	SND	10.52
---------	-----	-------

SHOT IN OPEN WATER

Line T-4

5962-83	SND	10.52
---------	-----	-------

SHOT IN OPEN WATER

Line T-5

5984-6000	SND	10.52
-----------	-----	-------

SHOT IN OPEN WATER

Line T-6

File: BA-173-RH1

06/01/15

AT No	Code	AN7147
6001-03	SND	10.52
6004	WE	"
6005	MSH	"
6006	WE	"
6007-11	SND	"

Description

SHOT in OPEN WATER
W/E @ ISLAND
ON "
W/E "
SHOT in OPEN WATER

Line T-7

6012-27	SND	10.52
---------	-----	-------

SHOT in OPEN WATER

Line T-11

6028-41	SND	10.52
---------	-----	-------

SHOT in OPEN WATER

~~Line T-24~~

6047	SND	10.52
------	-----	-------

~~SHOT in OPEN WATER~~

LINE IN CANAL @ T-19

File: DA-173-RH1

06/01/15

5a

Pt No Code ANT HT

Description

6041-60 SNO

10.52

SHOT IN CANAL

Line EDC1 Between T-23 & 24

6061-67 SNO

10.52

SHOT IN OPEN WATER

Line T-~~28~~³⁰

6068-85 SNO

10.52

SHOT IN OPEN WATER / CANAL

Line T-~~30~~³¹

6086-85 SNO

10.52

SHOT IN OPEN WATER

PHOTOS

06/01/15

151

PHOTO NO

PICTURE

2227 To 2233

WOODS @ Line T-35 @ Point of
ISLAND

PHOTO 2234

POST. LOUISIANA COASTAL RESTORATION
COASTWIDE REFERENCE MONITOR SYSTEM
ECOLOGICAL RESEARCH AREA
PHONE NO. 1-225-342-7308

RTK BASE SETUP

Base @ IRGBC-1

Trimble RB No 5257

ANT HT. 2.000 METERS

CHECK ON IRGBC-2

PUB N-379603.248 E-3755927.133 EL 1.320

END N-379603.265 E-3755927.136 EL 1.338

END N-379603.283 E-3755927.181 EL 1.295

File: 52571536

START: 13:05

END:

File: BA-173.RH1

06/02/25

52

Rover unit

Trimble RB No 0906

ANT HT. 2.000 METERS

PT: 6097

AT: 6168

Line T-24

File: BA173-RH1

06/02/15

PT NO CODE ANTH

Description

6098- MSH 5.85
6119

NG MARSH

6120-37 CL 10.52
~~10.615.35~~6138-⁴³ SWK 5.85

20 INCH WIDE BOARD WALK

6144 SGN 5.85

WARNING SIGN
PHOTO NO LOUISIANA COASTAL RESTORATION
COASTWIDE REFERENCE MONITOR SYSTEM
PHOTO NO 1-225-342-7308

6145 IR 5.85

1/2" STAINLESS STEEL ROD
PHOTO 2235

6146 SGN 5.85

WARNING SIGN. See ABOVE SEE PAGE 51
PHOTO NO 2234

Pipe Line INFO

PT No Code AMT HT

6147 SGN 5.85

6149 SGN 5.85

6150 SGN "

6151-58 SGN 5.85

6159-⁶⁰67 SGN 5.85

6161-67 PNE 16.15

File: BA-173-RH-1

06/02/15

54

Description

Pipe Line Warning Sign
PETROLEUM Pipe Line
Shell Pipe Line Company
PHONE 1-800-852-5614
PHOTO 2236

Photo 2237

Wood Sign SAME INFO AS ABOVE

Photo 2238

Pipe Line Sign SAME INFO AS ABOVE

WOODEN SIGN SAME INFO

TOP OF PIPE ON Pipe Line

RTIC BASE SETTOP

~~FILE NO~~ GORR ~~ANT HT~~

BASE @ IR GBC-1

TRIMBLE RB NO 5257

ANT HT 2.000 METERS

CHECK ON IR GBC-2

PUB N-379603.248 E-3755927.133 EL 1.320

END N-379603.284 E-3755927.180 EL 1.275

END N-379603.330 E-3755927.167 EL 1.339

FILE: 52571540

START: 13:16

File: DA.173-RH1

03
06/02/15

55

~~DESCRIPTION~~

POWER UNIT

TRIMBLE RB NO 0906

ANT HT 2.000 METERS

PT 6168 6165

AT 6258

C/L CANAL
Reshot PT 6042

PT NO CODE ALT HY

6170 SMO 5.85

Line T-16

TRL

6172 TRL 5.85

6173 NG 1.2

6175 NG 10.52

6219 TRL 5.85

6232-36 NG 10.52

6237-44 TRL 10.52

6245 NG 1

6249 TRL 10.52

6250 WE 10.

6251-55 SMO 10.52

FILE: BA.173-RH1

06/02

DESCRIPTION

SHOT IN CANAL

EDGE WOODS

NG WOODS

" "

