APPENDIX F: Magnetometer Survey Report

MAGNETOMETER SURVEY REPORT
DUCKS UNLIMITED
NORTH CATFISH LAKE MARSH CREATION (TE-112)
PROJECT NO.: US-LA-207-1

Professional Services

T. Baker Smith, LLC
TBS Project Number 2019.0193

Provided to
Ducks Unlimited, Inc.

Report Date
July 28, 2020

PREFACE

This Magnetometer Survey Report was prepared for Ducks Unlimited, Inc. (DU) by T. Baker Smith, LLC (TBS) in response to the above referenced project. TBS services were contracted through DU under the care of the Natural Resource and Conservation Service (NRCS). The purpose of this survey is to gather all magnetic anomaly data necessary to complete the design of this project, and present said data to DU. This report was completed on July 28, 2020 and survey operations overseen by TBS Senior Project Manager Matthew Stevens and Senior Project Manager and Joshua Bridges

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INTRODUCTION

DU retained TBS to provide the following magnetometer survey on the North Catfish Lake Marsh Creation (TE-112) project. This project was broken up into four phases designated by DU. The magnetometer surveys were completed by TBS on:

Phase 1: May 22, 23 & 24 of 2019
Phase 2: February 17 & 18 of 2020
Phase 3 & 4: May 12 of 2020

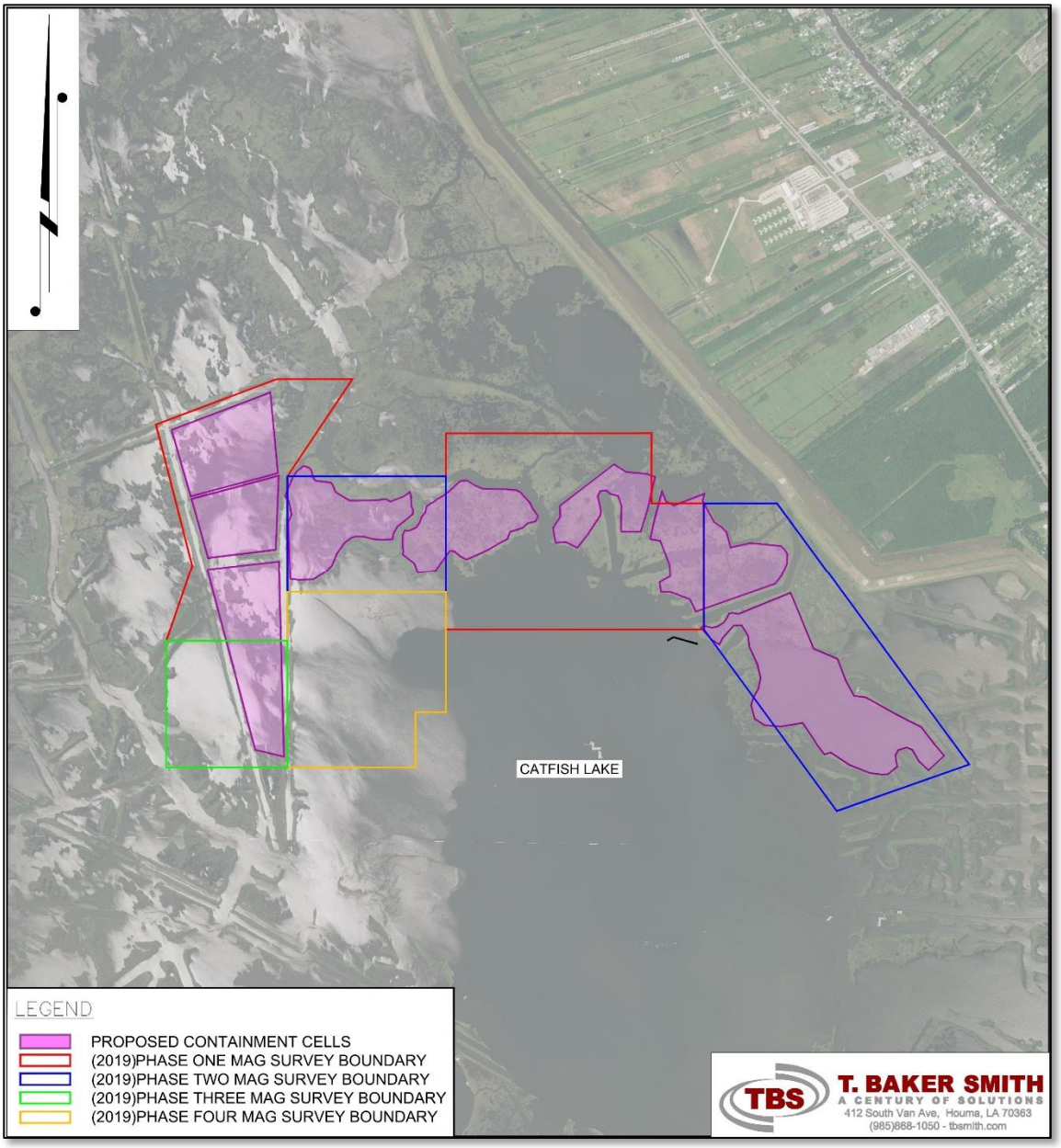


Figure 1: North Catfish Lake Project Survey Boundaries

METHODS

Project Control

Trimble R10 base stations, Trimble R10 rover units, and Trimble TSC-7 data collectors were used to establish control and collect all data for the project. All survey data was recorded using established control from benchmark "TE112-SM-01" located near the project area. The established horizontal and vertical data for the monument is in Louisiana South Zone (1702) NAD 83, U.S. Survey feet, with vertical datum of NAVD 88 (Geoid 12A). The published values for the control points were used as control for all survey work performed.

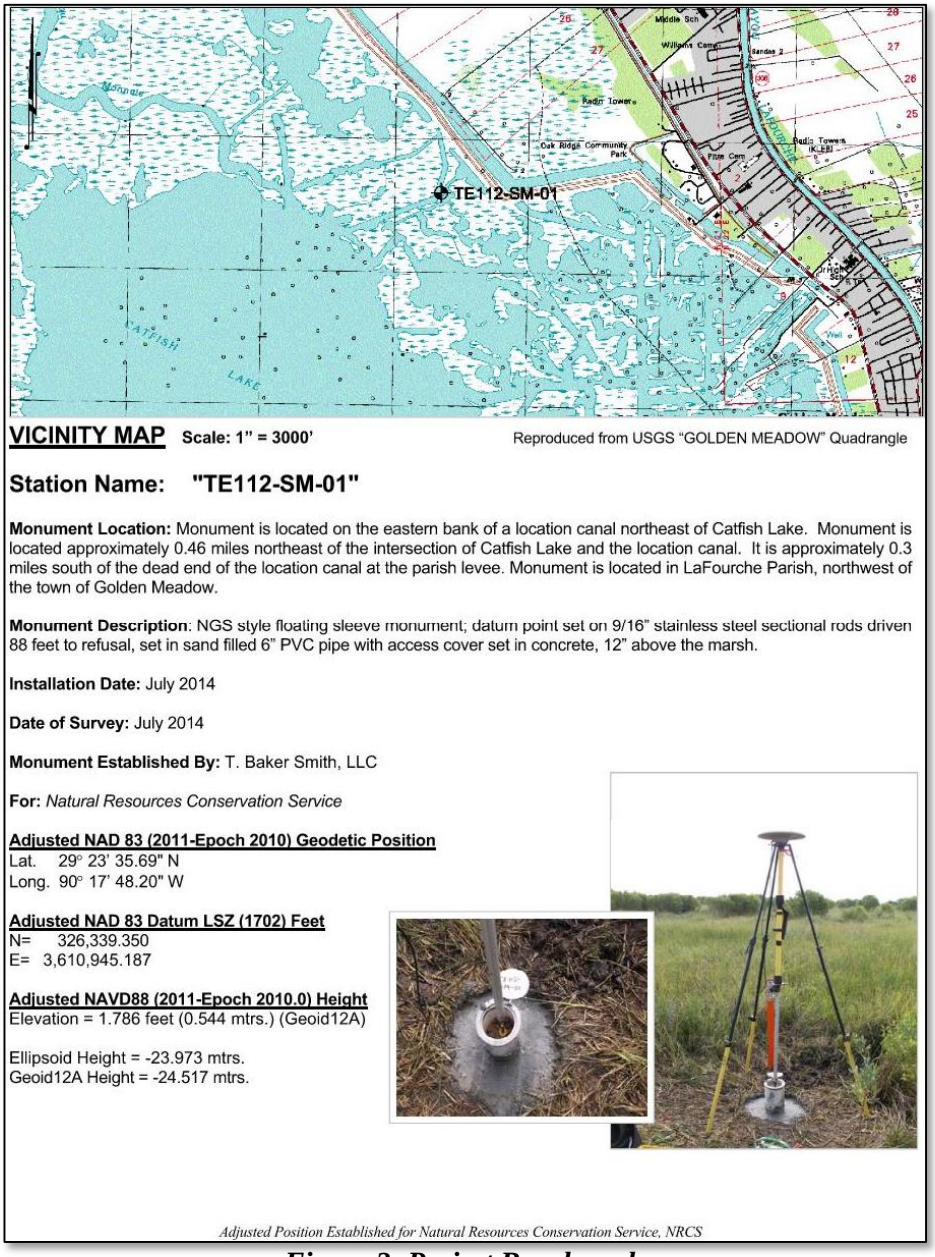


Figure 2: Project Benchmark

Hydrographic Survey

The magnetometer survey was conducted aboard a 16' airboat with a two-man survey crew. TBS survey instruments utilized during this survey consisted of a Trimble R10 RTK GPS unit and a Geometrics 882 cesium magnetometer integrated into Hypack navigation and data collection software on the on-board computer. The magnetometer sensor was deployed 55.5 feet behind the positioning antenna and 2.5 feet port and was towed inside of a retrofitted kayak modified for this purpose. Utilizing the kayak allows the operator to easily transition from water to marsh terrain. Transect lines for the phases 1-4 consisted of both north-south and east west transects. The east-west transects were spaced at 500' apart, and the north-south transects were also spaced at 500' apart.

Offset calibration transects were performed daily to qa/qc the horizontal offsets of the magnetometer from the positioning antennae. Opposing transects were run perpendicular to a known pipeline, and the peak magnetic targets were processed to check for horizontal positioning accuracy.

All Magnetometer data was digitally recorded by the HyPack survey navigation software mentioned above. The magnetometer was set to a collection frequency of 2 Hz. The data was processed in HyPack to obtain the horizontal position, signature type, duration in feet and gamma height of each anomaly. The HyPack processing software allows the user to view the magnetic data as gamma values along a continuous survey line. The user is able to detect anomalies as deflections from the normal magnetic field and note the position based on the center of the signature. Each magnetic anomaly is interpreted based on its gamma height, signature type and actual field observations.

Equipment

- 16' Airboat
- Trimble R10 RTK System
- Geometrics 882 Cesium Magnetometer

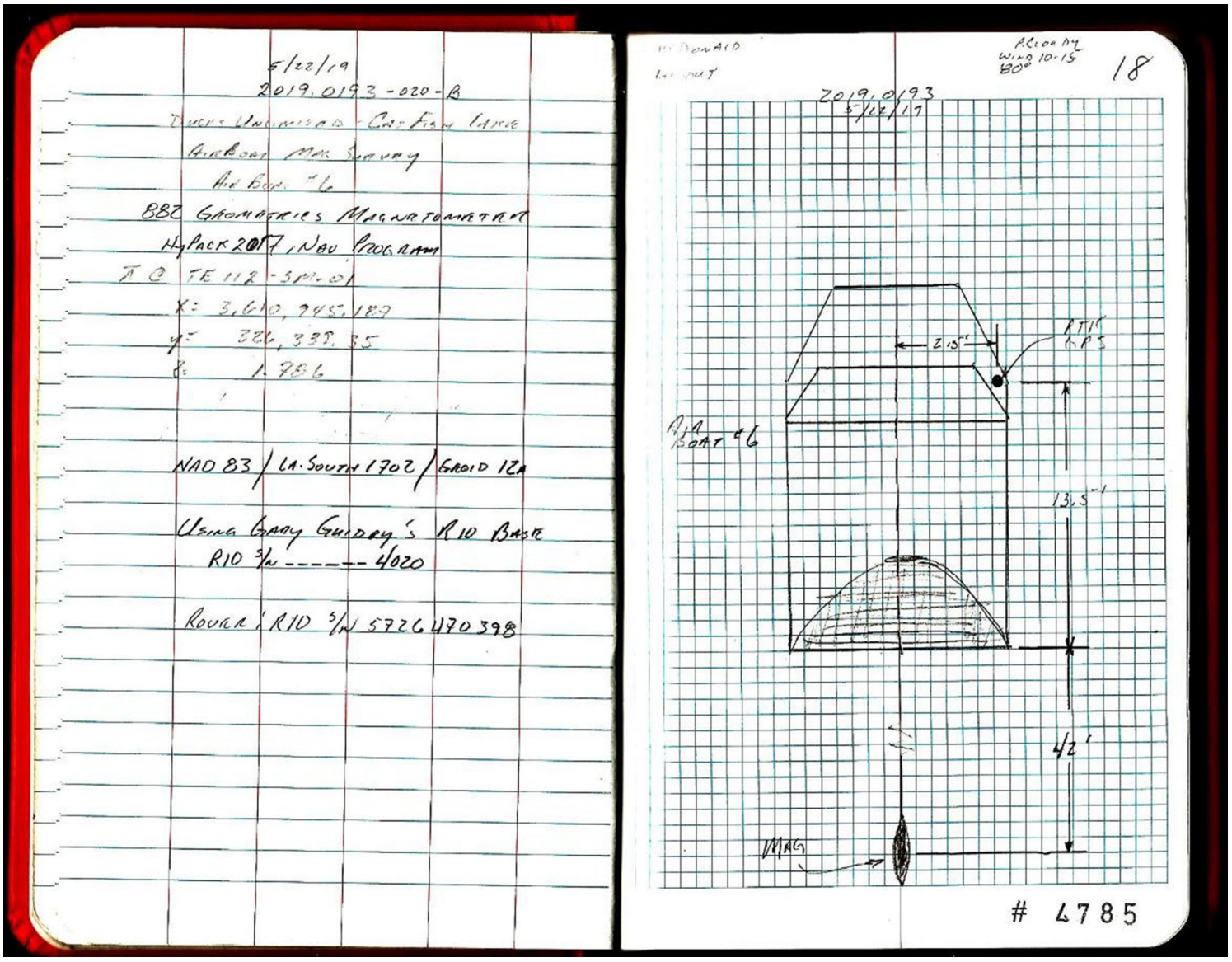
RESULTS

Note:
TBS uses pipeline locating equipment which may include magnetometers and/or gradiometers in an effort to locate underground and underwater pipelines in advance of drilling, construction, or abandonment activities. While reasonable efforts are made to locate all the pipelines, the equipment used and the characteristics of pipelines themselves make it practically impossible to guarantee total success. Accordingly, it is incumbent upon the operators and/or contractors conducting operations including dredging and excavation to conduct their operations with extreme caution and recognize that hazards in addition to those detected and marked by TBS may exist within the areas of operation in spite of our most diligent efforts.

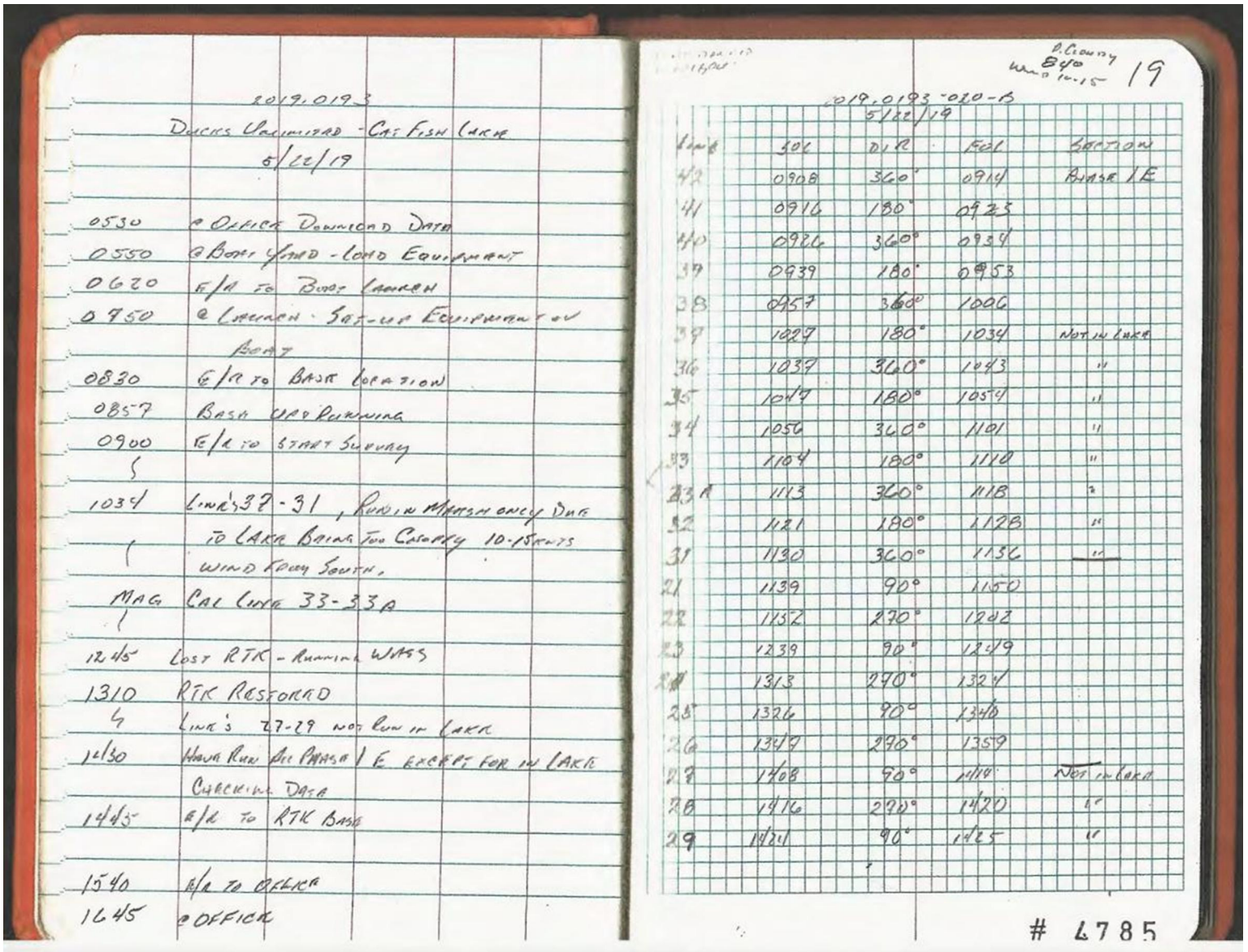
Pipelines shown on the maps come from various sources including LA-DNR, TBS survey data, and data from other sources. TBS takes no responsibility for any pipelines that may be unintentionally omitted from these maps.

The results of the magnetometer survey, and subsequent anomaly investigation survey, can be found on the following drawings:
PHASE ONE WEST MAGNETOMETER SURVEY.DWG
PHASE ONE EAST MAGNETOMETER SURVEY.DWG
PHASE TWO MAGNETOMETER SURVEY.DWG
PHASE THREE MAGNETOMETER SURVEY.DWG
PHASE FOUR MAGNETOMETER SURVEY.DWG

ATTACHMENT "A"
MAGNETOMETER SURVEY
FIELD NOTES



Phase 1
05-22-19
1 of 2



2019.0193
Ducks Unlimited - Cat Fish Lake
5/22/19

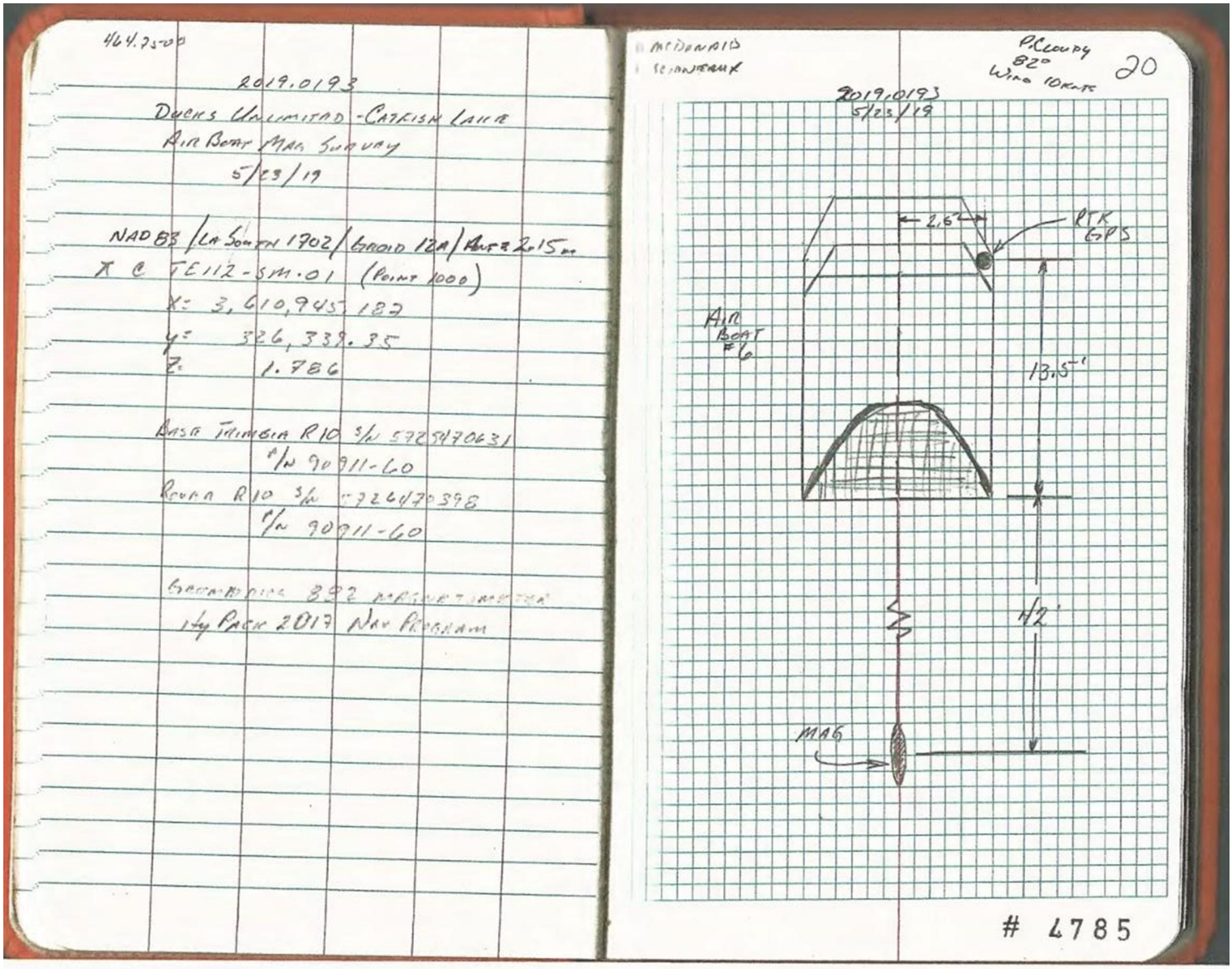
0530 @ Office Download Data
0550 @ Boat Yard - Load Equipment
0620 E/R to Boat Launch
0750 @ Launch - Set-up Equipment on Boat
0830 E/R to Base Location
0857 Base Was Running
0900 E/R to Start Survey
1034 Line's 32-31, Run in Marsh only Due to Lake Being Too Choppy 10-15 knts Wind from South.
MAG Cal Line 33-33A
1245 Lost RTK - Running Waas
1310 RTK Restored
Line's 27-29 not Run in Lake
1430 Have Run All Phase 1 E except for in Lake Checking Data
1445 E/R to RTK Base
1540 E/R to Office
1645 @ Office

2019.0193-020-6
5/22/19

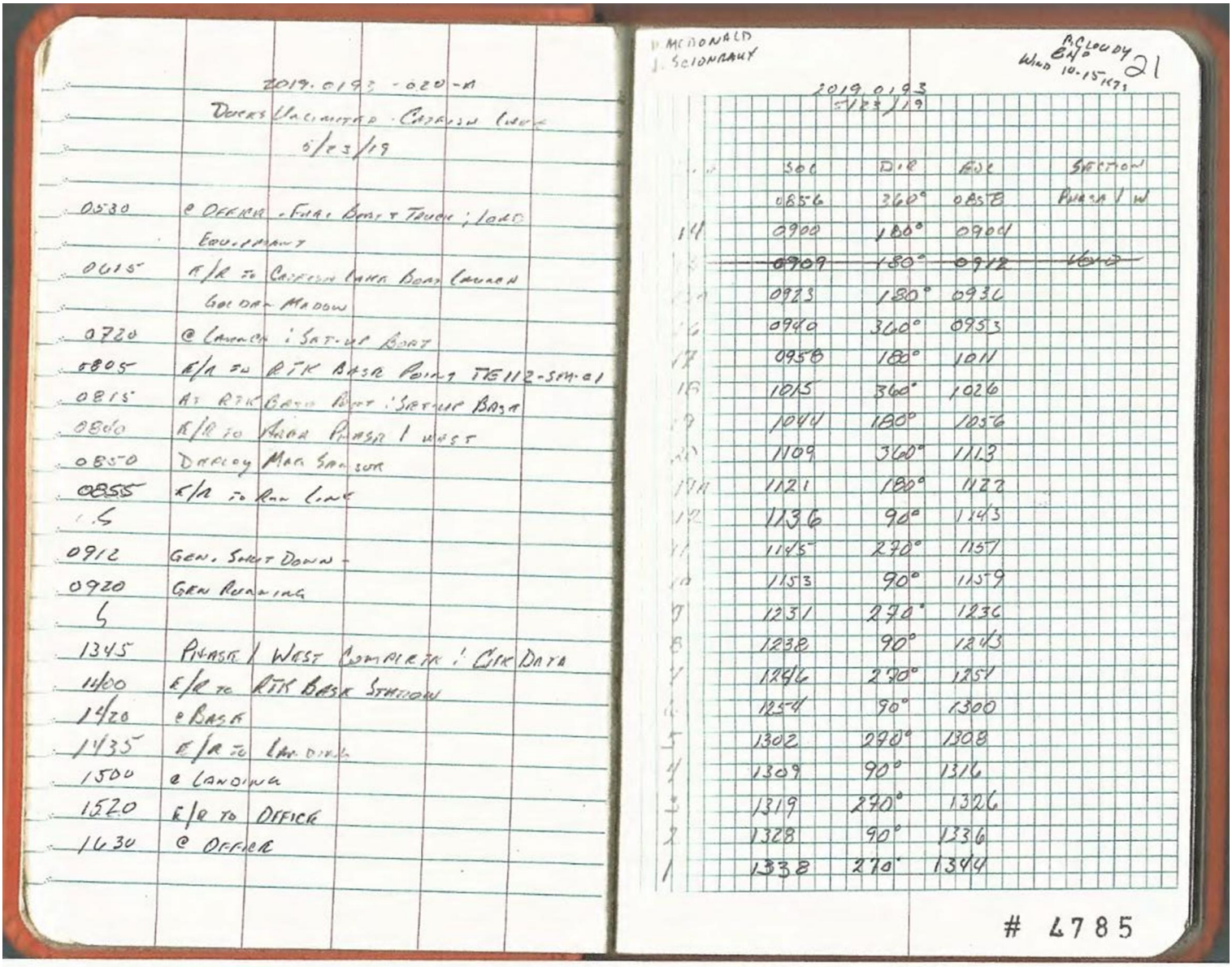
Line #	Tot	Dur	Est	Stations
42	0908	360°	0914	Phase 1E
41	0916	180°	0923	
40	0926	360°	0934	
39	0939	180°	0953	
38	0957	360°	1006	
37	1027	180°	1034	Not in Lake
36	1039	360°	1043	"
35	1047	180°	1054	"
34	1056	360°	1101	"
33	1104	180°	1110	"
33A	1113	360°	1118	"
32	1121	180°	1128	"
31	1130	360°	1136	"
21	1139	90°	1150	
22	1152	270°	1202	
23	1239	90°	1249	
24	1313	270°	1324	
25	1326	90°	1340	
26	1347	270°	1359	
27	1408	90°	1419	Not in Lake
28	1416	270°	1420	"
29	1421	90°	1425	"