EDGE WOODS

NG WOODS

EDGE WOODS

NG BRUSH

TBK CANAL

W/E @ CANAL

SHOT IN CANAL

Line RUNS ALONG
TREE LINE

RUNS ALONG TREE LINE

CONTROL POINTS

File: DA-173-RH1

06/03/15

PT NO CODE ANT. HT

Description

⁵⁶
6254 IR 5.85

Set A 10 FT IRON ROD NEAR CAMP HOUSE
FOR CONTROL POINTS

N-387175.580

HAND HELD POSITION

E-3719410.088

LAT. 29-33-26.6

EL 1.511

LONG. 89-57-13.9

⁵⁷
~~6255~~ HUB 5.85

Set 1" x 1" HUB FOR CHECK POINT

N-387160.999

HAND HELD

E-3719420.203

LAT 29-33-26.4

EL 1.694

LONG 89-57-13.7

RTK BASE Setup

File: RA-173-RH1

06/04/15

BASE @ IR GBC-1

Trimble RB No 5257

ANT HT. 2.000 METERS

POWER UNIT

Trimble RB No 0906

ANT HT. 2.000 METERS

CHECK ON IR GBC-2

PUB N. 379603.248 E. 3755927.133 EL 1.320

FWD N. 379603.269 E. 3755927.109 EL 1.278

FWD N. 379603.324 E. 3755927.113 EL 1.206

PT 6259

PT 6272

File: 52571550

START: 13:22

PIPE LINE PROBES

PT No Code ANT HT

6260-61 PPE 15.25

6263 I-1 -

I2 -

I3 -

6262 I4 -

File: RA-173-241

06/04/15

DESCRIPTION

Top of Pipe Line
See COMPANY INFO ON PAGE 54

Found ~~Hitting~~ Pipe GULF SOUTH

JUNK BROKEN ^{BE:} ~~Piece~~ OF METAL
Piece

See Pg 54 FOR PROBE ON PIPELINE
PT 6161 TO 6167

Found Pipe (~~owned unknown~~)
GULF SOUTH Pipe Line GAS Pipe Line
1-800-272-3020 / 1-800-850-0051
PHOTO NO. 2239 2240

PIPE Line Topo

PT No	CODE	ANT HT	
6264	SGN	5.85	
6265	PPE	13.40	
6266	SGN	5.85	
6267	PPE	13.40	
6268	SGN	5.85	
6269	PPE	13.40	I-5
6270	PPE	13.40	I-6
6271	PPE	13.40	I-7
-	I-8	-	

File: BA-179-RH1

06/04/15

Description

Pipe Line Sign

Top Pipe GULF SOUTH See Page 57

Pipe Line sign GULF SOUTH Pg 58

Top Pipe GULF SOUTH " "

Pipe Line sign GULF SOUTH Pg 59

DID NOT FIND Pipe Line

Top of Pipe See Pg 54 For Info

Top Pipe See Pg 54 For Info

Top Pipe See Pg 54 For Info

UNABLE To ~~Determine~~ Determine
Object. No pipe Found

Pipe Line To P6

PT No. Core Amt HT

- I9 -

- I10 -

- I11 -

- I12 -

File: BA-173-RH1

06/04/15

61

DESCRIPTION

Nothing Found

Found Junk

CRAB TRAP

Found Nothing

RTK BASE Setup

BASE @ IR GLB-2
Trimble RB No 5257
Ant HT 2.000 meters

Check on PT 4874 TBM

EST N. 379618.694 E. 3755947.891 EL. 1.644

END N. 379618.672 E. 3755947.898 EL. 1.651

Exp N. 379618. E. 3755947. EL. 1.

File. 52571580

START: 13:43

File: DA-173-RH1

08/08/15

62

Receiver unit Trimble

RB No 0906

Ant HT 2.000 meters

PT 6273

Pipe Line To Po

File: BA-173-RH1

06/08/15

PZ NO	Code	ANT HT
-	I 23	-
-	I-24	-

Description

Found Nothing

Found Nothing

RTK BASE SETUP

BASE @ PT 6256 See Pg 57

Trimble RB No 5257

ANT HT 2.000 meters

CHECK ON PT 6257 See Pg 57

EST. N. 387160.999 E. 3719420.203 EL 1.694

FM0 N. 387160.944 E. 3719420.197 EL 1.691

FM0 N. 387160.973 E. 3719420.168 EL 1.679

File: 52571581

START: 16:22

File: BA-173-RH1

06/08/15

Power UNIT

Trimble RB No 0986

ANT HT 2.000 meters

PT 6274

PT 6308

Line T-48

File: BA-173-RH1

06/08/15

PT No CODE

ALT HT

Description

6275-94 SNO

10.52

SHOT IN SHALLOW WATER

Line T-49

6295-07 SNA

10.52

SHOT IN SHALLOW WATER

RTK BASE SETUP

BASE @ IR GCB-2
TRIMBLE RB No. 5257
ANT HT. 2.000 METERS

CHECK ON PT 4874 TBM

EST N. 379618.694 E. 3755947.891 EL. 1.644
FWD N. 379618.680 E. 3755947.878 EL. 1.651
FWD N. 379618 E. 3755947 EL.

FILE: 52571590

START: 73.39

FILE: BA-173-RH1

06/09/15

ROVER UNIT

TRIMBLE RB No. 0906
ANT HT. 2.000 METERS

PT 6309

Line T50

File: BA-173-RH1

06/09/15

67

PT No Code Alt Ht

Description

6316-22 MSH 5.85

Ng MARSH

Line T36

6323 SNO 5.85

SHOT IN Edge OF CANAL

6325 SNO 10.52

" " "

6336 MSH "

Edge GRASS & MARSH

6337 WE "

W/E OF CANAL

6338-41 MSH 5.85

Ng MARSH

GAGE READING

GAGE	READING	Time
OLD	1.27	9:19
NEW	0.3	10:20

06/09/15

68

EMC IDC.
GRAND BAYOU CHENIER
MARSH RESTORATION
CONTRACT NO.

EMC IDC.
GRENADA MS, 38901

PL H. CLARK
T J. COLE
Ø T. MOORE

T. BASE-TRIMBLE RB-3 GDSS #2374
ROVER-TRIMBLE RB-2 GDSS #7074

INDEX

Pg 1-7 MISSING MAG LINE DATA

Pg 8 BASE SETUP & CHECKIN

Pg 9 INVESTIGATION TARGETS

MAL LINE GAPS
FILE: GBL-HL

LINE M7

FILE NAME: M7.RAW K
M7-0001.RAW ←
M7-0002.RAW
M7-0003.RAW

LINE M8

FILE NAME M8.RAW
M8-0001.RAW
M8-0002.RAW

LINE M4

FILE NAME M4.RAW

LINE M5

FILE NAME M5.RAW

LINE M4

FILE NAME M4.RAW

1
6-4-15

Laid BACK LINE

MAID LINE

MAG LINE GAPS

LINE M3

FILE NAME: M3.RAW

LINE M1

FILE NAME: M1.RAW

M1-0001.RAW

LINE M9

FILE NAME: M9.RAW

LINE MID

FILE NAME: MID.RAW

MID-0001.RAW

LINE M2B

FILE NAME: M2B.RAW

M2B-0001.RAW

~~LINE 2~~

MAG LINE GAPS

LINE 11

FILE NAME: M11.RAW

M11-0001.RAW

M11-0002.RAW

3

6-4-15

MAL LINE GAPS

LINE M12

FILE NAME: M12 RAW
M-0001 RAW

~~LINE~~

LINE M13

FILE NAME M13 RAW
M-001 RAW

LINE M14

FILE NAME M14 RAW

LINE M15

FILE NAME M15 RAW

LINE M16

UNABLE TO GET M16

ALL LARGE TREES & GROWN

UP

LINE M17 ~~RAW~~

FILE NAME M17 RAW

FILE NAME <LINE M18>

" "