4785

Phase 1
05-22-19
2 of 2



Phase 1
05-23-19
1 of 2



2019.0193 - 020 - M
DUCKS UNLIMITED - CATFISH LAKE
6/23/19

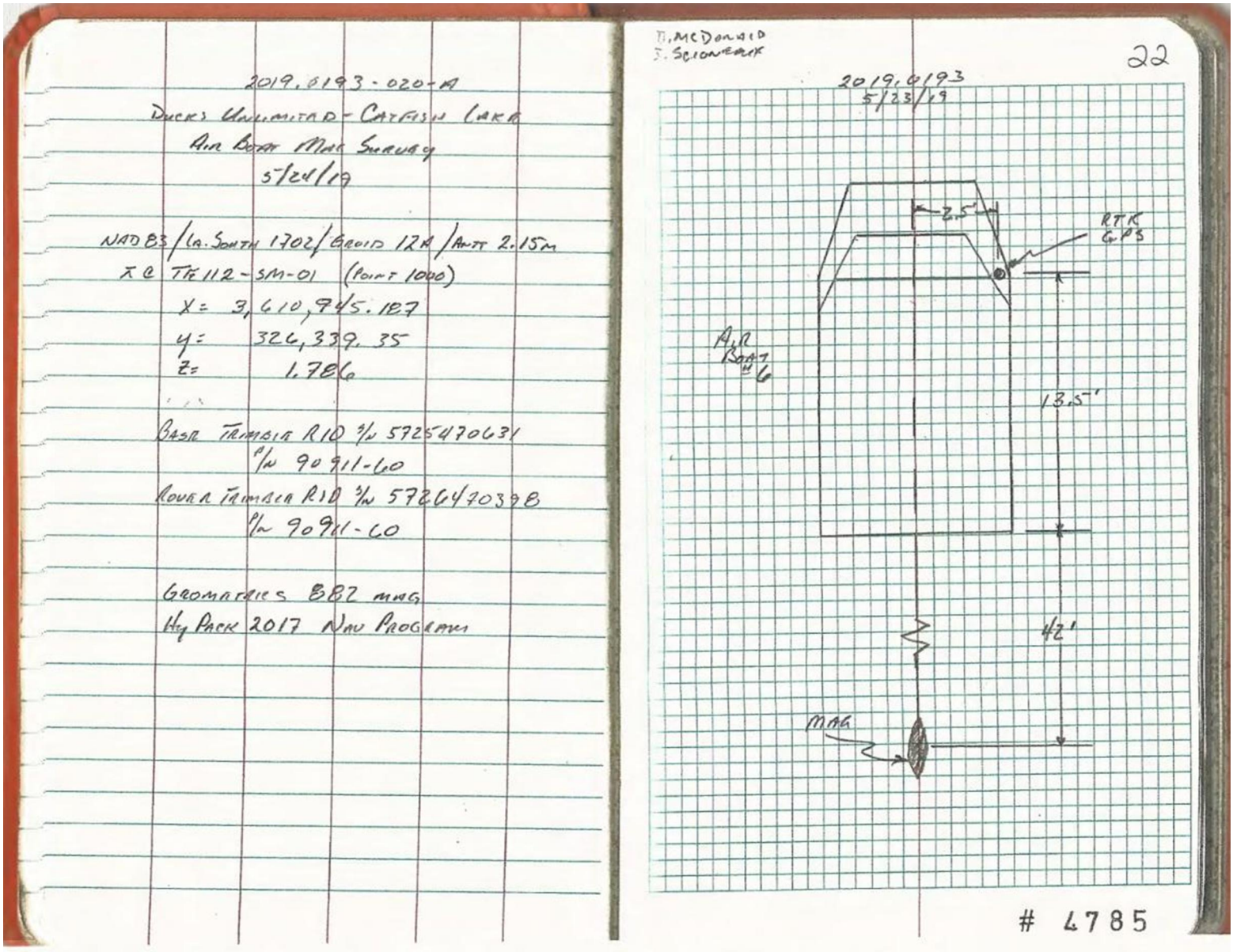
0530 @ OFFICE - FUEL BOAT & TRUCK ; LOAD EQUIPMENT
0615 A/R TO CATFISH LAKE BOAT LAUNCH GOLDEN MEADOW
0720 @ LAUNCH ; SAT-UP BOAT
0805 A/R TO RTK BASE POINT TE112-SM-01
0815 AT RTK GPS POINT ; SET UP BASE
0840 A/R TO AREA PHASE 1 WEST
0850 DAILY MAG SENSOR
0855 A/R TO RUN LINE
0912 GEN. SHUT DOWN -
0920 GEN RUNNING
1345 PHASE 1 WEST COMPLETE ; QIK DATA
1400 A/R TO RTK BASE STATION
1420 @ BASE
1435 A/R TO LANDING
1500 @ LANDING
1520 A/R TO OFFICE
1630 @ OFFICE

J. MCDONALD
J. SCIONEAUX
R. CLOUD
BH°
WIND 10-15 KTS
21
2019.0193
6/23/19

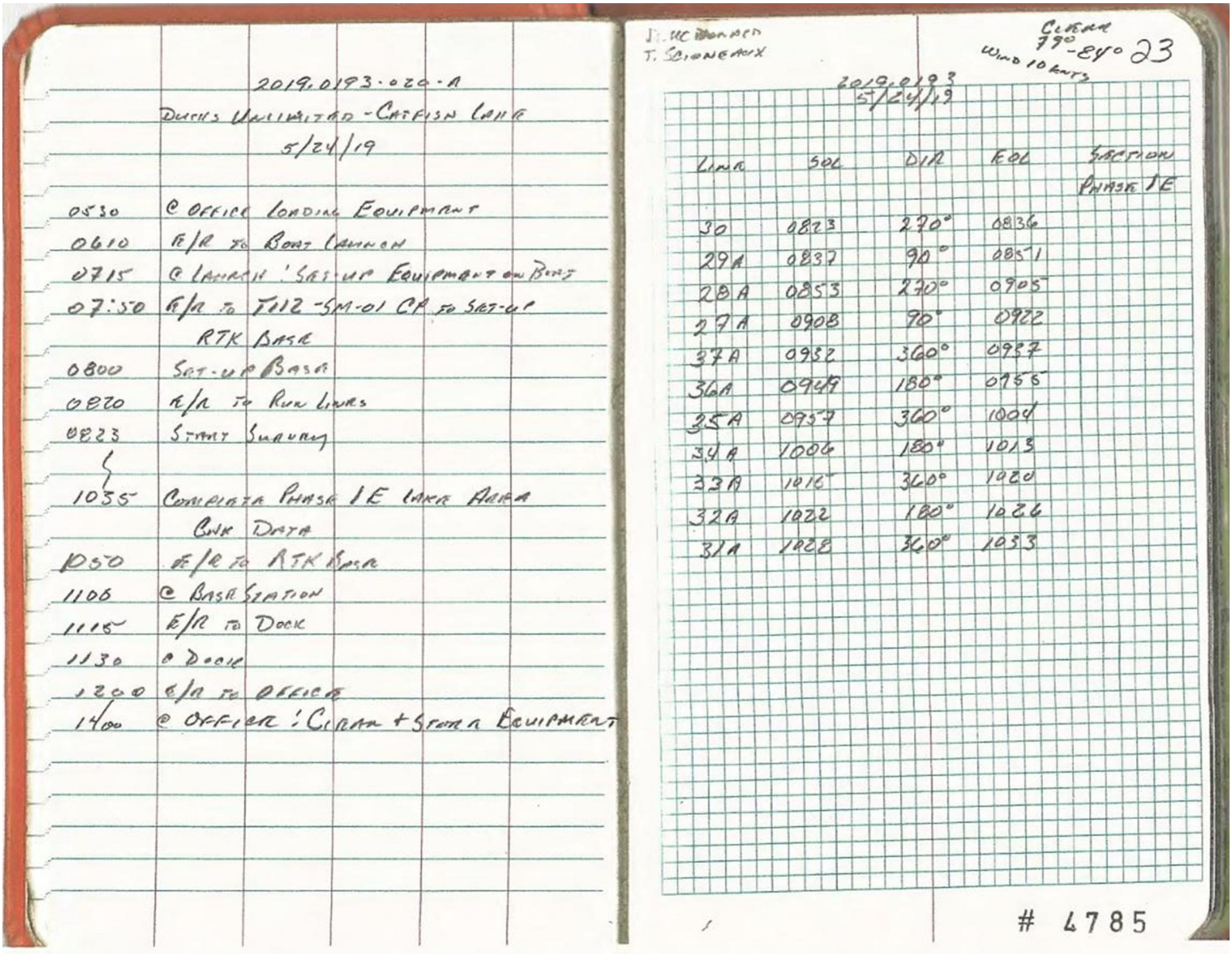
SOL	DIR	EOL	SECTION
0856	360°	0858	PHASE 1 W
0900	180°	0904	
~~0909~~	~~180°~~	~~0912~~	~~LOOP~~
0923	180°	0936	
0940	360°	0953	
0958	180°	1011	
1015	360°	1026	
1044	180°	1056	
1109	360°	1123	
1121	180°	1132	
1136	90°	1143	
1145	270°	1157	
1153	90°	1159	
1231	270°	1236	
1238	90°	1243	
1246	270°	1254	
1254	90°	1300	
1302	270°	1308	
1309	90°	1316	
1319	270°	1326	
1328	90°	1336	
1338	270°	1344	

4785

Phase 1
05-23-19
2 of 2



Phase 1
05-24-19
1 of 2



2019.0193-022-A
DUCKS UNLIMITED - CATFISH LAKE
5/24/19

0530	@ OFFICE LOADING EQUIPMENT
0610	E/R TO BOAT LANDING
0715	@ LANDING SET-UP EQUIPMENT ON BOAT
07:50	E/R TO TIE2-SM-01 CP TO SET-UP RTK BASE
0800	SET-UP BASE
0820	E/R TO RUN LINES
0823	START SURVEY
1035	COMPLETE PHASE 1E LAKE AREA LINE DATA
1050	E/R TO RTK BASE
1106	@ BASE STATION
1115	E/R TO DOCK
1130	@ DOCK
1200	E/R TO OFFICE
1400	@ OFFICE ; CLEAN + STORE EQUIPMENT

J. MCDONALD
T. SCIONEAUX

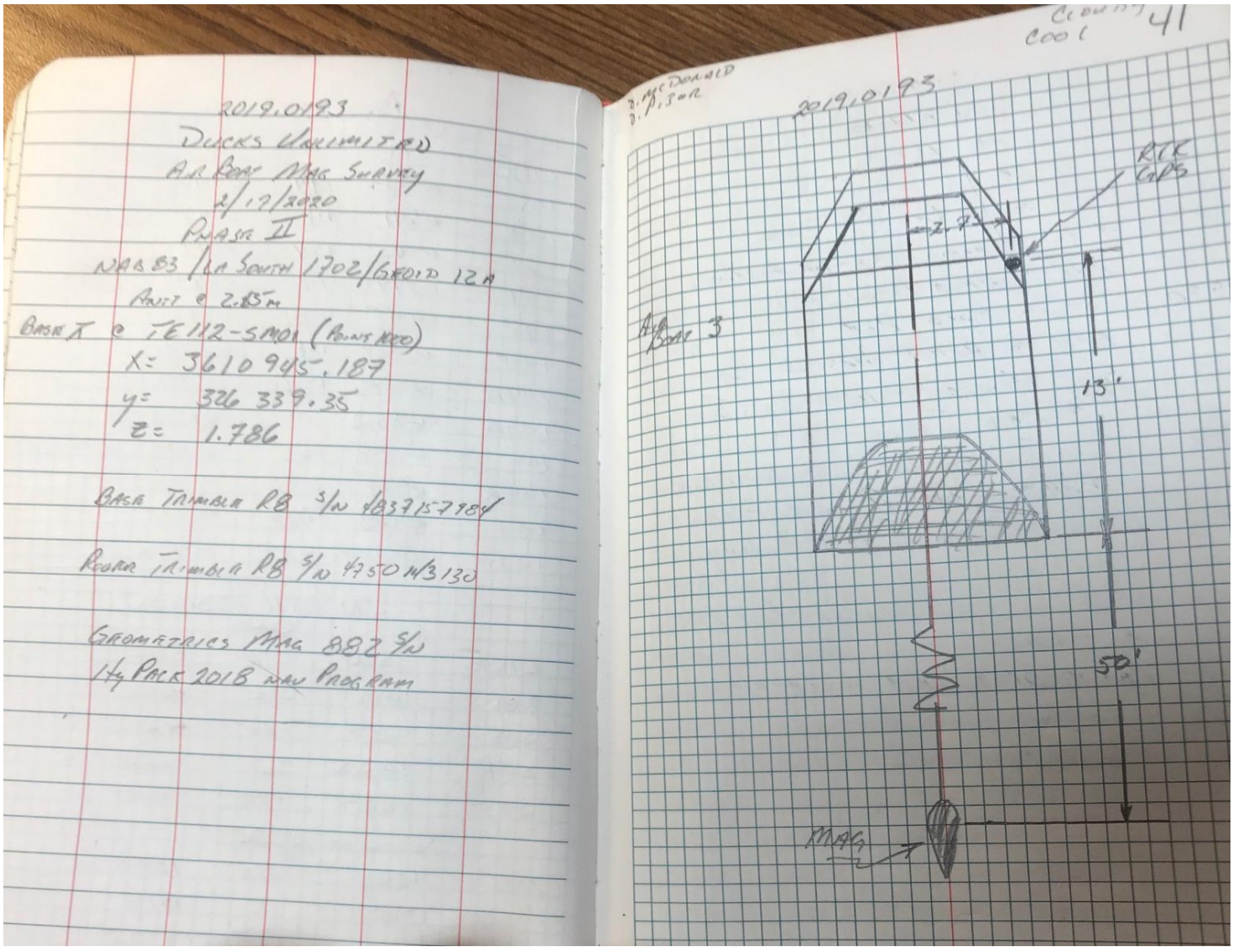
CLEAR 79°-84° 23
WIND 10 KNTS

2019.0193
5/24/19

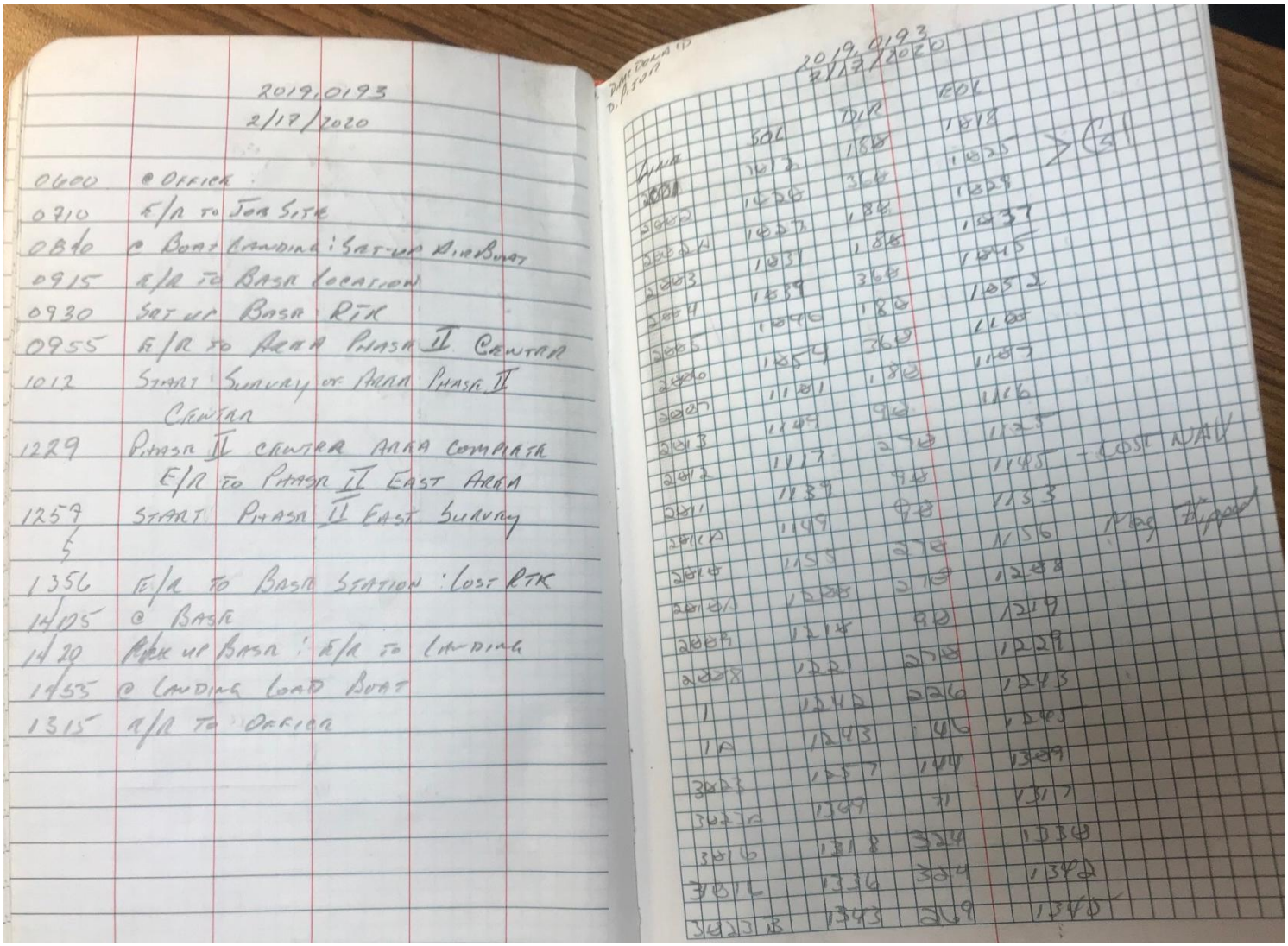
LINE	SOL	DIR	EOL	SECTION PHASE 1E
30	0823	270°	0836	
29A	0837	90°	0851	
28A	0853	270°	0905	
27A	0908	90°	0922	
37A	0932	360°	0937	
36A	0949	180°	0956	
35A	0957	360°	1004	
34A	1006	180°	1013	
33A	1016	360°	1020	
32A	1022	180°	1026	
31A	1028	360°	1033	