M18 RAW

M18-001 RAW

MAG LINE GAPS

LINE M 19

FILE NAME

M 19 RAW

M 19-001 RAW

LINE M 20

FILE NAME

M 20 RAW

LINE M 21

FILE NAME

M 21 RAW DELETE

20 11

M 21-001 RAW

LINE M 22

FILE NAME

M 22 RAW

LINE M 23

FILE NAME

M 23 RAW

LINE M 24

FILE NAME

M 24 RAW

LINE M 27

FILE NAME

M 27 RAW

5

6-5-15

MAG

LINE GAPS

LINE M25

FILE NAME

M25 RAW

LINE M26

FILE NAME

M26 RAW

6
6-5-15

MAG LINE GAPS

LINE M29

LINE NAME M29.RAW

M29_0001.RAW

M29_0002.RAW

M29_0003.RAW

M29_0004.RAW

M29_0005.RAW

LINE M13

LINE NAME M13.RAW

LINE M28

LINE NAME M28_0002.RAW

M28_0003.RAW

LINE M16

FILE NAME M16.RAW

NOTE: RAW ALONG EDGE OF WOODS

M28_0004.RAW

NOTE: RAW ALONG EDGE OF WOODS

& BARGE

BASE SETUP
FILE: GBL-HL.DC

BASE @ IR GBL-1
TRIMBLE RB-3 GNSS # 2374
TRIMBLE INTERNAL ANT.
ALT. 6.562 SFT.

ROVER TRIMBLE RL-2 GNSS # 7074

126 IR 6.562 IR GBL-2
N 379603.290
E 3755927.138
EL 1.321

ERDOR

N - 0.042
E - 0.005
EL - 0.001

P. CLOUDY & HOT

8
6-7-15
CLARK & PARTY

SEE RONNIE H. BOOK IR02 ROD

SEE RONNIE H. BOOK IR02 ROD
N 379603.248
E 3755927.133
EL 1.320

4-7-15

INVESTIGATION

PT. # CODE ROD DESCRIPTION

I13 FOUND OLD WIRE
NOTHING ELSE

I14 COULD NOT FIND ANYTHING
MAYBE CRAB TRAP

I15 FOUND OLD CRAB TRAP

I16 FOUND SMALL PIECE METAL

I17 NOTHING FOUND

I18 NOTHING FOUND

I19 NOTHING FOUND

I20 CRAB TRAP

I21 NOTHING FOUND

I22 CRAB TRAP

COASTAL RESTORATION AND PROTECTION
Bayou Grande Chenier Marsh & Ridge (BA-173)

EMC Job # 15-029

CONTRACTOR: EMC, INC.
GRENADA, MS.

PARTY: J. PEE
A. GANN
C. PETTIT

INSTRUMENTS: GPS TRIMBLE RTK

- 1-2 PROBE & LOCATE FOUND P/L
- 3 SHOTS NEEDED ON PROFILE
- 4 EXTEND SECTIONS T51 & T52
- 5-6 LOCATE ABANDON P/L'S
MESA GULF COAST
- 7 CONFIRM ELEV'S @ P10 & 11
OTHER EFFORT FOUND P3 & 8
- 8 INVESTIGATE POSSIBLE P/L
I17, I23, I43, I37 & I103
- 9 SET NEW CONTROL POINTS
- 10 LOCATE EXISTING P/L
CHEV. MIDSTREAM LLC
- 11 SKETCH OF P/L CROSSINGS
- 12-13 EXTRA SHOTS ON P/L

CPRA STATE OF LA,

BASE C GBC-2

SEE R. HUTCHINSON BOOK Pg. 38 BK 2

Pg. 66 BK 2

CK 15000 TO PT #4874

Found N: 379618.673 E: 3755947.861 EL: 1.645

Pub N: 379618.694 E: 3755947.891 EL: 1.644

PT NAME	CODE	ROD	DESCRIPTION	
15001	PPE	13.30	TOP OF PIPE	P1
15002	SND	5.85	SOUNDING	
15003	PPE	13.30	TOP OF PIPE	P2
15004	SND	5.85	SOUNDING	
15005	PPE	13.30	TOP OF PIPE	P4
15006	SND	5.85	SOUNDING	
15007	PPE	13.30	TOP OF PIPE	P5
15008	SND	5.85	SOUNDING	

FILE: BA173_158_IP

JUNE 9, 2015

SET

SET UP JUNE 9, 2015

CPRa STATE OF LA,

BASE C GBC-2

CK15009 TO Pr#4874

Found N=379618.700 E=3755947.917 EL=1.649

Pub N=379618.694 E=3755947.891 EL=1.644

Pr NAME	Code	Rod	DESCRIPTION	
15010	PPE	13.30	TOP OF PIPE	P6
15011	SND	5.85	SOUNDING	
15012	PPE	13.30	TOP OF PIPE	P7
15013	SND	5.85	SOUNDING	
15014	PPE	13.30	TOP OF PIPE	P9
15015	SND	5.85	SOUNDING	
15016	PPE	13.30	TOP OF PIPE	P12
15017	SND	10.52	SOUNDING	
15018	PPE	13.30	TOP OF PIPE	P10
15019	SND	15.35	SOUNDING	
15020	PPE	13.30	TOP OF PIPE	P11
15021	SND	15.35	SOUNDING	

FILE: BA173-158-3P

JUNE 10, 2015

(NOTE: SECOND EFFORT P3 & P8 NOT FOUND)

CPRa STATE OF LA,

BASE @ GBC-2

CK 15022 TO Pt #4874

Found N=379618.683 E=3755947.911 EL=1.632

Pub N=379618.694 E=3755947.891 EL=1.644

Pt NAME	Code	Rod	DESCRIPTION
15023-25	SNDg	10.52	SOUNDINGS
15026	EGL	"	EDGE MARSH GRASS
15027-101	MSH	"	SHOTS IN MARSH
15102	EGL	"	EDGE MARSH GRASS
15103-08	SND	"	SOUNDINGS

CK 15109 TO Pt #4874

Found N=379618.692 E=3755947.889 EL=1.647

Pub N=379618.694 E=3755947.891 EL=1.644

FILE: BA1⁷³~~88~~-15B-TP

JUNE 11, 2015

CPRa STATE OF LA.