4785

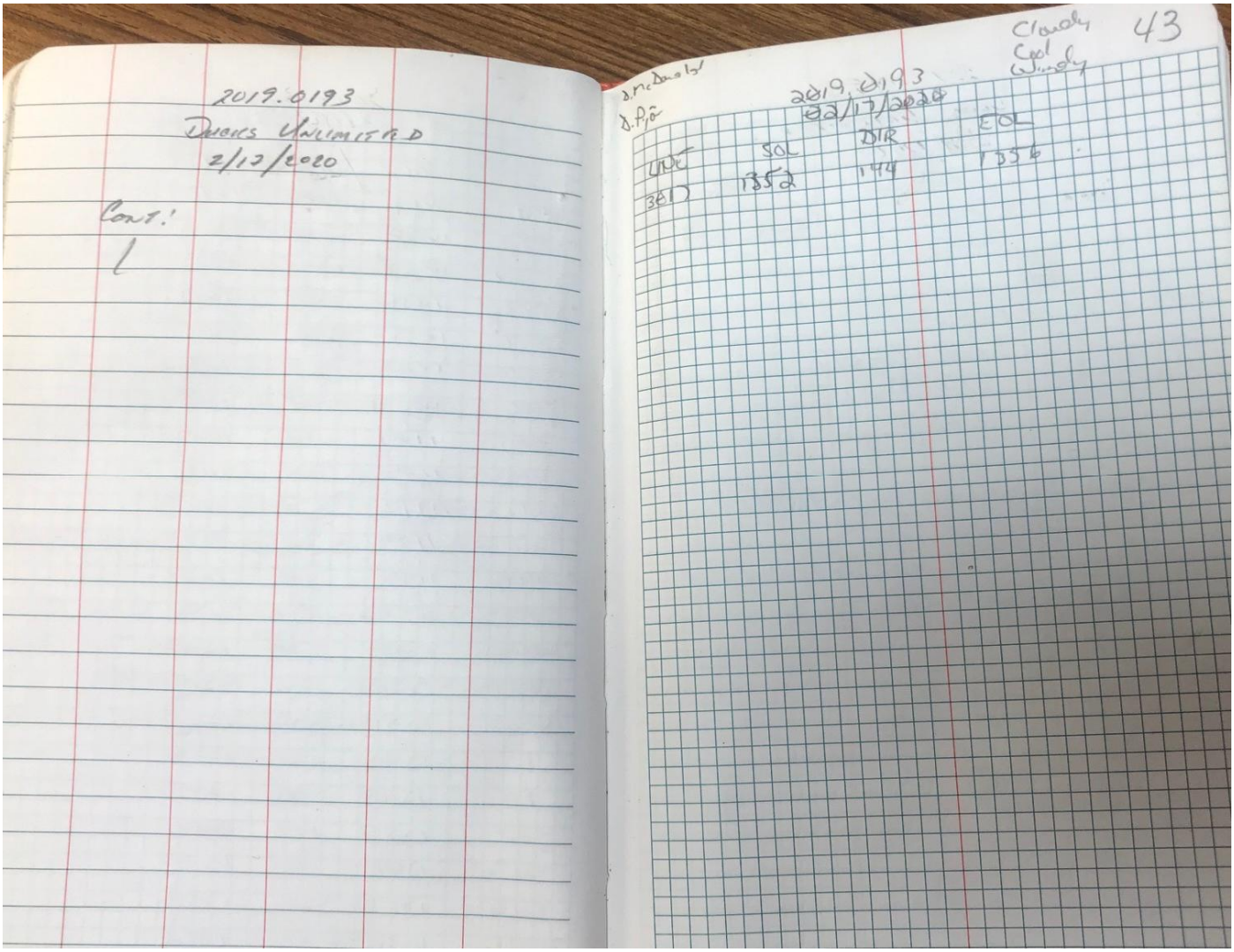
Phase 1
05-24-19
2 of 2



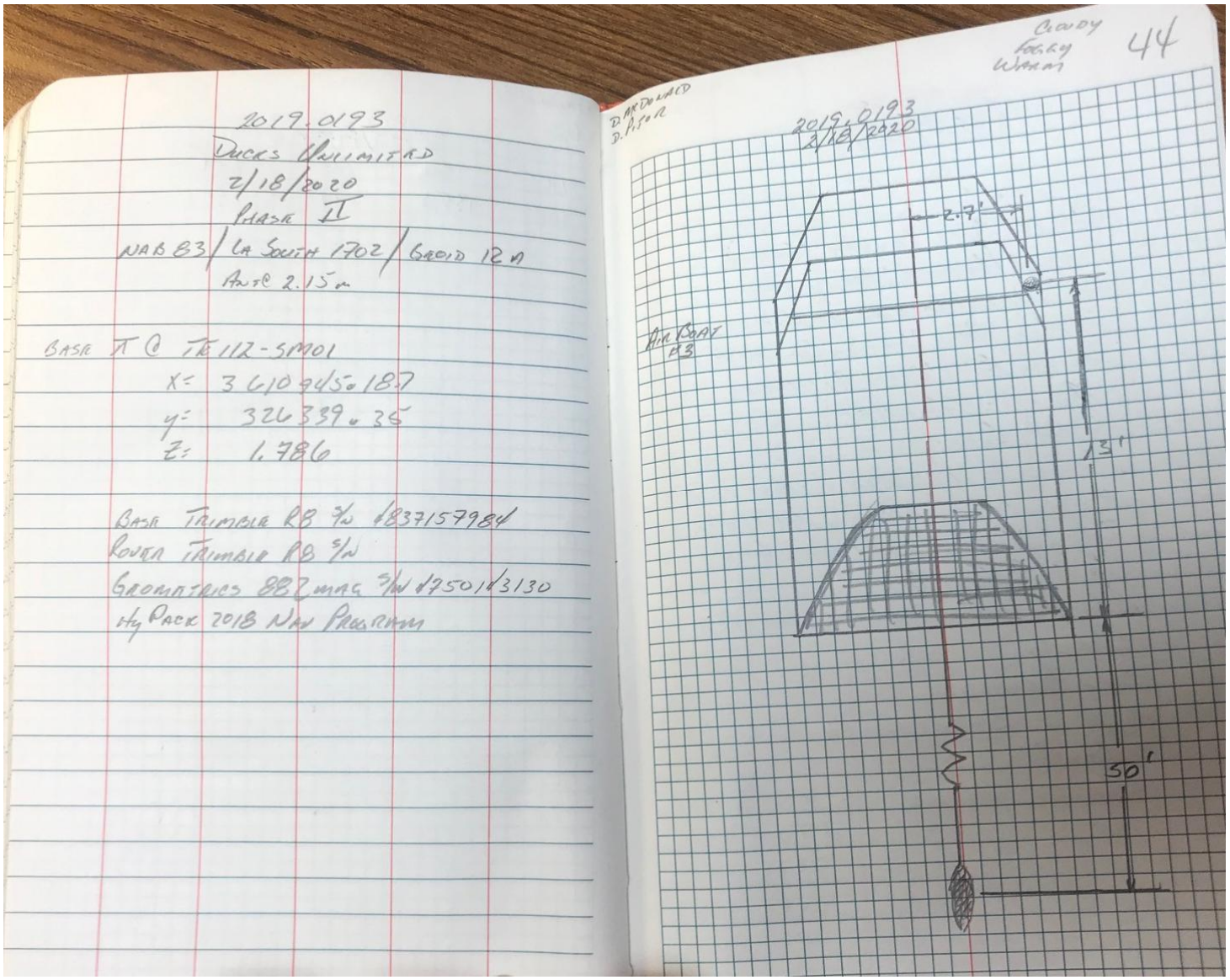
Phase 2
02-17-20
1 of 3



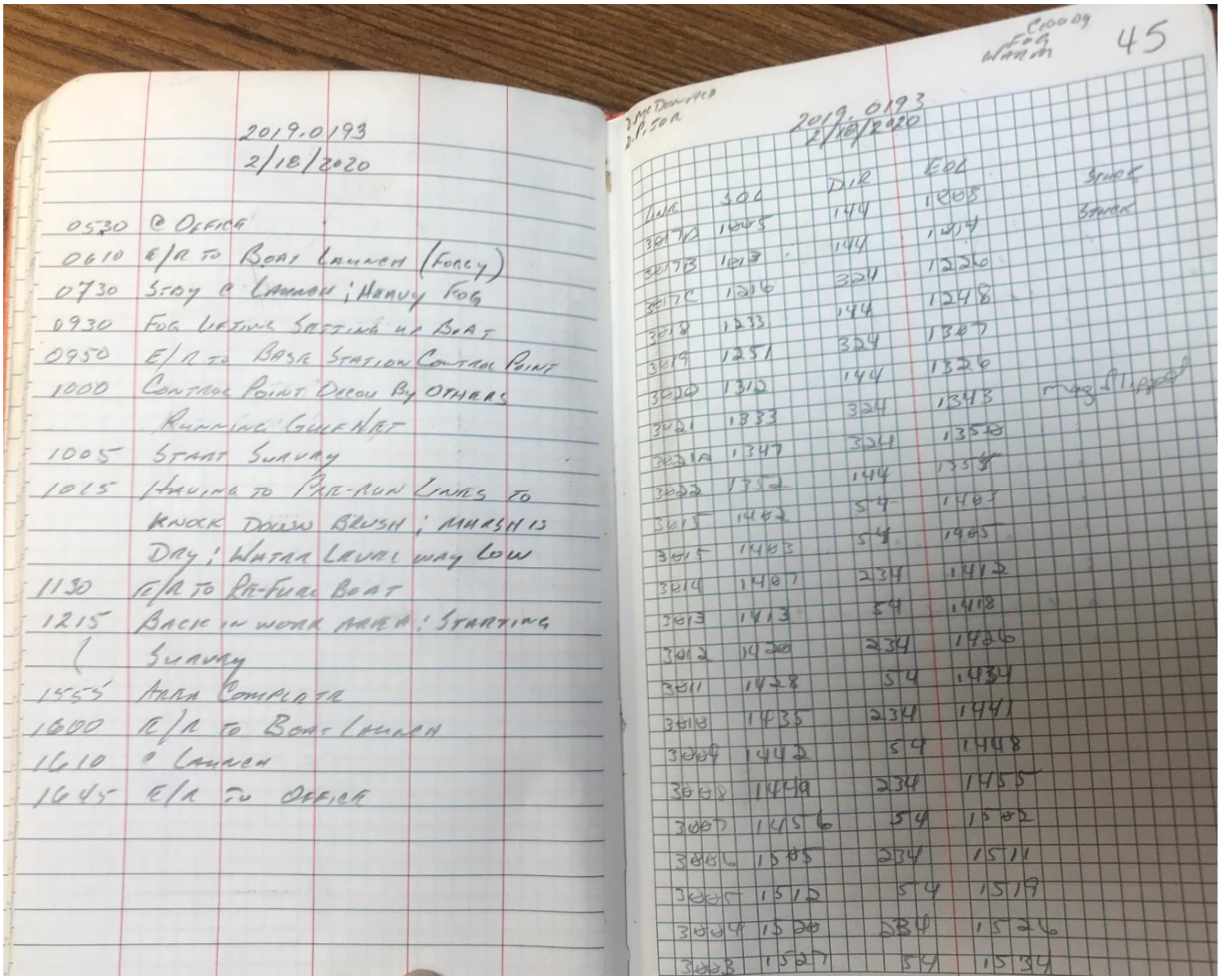
Phase 2
02-17-20
2 of 3



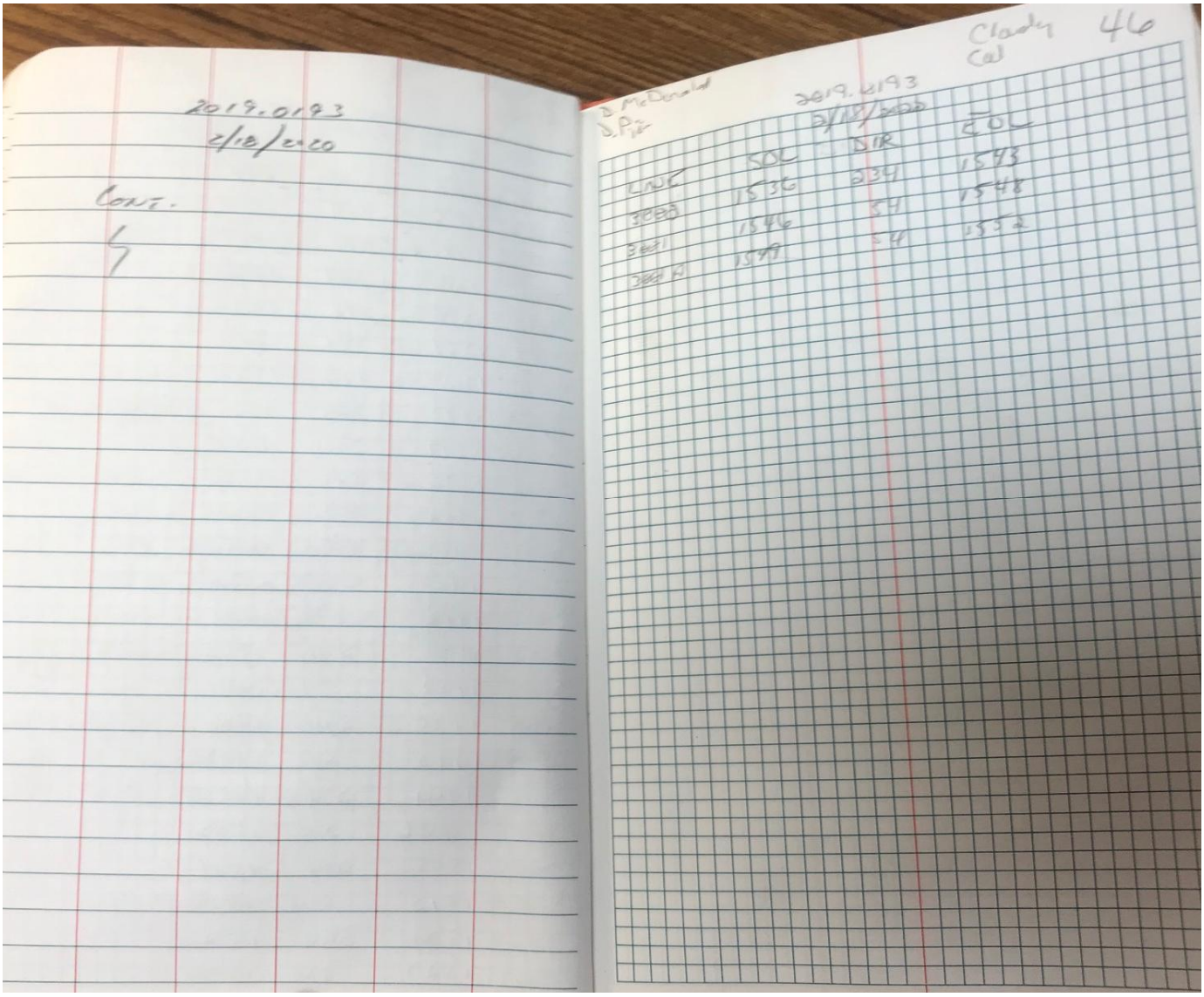
Phase 2
02-17-20
3 of 3



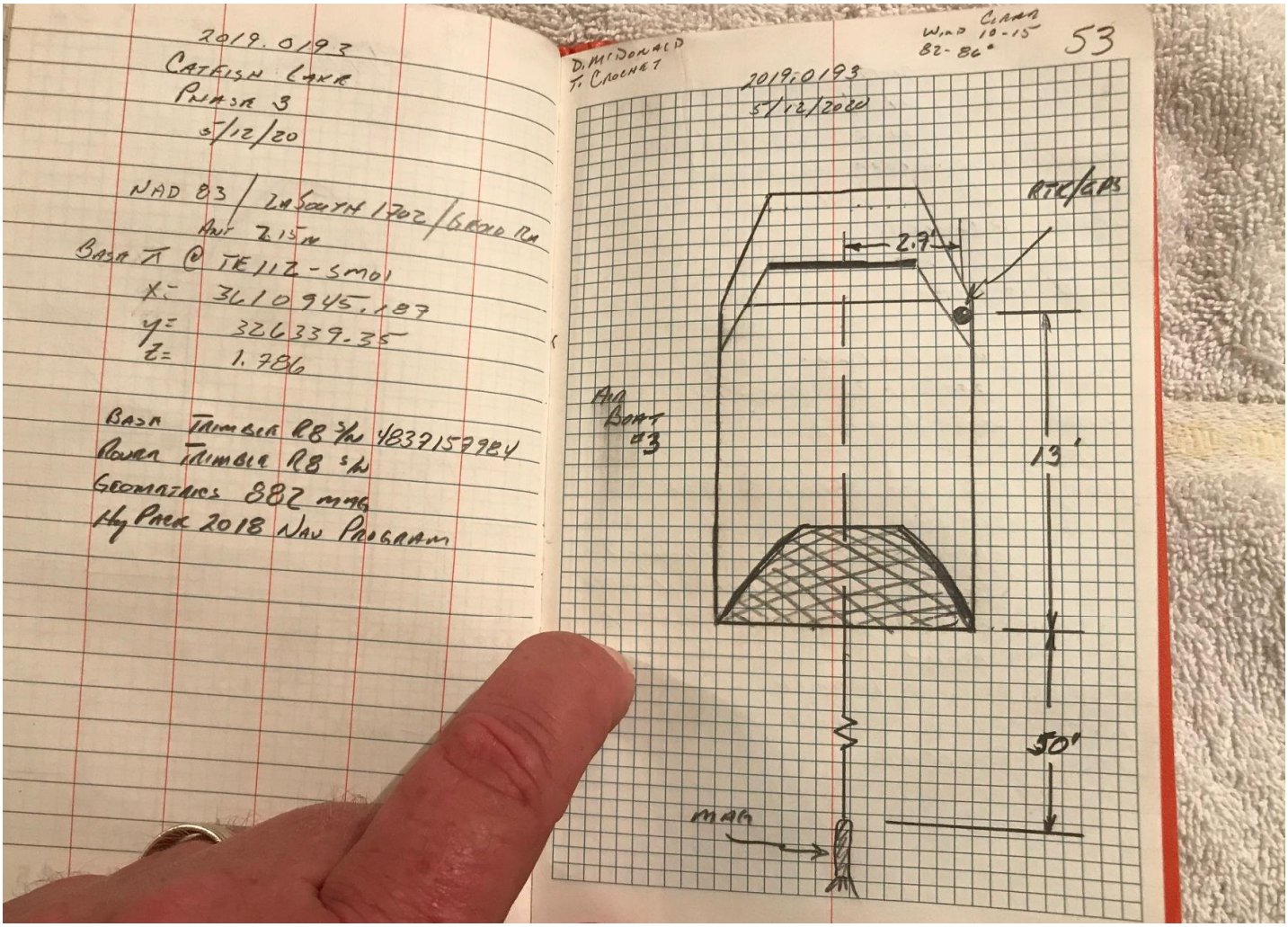
Phase 2
02-18-20
1 of 3



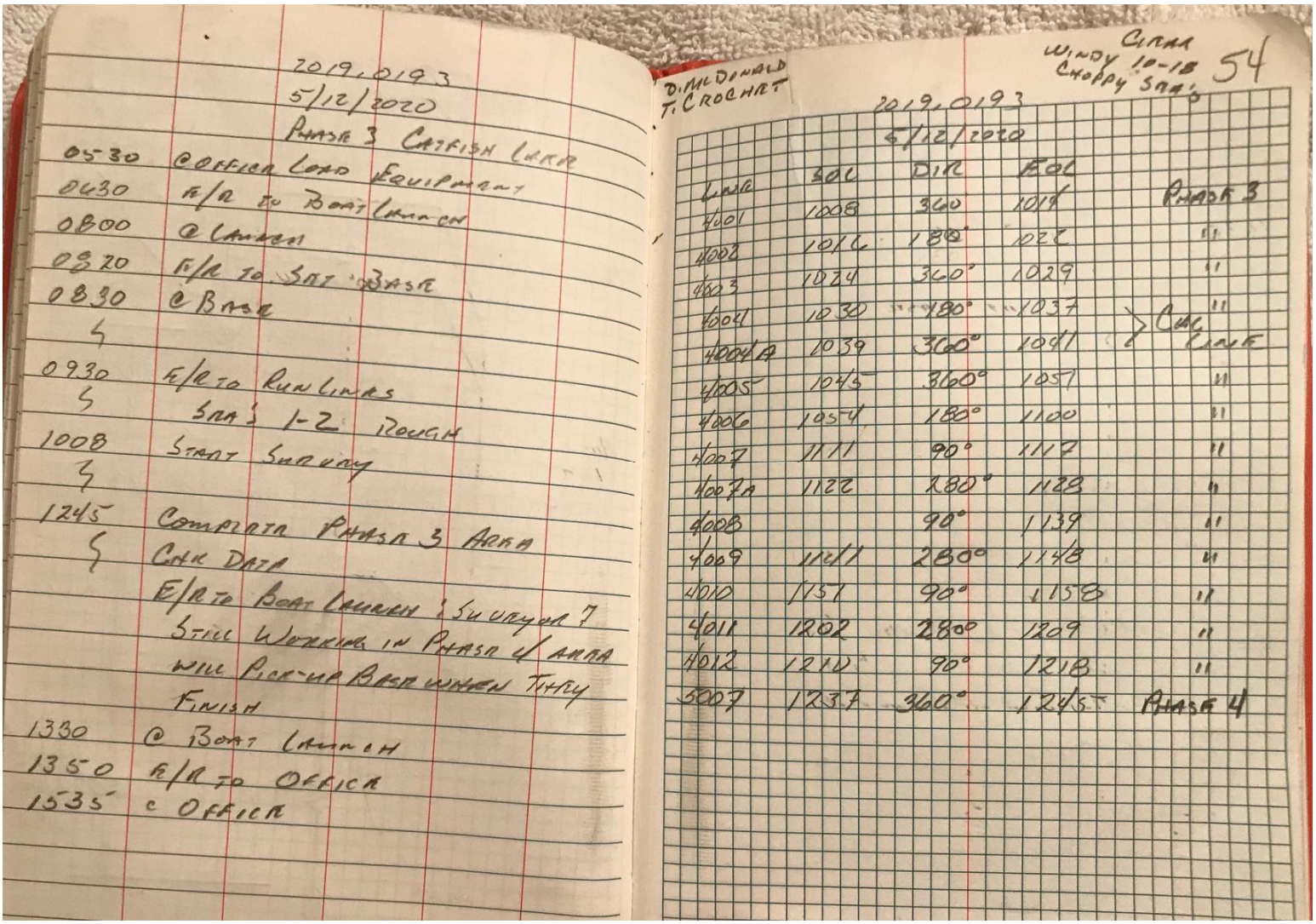
Phase 2
02-18-20
2 of 3



Phase 2
02-18-20
3 of 3



Phase 3 & 4
05-12-20
1 of 2



Phase 3 & 4
05-12-20
2 of 2

SURVEY NOTES:

1. THE FIELD SURVEY WAS PERFORMED BY CONVENTIONAL SURVEY CREW WITH TRIMBLE RTK GPS ON 05/20/19 THROUGH 08/02/19 BY T. BAKER SMITH, LLC.
2. TBS FIELD BOOK 4800 PAGE 53-64, & FIELD BOOK 4829 PAGE 15-44
3. HORIZONTAL POSITIONS SHOWN HEREON ARE BASED ON THE LOUISIANA SOUTH STATE PLANE COORDINATE SYSTEM OF 1983.
4. ALL ELEVATIONS ARE REFERENCED TO NAVD88 (GEOID 12A)
5. ALL UNITS OF MEASUREMENT SHOWN HEREON ARE IN U.S. SURVEY FEET.
6. 2016 GOOGLE EARTH IMAGERY USED FOR BACKGROUND PHOTOGRAPHY.
7. HORIZONTAL AND VERTICAL CONTROL WERE ESTABLISHED THROUGH STATIC GPS OBSERVATIONS ON MONUMENT TE112-SM-01. POSITIONS WERE CORRECTED THROUGH THE NATIONAL GEODETIC SURVEYS ONLINE POSITIONING USER SERVICE.
8. THE NEAREST CONTROLLING CORS STATION IS PAUL, PAUL GALLIANO, LA.

DISCLAIMER:

WHILE REASONABLE EFFORTS ARE MADE TO LOCATE ALL PIPELINES, METAL OBJECTS OR OTHER SUBSURFACE OBSTRUCTIONS IN THE SURVEYED AREA, THE EQUIPMENT USED AND THE CHARACTERISTICS OF PIPELINES THEMSELVES MAKE IT IMPOSSIBLE TO GUARANTEE TOTAL SUCCESS. ACCORDINGLY, IT IS INCUMBENT UPON THE OWNERS, OPERATORS AND/OR CONTRACTORS CONDUCTING OPERATIONS INCLUDING DREDGING AND EXCAVATION TO CONDUCT THEIR OPERATIONS WITH EXTREME CAUTION AND RECOGNIZE THAT HAZARDS IN ADDITION TO THOSE DETECTED AND MARKED BY TBS MAY EXIST.

SEC. 68

SEC. 69

SEC. 76

SEC. 77

CELL 4B
±79 AC.

CELL 4C
±75 AC.

CELL 3
±44 AC.

CELL 2
±95 AC.

CELL 1
±167 AC.

SURVEYED PIPELINE 1 (4INCH)
(SEE SHEET 7 CHART ONLY)

SURVEYED PIPELINE 2 (4INCH)
(SEE SHEETS 3 & 7)

SURVEYED PIPELINES 3 & 4 (2INCH)
(SEE SHEET 2,3, & 7)

SURVEYED PIPELINES 5 & 6 (2 INCH)
(SEE SHEETS 4 & 7)

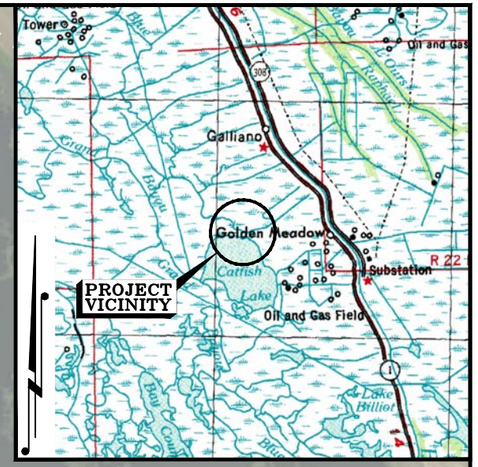
SURVEYED PIPELINE 7 (2 INCH)
(SEE SHEETS 4 & 7)

DETAIL "A"

DETAIL "B"
(SEE SHEET 5)

DETAIL "C"
(SEE SHEET 6)

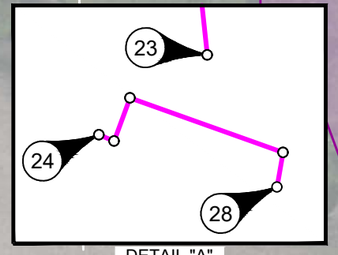
LOUISIANA COORDINATE SYSTEM (SOUTH ZONE)
(1983 DATUM)



VICINITY MAP
SCALE: 1"= 4 MILES

TE112-SM-01
(N.A.V.D. 88, GEOID 12A)
ELEV = 1.786' (2014)

X = 3,610,945.19'	NAD 83
Y = 326,339.35'	
LAT = 29° 23' 35.69"	NAD 83
LONG = 90° 17' 48.20"	



DETAIL "A"
(SCALE: 1"=20')

I CERTIFY THAT THE SURVEY DEPICTED ON THIS PLAT WAS PERFORMED UNDER MY SUPERVISION IN ACCORDANCE WITH GENERALLY ACCEPTED SURVEY PRACTICES. THIS SURVEY DOES NOT MEET THE STANDARDS OF PRACTICE FOR BOUNDARY SURVEYS AS SET FORTH BY THE LOUISIANA PROFESSIONAL ENGINEERS AND LAND SURVEYORS BOARD.

LOUISIANA SHANE J. KIRKLAND License No. 5142 PROFESSIONAL LAND SURVEYOR

07/07/2020

APPROVED: _____
SHANE J. KIRKLAND, P.L.S.
LA. LAND SURVEYOR REG. NO. 5142
P.O. BOX 4966 HOUMA, LA 70363 (985)868-1050

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEET 9 FOR MAGNETOMETER CHARTS

TBS
T. BAKER SMITH
A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

SCALE: 1" = 600'

600' 300' 0' 600'

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
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DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	08/13/19	JOB NO:	2019.0193

DRAWING NAME: PHASE ONE EAST MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 1 OF 9

LEGEND

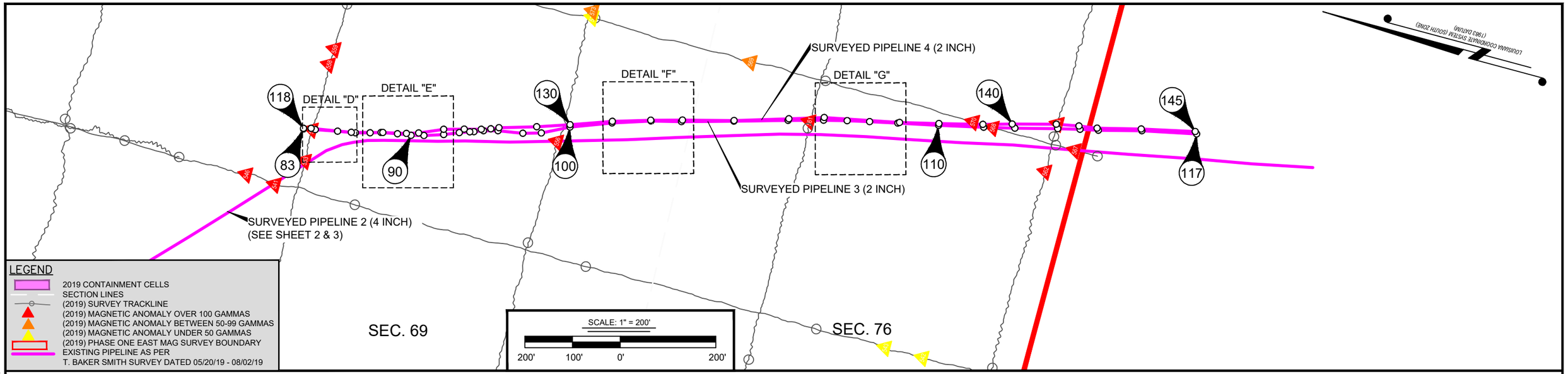
- 2019 CONTAINMENT CELLS
- SECTION LINES
- (2019) SURVEY TRACKLINE
- (2019) MAGNETIC ANOMALY OVER 100 GAMMAS
- (2019) MAGNETIC ANOMALY BETWEEN 50-99 GAMMAS
- (2019) MAGNETIC ANOMALY UNDER 50 GAMMAS
- (2019) PHASE ONE EAST MAG SURVEY BOUNDARY
- EXISTING PIPELINE AS PER T. BAKER SMITH SURVEY DATED 05/20/19 - 08/02/19

PHASE ONE (EAST) MAGNETOMETER SURVEY

DUCKS UNLIMITED

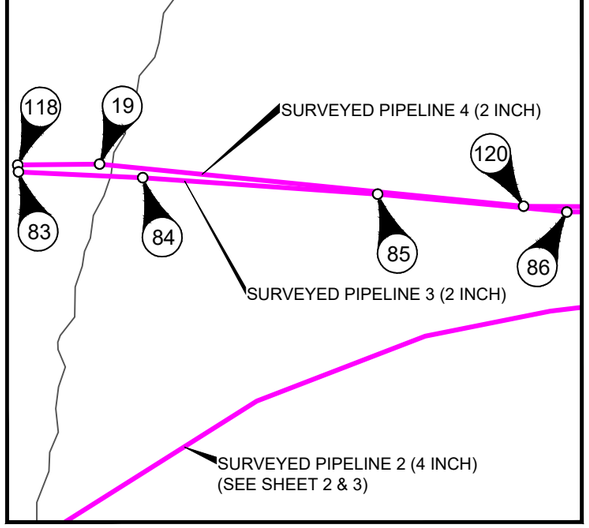
MAGNETOMETER INVESTIGAION SURVEY
BASE MAP AND PLAN VIEW OF SURVEYED PIPELINES
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,76,77, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

7/7/2020 - P:\Y-2019\2019.0193\DWG\PHASE ONE EAST MAGNETOMETER SURVEY\PHASE ONE EAST MAGNETOMETER SURVEY.DWG

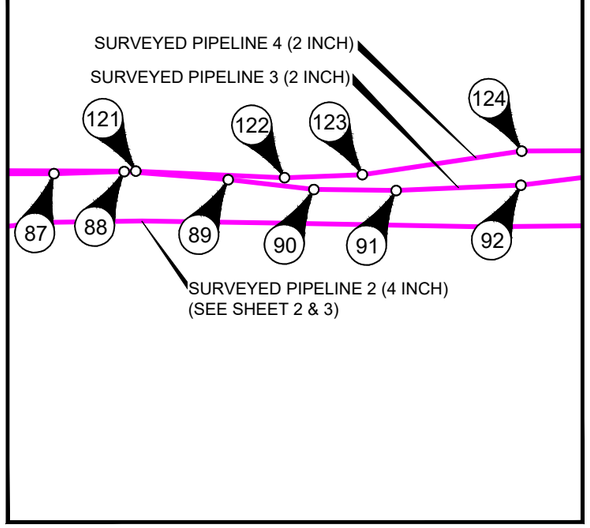


LEGEND

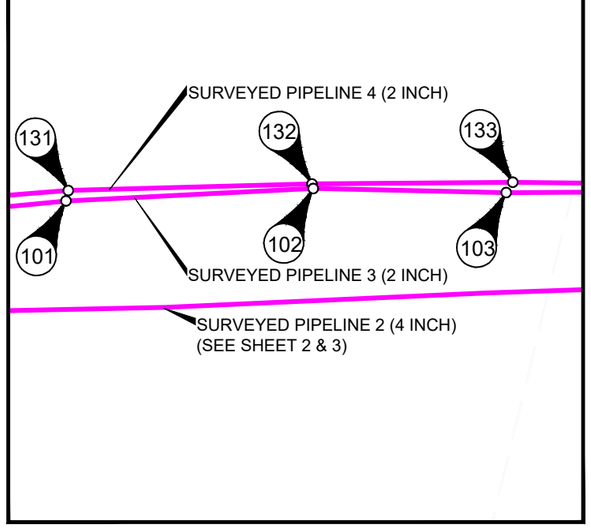
- 2019 CONTAINMENT CELLS
- SECTION LINES
- (2019) SURVEY TRACKLINE
- (2019) MAGNETIC ANOMALY OVER 100 GAMMAS
- (2019) MAGNETIC ANOMALY BETWEEN 50-99 GAMMAS
- (2019) MAGNETIC ANOMALY UNDER 50 GAMMAS
- (2019) PHASE ONE EAST MAG SURVEY BOUNDARY
- EXISTING PIPELINE AS PER T. BAKER SMITH SURVEY DATED 05/20/19 - 08/02/19



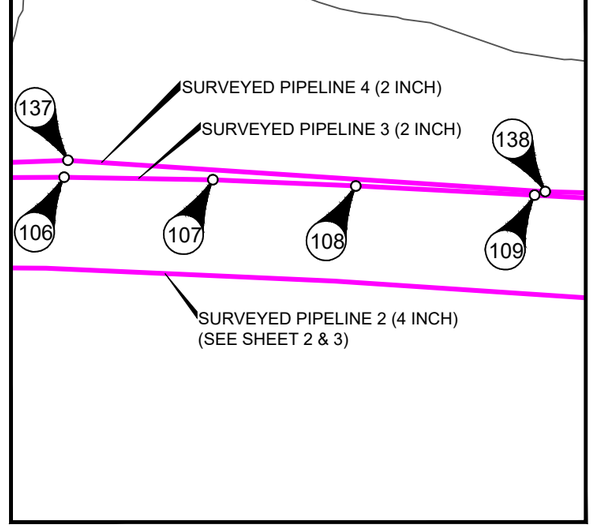
DETAIL "D"
SCALE: 1" = 30'
30' 15' 0' 30'



DETAIL "E"
SCALE: 1" = 50'
50' 25' 0' 50'



DETAIL "F"
SCALE: 1" = 50'
50' 25' 0' 50'



DETAIL "G"
SCALE: 1" = 50'
50' 25' 0' 50'

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEET 9 FOR MAGNETOMETER CHARTS

T. BAKER SMITH
A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
--

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	08/13/19	JOB NO:	2019.0193

DRAWING NAME: PHASE ONE EAST MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