BASE C GBC-2

CK 15110 TO Pt # 4874

Found N=379618.631 E=3755947.892 EL=1.637

Pub N=379618.694 E=3755947.891 EL=1.644

Pt NAME	Code	Rod	DESCRIPTION
15111-120	MSH	10.52	MARSH RANGE T52
15121	TBK	"	T.B. CHANNEL
15122-125	SND	"	SND IN "
15126	TBK	"	T.B. CHANNEL
15127-138	MSH	"	MARSH
15139	SND		SND IN CHANNEL T51
15140-146	MSH		MARSH

CK 15147 TO Pt # 4874

Found N=379618.679 E=3755947.882 EL=1.641

Pub N=379618.694 E=3755947.891 EL=1.644

FILE: BA173-158-3P

JUNE 15, 2015

CPRa STATE OF LA.

BASE @ GBC-2

CK 15148 TO P[#]4874

FOUND N=379618.700 E=3755947.857 EL=1.639

PUB N=379618.694 E=3755947.891 EL=1.644

PT NAME	CODE	ROD	DESCRIPTION
15149	SGN	10.52	SIGN POLES WARNING
15150	"	"	" " "
15151	PPE	5.85	TOP OF 2" VISIBLE PIPE
15152	"	"	" " "
15153	DOCK	"	VALVE DOCK STATION
15154-55	PPE	5.85	TOP OF 3" PIPE
15156-57	SGN	"	SIGN POLES WARNING
15158-59	PPE	"	TOP OF VISIBLE 3" PIPE
15160	DOCK	"	VALVE DOCK STATION

FILE: BA173_158_JP

JUNE 16, 2015

ABANDON

NOTE: HIGH PRESSURE PIPELINE CROSSING
MESA GULF COAST

1-800-889-2423

VALVE GAUGES REGISTER NO
PRESSURE @ DOCK STATIONS
PIPES ARE RUSTED SEVERELY

PROBE IN CHANNEL NOT FOUND

PHOTOS: SHOT 15149 PHOTO IMG_1
" 15151 " IMG_2
" ~~15153~~ " IMG_3
" 15154 " IMG_4
" 15158 " IMG_5
" 15159 " IMG_6

CPRA STATE OF LA.

PT NAME	Code	Rod	DESCRIPTION
15161-63	PPE	15.35	TOP OF 3" VISIBLE PIPE
15164-65	SON	10.52	SIGN POLES WARNING
15165			
15166-67	PPE	10.52	" " "
15166-67	PPE	15.35	TOP OF 3" VISIBLE PIPE

File: BA173-158-IP

JUNE 16, 2015

MESA GULF COAST
SEE NOTE Pg. 5

Img_7

Img_8

C/PRA STATE OF LA.

BASE C GBC-2

CK 15168 TO PT #4874

Found N=379618.600 E=3755947.901 EL=1.638

Pub N=379618.694 E=3755947.891 EL=1.644

PT NAME	CODE	ROD	DESCRIPTION
15169	PPE	13.30	TOP OF PIPE P10
15170	SND	15.35	SNDG C "
15171	PPE	13.30	TOP OF PIPE P11
15172	SND	15.35	SNDG C "
15173	PPE	13.30	TOP OF PIPE P8
15174	SND	10.52	SNDG C "
15175	PPE	13.30	TOP OF PIPE P3
15176	SND	10.52	SNDG C "

FILE: BA173-158-3P

JUNE 17, 2015

CONFIRM ELEV.^S @ P10 & P11

3RD EFFORT PROBE & FOUND P3 & P8

CPRA STATE OF LA,

SITE VISIT

I17 OPEN WATER

PROBE TIME APPROX. 45 MIN.^S

Nothing Found

I23 - THICK MARSH GRASS

I43 / PROBE TIME APPROX. 1 HOUR

Nothing Found

I37 SMALL CHANNEL

FOUND METAL SHEET TYPE

MATERIAL

I103 OPEN WATER

FOUND CONCRETE/REBAR FORM

NO EVIDENCE OF PIPE LINE

FILE: BA173_158_IP

JUNE 17, 2015

NOTE: NO EVIDENCE OF PIPE LINE

C THESE SITE LOCATIONS

CIPRA STATE OF LA,

BASE C GBC-3 PT#6256
SEE BK 2 Pg 57

CK15177 PT#6257

Found N=387160.985 E=3719420.160 EL=1.697
Pub N=387160.999 E=3719420.203 EL=1.694

PT NAME	CODE	ROD	DESCRIPTION
C15178	1/2"	PIPE	6.562 CONTROL POINT BASE
C15179	1/2"	ROD	" " " CHECK

BASE C C15178

N=383691.425

E=3709695.593

EL=2.139

CK15180 TO C15179

Found N=383690.808 E=3709715.146 EL=1.950

SET N=383690.825 E=3709715.171 EL=1.926

C15181	5/8"	REBAR	6.562 5/8" REBAR SET FOR CONTRL
C15182	"	"	" " " "