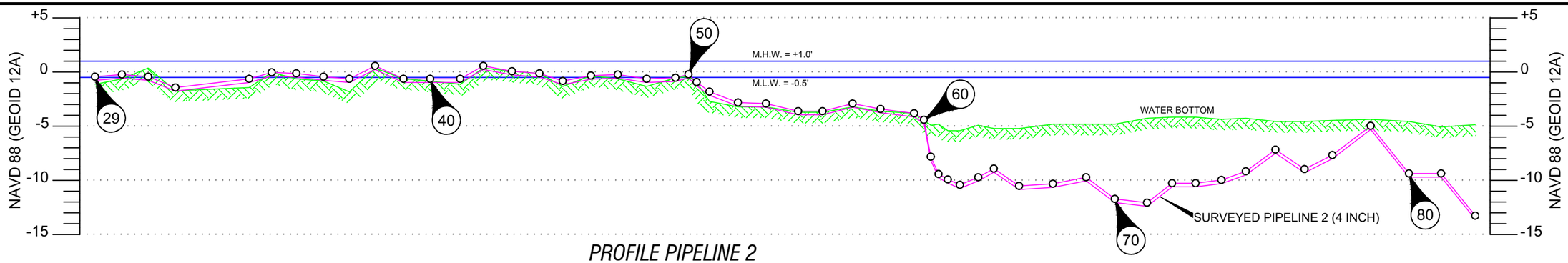
SHEET NO: 2 OF 9

PHASE ONE (EAST) MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGATION SURVEY
DETAIL PLAN VIEW OF PIPELINES 3 & 4
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,76,77, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

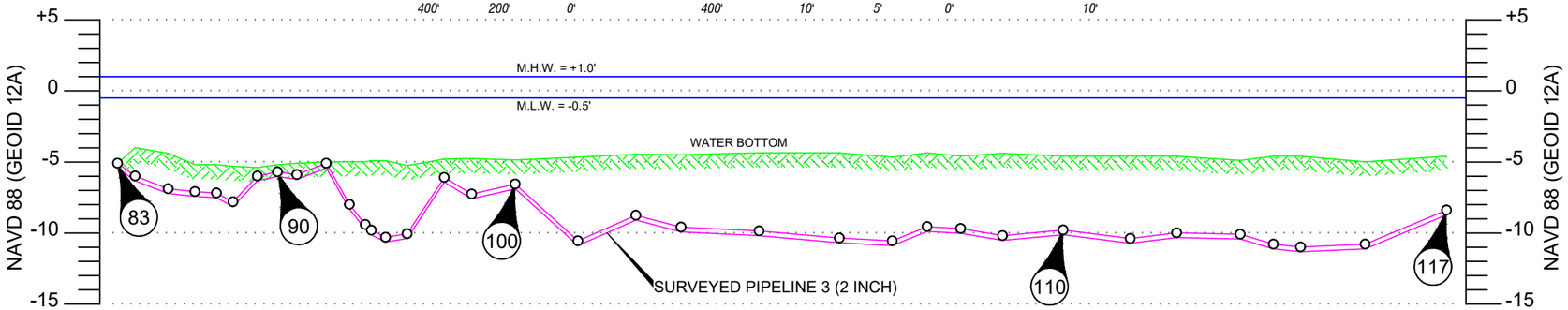
7/7/2020 - P:\Y-2019\2019.0193\DWG\PHASE ONE EAST MAGNETOMETER SURVEY\PHASE ONE EAST MAGNETOMETER SURVEY.DWG



PROFILE PIPELINE 2
LOOKING NORTH EASTERLY

HORIZONTAL SCALE IN FEET: 400' 200' 0' 400'

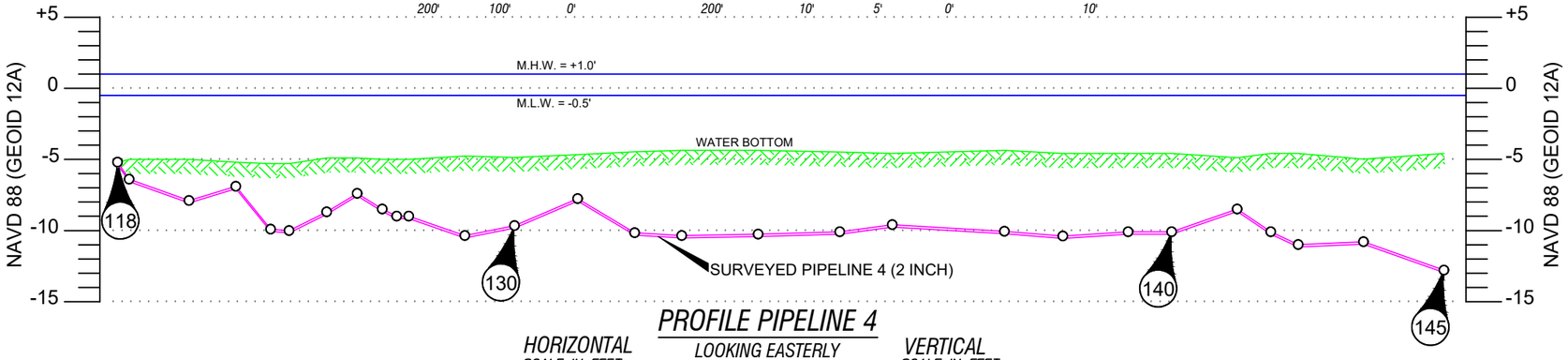
VERTICAL SCALE IN FEET: 10' 5' 0' 10'



PROFILE PIPELINE 3
LOOKING EASTERLY

HORIZONTAL SCALE IN FEET: 200' 100' 0' 200'

VERTICAL SCALE IN FEET: 10' 5' 0' 10'



PROFILE PIPELINE 4
LOOKING EASTERLY

HORIZONTAL SCALE IN FEET: 200' 100' 0' 200'

VERTICAL SCALE IN FEET: 10' 5' 0' 10'

LEGEND

1 — POINT LABELS (SEE PAGE 7 FOR CHARTS)

WATER LINE

WATER BOTTOM

EXISTING PIPELINE AS PER T. BAKER SMITH SURVEY DATED 05/20/19 - 08/02/19

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEET 9 FOR MAGNETOMETER CHARTS

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REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION: --

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	08/13/19	JOB NO:	2019.0193

DRAWING NAME: PHASE ONE EAST MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

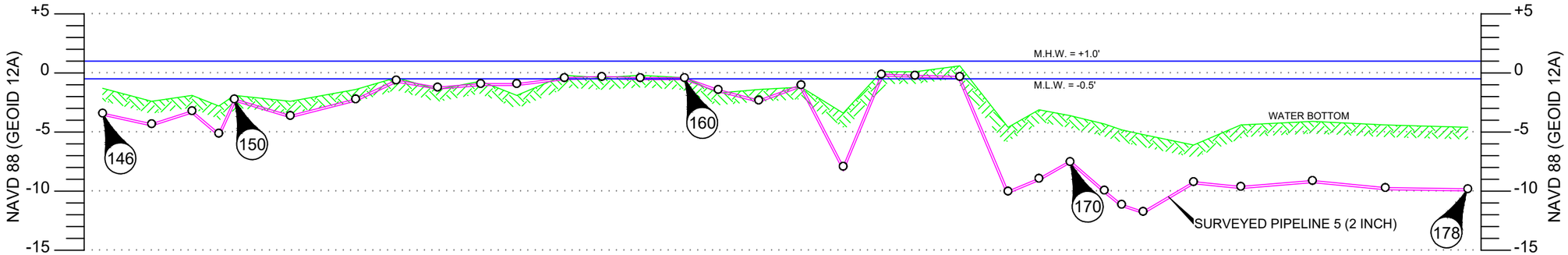
SHEET NO: 3 OF 9

PHASE ONE (EAST) MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGATION SURVEY
PROFILES OF SURVEYED PIPELINE
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,76,77, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

7/7/2020 - P:\Y-2019\2019.0193\DWG\PHASE ONE EAST MAGNETOMETER SURVEY\PHASE ONE EAST MAGNETOMETER SURVEY.DWG

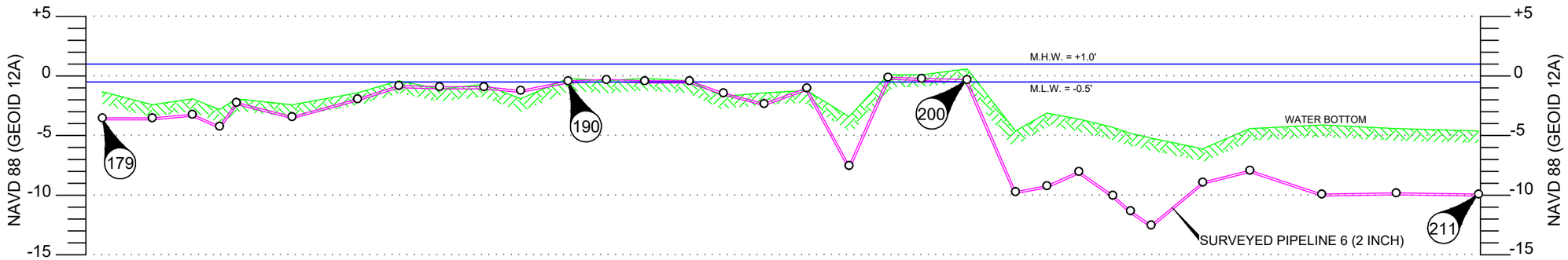


PROFILE PIPELINE 5

LOOKING SOUTH EASTERLY

HORIZONTAL SCALE IN FEET: 300' 150' 0' 300'

VERTICAL SCALE IN FEET: 10' 5' 0' 10'

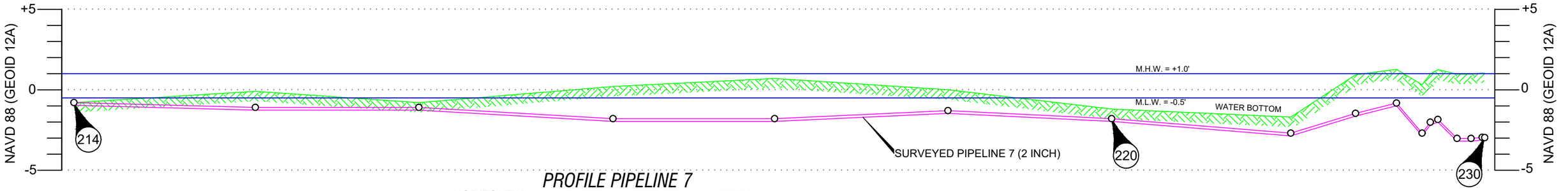


PROFILE PIPELINE 6

LOOKING SOUTH EASTERLY

HORIZONTAL SCALE IN FEET: 300' 150' 0' 300'

VERTICAL SCALE IN FEET: 10' 5' 0' 10'



PROFILE PIPELINE 7

LOOKING NORTH EASTERLY

HORIZONTAL SCALE IN FEET: 60' 30' 0' 60'

VERTICAL SCALE IN FEET: 6' 3' 0' 6'

LEGEND

1 POINT LABELS (SEE PAGE 7 FOR CHARTS)

WATER LINE

WATER BOTTOM

EXISTING PIPELINE AS PER T. BAKER SMITH SURVEY DATED 05/20/19 - 08/02/19

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEET 9 FOR MAGNETOMETER CHARTS

T. BAKER SMITH
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412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

REV. NO:	REV. DATE:	REV. BY:
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REVISION DESCRIPTION: --

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	08/13/19	JOB NO:	2019.0193

DRAWING NAME: PHASE ONE EAST MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 4 OF 9

PHASE ONE (EAST) MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGATION SURVEY
PROFILES OF SURVEYED PIPELINES
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,76,77, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

7/7/2020 - P:\Y-2019\2019.0193\DWG\PHASE ONE EAST MAGNETOMETER SURVEY\PHASE ONE EAST MAGNETOMETER SURVEY.DWG

LOUISIANA COORDINATE SYSTEM (SOUTH ZONE)
(1983 DATUM)

SURVEYED PIPELINE 7 (2 INCH)
(SEE SHEET 3)

LEGEND

1 POINT LABEL (SEE SHEET 8 FOR CHARTS)

(2019) MAGNETIC ANOMALY OVER 100 GAMMAS
(2019) MAGNETIC ANOMALY BETWEEN 50-99 GAMMAS
(2019) MAGNETIC ANOMALY UNDER 50 GAMMAS
EXISTING PIPELINE AS PER
T. BAKER SMITH SURVEY DATED 05/20/19 - 08/02/19

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEET 9 FOR MAGNETOMETER CHARTS

T. BAKER SMITH
A CENTURY OF SOLUTIONS
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(985)868-1050 - tbsmith.com

SCALE: 1" = 50'
50' 25' 0' 50'

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
--

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	08/13/19	JOB NO:	2019.0193

DRAWING NAME: PHASE ONE EAST MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 5 OF 9

PHASE ONE (EAST) MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGATION SURVEY
DETAIL "B" OF ABANDONED PIPELINES
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,76,77, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

7/7/2020 - P:\Y-2019\2019.0193\DWG\PHASE ONE EAST MAGNETOMETER SURVEY\PHASE ONE EAST MAGNETOMETER SURVEY.DWG

LOUISIANA COORDINATE SYSTEM SOUTH ZONE (1983 DATUM)

7/7/2020 - P:\Y-2019\2019.0193\DWG\PHASE ONE EAST MAGNETOMETER SURVEY\PHASE ONE EAST MAGNETOMETER SURVEY.DWG

LEGEND

1 POINT LABEL (SEE SHEET 8 FOR CHARTS)

(2019) MAGNETIC ANOMALY OVER 100 GAMMAS
(2019) MAGNETIC ANOMALY BETWEEN 50-99 GAMMAS
(2019) MAGNETIC ANOMALY UNDER 50 GAMMAS
EXISTING PIPELINE AS PER
T. BAKER SMITH SURVEY DATED 05/20/19 - 08/02/19

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEET 9 FOR MAGNETOMETER CHARTS

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412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

SCALE: 1" = 50'
50' 25' 0' 50'

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
--

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	08/13/19	JOB NO:	2019.0193

DRAWING NAME: PHASE ONE EAST MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 6 OF 9

PHASE ONE (EAST) MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGATION SURVEY
DETAIL"C" OF ABANDONED PIPELINES
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,76,77, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

SURVEYED PIPELINE 1 (4 INCH)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
1	3,603,792.92	329,572.54	29°24'08.33''	90°19'08.73''	N/A	N/A	N/A
2	3,603,897.66	329,497.27	29°24'07.58''	90°19'07.55''	N/A	N/A	N/A
3	3,603,965.41	329,448.77	29°24'07.09''	90°19'06.79''	N/A	N/A	N/A
4	3,604,050.31	329,387.14	29°24'06.48''	90°19'05.84''	N/A	N/A	N/A
5	3,604,130.78	329,329.01	29°24'05.89''	90°19'04.93''	N/A	N/A	N/A
6	3,604,215.90	329,268.07	29°24'05.28''	90°19'03.98''	N/A	N/A	N/A
7	3,604,293.61	329,212.70	29°24'04.73''	90°19'03.10''	N/A	N/A	N/A
8	3,604,378.34	329,152.47	29°24'04.12''	90°19'02.15''	N/A	N/A	N/A
9	3,604,440.66	329,107.49	29°24'03.67''	90°19'01.45''	N/A	N/A	N/A
10	3,604,528.24	329,043.71	29°24'03.03''	90°19'00.47''	N/A	N/A	N/A
11	3,604,616.35	328,978.47	29°24'02.38''	90°18'59.48''	N/A	N/A	N/A
12	3,604,699.48	328,915.70	29°24'01.75''	90°18'58.55''	N/A	N/A	N/A
13	3,604,777.44	328,857.97	29°24'01.17''	90°18'57.67''	0.4'	0.4'	EXPOSED
14	3,604,852.00	328,803.94	29°24'00.63''	90°18'56.83''	N/A	N/A	N/A
15	3,604,952.23	328,733.59	29°23'59.93''	90°18'55.71''	N/A	N/A	N/A
16	3,605,041.55	328,671.86	29°23'59.31''	90°18'54.70''	-0.4'	0.4'	EXPOSED
17	3,605,125.20	328,616.25	29°23'58.75''	90°18'53.76''	-0.1'	0.6'	EXPOSED
18	3,605,263.24	328,506.72	29°23'57.65''	90°18'52.21''	-3.2'	-5.6'	2.4'
19	3,605,301.98	328,476.84	29°23'57.35''	90°18'51.78''	-0.6'	0.4'	EXPOSED
20	3,605,386.06	328,410.14	29°23'56.69''	90°18'50.83''	N/A	N/A	N/A
21	3,605,472.46	328,306.80	29°23'55.66''	90°18'49.87''	N/A	N/A	N/A
22	3,605,446.37	328,352.59	29°23'56.11''	90°18'50.16''	-0.1'	0.4'	EXPOSED
23	3,605,479.69	328,239.85	29°23'54.99''	90°18'49.79''	N/A	N/A	N/A

SURVEYED EXPOSED PIPELINE (3 INCH)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
24	3,605,465.38	328,229.31	292354.8892	901849.9559	N/A	N/A	EXPOSED
25	3,605,467.39	328,228.47	292354.8807	901849.9333	N/A	N/A	EXPOSED
26	3,605,469.49	328,234.18	292354.937	901849.909	N/A	N/A	EXPOSED
27	3,605,489.68	328,226.98	292354.864	901849.6814	N/A	N/A	EXPOSED
28	3,605,488.89	328,222.40	292354.8187	901849.6908	N/A	N/A	EXPOSED

SURVEYED PIPELINE 7 (2 INCH)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
214	3,608,277.16	326,670.72	29°23'39.21''	90°18'18.33''	-0.8'	-0.8'	EXPOSED
215	3,608,311.01	326,563.36	29°23'38.15''	90°18'17.96''	-0.1'	-1.1'	1.0'
216	3,608,346.18	326,468.14	29°23'37.20''	90°18'17.57''	-0.8'	-1.1'	0.3'
217	3,608,383.40	326,353.45	29°23'36.06''	90°18'17.16''	0.2'	-1.8'	2.0'
218	3,608,411.85	326,257.32	29°23'35.11''	90°18'16.85''	0.7'	-1.8'	2.5'
219	3,608,447.69	326,155.92	29°23'34.10''	90°18'16.45''	0.0'	-1.3'	1.3'
220	3,608,479.60	326,059.45	29°23'33.14''	90°18'16.10''	-1.2'	-1.8'	0.6'
221	3,608,513.87	325,953.58	29°23'32.09''	90°18'15.72''	-1.7'	-2.7'	1.0'
222	3,608,530.28	325,916.94	29°23'31.73''	90°18'15.54''	0.9'	-1.5'	2.4'
223	3,608,546.26	325,897.24	29°23'31.53''	90°18'15.36''	1.3'	-0.8'	2.1'
224	3,608,555.86	325,884.55	29°23'31.40''	90°18'15.26''	0.3'	-2.7'	3.0'
225	3,608,558.57	325,880.19	29°23'31.36''	90°18'15.23''	1.0'	-2.0'	3.0'
226	3,608,559.54	325,875.63	29°23'31.32''	90°18'15.22''	1.3'	-1.8'	3.1'
227	3,608,561.19	325,863.82	29°23'31.20''	90°18'15.20''	1.0'	-3.0'	4.0'
228	3,608,560.37	325,855.12	29°23'31.11''	90°18'15.21''	1.0'	-3.0'	4.0'
229	3,608,558.96	325,848.42	29°23'31.05''	90°18'15.23''	1.0'	-3.0'	4.0'
230	3,608,559.19	325,846.84	29°23'31.03''	90°18'15.22''	1.0'	-3.0'	4.0'

SURVEYED PIPELINE 2 (4 INCH)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
29	3,603,437.02	328,940.38	29°24'02.11''	90°19'12.81''	-1.1'	-0.4'	EXPOSED
30	3,603,500.57	328,863.39	29°24'01.34''	90°19'12.10''	-0.6'	-0.2'	EXPOSED
31	3,603,565.35	328,792.03	29°24'00.63''	90°19'11.38''	0.4'	-0.4'	0.8'
32	3,603,626.01	328,711.37	29°23'59.82''	90°19'10.70''	-1.7'	-1.4'	EXPOSED
33	3,603,799.12	328,502.33	29°23'57.74''	90°19'08.77''	-1.4'	-0.6'	EXPOSED
34	3,603,858.98	328,443.91	29°23'57.15''	90°19'08.09''	0.0'	0.0'	EXPOSED
35	3,603,927.93	328,385.28	29°23'56.57''	90°19'07.32''	-0.6'	-0.1'	EXPOSED
36	3,604,002.74	328,317.30	29°23'55.89''	90°19'06.48''	-0.8'	-0.4'	EXPOSED
37	3,604,072.68	328,253.84	29°23'55.25''	90°19'05.70''	-1.8'	-0.6'	EXPOSED
38	3,604,142.30	328,189.17	29°23'54.61''	90°19'04.92''	0.4'	0.6'	EXPOSED
39	3,604,218.35	328,117.00	29°23'53.89''	90°19'04.06''	-0.6'	-0.6'	EXPOSED
40	3,604,290.85	328,049.95	29°23'53.22''	90°19'03.25''	-0.8'	-0.6'	EXPOSED
41	3,604,373.16	327,975.88	29°23'52.48''	90°19'02.33''	-1.1'	-0.6'	EXPOSED
42	3,604,436.99	327,919.11	29°23'51.91''	90°19'01.61''	0.4'	0.6'	EXPOSED
43	3,604,515.76	327,848.67	29°23'51.20''	90°19'00.73''	0.1'	0.1'	EXPOSED
44	3,604,590.84	327,780.34	29°23'50.52''	90°18'59.89''	-0.1'	-0.1'	EXPOSED
45	3,604,653.55	327,721.53	29°23'49.93''	90°18'59.18''	-1.3'	-0.8'	EXPOSED
46	3,604,730.22	327,650.99	29°23'49.23''	90°18'58.32''	-0.3'	-0.3'	EXPOSED
47	3,604,802.68	327,583.08	29°23'48.55''	90°18'57.51''	-0.6'	-0.2'	EXPOSED
48	3,604,880.97	327,511.54	29°23'47.84''	90°18'56.63''	-1.3'	-0.6'	EXPOSED
49	3,604,959.62	327,439.50	29°23'47.12''	90°18'55.75''	-0.5'	-0.5'	EXPOSED
50	3,604,994.90	327,407.37	29°23'46.79''	90°18'55.36''	-0.4'	-0.2'	EXPOSED
51	3,605,016.70	327,386.62	29°23'46.59''	90°18'55.11''	-0.9'	-0.9'	EXPOSED
52	3,605,050.44	327,353.79	29°23'46.26''	90°18'54.73''	-2.7'	-1.8'	EXPOSED
53	3,605,127.82	327,282.10	29°23'45.54''	90°18'53.87''	-3.2'	-2.8'	EXPOSED
54	3,605,203.06	327,211.31	29°23'44.83''	90°18'53.02''	-3.2'	-2.9'	EXPOSED
55	3,605,290.13	327,130.12	29°23'44.02''	90°18'52.05''	-3.7'	-3.6'	EXPOSED
56	3,605,354.83	327,068.43	29°23'43.41''	90°18'51.32''	-3.7'	-3.6'	EXPOSED
57	3,605,435.65	326,992.73	29°23'42.65''	90°18'50.42''	-3.2'	-2.9'	EXPOSED
58	3,605,511.57	326,922.71	29°23'41.95''	90°18'49.57''	-3.6'	-3.4'	EXPOSED
59	3,605,603.00	326,838.38	29°23'41.11''	90°18'48.54''	-3.8'	-3.8'	EXPOSED
60	3,605,624.04	326,809.52	29°23'40.82''	90°18'48.31''	-4.4'	-4.4'	EXPOSED
61	3,605,635.26	326,786.91	29°23'40.60''	90°18'48.18''	-4.9'	-7.8'	2.9'
62	3,605,646.08	326,760.33	29°23'40.33''	90°18'48.06''	-4.8'	-9.4'	4.6'
63	3,605,655.46	326,727.36	29°23'40.00''	90°18'47.96''	-5.4'	-9.9'	4.5'
64	3,605,666.41	326,684.31	29°23'39.58''	90°18'47.84''	-5.4'	-10.4'	5.0'
65	3,605,682.86	326,618.14	29°23'38.92''	90°18'47.66''	-4.9'	-9.7'	4.8'
66	3,605,698.36	326,562.63	29°23'38.37''	90°18'47.49''	-5.2'	-8.9'	3.7'
67	3,605,720.25	326,472.12	29°23'37.47''	90°18'47.25''	-5.2'	-10.5'	5.3'
68	3,605,754.96	326,352.69	29°23'36.29''	90°18'46.87''	-4.8'	-10.3'	5.5'
69	3,605,789.20	326,234.77	29°23'35.12''	90°18'46.50''	-4.8'	-9.7'	4.9'
70	3,605,821.23	326,133.91	29°23'34.11''	90°18'46.14''	-4.8'	-11.7'	6.9'
71	3,605,856.15	326,020.29	29°23'32.99''	90°18'45.76''	-4.3'	-12.1'	7.8'
72	3,605,882.92	325,931.26	29°23'32.10''	90°18'45.47''	-4.2'	-10.3'	6.1'
73	3,605,904.50	325,847.47	29°23'31.27''	90°18'45.23''	-4.2'	-10.3'	6.1'
74	3,605,925.17	325,754.38	29°23'30.35''	90°18'45.01''	-4.4'	-10.0'	5.6'
75	3,605,942.75	325,666.19	29°23'29.47''	90°18'44.82''	-4.3'	-9.2'	4.9'
76	3,605,964.35	325,559.28	29°23'28.41''	90°18'44.58''	-4.6'	-7.2'	2.6'
77	3,605,987.65	325,454.55	29°23'27.38''	90°18'44.33''	-4.6'	-9.0'	4.4'
78	3,606,005.97	325,353.14	29°23'26.37''	90°18'44.13''	-4.5'	-7.7'	3.2'
79	3,606,031.92	325,214.57	29°23'25.00''	90°18'43.86''	-4.4'	-5.0'	0.6'
80	3,606,059.35	325,075.84	29°23'23.62''	90°18'43.56''	-4.6'	-9.4'	4.8'
81	3,606,080.14	324,958.99	29°23'22.46''	90°18'43.34''	-5.1'	-9.4'	4.3'
82	3,606,105.35	324,835.31	29°23'21.23''	90°18'43.06''	-4.9'	-13.3'	8.4'

SURVEYED PIPELINE 3 (2 INCH)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
83	3,605,634.54	326,895.67	29°23'41.67''	90°18'48.18''	-5.1'	-5.1'	0.0'
84	3,605,639.80	326,871.62	29°23'41.43''	90°18'48.12''	-4.0'	-6.0'	2.0'
85	3,605,648.78	326,825.84	29°23'40.98''	90°18'48.02''	-4.4'	-6.9'	2.5'
86	3,605,655.09	326,788.77	29°23'40.61''	90°18'47.96''	-5.2'	-7.1'	1.9'
87	3,605,663.05	326,759.31	29°23'40.32''	90°18'47.87''	-5.2'	-7.2'	2.0'
88	3,605,669.85	326,737.14	29°23'40.10''	90°18'47.79''	-5.3'	-7.8'	2.5'
89	3,605,676.08	326,703.27	29°23'39.76''	90°18'47.73''	-5.4'	-6.0'	0.6'
90	3,605,680.26	326,675.18	29°23'39.49''	90°18'47.68''	-5.2'	-5.7'	0.5'
91	3,605,687.01	326,648.87	29°23'39.22''	90°18'47.61''	-5.1'	-5.9'	0.8'
92	3,605,699.40	326,609.52	29°23'38.83''	90°18'47.47''	-5.0'	-5.1'	0.1'
93	3,605,711.82	326,579.12	29°23'38.53''	90°18'47.34''	-5.0'	-8.0'	3.0'
94	3,605,719.15	326,558.11	29°23'38.32''	90°18'47.26''	-5.0'	-9.4'	4.4'
95	3,605,721.94	326,550.06	29°23'38.24''	90°18'47.22''	-4.9'	-9.8'	4.9'
96	3,605,728.93	326,531.16	29°23'38.06''	90°18'47.15''	-4.9'	-10.3'	5.4'
97	3,605,736.74	326,501.73	29°23'37.76''	90°18'47.06''	-5.3'	-10.1'	4.8'
98	3,605,745.05	326,450.31	29°23'37.25''	90°18'46.97''	-4.8'	-6.1'	1.3'
99	3,605,755.93	326,413.20	29°23'36.89''	90°18'46.85''	-4.8'	-7.3'	2.5'
100	3,605,783.43	326,358.26	29°23'36.34''	90°18'46.55''	-4.9'	-6.6'	1.7'
101	3,605,814.55	326,275.64	29°23'35.52''	90°18'46.21''	-4.7'	-10.6'	5.9'
102	3,605,839.73	326,197.90	29°23'34.75''	90°18'45.93''	-4.5'	-8.8'	4.3'
103	3,605,854.93	326,136.08	29°23'34.13''	90°18'45.76''	-4.5'	-9.6'	5.1'
104	3,605,884.35	326,030.26	29°23'33.08''	90°18'45.44''	-4.4'	-9.9'	5.5'
105	3,605,915.28	325,921.39	29°23'32.00''	90°18'45.10''	-4.4'	-10.4'	6.0'
106	3,605,935.04	325,849.52	29°23'31.29''	90°18'44.89''	-4.7'	-10.6'	5.9'
107	3,605,947.02	325,801.85	29°23'30.82''	90°18'44.76''	-4.4'	-9.6'	5.2'
108	3,605,957.27	325,755.80	29°23'30.36''	90°18'44.64''	-4.6'	-9.7'	5.1'
109	3,605,969.68	325,698.02	29°23'29.79''	90°18'44.51''	-4.4'	-10.2'	5.8'
110	3,605,987.22	325,614.44	29°23'28.96''	90°18'44.32''	-4.6'	-9.8'	5.2'
111	3,606,007.93	325,522.22	29°23'28.04''	90°18'44.10''	-4.6'	-10.4'	5.8'
112	3,606,022.92	325,458.58	29°23'27.41''	90°18'43.93''	-4.6'	-10.0'	5.4'
113	3,606,045.38	325,371.73	29°23'26.55''	90°18'43.69''	-4.9'	-10.1'	5.2'
114	3,606,056.12	325,326.30	29°23'26.10''	90°18'43.57''	-4.6'	-10.8'	6.2'
115	3,606,064.19	325,288.88	29°23'25.73''	90°18'43.48''	-4.6'	-11.0'	6.4'
116	3,606,086.73	325,200.78	29°23'24.85''	90°18'43.24''	-5.0'	-10.8'	5.8'
117	3,606,110.08	325,088.46	29°23'23.74''	90°18'42.98''	-4.6'	-8.4'	3.8'

SURVEYED PIPELINE 4 (2 INCH)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
118	3,605,635.84	326,896.14	29°23'41.68''	90°18'48.16''	-5.2'	-5.2'	0.0'
119	3,605,640.22	326,880.57	29°23'41.52''	90°18'48.12''	-5.0'	-6.4'	1.4'
120	3,605,653.94	326,797.33	29°23'40.70''	90°18'47.97''	-5.0'	-7.9'	2.9'
121	3,605,670.82	326,733.49	29°23'40.06''	90°18'47.78''	-5.2'	-6.9'	1.7'
122	3,605,681.50	326,685.50	29°23'39.59''	90°18'47.67''	-5.3'	-9.9'	4.6'
123	3,605,689.15	326,660.96	29°23'39.34''	90°18'47.58''	-5.3'	-10.0'	4.7'
124	3,605,710.31	326,612.23	29°23'38.86''	90°18'47.35''	-4.9'	-8.7'	3.8'
125	3,605,721.72	326,570.82	29°23'38.45''	90°18'47.23''	-4.9'	-7.4'	2.5'
126	3,605,730.57	326,536.54	29°23'38.11''	90°18'47.13''	-5.0'	-8.5'	3.5'
127	3,605,736.90	326,517.34	29°23'37.92''	90°18'47.06''	-5.0'	-9.0'	4.0'
128	3,605,743.48	326,501.42	29°23'37.76''	90°18'46.99''	-5.0'	-9.0'	4.0'
129	3,605,765.88	326,425.81	29°23'37.01''	90°18'46.74''	-4.8'	-10.4'	5.6'
130	3,605,788.23	326,359.56	29°23'36.35''	90°18'46.49''	-4.9'	-9.7'	4.8'
131	3,605,818.10	326,275.76	29°23'35.52''	90°18'46.17''	-4.7'	-7.8'	3.1'
132	3,605,841.07	326,198.73	29°23'34.75''	90°18'45.91''	-4.5'	-10.2'	5.7'
133	3,605,858.82	326,134.82	29°23'34.12''	90°18'45.72''	-4.4'	-10.4'	6.0'
134	3,605,885.67	326,030.32	29°23'33.08''	90°18'45.43''	-4.4'	-10.3'	5.9'
135	3,605,919.05	325,920.56	29°23'31.99''	90°18'45.06''	-4.5'	-10.1'	5.6'
136	3,605,940.76	325,849.70	29°23'31.29''	90°18'44.82''	-4.6'	-9.6'	5.0'
137	3,605,971.74	325,694.92	29°23'29.76''	90°18'44.49''	-4.4'	-10.1'	5.7'
138	3,605,991.10	325,614.69	29°23'28.96''	90°18'44.28''	-4.6'	-10.4'	5.8'
139	3,606,013.30	325,525.51	29°23'28.08''	90°18'44.03''	-4.6'	-10.1'	5.5'
140	3,606,029.73	325,466.25	29°23'27.49''	90°18'43.85''	-4.6'	-10.1'	5.5'
141	3,606,053.43	325,377.02	29°23'26.60''	90°18'43.60''	-4.9'	-8.5'	3.6'
142	3,606,062.08	325,330.48	29°23'26.14''	90°18'43.50''	-4.6'	-10.1'	5.5'
143	3,606,067.70	325,292.48	29°23'25.76''	90°18'43.44''	-4.6'	-11.0'	6.4'
144	3,606,089.90	325,203.07	29°23'24.88''	90°18'43.20''	-5.0'	-10.8'	5.8'
145	3,606,114.11	325,092.38	29°23'23.78''	90°18'42.94''	-4.6'	-12.8'	8.2'

SURVEYED PIPELINE 5 (2 INCH)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
146	3,608,073.06	328,368.99	29°23'56.04''	90°18'20.46''	-1.3'	-3.4'	2.1'
147	3,608,041.43	328,248.82	29°23'54.85''	90°18'20.83''	-2.4'	-4.3'	1.9'
148	3,608,014.31	328,149.94	29°23'53.88''	90°18'21.15''	-1.9'	-3.2'	1.3'
149	3,607,997.23	328,084.24	29°23'53.23''	90°18'21.35''	-2.8'	-5.1'	2.3'
150	3,607,986.55	328,045.98	29°23'52.85''	90°18'21.47''	-1.9'	-2.2'	0.3'
151	3,607,950.61	327,908.62	29°23'51.49''	90°18'21.89''	-2.4'	-3.6'	1.2'
152	3,607,907.25	327,748.35	29°23'49.91''	90°18'22.40''	-1.4'	-2.2'	0.8'
153	3,607,880.12	327,648.79	29°23'48.93''	90°18'22.72''	-0.4'	-0.6'	0.2'
154	3,607,853.37	327,547.73	29°23'47.93''	90°18'23.03''	-1.4'	-1.2'	EXPOSED
155	3,607,825.04	327,441.67	29°23'46.88''	90°18'23.36''	-0.7'	-0.9'	0.2'
156	3,607,801.93	327,353.21	29°23'46.01''	90°18'23.63''	-1.9'	-0.9'	EXPOSED
157	3,607,771.30	327,236.11	29°23'44.85''	90°18'23.99''	-0.2'	-0.4'	0.2'
158	3,607,746.26	327,144.25	29°23'43.95''	90°18'24.28''	-0.4'	-0.3'	EXPOSED
159	3,607,721.73	327,050.08	29°23'43.02''	90°18'24.57''	-0.2'	-0.4'	0.2'
160	3,607,692.31	326,941.45	29°23'41.94''	90°18'24.91''	-0.4'	-0.4'	EXPOSED
161	3,607,670.63	326,858.84	29°23'41.13''	90°18'25.17''	-1.7'	-1.4'	EXPOSED
162	3,607,643.04	326,759.73	29°23'40.15''	90°18'25.49''	-1.4'	-2.3'	0.9'
163	3,607,615.05	326,655.83	29°23'39.12''	90°18'25.81''	-1.2'	-1.0'	EXPOSED
164	3,607,586.13	326,552.77	29°23'38.11''	90°18'26.15''	-3.4'	-7.9'	4.5'
165	3,607,560.32	326,459.14	29°23'37.18''	90°18'26.45''	0.1'	-0.1'	0.2'
166	3,607,538.79	326,377.07	29°23'36.37''	90°18'26.70''	0.1'	-0.2'	0.3'
167	3,607,509.26	326,267.02	29°23'35.28''	90°18'27.05''	0.6'	-0.3'	0.9'
168	3,607,475.81	326,149.23	29°23'34.12''	90°18'27.44''	-4.6'	-10.0'	5.4'
169	3,607,455.98	326,073.05	29°23'33.37''	90°18'27.67''	-3.1'	-8.9'	5.8'
170	3,607,433.28	325,996.91	29°23'32.62''	90°18'27.94''	-3.6'	-7.4'	3.8'
171	3,607,409.76	325,913.86	29°23'31.80''	90°18'28.21''	-4.3'	-9.9'	5.6'
172	3,607,399.89	325,870.62	29°23'31.37''	90°18'28.33''	-4.8'	-11.1'	6.3'
173	3,607,386.28	325,817.83	29°23'30.85''	90°18'28.48''	-5.2'	-11.7'	6.5'
174	3,607,356.05	325,693.77	29°23'29.62''	90°18'28.84''	-6.1'	-9.2'	3.1'
175	3,607,321.88	325,578.46	29°23'28.48''	90°18'29.24''	-4.4'	-9.6'	5.2'
176	3,607,274.57	325,402.91	29°23'26.75''	90°18'29.79''	-4.1'	-9.1'	5.0'
177	3,607,227.08	325,224.26	29°23'24.99''	90°18'30.34''	-4.4'	-9.7'	5.3'
178	3,607,171.38	325,022.12	29°23'22.99''	90°18'30.99''	-4.6'	-9.8'	5.2'

SURVEYED PIPELINE 6 (2 INCH)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
179	3,608,074.53	328,369.40	29°23'56.05''	90°18'20.45''	-1.3'	-3.5'	2.2'
180	3,608,042.81	328,247.84	29°23'54.84''	90°18'20.82''	-2.4'	-3.5'	1.1'
181	3,608,017.07	328,150.08	29°23'53.88''	90°18'21.12''	-1.9'	-3.2'	1.3'
182	3,607,998.63	328,084.29	29°23'53.23''	90°18'21.33''	-2.8'	-4.2'	1.4'
183	3,607,988.35	328,043.10	29°23'52.82''	90°18'21.45''	-1.9'	-2.2'	0.3'
184	3,607,952.98	327,907.38	29°23'51.48''	90°18'21.87''	-2.4'	-3.4'	1.0'
185	3,607,909.43	327,748.18	29°23'49.91''	90°18'22.38''	-1.4'	-1.9'	0.5'
186	3,607,883.27	327,647.51	29°23'48.92''	90°18'22.68''	-0.4'	-0.8'	0.4'
187	3,607,857.24	327,548.29	29°23'47.94''	90°18'22.99''	-1.1'	-0.9'	-0.2'
188	3,607,828.65	327,440.88	29°23'46.88''	90°18'23.32''	-0.7'	-0.9'	0.2'
189	3,607,805.32	327,351.14	29°23'45.99''	90°18'23.59''	-1.9'	-1.2'	-0.7'
190	3,607,774.02	327,235.76	29°23'44.85''	90°18'23.96''	-0.2'	-0.4'	0.2'
191	3,607,748.93	327,142.77	29°23'43.93''	90°18'24.25''	-0.4'	-0.3'	-0.1'
192	3,607,724.00	327,049.41	29°23'43.01''	90°18'24.54''	-0.2'	-0.4'	0.2'
193	3,607,694.19	326,940.80	29°23'41.94''	90°18'24.89''	-0.4'	-0.4'	0.0'
194	3,607,671.54	326,858.77	29°23'41.13''	90°18'25.15''	-1.7'	-1.4'	-0.3'
195	3,607,644.08	326,759.64	29°23'40.15''	90°18'25.48''	-1.4'	-2.3'	0.9'
196	3,607,616.46	326,655.64	29°23'39.12''	90°18'25.80''	-1.2'	-1.0'	-0.2'
197	3,607,586.82	326,553.49	29°23'38.11''	90°18'26.14''	-3.4'	-7.5'	4.1'
198	3,607,562.01	326,458.77	29°23'37.18''	90°18'26.43''	0.1'	-0.1'	0.2'
199	3,607,540.79	326,376.83	29°23'36.37''	90°18'26.68''	0.1'	-0.2'	0.3'
200	3,607,510.26	326,266.68	29°23'35.28''	90°18'27.04''	0.6'	-0.3'	0.9'
201	3,607,476.44	326,149.30	29°23'34.12''	90°18'27.43''	-4.6'	-9.7'	5.1'
202	3,607,456.06	326,073.01	29°23'33.37''	90°18'27.67''	-3.1'	-9.2'	6.1'
203	3,607,435.81	325,995.26	29°23'32.60''	90°18'27.91''	-3.6'	-8.0'	4.4'
204	3,607,412.49	325,912.77	29°23'31.79''	90°18'28.18''	-4.3'	-10.0'	5.7'
205	3,607,400.94	325,870.06	29°23'31.36''	90°18'28.31''	-4.8'	-11.3'	6.5'
206	3,607,387.71	325,819.83	29°23'30.87''	90°18'28.47''	-5.2'	-12.5'	7.3'
207	3,607,356.22	325,693.67	29°23'29.62''	90°18'28.84''	-6.1'	-8.9'	2.8'
208	3,607,324.69	325,578.99	29°23'28.49''	90°18'29.21''	-4.4'	-7.9'	3.5'
209	3,607,278.27	325,404.30	29°23'26.76''	90°18'29.75''	-4.1'	-9.9'	5.8'
210	3,607,230.57	325,223.17	29°23'24.97''	90°18'30.31''	-4.4'	-9.8'	5.4'
211	3,607,175.50	325,022.94	29°23'23.00''	90°18'30.95''	-4.6'	-9.9'	5.3'

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

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REVISION DESCRIPTION:
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DRAWN BY: J.P.W. | APPROVED BY: J.M.B.

DATE: 08/13/19 | JOB NO: 2019.0193

DRAWING NAME: PHASE ONE EAST MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 7 OF 9

PHASE ONE (EAST) MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGATION SURVE

SURVEYED ABANDONED PIPELINES							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
231	3,608,052.44	326,044.90	29°23'33.04''	90°18'20.93''	-1.5'	-1.5'	EXPOSED
232	3,608,074.14	326,044.67	29°23'33.03''	90°18'20.69''	-1.8'	-1.8'	EXPOSED
233	3,608,239.67	325,970.11	29°23'32.28''	90°18'18.82''	-2.5'	-2.5'	EXPOSED
234	3,608,252.08	325,951.01	29°23'32.09''	90°18'18.68''	-2.3'	-2.3'	EXPOSED
235	3,608,259.86	325,954.95	29°23'32.13''	90°18'18.60''	-2.3'	-2.3'	EXPOSED
236	3,608,276.87	325,934.69	29°23'31.93''	90°18'18.41''	-2.0'	-2.0'	EXPOSED
237	3,608,279.96	325,886.76	29°23'31.45''	90°18'18.38''	-2.0'	-2.0'	EXPOSED
238	3,608,280.86	325,849.17	29°23'31.08''	90°18'18.37''	-2.5'	-2.5'	EXPOSED
239	3,608,279.22	325,939.27	29°23'31.97''	90°18'18.38''	-2.0'	-2.0'	EXPOSED
240	3,608,292.51	325,925.83	29°23'31.84''	90°18'18.23''	-1.9'	-1.9'	EXPOSED
241	3,608,313.00	325,907.81	29°23'31.66''	90°18'18.00''	-1.3'	-0.8'	-0.5'
242	3,608,322.06	325,899.48	29°23'31.57''	90°18'17.90''	1.0'	-0.9'	1.9'
243	3,608,333.50	325,888.90	29°23'31.47''	90°18'17.77''	1.0'	-1.2'	2.2'
244	3,608,343.76	325,879.88	29°23'31.38''	90°18'17.66''	-0.8'	-1.3'	0.5'
245	3,608,347.38	325,872.63	29°23'31.30''	90°18'17.62''	-1.0'	-0.7'	-0.3'
246	3,608,352.90	325,862.14	29°23'31.20''	90°18'17.55''	-1.0'	-0.7'	-0.3'
247	3,608,353.80	325,852.29	29°23'31.10''	90°18'17.54''	-1.0'	-0.7'	-0.3'
248	3,608,373.80	325,789.06	29°23'30.48''	90°18'17.32''	-2.5'	-2.5'	EXPOSED
249	3,608,285.77	325,919.83	29°23'31.78''	90°18'18.31''	-2.0'	-2.0'	EXPOSED
250	3,608,282.47	325,907.92	29°23'31.66''	90°18'18.35''	-2.0'	-2.0'	EXPOSED
251	3,608,267.20	325,862.98	29°23'31.22''	90°18'18.52''	-2.5'	-2.5'	EXPOSED
252	3,608,289.25	325,917.53	29°23'31.75''	90°18'18.27''	-2.0'	-2.0'	EXPOSED
253	3,608,309.84	325,893.33	29°23'31.51''	90°18'18.04''	-1.3'	-1.3'	EXPOSED
254	3,608,319.04	325,885.23	29°23'31.43''	90°18'17.93''	1.0'	-0.1'	1.1'
255	3,608,322.67	325,879.61	29°23'31.38''	90°18'17.89''	-1.0'	-0.6'	-0.4'
256	3,608,329.59	325,870.37	29°23'31.28''	90°18'17.82''	-1.0'	-1.0'	EXPOSED
257	3,608,336.76	325,864.55	29°23'31.23''	90°18'17.74''	-1.3'	-1.3'	EXPOSED
258	3,608,283.44	325,893.39	29°23'31.52''	90°18'18.34''	-2.0'	-2.0'	EXPOSED
259	3,608,298.58	325,878.34	29°23'31.37''	90°18'18.17''	-2.0'	-2.0'	EXPOSED
260	3,608,330.80	325,869.82	29°23'31.28''	90°18'17.80''	-1.0'	-1.0'	EXPOSED
261	3,608,320.60	325,891.90	29°23'31.50''	90°18'17.92''	1.0'	-0.6'	1.6'
262	3,608,322.30	325,888.63	29°23'31.47''	90°18'17.90''	1.0'	-0.9'	1.9'
263	3,608,324.47	325,884.43	29°23'31.42''	90°18'17.87''	1.0'	-1.0'	2.0'
264	3,608,328.63	325,875.42	29°23'31.33''	90°18'17.83''	-1.0'	-1.0'	EXPOSED
265	3,608,332.76	325,867.01	29°23'31.25''	90°18'17.78''	-1.3'	-1.3'	EXPOSED
266	3,608,336.79	325,858.86	29°23'31.17''	90°18'17.74''	-1.7'	-1.7'	EXPOSED
267	3,608,321.54	325,893.23	29°23'31.51''	90°18'17.91''	1.0'	-0.8'	1.8'
268	3,608,323.28	325,890.04	29°23'31.48''	90°18'17.89''	1.0'	-0.8'	1.8'
269	3,608,325.86	325,885.02	29°23'31.43''	90°18'17.86''	1.0'	-1.0'	2.0'
270	3,608,330.49	325,876.49	29°23'31.34''	90°18'17.81''	-1.2'	-1.2'	EXPOSED
271	3,608,334.24	325,867.45	29°23'31.25''	90°18'17.76''	-1.1'	-1.1'	EXPOSED
272	3,608,325.71	325,891.45	29°23'31.49''	90°18'17.86''	1.0'	-1.0'	2.0'
273	3,608,327.91	325,886.83	29°23'31.45''	90°18'17.83''	1.0'	-1.0'	2.0'
274	3,608,332.20	325,876.66	29°23'31.35''	90°18'17.79''	-1.2'	-1.2'	EXPOSED
275	3,608,335.59	325,867.27	29°23'31.25''	90°18'17.75''	-1.6'	-1.6'	EXPOSED
276	3,608,271.24	325,862.87	29°23'31.21''	90°18'18.48''	-2.5'	-2.5'	EXPOSED
277	3,608,278.56	325,850.35	29°23'31.09''	90°18'18.40''	-2.5'	-2.5'	EXPOSED
278	3,608,275.12	325,824.51	29°23'30.83''	90°18'18.44''	-2.7'	-2.7'	EXPOSED
279	3,608,268.39	325,746.90	29°23'30.07''	90°18'18.52''	-2.8'	-2.8'	EXPOSED
280	3,608,076.25	325,647.87	29°23'29.10''	90°18'20.70''	-4.4'	-4.4'	EXPOSED
281	3,608,082.01	325,637.57	29°23'29.00''	90°18'20.64''	-4.4'	-4.4'	EXPOSED
282	3,608,432.26	325,819.20	29°23'30.77''	90°18'16.66''	-2.4'	-2.4'	EXPOSED
283	3,608,455.46	325,819.01	29°23'30.76''	90°18'16.40''	-2.2'	-2.2'	EXPOSED
284	3,608,484.39	325,819.23	29°23'30.76''	90°18'16.07''	-1.7'	-1.7'	EXPOSED
285	3,608,474.09	325,798.31	29°23'30.56''	90°18'16.19''	-2.5'	-2.5'	EXPOSED
286	3,608,478.85	325,828.01	29°23'30.85''	90°18'16.13''	-1.5'	-1.5'	EXPOSED
287	3,608,485.57	325,808.63	29°23'30.66''	90°18'16.06''	-2.3'	-2.3'	EXPOSED
288	3,608,489.76	325,795.89	29°23'30.53''	90°18'16.01''	-2.5'	-2.5'	EXPOSED
289	3,608,494.30	325,781.38	29°23'30.39''	90°18'15.96''	-2.6'	-2.6'	EXPOSED
290	3,608,472.39	325,834.37	29°23'30.91''	90°18'16.21''	-1.0'	-1.0'	EXPOSED
291	3,608,491.87	325,819.85	29°23'30.77''	90°18'15.99''	-1.8'	-1.8'	EXPOSED
292	3,608,460.60	325,841.13	29°23'30.98''	90°18'16.34''	1.0'	1.0'	EXPOSED
293	3,608,486.54	325,832.09	29°23'30.89''	90°18'16.05''	1.0'	1.0'	EXPOSED
294	3,608,497.22	325,839.36	29°23'30.96''	90°18'15.92''	1.0'	-0.5'	1.5'
295	3,608,507.58	325,846.14	29°23'31.03''	90°18'15.81''	1.0'	-2.0'	3.0'

SURVEYED ABANDONED PIPELINES							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
296	3,608,520.71	325,859.65	29°23'31.16''	90°18'15.66''	1.0'	-2.0'	3.0'
297	3,608,529.21	325,874.12	29°23'31.30''	90°18'15.56''	1.0'	-3.0'	4.0'
298	3,608,537.38	325,880.95	29°23'31.37''	90°18'15.47''	1.0'	-1.1'	2.1'
299	3,608,542.76	325,879.62	29°23'31.36''	90°18'15.41''	1.0'	-1.1'	2.1'
300	3,608,546.80	325,874.11	29°23'31.30''	90°18'15.36''	1.0'	-1.5'	2.5'
301	3,608,546.61	325,856.07	29°23'31.12''	90°18'15.36''	1.0'	-2.8'	3.8'
302	3,608,550.01	325,851.75	29°23'31.08''	90°18'15.33''	1.0'	-2.6'	3.6'
303	3,608,562.92	325,855.13	29°23'31.11''	90°18'15.18''	1.0'	-2.8'	3.8'
304	3,608,570.44	325,858.90	29°23'31.15''	90°18'15.09''	1.0'	-3.0'	4.0'
305	3,608,461.92	325,844.00	29°23'31.01''	90°18'16.32''	1.0'	0.8'	0.2'
306	3,608,476.13	325,840.28	29°23'30.97''	90°18'16.16''	1.0'	1.0'	EXPOSED
307	3,608,485.82	325,835.86	29°23'30.93''	90°18'16.05''	1.0'	1.0'	EXPOSED
308	3,608,493.80	325,832.62	29°23'30.90''	90°18'15.96''	1.0'	0.5'	0.5'
309	3,608,509.03	325,825.25	29°23'30.82''	90°18'15.79''	1.0'	1.0'	EXPOSED
310	3,608,476.31	325,858.15	29°23'31.15''	90°18'16.16''	1.0'	-1.9'	2.9'
311	3,608,471.92	325,854.00	29°23'31.11''	90°18'16.21''	1.0'	-2.0'	3.0'
312	3,608,470.70	325,849.27	29°23'31.06''	90°18'16.22''	1.0'	0.5'	0.5'
313	3,608,484.46	325,842.22	29°23'30.99''	90°18'16.07''	1.0'	0.7'	0.3'
314	3,608,503.89	325,838.87	29°23'30.96''	90°18'15.85''	1.0'	0.0'	1.0'
315	3,608,525.28	325,837.03	29°23'30.94''	90°18'15.61''	-1.7'	-1.7'	EXPOSED
316	3,608,523.42	325,835.48	29°23'30.92''	90°18'15.63''	-1.9'	-1.9'	EXPOSED
317	3,608,500.71	325,837.36	29°23'30.94''	90°18'15.89''	1.0'	-1.0'	2.0'
318	3,608,499.08	325,834.72	29°23'30.92''	90°18'15.90''	1.0'	0.1'	0.9'
319	3,608,513.09	325,823.09	29°23'30.80''	90°18'15.75''	-1.8'	-1.8'	EXPOSED
320	3,608,526.69	325,833.93	29°23'30.91''	90°18'15.59''	-1.3'	-1.3'	EXPOSED
321	3,608,553.05	325,821.81	29°23'30.78''	90°18'15.30''	-1.7'	0.0'	-1.7'
322	3,608,562.83	325,821.74	29°23'30.78''	90°18'15.18''	-2.1'	-3.7'	1.6'
323	3,608,509.77	325,823.77	29°23'30.81''	90°18'15.78''	-1.7'	-1.7'	EXPOSED
324	3,608,535.74	325,802.48	29°23'30.59''	90°18'15.49''	-2.5'	-2.5'	EXPOSED
325	3,608,563.48	325,838.88	29°23'30.95''	90°18'15.18''	0.5'	-2.5'	3.0'
326	3,608,561.44	325,824.33	29°23'30.81''	90°18'15.20''	-2.1'	-2.1'	EXPOSED
327	3,608,555.45	325,807.03	29°23'30.64''	90°18'15.27''	-1.9'	-1.9'	EXPOSED
328	3,608,549.77	325,803.60	29°23'30.60''	90°18'15.33''	-2.2'	-2.2'	EXPOSED
329	3,608,680.68	325,641.78	29°23'28.99''	90°18'13.87''	-1.3'	-1.3'	EXPOSED
330	3,608,721.35	325,607.03	29°23'28.64''	90°18'13.41''	-0.4'	-0.4'	EXPOSED
331	3,608,739.81	325,590.75	29°23'28.48''	90°18'13.21''	1.1'	0.1'	1.0'
332	3,608,762.41	325,570.74	29°23'28.28''	90°18'12.95''	1.1'	1.1'	EXPOSED
333	3,608,776.11	325,559.47	29°23'28.17''	90°18'12.80''	-1.9'	-1.9'	EXPOSED
334	3,608,734.63	325,594.55	29°23'28.52''	90°18'13.27''	1.1'	-0.1'	1.2'
335	3,608,717.74	325,586.80	29°23'28.44''	90°18'13.46''	1.1'	-0.1'	1.2'
336	3,608,657.51	325,564.58	29°23'28.23''	90°18'14.14''	1.1'	0.1'	1.0'
337	3,608,611.78	325,548.84	29°23'28.08''	90°18'14.66''	1.1'	-0.9'	2.0'
338	3,608,595.75	325,543.66	29°23'28.03''	90°18'14.84''	1.1'	-0.9'	2.0'
339	3,608,586.87	325,540.56	29°23'28.00''	90°18'14.94''	-0.9'	-0.9'	EXPOSED
340	3,608,557.82	325,530.49	29°23'27.90''	90°18'15.27''	-2.5'	-2.5'	EXPOSED
341	3,608,652.39	325,602.20	29°23'28.60''	90°18'14.19''	1.1'	-1.0'	2.1'
342	3,608,647.11	325,599.52	29°23'28.57''	90°18'14.25''	1.1'	-0.1'	1.2'
343	3,608,651.01	325,583.55	29°23'28.42''	90°18'14.21''	1.1'	-0.3'	1.4'
344	3,608,657.80	325,558.65	29°23'28.17''	90°18'14.14''	1.1'	-0.1'	1.2'
345	3,608,662.46	325,542.61	29°23'28.01''	90°18'14.09''	1.1'	0.7'	0.4'
346	3,608,664.79	325,521.58	29°23'27.80''	90°18'14.06''	1.1'	1.1'	EXPOSED
347	3,608,784.60	325,550.01	29°23'28.07''	90°18'12.71''	-1.9'	-1.9'	EXPOSED
348	3,608,776.89	325,557.52	29°23'28.15''	90°18'12.79''	-1.9'	-1.9'	EXPOSED
349	3,608,761.55	325,552.41	29°23'28.10''	90°18'12.97''	-2.1'	-2.1'	EXPOSED
350	3,608,731.24	325,540.27	29°23'27.98''	90°18'13.31''	-2.3'	-2.3'	EXPOSED
351	3,608,683.26	325,520.58	29°23'27.79''	90°18'13.85''	-2.0'	-2.0'	EXPOSED
352	3,608,635.81	325,509.68	29°23'27.69''	90°18'14.39''	-2.5'	-2.5'	EXPOSED
353	3,608,606.77	325,493.54	29°23'27.53''	90°18'14.72''	-2.3'	-2.3'	EXPOSED
354	3,608,574.89	325,467.15	29°23'27.27''	90°18'15.08''	-2.8'	-2.8'	EXPOSED
355	3,608,569.28	325,452.11	29°23'27.12''	90°18'15.15''	-3.1'	-3.1'	EXPOSED
356	3,608,663.24	325,502.71	29°23'27.61''	90°18'14.08''	-2.1'	-2.1'	EXPOSED
357	3,608,626.92	325,508.78	29°23'27.68''	90°18'14.49''	-2.1'	-2.1'	EXPOSED
358	3,608,669.48	325,498.48	29°23'27.57''	90°18'14.01''	-2.5'	-2.5'	EXPOSED
359	3,608,578.65	325,483.20	29°23'27.43''	90°18'15.04''	-2.6'	-2.6'	EXPOSED
360	3,608,485.77	325,477.05	29°23'27.38''	90°18'16.09''	-2.6'	-2.6'	EXPOSED