FILE
BA173-158-3P

JUNE 18, 2015

CPRa STATE OF LA,

BASE C C15181

N= 385663.411

E= 3697186.679

EL= 1.830

CK 15183 TO C15182

FOUND N= 385643.943 E= 3697181.591 EL= 1.716

SET N= 385643.978 E= 3697181.552 EL= 1.715

PT NAME	CODE	ROD	DESCRIPTION
15184	PPE	13.30	TOP OF PIPE
15185	SND	5.85	SNDg
15186	SGN	"	GROUND C SIGN POST
15187	PPE	13.30	TOP OF PIPE
15188	NG	5.85	NGROUND MARSH
15189	SND	15.35	SNDg

CK 15190 TO 15182

FOUND N= 385643.944 E= 3697181.589 EL= 1.730

PUB N= 385643.978 E= 3697181.552 EL= 1.715

FILE: BA173-158-JP

JUNE 19, 2015

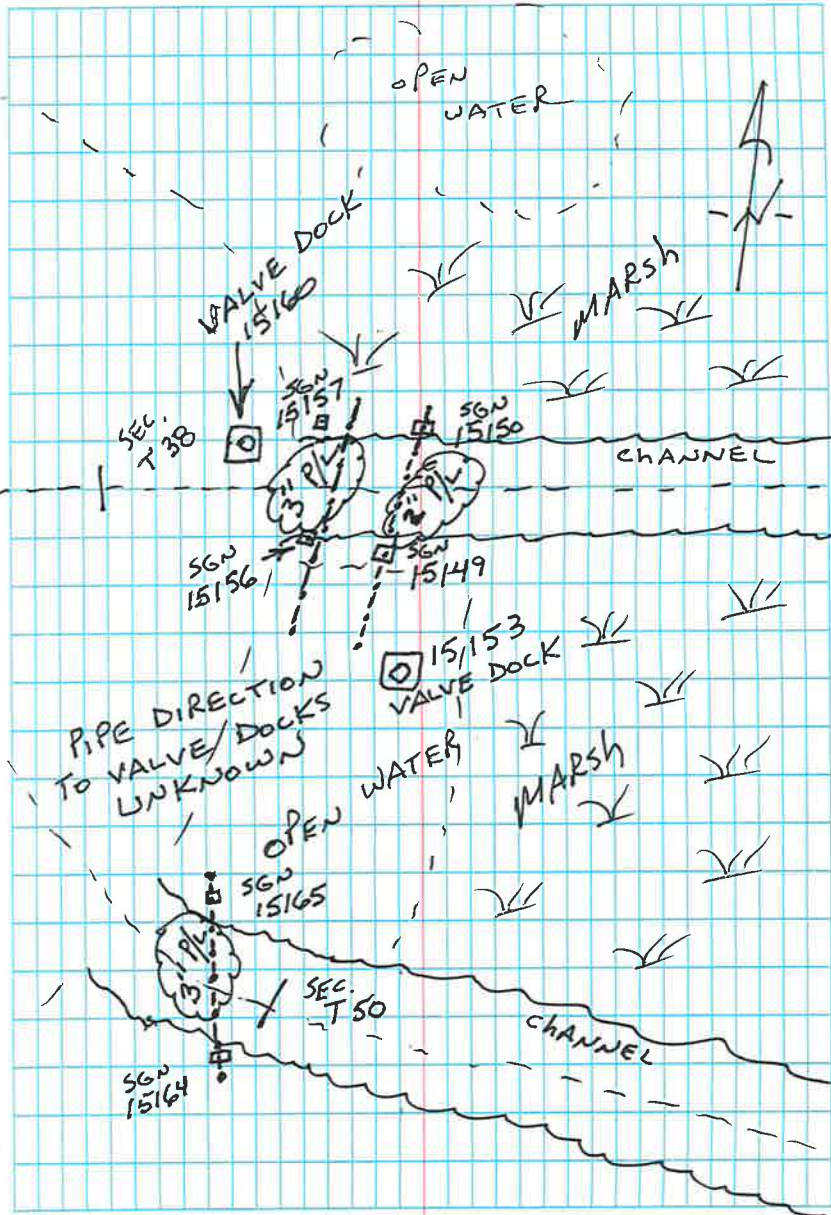
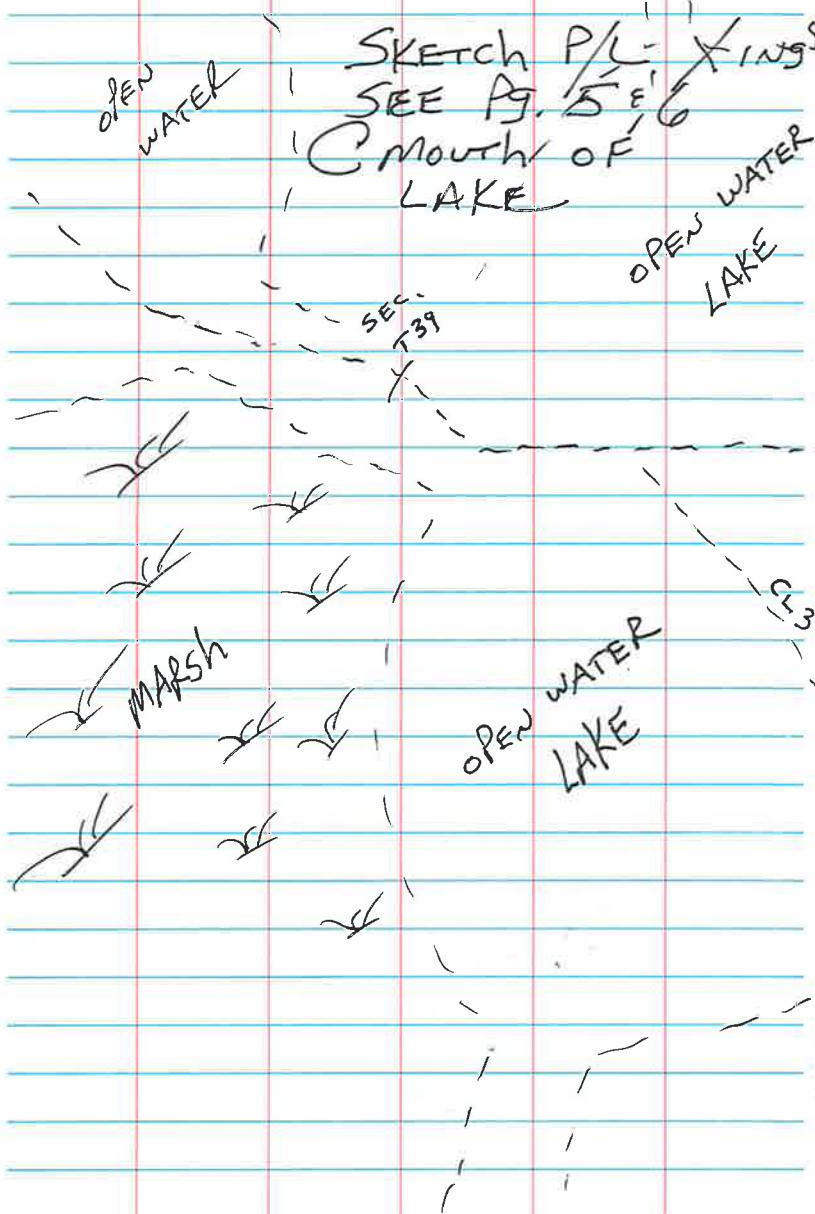
PETROLEUM PIPELINE CROSSING
CHEVRON MIDSTREAM PL LLC
1-800-762-3404