SURVEYED ABANDONED PIPELINES							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
361	3,608,675.11	325,488.04	29°23'27.47''	90°18'13.95''	-2.5'	-2.5'	EXPOSED
362	3,608,619.00	325,482.48	29°23'27.42''	90°18'14.58''	-2.1'	-2.1'	EXPOSED
363	3,608,548.48	325,533.67	29°23'27.93''	90°18'15.38''	-2.4'	-2.4'	EXPOSED
364	3,608,578.41	325,520.38	29°23'27.80''	90°18'15.04''	-2.4'	-2.4'	EXPOSED
365	3,608,609.34	325,509.38	29°23'27.69''	90°18'14.69''	-2.1'	-2.1'	EXPOSED
366	3,608,543.56	325,521.69	29°23'27.81''	90°18'15.43''	-2.9'	-2.9'	EXPOSED
367	3,608,525.71	325,496.59	29°23'27.57''	90°18'15.64''	-2.7'	-2.7'	EXPOSED
368	3,608,594.95	325,482.99	29°23'27.43''	90°18'14.86''	-2.3'	-2.3'	EXPOSED
369	3,608,559.46	325,480.58	29°23'27.40''	90°18'15.26''	-2.3'	-2.3'	EXPOSED
370	3,608,543.11	325,479.81	29°23'27.40''	90°18'15.44''	-2.5'	-2.5'	EXPOSED
371	3,608,511.16	325,479.73	29°23'27.40''	90°18'15.80''	-2.6'	-2.6'	EXPOSED
372	3,608,498.88	325,459.75	29°23'27.20''	90°18'15.94''	-2.9'	-2.9'	EXPOSED
373	3,608,490.70	325,552.93	29°23'28.13''	90°18'16.03''	-3.0'	-3.0'	EXPOSED
374	3,608,492.61	325,543.76	29°23'28.04''	90°18'16.01''	-3.0'	-3.0'	EXPOSED
375	3,608,486.54	325,546.15	29°23'28.06''	90°18'16.08''	-3.0'	-3.0'	EXPOSED
376	3,608,470.96	325,537.67	29°23'27.98''	90°18'16.25''	-3.0'	-3.0'	EXPOSED
377	3,608,480.48	325,577.88	29°23'28.38''	90°18'16.14''	-2.6'	-2.6'	EXPOSED
378	3,608,457.73	325,535.81	29°23'27.96''	90°18'16.40''	-3.1'	-3.1'	EXPOSED
379	3,608,445.81	325,528.91	29°23'27.89''	90°18'16.54''	-3.1'	-3.1'	EXPOSED
380	3,608,444.87	325,499.59	29°23'27.60''	90°18'16.55''	-3.1'	-3.1'	EXPOSED
381	3,608,455.39	325,522.56	29°23'27.83''	90°18'16.43''	-3.1'	-3.1'	EXPOSED
382	3,608,394.51	325,528.59	29°23'27.89''	90°18'17.12''	-3.1'	-3.1'	EXPOSED
383	3,608,390.74	325,526.28	29°23'27.87''	90°18'17.16''	-3.1'	-3.1'	EXPOSED
384	3,608,358.67	325,544.14	29°23'28.05''	90°18'17.52''	-3.1'	-3.1'	EXPOSED
385	3,608,339.19	325,542.30	29°23'28.04''	90°18'17.74''	-3.1'	-3.1'	EXPOSED
386	3,608,312.65	325,537.59	29°23'27.99''	90°18'18.04''	-3.1'	-3.1'	EXPOSED
387	3,608,373.28	325,531.33	29°23'27.92''	90°18'17.36''	-3.1'	-3.1'	EXPOSED
388	3,608,347.20	325,532.12	29°23'27.93''	90°18'17.65''	-3.1'	-3.1'	EXPOSED
389	3,608,326.64	325,533.20	29°23'27.95''	90°18'17.88''	-3.1'	-3.1'	EXPOSED
390	3,608,338.81	325,568.80	29°23'28.30''	90°18'17.74''	-3.1'	-3.1'	EXPOSED
391	3,608,332.39	325,572.39	29°23'28.33''	90°18'17.81''	-3.1'	-3.1'	EXPOSED
392	3,608,307.25	325,535.21	29°23'27.97''	90°18'18.10''	-3.1'	-3.1'	EXPOSED
393	3,608,276.99	325,607.71	29°23'28.69''	90°18'18.44''	-3.4'	-3.4'	EXPOSED
394	3,608,304.33	325,536.05	29°23'27.98''	90°18'18.14''	-3.1'	-3.1'	EXPOSED
395	3,608,916.94	325,464.42	29°23'27.21''	90°18'11.22''	-1.5'	-1.5'	EXPOSED
396	3,608,927.79	325,453.22	29°23'27.10''	90°18'11.10''	0.5'	0.5'	EXPOSED
397	3,608,963.22	325,422.57	29°23'26.79''	90°18'10.70''	0.5'	-0.5'	1.0'
398	3,608,995.71	325,383.26	29°23'26.40''	90°18'10.34''	0.5'	-1.6'	2.1'
399	3,609,007.44	325,392.85	29°23'26.50''	90°18'10.20''	0.5'	-1.6'	2.1'
400	3,608,930.46	325,409.86	29°23'26.67''	90°18'11.07''	0.5'	-0.5'	1.0'
401	3,608,908.45	325,417.54	29°23'26.75''	90°18'11.32''	0.5'	0.2'	0.3'
402	3,608,876.51	325,425.59	29°23'26.83''	90°18'11.68''	0.5'	0.5'	EXPOSED
403	3,608,828.25	325,437.49	29°23'26.95''	90°18'12.22''	-0.2'	-0.2'	EXPOSED
404	3,608,826.44	325,440.40	29°23'26.98''	90°18'12.24''	-0.2'	-0.2'	EXPOSED
405	3,608,721.91	325,419.54	29°23'26.79''	90°18'13.43''	-2.2'	-2.2'	EXPOSED
406	3,608,697.76	325,413.39	29°23'26.73''	90°18'13.70''	-2.9'	-2.9'	EXPOSED
407	3,608,702.81	325,414.28	29°23'26.74''	90°18'13.64''	-2.7'	-2.7'	EXPOSED
408	3,608,704.45	325,413.35	29°23'26.73''	90°18'13.63''	-2.7'	-2.7'	EXPOSED
409	3,608,701.09	325,382.12	29°23'26.42''	90°18'13.67''	-2.1'	-2.1'	EXPOSED
410	3,608,710.65	325,376.01	29°23'26.36''	90°18'13.56''	-2.4'	-2.4'	EXPOSED
411	3,608,686.66	325,370.90	29°23'26.31''	90°18'13.83''	-2.2'	-2.2'	EXPOSED
412	3,608,670.07	325,360.97	29°23'26.21''	90°18'14.02''	-2.4'	-2.4'	EXPOSED
413	3,608,660.06	325,357.03	29°23'26.17''	90°18'14.13''	-2.7'	-2.7'	EXPOSED
414	3,608,658.64	325,360.36	29°23'26.21''	90°18'14.15''	-2.7'	-2.7'	EXPOSED
415	3,608,653.16	325,358.07	29°23'26.18''	90°18'14.21''	-3.0'	-3.0'	EXPOSED
416	3,608,648.03	325,370.91	29°23'26.31''	90°18'14.27''	-3.1'	-3.1'	EXPOSED
417	3,608,641.90	325,370.52	29°23'26.31''	90°18'14.34''	-3.1'	-3.1'	EXPOSED
418	3,608,829.51	325,323.70	29°23'25.83''	90°18'12.22''	-2.0'	-2.0'	EXPOSED
419	3,608,827.19	325,316.36	29°23'25.76''	90°18'12.25''	-2.0'	-2.0'	EXPOSED
420	3,608,773.94	325,357.85	29°23'26.17''	90°18'12.85''	-2.2'	-2.2'	EXPOSED
421	3,608,791.35	325,342.99	29°23'26.02''	90°18'12.65''	-2.2'	-2.2'	EXPOSED
422	3,608,836.52	325,306.49	29°23'25.66''	90°18'12.14''	-2.2'	-2.2'	EXPOSED
423	3,608,887.23	325,260.19	29°23'25.19''	90°18'11.57''	-2.2'	-2.2'	EXPOSED
424	3,608,920.82	325,224.07	29°23'24.83''	90°18'11.20''	-1.9'	-1.9'	EXPOSED
425	3,608,942.31	325,200.43	29°23'24.60''	90°18'10.96''	0.5'	0.5'	EXPOSED

SURVEYED ABANDONED PIPELINES							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
426	3,608,753.41	325,371.60	29°23'26.31''	90°18'13.08''	-2.7'	-2.7'	EXPOSED
427	3,608,790.59	325,341.84	29°23'26.01''	90°18'12.66''	-2.7'	-2.7'	EXPOSED
428	3,608,835.97	325,305.19	29°23'25.64''	90°18'12.15''	-2.7'	-2.7'	EXPOSED
429	3,608,885.83	325,259.03	29°23'25.18''	90°18'11.59''	-2.7'	-2.7'	EXPOSED
430	3,608,920.16	325,223.24	29°23'24.83''	90°18'11.21''	-2.4'	-2.4'	EXPOSED
431	3,608,941.35	325,199.64	29°23'24.59''	90°18'10.97''	N/A	N/A	EXPOSED
432	3,608,767.35	325,359.31	29°23'26.19''	90°18'12.92''	-3.0'	-3.0'	EXPOSED
433	3,608,789.78	325,341.24	29°23'26.01''	90°18'12.67''	-2.7'	-2.7'	EXPOSED
434	3,608,835.70	325,304.61	29°23'25.64''	90°18'12.15''	-2.7'	-2.7'	EXPOSED
435	3,608,885.02	325,258.79	29°23'25.18''	90°18'11.60''	-2.7'	-2.7'	EXPOSED
436	3,608,919.74	325,221.54	29°23'24.81''	90°18'11.21''	-2.4'	-2.4'	EXPOSED
437	3,608,940.74	325,199.53	29°23'24.59''	90°18'10.98''	N/A	N/A	EXPOSED

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEET 9 FOR MAGNETOMETER CHARTS

T. BAKER SMITH
A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

REV. NO: 00 | REV. DATE: --/--/-- | REV. BY: ---

REVISION DESCRIPTION:
--

DRAWN BY: J.P.W. | APPROVED BY: J.M.B.

DATE: 08/13/19 | JOB NO: 2019.0193

DRAWING NAME: PHASE ONE EAST MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 8 OF 9

PHASE ONE (EAST) MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGATION SURVEY
CHARTS OF SURVEYED ABANDONED PIPELINES
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,76,77, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

7/7/2020 - P:\Y-2019\2019.0193\DWG\PHASE ONE EAST MAGNETOMETER SURVEY\PHASE ONE EAST MAGNETOMETER SURVEY.DWG

MAGNETOMETER SURVEY						
PNT NO	COORDINATES (NAD83)		COORDINATES (NAD83)		DURATION	GAMMA
	X	Y	LAT	LONG		
500	3,603,477	327,370	29°23'46.56''	90°19'12.52''	185.3	165.0
501	3,603,484	328,878	29°24'01.48''	90°19'12.29''	155.9	346.5
502	3,603,507	328,850	29°24'01.21''	90°19'12.03''	339.1	419.1
503	3,603,510	327,813	29°23'50.94''	90°19'12.10''	418.2	96.1
504	3,603,514	325,507	29°23'28.11''	90°19'12.29''	672.4	531.6
505	3,603,817	329,557	29°24'08.18''	90°19'08.46''	727.2	1604.5
506	3,603,945	328,370	29°23'56.42''	90°19'07.13''	397.2	633.3
507	3,604,009	329,417	29°24'06.77''	90°19'06.30''	293.8	1885.4
508	3,604,012	328,307	29°23'55.79''	90°19'06.38''	247.3	4199.8
509	3,604,012	326,146	29°23'34.39''	90°19'06.59''	1492.9	239.5
510	3,604,021	326,691	29°23'39.79''	90°19'06.44''	120.3	30.5
511	3,604,068	329,367	29°24'06.27''	90°19'05.64''	655.3	1110.4
512	3,604,128	325,368	29°23'26.68''	90°19'05.36''	84.4	28.4
513	3,604,293	329,559	29°24'08.16''	90°19'03.08''	188.6	110.6
514	3,604,387	327,371	29°23'46.49''	90°19'02.23''	156.1	28.5
515	3,604,436	325,375	29°23'26.72''	90°19'01.88''	114.6	93.5
516	3,604,480	327,877	29°23'51.49''	90°19'01.13''	87.4	5695.1
517	3,604,512	327,854	29°23'51.26''	90°19'00.77''	200.7	1580.2
518	3,604,512	329,053	29°24'03.13''	90°19'00.65''	333.1	5831.9
519	3,604,513	329,056	29°24'03.16''	90°19'00.64''	47.4	4827.0
520	3,604,513	327,851	29°23'51.23''	90°19'00.76''	146.8	1484.5
521	3,604,741	328,884	29°24'01.43''	90°18'58.08''	266.5	1825.8
522	3,604,758	329,378	29°24'06.32''	90°18'57.84''	405.3	170.0
523	3,604,936	326,377	29°23'36.60''	90°18'56.13''	382.3	173.2
524	3,604,955	327,367	29°23'46.40''	90°18'55.81''	182.5	20.6
525	3,605,007	327,396	29°23'46.68''	90°18'55.22''	175.2	2852.9
526	3,605,007	327,628	29°23'48.98''	90°18'55.20''	117.2	29.5
527	3,605,008	327,629	29°23'48.99''	90°18'55.19''	66.1	19.4
528	3,605,011	328,299	29°23'55.62''	90°18'55.09''	70.0	13.5
529	3,605,012	327,567	29°23'48.37''	90°18'55.15''	269.4	28.2
530	3,605,016	328,506	29°23'57.67''	90°18'55.00''	53.9	289.8
531	3,605,020	327,378	29°23'46.50''	90°18'55.08''	498.2	1728.4
532	3,605,024	328,685	29°23'59.44''	90°18'54.90''	65.5	10263.9
533	3,605,025	328,518	29°23'57.79''	90°18'54.91''	52.7	120.4
534	3,605,026	328,541	29°23'58.01''	90°18'54.89''	60.9	584.4
535	3,605,033	327,360	29°23'46.32''	90°18'54.93''	348.1	1274.0
536	3,605,122	328,372	29°23'56.33''	90°18'53.82''	274.2	21.3
537	3,605,147	326,876	29°23'41.52''	90°18'53.69''	106.9	102.9
538	3,605,427	328,368	29°23'56.27''	90°18'50.38''	112.4	3745.1
539	3,605,470	327,371	29°23'46.39''	90°18'49.99''	205.9	39.2
540	3,605,503	328,065	29°23'53.26''	90°18'49.55''	616.7	985.4
541	3,605,506	326,922	29°23'41.94''	90°18'49.63''	125.1	1832.1
542	3,605,508	325,519	29°23'28.06''	90°18'49.75''	90.5	28.5
543	3,605,508	325,600	29°23'28.86''	90°18'49.74''	90.3	10.5
544	3,605,508	328,162	29°23'54.22''	90°18'49.48''	36.3	48.2
545	3,605,509	328,199	29°23'54.59''	90°18'49.47''	33.7	24.6
546	3,605,511	326,985	29°23'42.57''	90°18'49.57''	65.9	914.6
547	3,605,511	328,130	29°23'53.90''	90°18'49.45''	82.1	366.4
548	3,605,513	328,132	29°23'53.92''	90°18'49.43''	313.5	620.1
549	3,605,513	327,509	29°23'47.75''	90°18'49.49''	142.9	30.9
550	3,605,513	327,280	29°23'45.49''	90°18'49.51''	126.0	34.7
551	3,605,517	327,282	29°23'45.51''	90°18'49.47''	105.1	26.7
552	3,605,518	328,275	29°23'55.34''	90°18'49.36''	418.3	169.4
553	3,605,570	326,874	29°23'41.46''	90°18'48.91''	83.7	500.3
554	3,605,637	326,877	29°23'41.49''	90°18'48.15''	178.9	1313.3
555	3,605,665	327,877	29°23'51.38''	90°18'47.73''	60.0	299.4
556	3,605,746	326,375	29°23'36.51''	90°18'46.97''	218.3	163.8
557	3,605,753	326,370	29°23'36.46''	90°18'46.89''	550.3	163.8
558	3,605,778	326,878	29°23'41.48''	90°18'46.56''	150.6	622.2
559	3,605,812	326,875	29°23'41.45''	90°18'46.17''	103.7	523.9
560	3,605,845	327,888	29°23'51.48''	90°18'45.70''	178.6	66.0
561	3,605,924	325,876	29°23'31.55''	90°18'45.00''	271.9	233.4
562	3,605,951	325,372	29°23'26.56''	90°18'44.75''	372.8	1381.1
563	3,606,006	328,064	29°23'53.21''	90°18'43.86''	189.2	18.2
564	3,606,007	327,420	29°23'46.83''	90°18'43.91''	517.9	110.4
565	3,606,008	327,419	29°23'46.82''	90°18'43.90''	217.1	112.7

MAGNETOMETER SURVEY						
PNT NO	COORDINATES (NAD83)		COORDINATES (NAD83)		DURATION	GAMMA
	X	Y	LAT	LONG		
565	3,606,008	327,419	29°23'46.82''	90°18'43.90''	217.1	112.7
566	3,606,010	327,133	29°23'43.99''	90°18'43.91''	38.5	14.7
567	3,606,010	325,324	29°23'26.08''	90°18'44.09''	197.4	2174.9
568	3,606,011	325,502	29°23'27.84''	90°18'44.06''	154.2	417.5
569	3,606,012	326,027	29°23'33.04''	90°18'44.00''	212.3	66.4
570	3,606,012	325,545	29°23'28.27''	90°18'44.05''	245.1	711.9
571	3,606,016	326,371	29°23'36.44''	90°18'43.92''	87.2	18.9
572	3,606,018	326,753	29°23'40.23''	90°18'43.86''	124.5	294.8
573	3,606,029	326,374	29°23'36.47''	90°18'43.77''	87.5	52.7
574	3,606,054	325,373	29°23'26.56''	90°18'43.59''	141.0	360.0
575	3,606,262	326,876	29°23'41.42''	90°18'41.09''	138.2	114.4
576	3,606,415	325,876	29°23'31.51''	90°18'39.46''	105.3	133.9
577	3,606,506	325,492	29°23'27.70''	90°18'38.47''	116.5	9.4
578	3,606,508	326,174	29°23'34.45''	90°18'38.38''	111.0	77.6
579	3,606,508	326,418	29°23'36.87''	90°18'38.35''	93.5	326.5
580	3,606,509	325,356	29°23'26.35''	90°18'38.45''	127.1	18.0
581	3,606,510	325,398	29°23'26.77''	90°18'38.43''	84.7	13.3
582	3,606,511	326,440	29°23'37.08''	90°18'38.32''	48.6	21.8
583	3,606,511	326,474	29°23'37.42''	90°18'38.31''	51.3	70.4
584	3,606,513	328,999	29°24'02.42''	90°18'38.04''	504.8	40.5
585	3,606,873	329,565	29°24'07.99''	90°18'33.91''	176.7	32.6
586	3,606,973	325,377	29°23'26.52''	90°18'33.20''	71.6	29.1
587	3,607,002	325,633	29°23'29.05''	90°18'32.85''	116.2	26.6
588	3,607,002	328,157	29°23'54.04''	90°18'32.59''	352.2	269.8
589	3,607,003	326,459	29°23'37.23''	90°18'32.75''	123.6	94.5
590	3,607,007	326,915	29°23'41.74''	90°18'32.66''	75.7	92.4
591	3,607,008	326,961	29°23'42.20''	90°18'32.65''	153.3	7588.1
592	3,607,008	327,156	29°23'44.13''	90°18'32.63''	55.6	22.2
593	3,607,008	327,868	29°23'51.18''	90°18'32.55''	126.9	49.0
594	3,607,013	326,848	29°23'41.08''	90°18'32.60''	73.8	541.5
595	3,607,014	326,665	29°23'39.27''	90°18'32.61''	163.8	568.5
596	3,607,017	328,288	29°23'55.33''	90°18'32.41''	122.1	46.3
597	3,607,021	328,250	29°23'54.96''	90°18'32.37''	92.0	227.9
598	3,607,026	328,238	29°23'54.84''	90°18'32.31''	60.6	96.3
599	3,607,033	328,208	29°23'54.54''	90°18'32.24''	102.1	177.5
600	3,607,070	326,375	29°23'36.39''	90°18'32.00''	209.7	366.9
601	3,607,075	326,373	29°23'36.37''	90°18'31.95''	209.7	366.9
602	3,607,163	326,377	29°23'36.40''	90°18'30.95''	86.5	133.6
603	3,607,254	325,374	29°23'26.47''	90°18'30.02''	205.6	159.3
604	3,607,265	326,380	29°23'36.42''	90°18'29.80''	33.4	32.3
605	3,607,265	326,378	29°23'36.40''	90°18'29.80''	34.2	45.1
606	3,607,287	325,370	29°23'26.42''	90°18'29.65''	208.9	159.4
607	3,607,307	326,374	29°23'36.36''	90°18'29.32''	41.0	1059.6
608	3,607,307	326,375	29°23'36.37''	90°18'29.32''	30.6	1456.2
609	3,607,310	329,375	29°24'06.07''	90°18'28.99''	114.2	13.9
610	3,607,405	325,870	29°23'31.36''	90°18'28.27''	324.0	232.4
611	3,607,511	326,397	29°23'36.57''	90°18'27.02''	234.9	149.0
612	3,607,516	326,481	29°23'37.40''	90°18'26.95''	288.6	24.4
613	3,607,517	326,009	29°23'32.73''	90°18'26.99''	59.3	27.5
614	3,607,525	325,368	29°23'26.38''	90°18'26.96''	69.6	27.0
615	3,607,533	326,296	29°23'35.57''	90°18'26.78''	55.0	7926.5
616	3,607,538	326,371	29°23'36.31''	90°18'26.71''	65.2	999.6
617	3,607,540	326,372	29°23'36.32''	90°18'26.69''	90.5	925.7
618	3,607,677	326,879	29°23'41.33''	90°18'25.09''	57.5	1850.3
619	3,607,683	326,871	29°23'41.25''	90°18'25.02''	297.1	1490.6
620	3,607,811	327,379	29°23'46.26''	90°18'23.53''	93.1	3407.5
621	3,607,949	327,878	29°23'51.19''	90°18'21.92''	516.3	350.9
622	3,607,993	325,876	29°23'31.37''	90°18'21.62''	237.0	57.5
623	3,608,001	325,656	29°23'29.19''	90°18'21.55''	122.6	1281.5
624	3,608,004	325,454	29°23'27.19''	90°18'21.54''	129.1	3645.5
625	3,608,004	326,812	29°23'40.63''	90°18'21.40''	85.5	21.4
626	3,608,005	325,627	29°23'28.90''	90°18'21.51''	112.5	876.0
627	3,608,005	325,689	29°23'29.52''	90°18'21.50''	103.5	594.8
628	3,608,005	327,942	29°23'51.82''	90°18'21.28''	403.2	129.3
629	3,608,005	327,943	29°23'51.83''	90°18'21.28''	286.7	108.0
630	3,608,006	325,485	29°23'27.50''	90°18'21.51''	147.8	1423.1

MAGNETOMETER SURVEY						
PNT NO	COORDINATES (NAD83)		COORDINATES (NAD83)		DURATION	GAMMA
	X	Y	LAT	LONG		
631	3,608,006	326,140	29°23'33.98''	90°18'21.45''	47.5	62.7
632	3,608,008	328,117	29°23'53.55''	90°18'21.22''	281.9	8136.9
633	3,608,008	328,117	29°23'53.55''	90°18'21.22''	219.5	8127.8
634	3,608,010	328,055	29°23'52.94''	90°18'21.21''	219.9	347.1
635	3,608,011	325,559	29°23'28.23''	90°18'21.45''	118.3	720.7
636	3,608,011	325,897	29°23'31.58''	90°18'21.42''	92.5	2237.7
637	3,608,012	326,462	29°23'37.17''	90°18'21.35''	64.7	22.6
638	3,608,017	326,913	29°23'41.63''	90°18'21.24''	38.0	15.3
639	3,608,074	328,368	29°23'56.03''	90°18'20.45''	116.0	2547.3
640	3,608,086	325,372	29°23'26.37''	90°18'20.62''	112.4	3441.8
641	3,608,138	325,376	29°23'26.41''	90°18'20.03''	65.0	523.3
642	3,608,153	325,378	29°23'26.43''	90°18'19.86''	117.7	3480.0
643	3,608,201	325,378	29°23'26.42''	90°18'19.32''	119.7	657.0
644	3,608,303	325,862	29°23'31.20''	90°18'18.12''	83.1	33721.3
645	3,608,335	325,875	29°23'31.33''	90°18'17.75''	97.6	8262.8
646	3,608,347	325,879	29°23'31.37''	90°18'17.62''	32.4	2281.4
647	3,608,350	325,370	29°23'26.33''	90°18'17.64''	110.2	894.2
648	3,608,374	326,379	29°23'36.32''	90°18'17.26''	177.0	1501.6
649	3,608,376	326,369	29°23'36.22''	90°18'17.24''	331.4	1014.2
650	3,608,440	325,887	29°23'31.44''	90°18'16.57''	19.0	35.9
651	3,608,493	325,889	29°23'31.45''	90°18'15.97''	84.1	51.9
652	3,608,509	325,903	29°23'31.59''	90°18'15.79''	143.0	265.4
653	3,608,516	325,853	29°23'31.10''	90°18'15.71''	84.4	1031.0
654	3,608,516	325,838	29°23'30.95''	90°18'15.71''	72.1	9071.1
655	3,608,517	325,449	29°23'27.10''	90°18'15.74''	90.7	308.8
656	3,608,518	325,612	29°23'28.71''	90°18'15.71''	57.1	119.0
657	3,608,518	325,518	29°23'27.78''	90°18'15.72''	79.0	1530.7
658	3,608,519	325,952	29°23'32.08''	90°18'15.67''	86.4	1822.6
659	3,608,519	325,820	29°23'30.77''	90°18'15.68''	37.6	1890.5
660	3,608,519	325,478	29°23'27.38''	90°18'15.72''	139.5	2923.0
661	3,608,527	326,007	29°23'32.62''	90°18'15.57''	219.4	222.4
662	3,608,532	325,378	29°23'26.39''	90°18'15.58''	50.2	440.7
663	3,608,536	325,878	29°23'31.34''	90°18'15.48''	92.6	1225.6
664	3,608,547	325,378	29°23'26.39''	90°18'15.41''	56.5	1011.2
665	3,608,547	325,876	29°23'31.32''	90°18'15.36''	236.2	1524.9
666	3,608,550	325,878	29°23'31.34''	90°18'15.32''	233.0	1453.8
667	3,608,626	327,878	29°23'51.13''	90°18'14.26''	92.9	37.5
668	3,608,626	327,878	29°23'51.13''	90°18'14.26''	80.5	37.5
669	3,608,653	325,379	29°23'26.39''	90°18'14.21''	72.2	1446.4
670	3,608,708	325,376	29°23'26.36''	90°18'13.59''	108.3	86106.5
671	3,608,726	325,374	29°23'26.34''	90°18'13.39''	88.4	2130.7
672	3,608,883	325,376	29°23'26.34''	90°18'11.61''	129.4	2558.9
673	3,609,006	325,370	29°23'26.27''	90°18'10.22''	108.5	2430.3
674	3,609,008	325,287	29°23'25.45''	90°18'10.21''	186.6	60.1
675	3,609,022	325,352	29°23'26.09''	90°18'10.04''	62.0	5611.9
676	3,609,023	325,389	29°23'26.46''	90°18'10.03''	59.0	326.9
677	3,609,101	325,355	29°23'26.11''	90°18'09.15''	74.5	1401.5

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

T. BAKER SMITH
A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

REV. NO: 00 | REV. DATE: --/--/-- | REV. BY: ---

REVISION DESCRIPTION:
--

DRAWN BY: J.P.W. | APPROVED BY: J.M.B.

DATE: 08/13/19 | JOB NO: 2019.0193

DRAWING NAME: PHASE ONE EAST MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 9 OF 9

PHASE ONE (EAST) MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGATION SURVEY
CHARTS OF MAGNETOMETER SURVEY
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,76,77, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

7/7/2020 - P:\Y-2019\2019.0193\DWG\PHASE ONE EAST MAGNETOMETER SURVEY\PHASE ONE EAST MAGNETOMETER SURVEY.DWG

SURVEY NOTES:

1. THE FIELD SURVEY WAS PERFORMED BY CONVENTIONAL SURVEY CREW WITH TRIMBLE RTK GPS ON 05/20/19 THROUGH 08/02/19 BY T. BAKER SMITH, LLC.
2. TBS FIELD BOOK 4800 PAGE 53-64, & FIELD BOOK 4829 PAGE 15-44
3. HORIZONTAL POSITIONS SHOWN HEREON ARE BASED ON THE LOUISIANA SOUTH STATE PLANE COORDINATE SYSTEM OF 1983.
4. ALL ELEVATIONS ARE REFERENCED TO NAVD88 (GEOID 12A)
5. ALL UNITS OF MEASUREMENT SHOWN HEREON ARE IN U.S. SURVEY FEET.
6. 2016 GOOGLE EARTH IMAGERY USED FOR BACKGROUND PHOTOGRAPHY.
7. HORIZONTAL AND VERTICAL CONTROL WERE ESTABLISHED THROUGH STATIC GPS OBSERVATIONS ON MONUMENT TE112-SM-01. POSITIONS WERE CORRECTED THROUGH THE NATIONAL GEODETIC SURVEYS ONLINE POSITIONING USER SERVICE.
8. THE NEAREST CONTROLLING CORS STATION IS PAUL, PAUL GALLIANO, LA.

DISCLAIMER:

WHILE REASONABLE EFFORTS ARE MADE TO LOCATE ALL PIPELINES, METAL OBJECTS OR OTHER SUBSURFACE OBSTRUCTIONS IN THE SURVEYED AREA, THE EQUIPMENT USED AND THE CHARACTERISTICS OF PIPELINES THEMSELVES MAKE IT IMPOSSIBLE TO GUARANTEE TOTAL SUCCESS. ACCORDINGLY, IT IS INCUMBENT UPON THE OWNERS, OPERATORS AND/OR CONTRACTORS CONDUCTING OPERATIONS INCLUDING DREDGING AND EXCAVATION TO CONDUCT THEIR OPERATIONS WITH EXTREME CAUTION AND RECOGNIZE THAT HAZARDS IN ADDITION TO THOSE DETECTED AND MARKED BY TBS MAY EXIST.

LOUISIANA COORDINATE SYSTEM (SOUTH ZONE)
(1983 DATUM)

SURVEYED PIPELINE 1
(SEE SHEETS 2 & 4)

SURVEYED PIPELINE 2
(SEE SHEETS 2 & 4)

SURVEYED PIPELINE 3 (12 INCH)
AFTER HURRICANE BARRY (7-17-19)
(SEE SHEETS 3 & 4)

SURVEYED PIPELINE 3 (12 INCH)
BEFORE HURRICANE BARRY (5-20-19)

SURVEYED PIPELINE 4 (3 INCH)
(SEE SHEETS 3 & 4)

CELL 4A
±101 AC.

CELL ALT. 1
±58 AC.

CELL ALT. 2
±76 AC.

CELL 4B
±79 AC.

SEC. 75

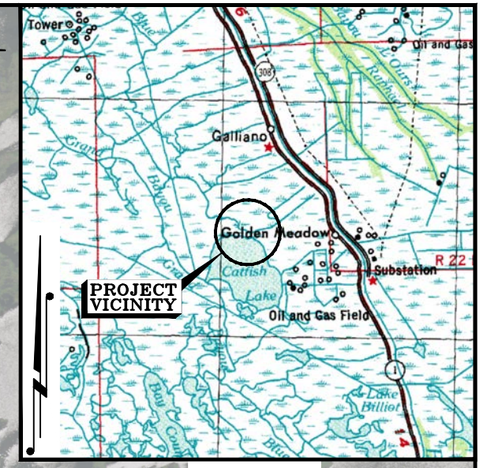
SEC. 70

SEC. 64

SEC. 76

SEC. 69

SEC. 65



VICINITY MAP
SCALE: 1"= 4 MILES

LEGEND

- 2019 CONTAINMENT CELLS
- SECTION LINES
- (2019) SURVEY TRACKLINE
- (2019) MAGNETIC ANOMALY OVER 100 GAMMAS
- (2019) MAGNETIC ANOMALY BETWEEN 50-99 GAMMAS
- (2019) MAGNETIC ANOMALY UNDER 50 GAMMAS
- (2019) PHASE ONE EAST MAG SURVEY BOUNDARY
- EXISTING PIPELINE AS PER T. BAKER SMITH SURVEY DATED 05/20/19 - 08/02/19

I CERTIFY THAT THE SURVEY DEPICTED ON THIS PLAT WAS PERFORMED UNDER MY SUPERVISION IN ACCORDANCE WITH GENERALLY ACCEPTED SURVEY PRACTICES. THIS SURVEY DOES NOT MEET THE STANDARDS OF PRACTICE FOR BOUNDARY SURVEYS AS SET FORTH BY THE LOUISIANA PROFESSIONAL ENGINEERS AND LAND SURVEYORS BOARD.

STATE OF LOUISIANA
SHANE J. KIRKLAND
License No. 5142
PROFESSIONAL
LAND SURVEYOR

07/07/2020

APPROVED: _____

SHANE J. KIRKLAND, P.L.S.
LAND SURVEYOR REG. NO. 5142
P.O. BOX 7966 HOUMA, LA 70363 (985)868-1050

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEET 5 FOR MAGNETOMETER CHARTS

TBS
T. BAKER SMITH
A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

SCALE: 1" = 600'

600' 300' 0' 600'

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
--

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	08/19/19	JOB NO:	2019.0193

DRAWING NAME: PHASE ONE WEST MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

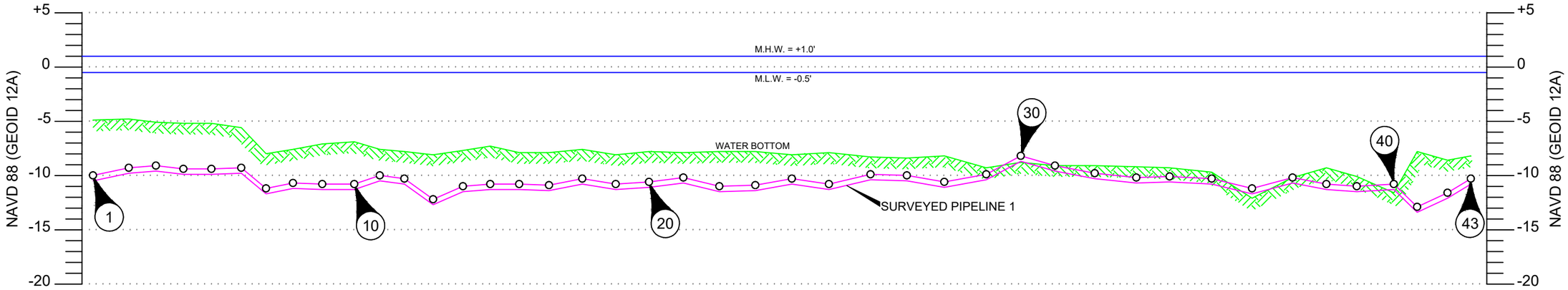
SHEET NO: 1 OF 5

PHASE ONE (WEST) MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGAION SURVEY
BASE MAP AND PLAN VIEW OF SURVEYED PIPELINES
LOCATED NEAR CATFISH LAKE IN
SECTIONS 70 & 75, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

7/7/2020 - P:\Y-2019\2019.0193\DWG\PHASE ONE WEST MAGNETOMETER SURVEY\PHASE ONE WEST MAGNETOMETER SURVEY.DWG

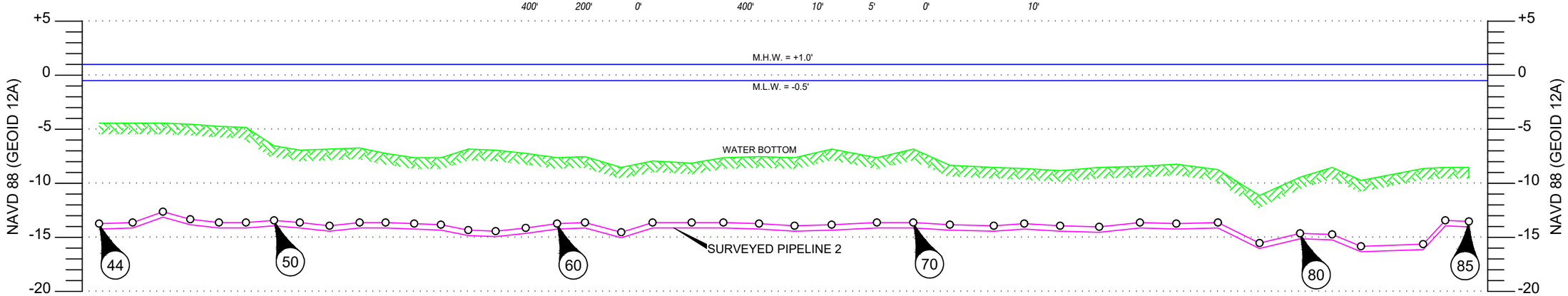


PROFILE PIPELINE 1

LOOKING SOUTH WESTERLY

HORIZONTAL SCALE IN FEET: 400' 200' 0' 400'

VERTICAL SCALE IN FEET: 10' 5' 0' 10'



PROFILE PIPELINE 2

LOOKING SOUTH WESTERLY

HORIZONTAL SCALE IN FEET: 400' 200' 0' 400'

VERTICAL SCALE IN FEET: 10' 5' 0' 10'

LEGEND

1 POINT LABELS (SEE PAGE 4 FOR CHARTS)

WATER LINE

WATER BOTTOM

EXISTING PIPELINE AS PER T. BAKER SMITH SURVEY DATED 05/20/19 - 08/02/19

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEET 5 FOR MAGNETOMETER CHARTS

T. BAKER SMITH
A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION: --

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	08/19/19	JOB NO:	2019.0193

DRAWING NAME: PHASE ONE WEST MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

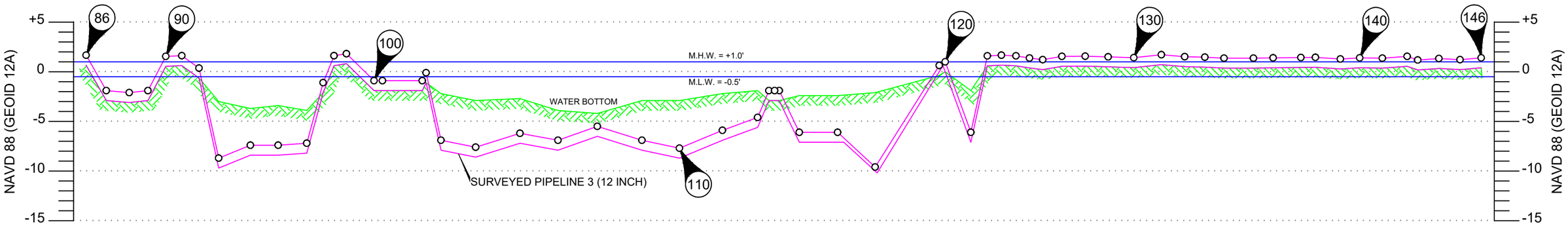
SHEET NO: 2 OF 5

PHASE ONE (WEST) MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGATION SURVEY
PROFILES OF SURVEYED PIPELINE
LOCATED NEAR CATFISH LAKE IN
SECTIONS 70 & 75, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

7/7/2020 - P:\Y-2019\2019.0193\DWG\PHASE ONE WEST MAGNETOMETER SURVEY\PHASE ONE WEST MAGNETOMETER SURVEY.DWG

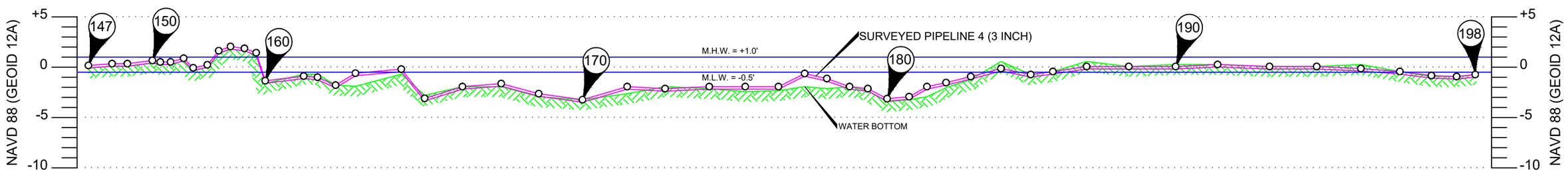


PROFILE PIPELINE 3

LOOKING NORTH WESTERLY

HORIZONTAL SCALE IN FEET: 500' 250' 0' 500'

VERTICAL SCALE IN FEET: 10' 5' 0' 10'



PROFILE PIPELINE 4

LOOKING NORTH WESTERLY

HORIZONTAL SCALE IN FEET: 500' 250' 0' 500'

VERTICAL SCALE IN FEET: 10' 5' 0' 10'

LEGEND

1 POINT LABELS (SEE PAGE 4 FOR CHARTS)

WATER LINE

WATER BOTTOM

EXISTING PIPELINE AS PER T. BAKER SMITH SURVEY DATED 05/20/19 - 08/02/19

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEET 5 FOR MAGNETOMETER CHARTS

T. BAKER SMITH
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REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION: --

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	08/19/19	JOB NO:	2019.0193

DRAWING NAME: PHASE ONE WEST MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 3 OF 5

PHASE ONE (WEST) MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGATION SURVEY
PROFILES OF SURVEYED PIPELINE
LOCATED NEAR CATFISH LAKE IN
SECTIONS 70 & 75, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

7/7/2020 - P:\Y-2019\2019.0193\DWG\PHASE ONE WEST MAGNETOMETER SURVEY\PHASE ONE WEST MAGNETOMETER SURVEY.DWG

SURVEYED PIPELINE 1							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
1	3,598,642.77	325,030.86	29°23'23.82''	90°20'07.40''	-4.9'	-10.0'	5.1'
2	3,598,608.01	325,158.08	29°23'25.08''	90°20'07.78''	-4.8'	-9.3'	4.5'
3	3,598,582.83	325,254.97	29°23'26.05''	90°20'08.05''	-5.1'	-9.1'	4.0'
4	3,598,555.96	325,352.91	29°23'27.02''	90°20'08.35''	-5.2'	-9.4'	4.2'
5	3,598,529.85	325,453.03	29°23'28.01''	90°20'08.63''	-5.2'	-9.4'	4.2'
6	3,598,502.96	325,559.04	29°23'29.06''	90°20'08.93''	-5.6'	-9.3'	3.7'
7	3,598,481.49	325,648.35	29°23'29.95''	90°20'09.16''	-8.0'	-11.2'	3.2'
8	3,598,455.10	325,743.77	29°23'30.89''	90°20'09.45''	-7.6'	-10.7'	3.1'
9	3,598,428.95	325,848.55	29°23'31.93''	90°20'09.73''	-7.1'	-10.8'	3.7'
10	3,598,399.43	325,963.22	29°23'33.07''	90°20'10.06''	-6.9'	-10.8'	3.9'
11	3,598,374.91	326,053.82	29°23'33.97''	90°20'10.33''	-7.6'	-10.0'	2.4'
12	3,598,351.99	326,141.52	29°23'34.84''	90°20'10.58''	-7.8'	-10.3'	2.5'
13	3,598,325.54	326,243.92	29°23'35.86''	90°20'10.86''	-8.1'	-12.2'	4.1'
14	3,598,295.05	326,349.38	29°23'36.90''	90°20'11.20''	-7.7'	-11.0'	3.3'
15	3,598,268.09	326,446.76	29°23'37.87''	90°20'11.49''	-7.3'	-10.8'	3.5'
16	3,598,240.16	326,549.78	29°23'38.89''	90°20'11.80''	-7.9'	-10.8'	2.9'
17	3,598,211.50	326,655.85	29°23'39.94''	90°20'12.11''	-7.9'	-10.9'	3.0'
18	3,598,179.63	326,774.18	29°23'41.12''	90°20'12.46''	-7.6'	-10.3'	2.7'
19	3,598,150.74	326,894.04	29°23'42.31''	90°20'12.78''	-8.1'	-10.8'	2.7'
20	3,598,117.67	327,012.46	29°23'43.48''	90°20'13.14''	-7.8'	-10.6'	2.8'
21	3,598,085.11	327,134.39	29°23'44.69''	90°20'13.49''	-7.9'	-10.2'	2.3'
22	3,598,052.00	327,263.47	29°23'45.97''	90°20'13.86''	-7.8'	-11.0'	3.2'
23	3,598,018.86	327,391.61	29°23'47.24''	90°20'14.22''	-7.8'	-10.9'	3.1'
24	3,597,985.91	327,522.45	29°23'48.54''	90°20'14.58''	-8.1'	-10.3'	2.2'
25	3,597,951.22	327,654.74	29°23'49.86''	90°20'14.96''	-7.9'	-10.8'	2.9'
26	3,597,912.51	327,803.10	29°23'51.33''	90°20'15.38''	-8.3'	-9.9'	1.6'
27	3,597,876.23	327,931.50	29°23'52.60''	90°20'15.78''	-8.4'	-10.0'	1.6'
28	3,597,841.65	328,065.02	29°23'53.93''	90°20'16.16''	-8.2'	-10.6'	2.4'
29	3,597,801.02	328,214.24	29°23'55.41''	90°20'16.60''	-9.3'	-9.9'	0.6'
30	3,597,767.94	328,337.36	29°23'56.63''	90°20'16.96''	-8.8'	-8.2'	EXPOSED
31	3,597,733.82	328,458.85	29°23'57.83''	90°20'17.34''	-9.1'	-9.1'	EXPOSED
32	3,597,699.87	328,601.29	29°23'59.25''	90°20'17.71''	-9.1'	-9.8'	0.7'
33	3,597,660.45	328,749.97	29°24'00.72''	90°20'18.14''	-9.2'	-10.2'	1.0'
34	3,597,628.85	328,868.29	29°24'01.90''	90°20'18.48''	-9.3'	-10.1'	0.8'
35	3,597,587.41	329,017.95	29°24'03.38''	90°20'18.94''	-9.7'	-10.3'	0.6'
36	3,597,549.36	329,161.60	29°24'04.81''	90°20'19.35''	-12.1'	-11.2'	EXPOSED
37	3,597,508.75	329,305.34	29°24'06.23''	90°20'19.80''	-10.2'	-10.2'	EXPOSED
38	3,597,479.82	329,426.61	29°24'07.44''	90°20'20.11''	-9.3'	-10.8'	1.5'
39	3,597,451.73	329,534.89	29°24'08.51''	90°20'20.42''	-10.1'	-11.0'	0.9'
40	3,597,418.69	329,667.44	29°24'09.83''	90°20'20.78''	-11.6'	-10.8'	EXPOSED
41	3,597,396.85	329,750.57	29°24'10.65''	90°20'21.02''	-7.8'	-12.9'	5.1'
42	3,597,367.03	329,859.07	29°24'11.73''	90°20'21.35''	-8.6'	-11.6'	3.0'
43	3,597,346.07	329,942.18	29°24'12.55''	90°20'21.57''	-8.2'	-10.3'	2.1'

SURVEYED PIPELINE 2							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
44	3,598,672.81	325,036.72	29°23'23.88''	90°20'07.06''	-4.4'	-13.7'	9.3'
45	3,598,645.03	325,157.54	29°23'25.08''	90°20'07.36''	-4.4'	-13.6'	9.2'
46	3,598,617.60	325,265.99	29°23'26.15''	90°20'07.66''	-4.4'	-12.6'	8.2'
47	3,598,589.08	325,363.62	29°23'27.12''	90°20'07.97''	-4.5'	-13.3'	8.8'
48	3,598,558.18	325,464.88	29°23'28.13''	90°20'08.31''	-4.7'	-13.6'	8.9'
49	3,598,532.17	325,561.83	29°23'29.09''	90°20'08.60''	-4.8'	-13.6'	8.8'
50	3,598,505.25	325,662.06	29°23'30.08''	90°20'08.89''	-6.5'	-13.4'	6.9'
51	3,598,479.49	325,753.80	29°23'30.99''	90°20'09.17''	-6.9'	-13.6'	6.7'
52	3,598,453.40	325,860.65	29°23'32.05''	90°20'09.46''	-6.8'	-13.9'	7.1'
53	3,598,427.24	325,969.08	29°23'33.13''	90°20'09.74''	-6.7'	-13.6'	6.9'
54	3,598,401.07	326,061.49	29°23'34.04''	90°20'10.03''	-7.2'	-13.6'	6.4'
55	3,598,371.51	326,163.02	29°23'35.05''	90°20'10.35''	-7.6'	-13.7'	6.1'
56	3,598,346.74	326,258.79	29°23'36.00''	90°20'10.62''	-7.6'	-13.8'	6.2'
57	3,598,320.82	326,356.62	29°23'36.97''	90°20'10.91''	-6.8'	-14.3'	7.5'
58	3,598,294.07	326,453.98	29°23'37.94''	90°20'11.20''	-6.9'	-14.4'	7.5'
59	3,598,266.34	326,562.17	29°23'39.01''	90°20'11.50''	-7.2'	-14.1'	6.9'
60	3,598,238.01	326,674.37	29°23'40.13''	90°20'11.81''	-7.6'	-13.7'	6.1'
61	3,598,212.01	326,774.68	29°23'41.12''	90°20'12.10''	-7.5'	-13.6'	6.1'
62	3,598,177.01	326,903.58	29°23'42.40''	90°20'12.48''	-8.5'	-14.5'	6.0'
63	3,598,147.86	327,016.13	29°23'43.52''	90°20'12.80''	-7.9'	-13.6'	5.7'
64	3,598,112.19	327,156.59	29°23'44.91''	90°20'13.19''	-8.1'	-13.6'	5.5'
65	3,598,084.53	327,270.51	29°23'46.04''	90°20'13.49''	-7.6'	-13.6'	6.0'
66	3,598,050.06	327,397.98	29°23'47.31''	90°20'13.87''	-7.5'	-13.7'	6.2'
67	3,598,017.19	327,525.20	29°23'48.57''	90°20'14.22''	-7.6'	-13.9'	6.3'
68	3,597,980.30	327,657.47	29°23'49.88''	90°20'14.63''	-6.8'	-13.8'	7.0'
69	3,597,938.16	327,818.99	29°23'51.48''	90°20'15.09''	-7.6'	-13.6'	6.0'
70	3,597,903.55	327,949.25	29°23'52.78''	90°20'15.47''	-6.8'	-13.6'	6.8'
71	3,597,870.42	328,080.69	29°23'54.08''	90°20'15.83''	-8.3'	-13.8'	5.5'
72	3,597,832.18	328,238.35	29°23'55.64''	90°20'16.25''	-8.5'	-13.9'	5.4'
73	3,597,797.94	328,346.15	29°23'56.71''	90°20'16.62''	-8.6'	-13.7'	5.1'
74	3,597,764.51	328,474.18	29°23'57.98''	90°20'16.99''	-8.8'	-13.9'	5.1'
75	3,597,731.25	328,615.04	29°23'59.38''	90°20'17.35''	-8.5'	-14.0'	5.5'
76	3,597,693.28	328,760.61	29°24'00.82''	90°20'17.76''	-8.4'	-13.6'	5.2'
77	3,597,654.94	328,889.73	29°24'02.11''	90°20'18.19''	-8.2'	-13.7'	5.5'
78	3,597,612.47	329,037.66	29°24'03.57''	90°20'18.65''	-8.7'	-13.6'	4.9'
79	3,597,572.23	329,186.26	29°24'05.05''	90°20'19.09''	-11.1'	-15.5'	4.4'
80	3,597,538.82	329,332.53	29°24'06.50''	90°20'19.45''	-9.4'	-14.6'	5.2'
81	3,597,507.86	329,447.34	29°24'07.64''	90°20'19.79''	-8.5'	-14.7'	6.2'
82	3,597,476.39	329,549.03	29°24'08.65''	90°20'20.14''	-9.7'	-15.8'	6.1'
83	3,597,419.45	329,772.00	29°24'10.86''	90°20'20.76''	-8.6'	-15.6'	7.0'
84	3,597,399.42	329,851.32	29°24'11.65''	90°20'20.98''	-8.5'	-13.4'	4.9'
85	3,597,377.62	329,936.22	29°24'12.49''	90°20'21.22''	-8.5'	-13.5'	5.0'