Photo: 2242



C PRA STATE OF LA.

SKETCH P/L - Kings.
SEE Pg. 5 E 6
MOUTH OF LAKE



CPRA STATE OF LA,

BASE $\odot$ GBC-2

N=379603.282

E=3755927.139

EL=1.265

CK15191 TO PT[#]4874

Found N=379618.708 E=3755947.845 EL=1.661

Pub N=379618.694 E=3755947.891 EL=1.644

PT NAME	CODE	ROD	DESCRIPTION
15192	TBK	5.85	T.B. Edge MARSH
15193	SND	"	TOE
15194	"	15.35	SNDING
15195	"	10.52	"
15196	"	"	MARSH GRASS LINE Edge
15197	"	"	SNDING
15198	TBK	5.85	T.B.
15199	TOE	10.52	TOE
15200	SND	15.35	SNDING
15201	"	"	"

FILE: BA173-15B-JP

JUNE 20, 2015

SOUTH CHANNEL

NORTH CHANNEL EAST P/L

CPRA STATE OF LA,

PT NAME	CODE	ROD	DESCRIPTION
---------	------	-----	-------------

15202	TBK	15.35	T.B.
-------	-----	-------	------

1503-04	snd	"	sndgs
---------	-----	---	-------

15205 1505-06	snd	"	"
-----------------------------	-----	---	---

I 25 Probe SEARCH NEAR CHANNEL
NO PIPE FOUND

13

FILE: BA173-158-IP JUNE 20, 2015

NORTH CHANNEL WEST P/L

BAYOU GRANDE CHENIER

MARSH / Ridge RESTORATION

BA - 173

TOPOGRAPHIC, BATHYMETRIC, MAGNETOMETER

PLAQUEMINES PARISH, LA

JUNE 2015

CONTRACT NO.

ITEM NO: BA-173

SURVEY BY: E.H.C. INC
GRENADE, MS

SURVEY BY: R. HUTCHINSON
R. HUTCHINSON JR
C. PETTIT

INDEX

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1	BASE SETUP & CHECK
2	MAG LINE ON CL-2
3	BASE SETUP & CHECK
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5-6	MAG ON INVESTIGATION POINTS
7	BASE SETUP & CHECK
8-10	MAG ON INVESTIGATION POINTS
11-	BASE SETUP & CHECK
12-17	MAG ON INVESTIGATION POINTS
18	BASE SETUP & CHECK
19-23	MAG ON INVESTIGATION POINTS

RTK BASE Setup

BASE @ IR GBC-2

TRIMBLE RB No 5257

ANT AT 2.000 meters

Check on PT 4874 sec P5 J8 Bk2

EST N. 379618.694 E. 3755947.891 EL 1.644

FRD N. 379618.699 E. 3755947.882 EL 1.641

FRD N. 379618 E. 3755947. EL

File: BA.173-RH1

06/10/15

ROVER UNIT

TRIMBLE RB No 0906

ANT AT 2.000 meters

PT 6342

MAG Lines CL-2

Line

File Name

CL-2

CL2. RAW

CL2-0001. RAW

CL2-0002. RAW

CL2-0003. RAW

CL2-0004. RAW

CL-1

CL1-0. RAW

LAY BACK LINE

06/10/15

21

RTK BASE SETUP

BASE @ IR GBC-2

Trimble RB No 5257

ANT HT. 2.000 METERS

CHECK ON PT 4874 SEE BK 2 Pg 38

EST N. 379618.684 E. 3755947.891 EL 1.644

END N. 379618.664 E. 3755947.914 EL 1.644

File

START: 13:04

06/11/15

3

FILE: DA-173-RH1

ROVER UNIT

Trimble RB No 0906

ANT HT 2.000 METERS

PT 6343

PT 6343

MAG Lines

~~PENG~~ ~~CODE~~ ~~AUT HT~~

Line File Name

CL3 CL3-RAW

06/11/15 4

INVESTIGATION POINTS

INVP

FILE

~~BE~~

I107

000-1100 RAW

000-1102 RAW

000-1103 RAW

000-1104 RAW

000-1105 RAW

I17

000-1113 RAW

000-1114 RAW

000-1115 RAW

000-1116 RAW

000-1117 RAW

000-1118 RAW

~~IF~~

000-1120 RAW

000-1121 RAW

06/11/15

5

PIECE OF CHAIN

CRAB TRAP

MAG Invest Points

INVEST

File

I 103

000-1129. RAW

000-1130. RAW

000-1131. RAW

000-1133. RAW

I 11

000-1141. RAW

000-1142. RAW

000-1143. RAW

000-1144. RAW

I 10

000-1153. RAW

000-1154. RAW

000-11⁵⁶~~53~~. RAW

000-115~~5~~. RAW

4

LAY BACK LINE 0002. RAW

in

7

0003. RAW

06/11/15

6

CABLE

CRAV POT

SCRAP IRON OFF A OLD BOAT

RTK BASE SETUP

BASE C ZRGDC-1

Trimble RB No 5257

ANT HT. 2.000 meters

Check on PT 4874 TBM ^{Sec BE 2} PS38

EST. N. 379618.694 E. 3755947.891 EL. 1.644

END. N. 379618.694 E. 3755947.854 EL. 1.642

File: 52571661

START: 13:27

File: BA-173-RH1

06/15/15

7

POWER UNIT

Trimble RB No 0906

ANT HT. 2.000 meters

PT 6344

MAG INVEST POINTS

ENV M

File

I-23

000-1232. RAW

000-1233. RAW

000-1235. RAW

000-1236. RAW

I-43

000-1254. RAW

000-1255. RAW

000-1256. RAW

000-1257. RAW

I-37

000-1307. RAW

000-1308. RAW

000-1310. RAW

000-1311. RAW

I-113

000-1329. RAW

000-1330. RAW

000-1331. RAW

000-1332. RAW

File: BA-173. RH1

06/15/15

CABLE

DID NOT FIND ANYTHING
NO EVIDENCE OF PIPE LINE

SCRAP IRON FROM BOAT

CRAB TRAP

POINT CLOSE TO BANK WITH TREES
IN WATER

MAG INVEST POINTS

Inv Pt

File

I 114

000-1342. RAW

000-1343. RAW

000-1344. RAW

000-1358. RAW

I 112

000-1421

000-1423. RAW

000-1424. RAW

000-1425. RAW

000-1426. RAW

I 27

000-1434. RAW

000-1437. RAW

000-1438. RAW

000-1439. RAW

I 108

000-1446. RAW

000-1447. RAW

000-1448. RAW

000-1449. RAW

File: BA173. RH1

06/15/15

9

CRAB TRAP

Delete X

SCRAP IRON

~~CRAB~~ CRAB POT

CRAB TRAP

MAG INVEST POINTS

INV. PT

FILE

I 139

000-1505. RAW

000-1507. RAW

000-1508. RAW

000-1509. RAW

I 19

000-1519. RAW

000-1520. RAW

000-1521. RAW

000-1522. RAW

I 18

000-1526. RAW

000-1527. RAW

000-1528. RAW

000-1529. RAW

LAY BACK - 0004

LAY BACK - 0005

LAY BACK - 0006

FILE: BA-173. RH

06/15/15

10

CRAB TRAPS

CRAB TRAP IN
CHANNEL.

SCRAP IRON OFF BOAT

Delete *

NOTE: ~~I 115~~, ~~I 116~~
UNABLE TO RUN
DUE TO BARGE PARKED
ON LINE OF R NEAR
TARGET.

RTK Base Setup

BASE @ IA GBC-1

Trimble R8 No. 5257

ANT HT. 2.000 meters

Check on PT 4874 see Bk 2 p 38

EST N. 379618.694 E. 3755947.851 EL 1.644

END. N. 379618.644 E. 3755947.853 EL 1.650

File: 5257167

File: BA.173_RH1

06/16/15

11

Rover unit

Trimble R8 0906

ANT HT. 2.000 meters

PT 6345

MAG INUCST POINTS

INV. PT

File

LAY BACK - 0007. RAW

LAY BACK - 000. B. "

I 225

000 - 0940. RAW

000 - 0941. RAW

000 - 0942. RAW

000 - 0944. RAW

I 105

000 - 0947. RAW

000 - 0948. RAW

000 - 0950. RAW

000 - 0951. RAW

I 109

000 - 0959. RAW

~~000 - 100~~

~~59. 000. RAW~~

000 - 0959 - 0001. RAW

000 - 1002. RAW

000 - 1003. RAW

File: BA-173-R111

06/16/15

12

CRAB TRAPS.

Point Close To Bank

CRAB TRAP.

Point Close To BANK OF CAKAL

CRAB TRAP

MAG INVEST. POINTS

INVT PT

File

I 228⁴

000-1009. RAW

000-1010. RAW

000-1011. RAW

000-1012. RAW

I 106

000-1027. RAW

000-1028. RAW

000-1029. RAW

000-1030. RAW

I 104

000-1034. RAW

000-1035. RAW

000-1036. RAW

000-1037. RAW

I 90

000-1044. RAW

000-1045. RAW

000-1047. RAW

000-1050. RAW

File: DA-173. RH1

06/16/15

13

CRAB TRAP

WIRE/CABLE

WIRE/CABLE

SCRAP IRON OFF BOAT

MAG INVEST. POINTS

PT

File.

I30

000-1107-RAW

000-1108-RAW

000-1109-RAW

000-1110-RAW

000-1112-RAW

I35

000-1127-RAW

000-1127-00001-RAW

000-1129-0001-RAW

000-1130-0001-RAW

I110

000-1136-RAW

000-1137-RAW

000-1138-RAW

000-1139-RAW

File: BA-123-RH1

06/16/15

14

CRAB POT / SCRAP IRON

JUNK

CABLE

MAG INVEST. PT

File: BA-173-RA1

06/16/15

15

INV PT

File

I2

000-1144-0001-RAW

000-1145-RAW

000-1147-RAW

000-1147-0001-RAW

WIRE

I102

000-1152-RAW

000-1153-0001-RAW

000-1154-0001-RAW

000-1155-RAW

SCRAP IRON

I36

000-1203-RAW

000-1209-RAW

000-1210-RAW

000-1211-RAW

STEEL PLATE

I111

000-1221-RAW

000-1223-RAW

000-1224-RAW

000-1225-RAW

SCRAP IRON

May Zuest Points

INUPAT

File

I 9

000-1333-0001. RAW

000-1334. RAW

000-1335. RAW

000-1336. RAW

I 01

000-1343-0001. RAW

000-1344-0001. RAW

000-1345. RAW

000-1346. RAW

I 100

000-1352. RAW

000-1352-0001. RAW

000-1353. RAW

000-1354. RAW

I 25

000-1420. RAW

000-1420-0001. RAW

000-1421-0001. RAW

000-1422. RAW

File: BA-173-RH1

06/16/15

NOTHING FOUND

FOUND NOTHING

TRAP TRAP

~~TRAP~~ UNKNOWN

Maj INVEST Points

INVT

File

I 221

000-1438-0001. RAW

000-1439-0001. RAW

000-1440. RAW

000-1441. RAW

I 222

000-1446-0001. RAW

000-1447-0001. RAW

000-1448-0001. RAW

000-1449-0001. RAW

000-1457. RAW

I 223

000-1509. RAW

000-1510. R

000-1511. RAW

000-1512. RAW

File: Bq-173. RH1

06/16/15

17

CRAB TRAP

CRAB TRAP

* Delete

wire Basket & cable

RTK BASE

BASE @ IN GBL-2
Trimble R8 No. 5257
ANT HT 2.000 METERS

CHECK ON PT 4874 SEE BAZ Pg 38
EST N. 379618, 694 E. 3755947.891 EL. 1.644
FWD N. 379618, 655 E. 3755947.912 EL. 1.657

File: 52571680

START 13:12

File: BA-173-RH1

06/17/15

18

Rover unit
Trimble R8 No. 0906
ANT HT. 2.000 METERS

PT 6347

MAG INVEST POINTS

TRV PT

File

Lay Back - 0009. RAW

Lay Back - 0010. RAW

I 220

000-0915. RAW

000-0916. RAW

000-0917. RAW

000-0918

I 218

000-0925. RAW

000-0926. RAW

000-0927. RAW

000-0928. RAW

I 219

000-0934. RAW

000-0936. RAW

000-0937. RAW

000-0937-0001. RAW

File: BA-173-RH1

06/17/15

19

CRAB TRAPS *

~~PIPE LINE~~

CRAB TRAPS

CRAB TRAPS

NOTE:

LOTS OF CRAB
TRAPS IN
AREA

MAJ INVEST Points

I 213

File

I 213

000-0952. RAW

000-0953. RAW

000-0954. RAW

000-0955. RAW

I 214

000, 1004. RAW

I 215

000-1012.0001. RAW

000-1013. RAW

000-1014. RAW

000-1015. RAW

I 216

000-1024. RAW

000-1025. RAW

000-1026. RAW

000-1027.0001. RAW

DELETE

000-1028.0001. RAW

File: QA-173-RH1

06/17/15

20

CRAB TRAPS

~~ABANDON~~ Pipe Line

Found CABLE

SEEMS TO BE OLD SUNK PLATFORM
WITH ABANDON Pipe Line

PHOTO 2241

~~ABANDON~~

ABANDON Pipe Line

~~Found CABLE~~ Found NOTHING.

AFTER PROBING

to SCRAP

AFTER PROBING NOTHING Found

MAY INVEST POINTS

INV PT

File.

I 217

000.1042. RAW

000.1043. RAW

000.1044.0001. RAW

000.1045.0001. RAW

I 212

000.1058. RAW

000.1058.0001. RAW

000.1100.0001. RAW

000.1101. RAW

I 209

000.1241. RAW

000.1242. RAW

000.1242.0001. RAW

000.1244. RAW

I 210

000.1250. RAW

000.1251. RAW

000.1252. RAW

000.1253. RAW

File: BA-173- RH1

06/17/15

CRAB TRAP

CRAB TRAP

CRAB TRAP

Possible Pipe Line (No Pipe)
Probe For 30 minutes.
~~Set~~ SUNKEN CRAB TRAP

IRAS INVEST POINTS

Inv. Pt	File
I211	000-1255-001. RAW 000-1256-001. RAW 000-1257-001. RAW 000-1258. RAW
I200	000-1304. RAW 000-1305. RAW 000-1306. RAW 000-1307-0001. RAW
I201	000-1312-0001. RAW 000-1313. RAW 000-1314. RAW 000-1315. RAW
I202	000-1323. RAW 000-1324. RAW 000-1325. RAW 000-1326. RAW

File: BA-123. RA1

06/17/15

22

Possible Pipe Line
Probe For 30 minutes Nothing
Found

Pipe Like (Probe
Found Nothing)

~~CRAB TRAP~~ SUNKEN BOAT

UNKNOWN OBJECT IN DEEP WATER

MAJ INVEST Points

Inv. #

File

I203

000-1330-0001-RAW

000-1331-0001-RAW

000-1332-RAW

000-1333-0002-RAW

000-1333-0003-RAW

I204

000-1337-RAW

000-1338-RAW

000-1339-RAW

000-1339-0001-RAW

I205

000-1342-0001-RAW

000-1343-0002-RAW

000-1344-0002-RAW

000-1344-0003-RAW

I206

CRAB TRAP NEAR BALT

I207

" " " "

I208

000-1404-RAW

File: BA173-RA1

06/17/15

23

SUNKEN ~~CRAB~~ CRAB TRAP

CRAB TRAP SUNK

Pipe-Line Crossing

CRAB TRAP

~~AA Ag. Inquest Points~~

BASE setup

~~For AT~~

File

BASE @ 6256 GBC-3

TRIMBLE RB No.

ANT HT 2.000 METERS

CHECK ON AT 6257

EST. N. 387160.999 E. 3719420.203 EL. 1.694

FM. N. 387160.875 E. 3719420.146 EL. 1.693

File: 52571690

START @ 13:28

File: BA-173-RH1

06/17/15

24

AT 6348

~~Pipe Line Probes~~

PTTB Code ANT HZ

BASE @ IR GBC-2
TRINDLE RB No 0906
ANT H7 2.000 meters

Check on PT 4874 see Ak 2 Pg 38

EST. N. 379618.694 E-3755947.891 EL. 1.644
END. N. 379618.691 E-3755947.843 EL. 1.639

File: BA-173-R41

06/18/15

ROVER unit

TRINDLE RB No

ANT H7

PT 6349

MAG INVEST POINTS

INV PT

F

PT NO

CODE

ANT/HT

I 213

-

-

I 215

-

-

I 216

-

.

I 220

-

-

File: RA-173-RA1

06/20/15

26

Description

Found CABLE

AFTER PROBING NOTHING WAS FOUND

NOTHING FOUND AFTER PROBING

CHANGE SOURCE TO CRAB TRAP