SURVEYED PIPELINE 3 (12 INCH)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
86	3,597,500.45	324,815.34	29°23'21.79''	90°20'20.33''	0.7'	1.7'	EXPOSED
87	3,597,566.82	324,893.28	29°23'22.55''	90°20'19.57''	-2.9'	-1.9'	EXPOSED
88	3,597,637.68	324,984.27	29°23'23.45''	90°20'18.76''	-3.1'	-2.1'	EXPOSED
89	3,597,689.04	325,063.38	29°23'24.23''	90°20'18.18''	-2.9'	-1.9'	EXPOSED
90	3,597,734.93	325,140.74	29°23'24.99''	90°20'17.65''	0.5'	1.5'	EXPOSED
91	3,597,774.86	325,210.87	29°23'25.68''	90°20'17.19''	0.6'	1.6'	EXPOSED
92	3,597,818.43	325,286.40	29°23'26.42''	90°20'16.69''	-0.6'	0.4'	EXPOSED
93	3,597,890.44	325,354.16	29°23'27.09''	90°20'15.87''	-3.0'	-8.7'	5.7'
94	3,597,977.37	325,488.12	29°23'28.41''	90°20'14.87''	-3.7'	-7.4'	3.7'
95	3,598,054.40	325,605.17	29°23'29.56''	90°20'13.99''	-3.4'	-7.4'	4.0'
96	3,598,114.83	325,736.25	29°23'30.85''	90°20'13.30''	-3.9'	-7.2'	3.3'
97	3,598,150.91	325,810.27	29°23'31.58''	90°20'12.88''	-2.1'	-1.1'	EXPOSED
98	3,598,177.46	325,858.76	29°23'32.06''	90°20'12.58''	0.6'	1.6'	EXPOSED
99	3,598,210.84	325,911.62	29°23'32.58''	90°20'12.19''	0.8'	1.8'	EXPOSED
100	3,598,284.81	326,029.64	29°23'33.74''	90°20'11.35''	-1.9'	-0.9'	EXPOSED
101	3,598,307.88	326,065.45	29°23'34.09''	90°20'11.08''	-1.9'	-0.9'	EXPOSED
102	3,598,417.31	326,233.58	29°23'35.75''	90°20'09.83''	-1.9'	-0.9'	EXPOSED
103	3,598,427.56	326,249.99	29°23'35.91''	90°20'09.71''	-1.1'	-0.1'	EXPOSED
104	3,598,449.11	326,312.35	29°23'36.52''	90°20'09.24''	-2.2'	-6.9'	4.7'
105	3,598,568.99	326,455.25	29°23'37.93''	90°20'08.09''	-2.9'	-7.6'	4.7'
106	3,598,692.91	326,641.36	29°23'39.76''	90°20'06.67''	-2.7'	-6.2'	3.5'
107	3,598,799.19	326,800.97	29°23'41.33''	90°20'05.46''	-3.9'	-6.9'	3.0'
108	3,598,907.08	326,967.85	29°23'42.97''	90°20'04.22''	-4.2'	-5.5'	1.3'
109	3,599,026.77	327,157.43	29°23'44.84''	90°20'02.85''	-2.9'	-6.9'	4.0'
110	3,599,123.08	327,320.86	29°23'46.45''	90°20'01.74''	-2.9'	-7.7'	4.8'
111	3,599,225.02	327,511.47	29°23'48.33''	90°20'00.57''	-2.2'	-5.9'	3.7'
112	3,599,306.56	327,669.98	29°23'49.89''	90°19'59.63''	-1.9'	-4.6'	2.7'
113	3,599,333.81	327,718.94	29°23'50.37''	90°19'59.32''	-2.9'	-1.9'	EXPOSED
114	3,599,347.25	327,745.40	29°23'50.63''	90°19'59.17''	-2.9'	-1.9'	EXPOSED
115	3,599,356.09	327,766.26	29°23'50.84''	90°19'59.07''	-2.9'	-1.9'	EXPOSED
116	3,599,398.05	327,858.30	29°23'51.75''	90°19'58.58''	-2.4'	-6.1'	3.7'
117	3,599,494.28	328,026.35	29°23'53.40''	90°19'57.48''	-2.4'	-6.1'	3.7'
118	3,599,596.23	328,185.68	29°23'54.97''	90°19'56.31''	-2.1'	-9.6'	7.5'
119	3,599,773.85	328,455.99	29°23'57.63''	90°19'54.27''	-0.4'	0.6'	EXPOSED
120	3,599,788.98	328,481.07	29°23'57.88''	90°19'54.10''	0.0'	1.0'	EXPOSED
121	3,599,855.48	328,592.52	29°23'58.97''	90°19'53.34''	-1.9'	-6.1'	4.2'
122	3,599,891.37	328,667.02	29°23'59.71''	90°19'52.92''	0.6'	1.6'	EXPOSED
123	3,599,918.00	328,732.70	29°24'00.36''	90°19'52.62''	0.7'	1.7'	EXPOSED
124	3,599,945.77	328,801.31	29°24'01.03''	90°19'52.30''	0.6'	1.6'	EXPOSED
125	3,599,972.41	328,864.09	29°24'01.65''	90°19'51.99''	0.4'	1.4'	EXPOSED
126	3,600,000.20	328,924.41	29°24'02.25''	90°19'51.67''	0.2'	1.2'	EXPOSED
127	3,600,039.40	329,012.75	29°24'03.12''	90°19'51.22''	0.6'	1.6'	EXPOSED
128	3,600,089.28	329,119.24	29°24'04.17''	90°19'50.64''	0.6'	1.6'	EXPOSED
129	3,600,139.64	329,223.59	29°24'05.20''	90°19'50.06''	0.5'	1.5'	EXPOSED
130	3,600,196.83	329,339.02	29°24'06.33''	90°19'49.41''	0.4'	1.4'	EXPOSED
131	3,600,260.56	329,463.20	29°24'07.56''	90°19'48.67''	0.7'	1.7'	EXPOSED
132	3,600,315.69	329,566.86	29°24'08.58''	90°19'48.04''	0.5'	1.5'	EXPOSED
133	3,600,364.20	329,656.11	29°24'09.46''	90°19'47.48''	0.5'	1.5'	EXPOSED
134	3,600,411.99	329,740.36	29°24'10.29''	90°19'46.93''	0.4'	1.4'	EXPOSED
135	3,600,486.25	329,868.14	29°24'11.55''	90°19'46.08''	0.4'	1.4'	EXPOSED
136	3,600,536.55	329,953.83	29°24'12.39''	90°19'45.50''	0.4'	1.4'	EXPOSED
137	3,600,608.25	330,074.49	29°24'13.58''	90°19'44.68''	0.4'	1.4'	EXPOSED
138	3,600,646.18	330,136.78	29°24'14.19''	90°19'44.25''	0.4'	1.4'	EXPOSED
139	3,600,713.23	330,243.82	29°24'15.25''	90°19'43.48''	0.3'	1.3'	EXPOSED
140	3,600,765.72	330,326.14	29°24'16.06''	90°19'42.88''	0.4'	1.4'	EXPOSED
141	3,600,828.28	330,421.43	29°24'17.00''	90°19'42.16''	0.4'	1.4'	EXPOSED
142	3,600,898.02	330,524.93	29°24'18.01''	90°19'41.36''	0.6'	1.6'	EXPOSED
143	3,600,928.29	330,568.51	29°24'18.44''	90°19'41.01''	0.2'	1.2'	EXPOSED
144	3,600,984.30	330,659.08	29°24'19.33''	90°19'40.37''	0.3'	1.3'	EXPOSED
145	3,601,043.79	330,748.35	29°24'20.21''	90°19'39.69''	0.2'	1.2'	EXPOSED
146	3,601,107.18	330,834.33	29°24'21.06''	90°19'38.97''	0.4'	1.4'	EXPOSED

SURVEYED PIPELINE 4 (3 INCH)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
147	3,597,565.57	324,936.87	29°23'22.98''	90°20'19.58''	-0.1'	0.2'	EXPOSED
148	3,597,632.89	325,033.91	29°23'23.94''	90°20'18.81''	0.1'	0.3'	EXPOSED
149	3,597,677.03	325,095.49	29°23'24.54''	90°20'18.31''	0.1'	0.3'	EXPOSED
150	3,597,751.55	325,194.43	29°23'25.52''	90°20'17.46''	0.4'	0.7'	EXPOSED
151	3,597,775.18	325,225.99	29°23'25.83''	90°20'17.19''	0.3'	0.5'	EXPOSED
152	3,597,808.61	325,263.72	29°23'26.20''	90°20'16.80''	0.3'	0.5'	EXPOSED
153	3,597,859.30	325,304.41	29°23'26.60''	90°20'16.23''	0.6'	0.9'	EXPOSED
154	3,597,896.11	325,334.23	29°23'26.89''	90°20'15.81''	-0.3'	-0.1'	EXPOSED
155	3,597,945.89	325,384.34	29°23'27.38''	90°20'15.24''	0.0'	0.2'	EXPOSED
156	3,597,981.79	325,427.56	29°23'27.81''	90°20'14.83''	1.4'	1.6'	EXPOSED
157	3,598,015.92	325,474.74	29°23'28.27''	90°20'14.44''	1.8'	2.1'	EXPOSED
158	3,598,054.78	325,532.11	29°23'28.83''	90°20'14.00''	1.6'	1.9'	EXPOSED
159	3,598,082.44	325,583.89	29°23'29.34''	90°20'13.68''	1.2'	1.4'	EXPOSED
160	3,598,096.25	325,626.44	29°23'29.76''	90°20'13.52''	-1.6'	-1.3'	EXPOSED
161	3,598,167.48	325,803.46	29°23'31.51''	90°20'12.69''	-0.7'	-0.9'	0.2'
162	3,598,202.51	325,862.72	29°23'32.09''	90°20'12.29''	-0.7'	-1.0'	0.3'
163	3,598,248.68	325,939.78	29°23'32.85''	90°20'11.76''	-1.8'	-1.8'	EXPOSED
164	3,598,299.35	326,024.21	29°23'33.68''	90°20'11.18''	-1.9'	-0.6'	EXPOSED
165	3,598,421.82	326,215.47	29°23'35.57''	90°20'09.78''	-0.7'	-0.2'	EXPOSED
166	3,598,483.72	326,313.73	29°23'36.53''	90°20'09.07''	-2.8'	-3.1'	0.3'
167	3,598,590.87	326,467.50	29°23'38.05''	90°20'07.84''	-1.9'	-1.9'	EXPOSED
168	3,598,701.91	326,624.77	29°23'39.59''	90°20'06.57''	-1.9'	-1.6'	EXPOSED
169	3,598,815.93	326,771.35	29°23'41.04''	90°20'05.27''	-2.9'	-2.6'	EXPOSED
170	3,598,925.95	326,959.28	29°23'42.89''	90°20'04.01''	-3.2'	-3.2'	EXPOSED
171	3,599,035.43	327,151.36	29°23'44.78''	90°20'02.75''	-2.6'	-1.9'	EXPOSED
172	3,599,128.04	327,315.84	29°23'46.40''	90°20'01.69''	-1.9'	-2.1'	EXPOSED
173	3,599,235.09	327,506.69	29°23'48.28''	90°20'00.46''	-2.1'	-1.9'	EXPOSED
174	3,599,322.95	327,662.44	29°23'49.81''	90°19'59.45''	-2.4'	-1.9'	EXPOSED
175	3,599,404.04	327,805.44	29°23'51.22''	90°19'58.52''	-2.3'	-1.9'	EXPOSED
176	3,599,469.51	327,918.27	29°23'52.33''	90°19'57.77''	-1.9'	-0.6'	EXPOSED
177	3,599,526.21	328,012.46	29°23'53.26''	90°19'57.12''	-2.1'	-1.1'	EXPOSED
178	3,599,583.45	328,109.56	29°23'54.22''	90°19'56.46''	-1.9'	-1.9'	EXPOSED
179	3,599,630.97	328,186.15	29°23'54.97''	90°19'55.92''	-2.3'	-2.1'	EXPOSED
180	3,599,681.04	328,268.58	29°23'55.78''	90°19'55.34''	-3.4'	-3.1'	EXPOSED
181	3,599,739.17	328,360.68	29°23'56.69''	90°19'54.68''	-3.2'	-2.9'	EXPOSED
182	3,599,787.78	328,434.01	29°23'57.41''	90°19'54.12''	-2.9'	-1.9'	EXPOSED
183	3,599,836.03	328,516.44	29°23'58.22''	90°19'53.57''	-2.0'	-1.5'	EXPOSED
184	3,599,897.97	328,622.01	29°23'59.26''	90°19'52.85''	-1.2'	-0.9'	EXPOSED
185	3,599,975.68	328,750.43	29°24'00.53''	90°19'51.96''	0.6'	-0.1'	0.7'
186	3,600,051.88	328,876.09	29°24'01.76''	90°19'51.09''	-0.7'	-0.7'	EXPOSED
187	3,600,109.81	328,970.09	29°24'02.69''	90°19'50.43''	-0.4'	-0.4'	EXPOSED
188	3,600,196.21	329,113.92	29°24'04.11''	90°19'49.43''	0.6'	0.1'	0.5'
189	3,600,302.02	329,293.43	29°24'05.87''	90°19'48.22''	0.1'	0.1'	EXPOSED
190	3,600,419.04	329,495.02	29°24'07.86''	90°19'46.88''	0.3'	0.1'	0.2'
191	3,600,523.03	329,675.16	29°24'09.63''	90°19'45.68''	0.3'	0.3'	EXPOSED
192	3,600,650.38	329,899.21	29°24'11.84''	90°19'44.22''	0.1'	0.1'	EXPOSED
193	3,600,760.64	330,105.80	29°24'13.88''	90°19'42.96''	0.1'	0.1'	EXPOSED
194	3,600,861.88	330,300.42	29°24'15.79''	90°19'41.79''	0.3'	-0.1'	0.4'
195	3,600,948.62	330,473.08	29°24'17.50''	90°19'40.79''	-0.4'	-0.4'	EXPOSED
196	3,601,018.12	330,612.98	29°24'18.87''	90°19'39.99''	-0.9'	-0.8'	EXPOSED
197	3,601,075.09	330,724.52	29°24'19.97''	90°19'39.34''	-0.9'	-0.9'	EXPOSED
198	3,601,116.68	330,807.34	29°24'20.79''	90°19'38.86''	-0.7'	-0.7'	EXPOSED

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEET 5 FOR MAGNETOMETER CHARTS

T. BAKER SMITH
A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
--

DRAWN BY: J.P.W.	APPROVED BY: J.M.B.
DATE: 08/19/19	JOB NO: 2019.0193

DRAWING NAME: PHASE ONE WEST MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 4 OF 5

PHASE ONE (WEST) MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGATION SURVEY
CHARTS OF SURVEYED PIPELINES
LOCATED NEAR CATFISH LAKE IN
SECTIONS 70 & 75, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

7/7/2020 - P:\Y-2019\2019.0193\DWG\PHASE ONE WEST MAGNETOMETER SURVEY\PHASE ONE WEST MAGNETOMETER SURVEY.DWG

MAGNETOMETER SURVEY						
PNT NO	COORDINATES (NAD83)		COORDINATES (NAD83)		DURATION	GAMMA
	X	Y	LAT	LONG		
200	3,597,361	329,871	29°24'11.85''	90°20'21.41''	328.5	614.6
201	3,597,386	329,869	29°24'11.82''	90°20'21.13''	328.5	614.6
202	3,597,398	329,367	29°24'06.85''	90°20'21.04''	43.7	89.1
203	3,597,398	329,367	29°24'06.85''	90°20'21.04''	30.7	85.6
204	3,597,492	329,653	29°24'09.68''	90°20'19.95''	56.4	34.5
205	3,597,495	329,361	29°24'06.79''	90°20'19.95''	222.4	916.2
206	3,597,497	329,684	29°24'09.98''	90°20'19.89''	65.2	38
207	3,597,497	329,683	29°24'09.97''	90°20'19.89''	66.2	38
208	3,597,501	329,296	29°24'06.14''	90°20'19.89''	269.4	271.7
209	3,597,503	329,763	29°24'10.76''	90°20'19.82''	51	59
210	3,597,503	329,763	29°24'10.76''	90°20'19.82''	79.3	59
211	3,597,503	329,850	29°24'11.63''	90°20'19.81''	141.8	23.2
212	3,597,505	329,361	29°24'06.78''	90°20'19.83''	226.3	659.3
213	3,597,507	329,478	29°24'07.94''	90°20'19.80''	304.5	1112.4
214	3,597,510	329,854	29°24'11.66''	90°20'19.73''	60.2	36.1
215	3,597,510	329,854	29°24'11.66''	90°20'19.73''	78.4	36.1
216	3,597,624	328,872	29°24'01.93''	90°20'18.54''	140.7	846.3
217	3,597,631	325,066	29°23'24.26''	90°20'18.83''	29.3	287
218	3,597,654	325,067	29°23'24.26''	90°20'18.57''	43	1228.1
219	3,597,656	328,871	29°24'01.92''	90°20'18.18''	176	416.9
220	3,597,663	325,066	29°23'24.25''	90°20'18.47''	39.6	1444.9
221	3,597,758	328,366	29°23'56.91''	90°20'17.07''	265.7	923.5
222	3,597,791	328,371	29°23'56.96''	90°20'16.70''	275.5	1165.3
223	3,597,846	327,874	29°23'52.04''	90°20'16.13''	86	57.4
224	3,597,867	329,869	29°24'11.78''	90°20'15.69''	127.4	29.5
225	3,597,889	327,875	29°23'52.04''	90°20'15.64''	410.7	1317
226	3,597,918	327,866	29°23'51.95''	90°20'15.31''	410.7	1317
227	3,597,928	325,371	29°23'27.25''	90°20'15.44''	28.8	1577.1
228	3,597,935	325,372	29°23'27.26''	90°20'15.37''	52.7	1976.4
229	3,598,003	325,454	29°23'28.07''	90°20'14.59''	82.8	1819.4
230	3,598,006	325,398	29°23'27.51''	90°20'14.56''	25.4	79.3
231	3,598,007	325,787	29°23'31.36''	90°20'14.51''	67.3	729.1
232	3,598,009	327,417	29°23'47.50''	90°20'14.33''	368	691.8
233	3,598,009	325,454	29°23'28.06''	90°20'14.52''	135.5	2385.9
234	3,598,010	325,440	29°23'27.93''	90°20'14.51''	70.4	629
235	3,598,011	327,554	29°23'48.85''	90°20'14.29''	372.6	1069.2
236	3,598,012	325,759	29°23'31.08''	90°20'14.46''	136	1596.5
237	3,598,025	327,364	29°23'46.97''	90°20'14.15''	168.3	430.5
238	3,598,058	327,363	29°23'46.96''	90°20'13.78''	212.4	57
239	3,598,152	326,879	29°23'42.16''	90°20'12.76''	463.7	521.2
240	3,598,188	326,878	29°23'42.15''	90°20'12.36''	463.7	521.2
241	3,598,215	325,874	29°23'32.20''	90°20'12.15''	337.7	3828.6
242	3,598,255	325,870	29°23'32.16''	90°20'11.70''	201.4	1404.9
243	3,598,287	326,356	29°23'36.97''	90°20'11.29''	480.2	420.1
244	3,598,410	329,866	29°24'11.71''	90°20'09.55''	113.2	113.4
245	3,598,420	325,873	29°23'32.18''	90°20'09.83''	312.5	508.6
246	3,598,453	325,874	29°23'32.18''	90°20'09.46''	127	151.9
247	3,598,506	325,679	29°23'30.25''	90°20'08.88''	716.7	1649.5
248	3,598,507	326,342	29°23'36.81''	90°20'08.80''	563.4	3015
249	3,598,508	325,555	29°23'29.02''	90°20'08.87''	854	898.2
250	3,598,510	326,177	29°23'35.18''	90°20'08.79''	277.1	648

MAGNETOMETER SURVEY						
PNT NO	COORDINATES (NAD83)		COORDINATES (NAD83)		DURATION	GAMMA
	X	Y	LAT	LONG		
251	3,598,528	326,367	29°23'37.06''	90°20'08.56''	114.8	6932.1
252	3,598,554	325,361	29°23'27.10''	90°20'08.37''	283.7	1423.3
253	3,598,590	325,362	29°23'27.10''	90°20'07.96''	171.7	138.7
254	3,598,629	325,065	29°23'24.16''	90°20'07.55''	110	471.8
255	3,598,643	326,363	29°23'37.00''	90°20'07.26''	91	9538.6
256	3,598,663	325,066	29°23'24.17''	90°20'07.17''	165.2	343.8
257	3,598,845	326,865	29°23'41.96''	90°20'04.93''	143.2	106.9
258	3,598,880	326,866	29°23'41.97''	90°20'04.54''	185.2	960.6
259	3,599,007	327,106	29°23'44.33''	90°20'03.08''	475.5	2338.1
260	3,599,010	326,872	29°23'42.02''	90°20'03.07''	951.1	159.6
261	3,599,010	326,228	29°23'35.64''	90°20'03.13''	198.6	307.2
262	3,599,047	326,867	29°23'41.96''	90°20'02.65''	330.8	1795.9
263	3,599,156	327,364	29°23'46.87''	90°20'01.37''	311.3	1589.3
264	3,599,443	327,866	29°23'51.82''	90°19'58.07''	119.9	1519.2
265	3,599,507	324,955	29°23'23.00''	90°19'57.64''	85.2	20.2
266	3,599,507	325,193	29°23'25.35''	90°19'57.61''	65.6	9.1
267	3,599,507	325,424	29°23'27.64''	90°19'57.59''	120.6	15.9
268	3,599,510	327,981	29°23'52.95''	90°19'57.30''	1110	4355.8
269	3,599,707	326,867	29°23'41.91''	90°19'55.19''	74	25.1
270	3,599,727	328,370	29°23'56.78''	90°19'54.81''	682.8	592
271	3,599,745	328,368	29°23'56.76''	90°19'54.61''	682.8	592
272	3,599,808	327,973	29°23'52.85''	90°19'53.94''	33.3	39.1
273	3,599,825	327,988	29°23'53.00''	90°19'53.74''	101.3	627.7
274	3,600,002	328,798	29°24'01.00''	90°19'51.66''	74.2	1797.3
275	3,600,008	327,729	29°23'50.41''	90°19'51.70''	188.8	508.1
276	3,600,009	327,527	29°23'48.41''	90°19'51.71''	105	15.3
277	3,600,010	328,862	29°24'01.63''	90°19'51.56''	17.2	17305.1
278	3,600,011	327,049	29°23'43.68''	90°19'51.73''	171.9	432.3
279	3,600,011	326,990	29°23'43.10''	90°19'51.74''	116.5	110.3
280	3,600,012	328,863	29°24'01.64''	90°19'51.54''	81.1	2564.3
281	3,600,014	328,049	29°23'53.58''	90°19'51.60''	132.1	198.2
282	3,600,058	328,869	29°24'01.69''	90°19'51.02''	167.1	1430.1
283	3,600,310	329,363	29°24'06.56''	90°19'48.12''	71.7	2462.3
284	3,600,342	329,365	29°24'06.58''	90°19'47.76''	277.5	1606.9
285	3,600,506	330,007	29°24'12.92''	90°19'45.84''	93.1	240.7
286	3,600,507	329,708	29°24'09.96''	90°19'45.86''	44.9	5130.1
287	3,600,523	329,657	29°24'09.45''	90°19'45.69''	72.3	4963.6
288	3,600,596	329,876	29°24'11.62''	90°19'44.84''	48.1	3709.4
289	3,600,642	329,871	29°24'11.56''	90°19'44.32''	110.1	1407.6
290	3,600,841	330,363	29°24'16.42''	90°19'42.02''	44.1	1807.7
291	3,600,841	330,363	29°24'16.42''	90°19'42.02''	44.1	1807.7
292	3,600,892	330,357	29°24'16.35''	90°19'41.45''	66.4	4185.7
293	3,600,999	330,388	29°24'16.65''	90°19'40.23''	31	64.1
294	3,601,004	330,698	29°24'19.72''	90°19'40.15''	72.6	5283.2
295	3,601,006	330,463	29°24'17.39''	90°19'40.15''	29.9	33.4
296	3,601,009	330,593	29°24'18.68''	90°19'40.10''	207.4	1876.9

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

T. BAKER SMITH
A CENTURY OF SOLUTIONS
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(985)868-1050 - tbsmith.com

REV. NO: 00 | REV. DATE: --/--/-- | REV. BY: ---

REVISION DESCRIPTION:
--

DRAWN BY: J.P.W. | APPROVED BY: J.M.B.

DATE: 08/19/19 | JOB NO: 2019.0193

DRAWING NAME: PHASE ONE WEST MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 5 OF 5

PHASE ONE (WEST) MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGATION SURVEY
CHARTS OF MAGNETOMETER SURVEY
LOCATED NEAR CATFISH LAKE IN
SECTIONS 70 & 75, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

7/7/2020 - P:\Y-2019\2019.0193\DWG\PHASE ONE WEST MAGNETOMETER SURVEY\PHASE ONE WEST MAGNETOMETER SURVEY.DWG

LAFOURCHE PARISH
T19S-R12E

SEC. 70 | SEC. 69 | SEC. 68 | SEC. 25 | SEC. 26 | SEC. 27

SEC. 75 | SEC. 76 | SEC. 77 | SEC. 78

BAYOU MONNAIE

CATFISH LAKE

CELL ALT. 2 ±76 AC.

CELL ALT. 1 ±58 AC.

CELL 4A ±101 AC.

CELL 4B ±79 AC.

PHASE II CENTER

CELL 4C ±75 AC.

CELL 3 ±44 AC.

CELL 2 ±95 AC.

PHASE II EAST

CELL 1 ±167 AC.

SEE SHEET 2 FOR PHASE II CENTER MAGNETOMETER SURVEY

SEE SHEET 3 FOR PHASE II EAST MAGNETOMETER SURVEY

LOUISIANA COORDINATE SYSTEM (SOUTH ZONE) (1983 DATUM)



VICINITY MAP
SCALE: 1" = 4 MILES

TE112-SM-01
(N.A.V.D. 88, GEOID 12A)
ELEV = 1.786' (2014)

X = 3,610,945.19'	NAD 83
Y = 326,339.35'	
LAT = 29° 23' 35.69"	NAD 83
LONG = 90° 17' 48.20"	

LEGEND
- 2019 CONTAINMENT CELLS
- SECTION LINES
- (2020) PHASE TWO MAG SURVEY BOUNDARY

DISCLAIMER:

WHILE REASONABLE EFFORTS ARE MADE TO LOCATE ALL PIPELINES, METAL OBJECTS OR OTHER SUBSURFACE OBSTRUCTIONS IN THE SURVEYED AREA, THE EQUIPMENT USED AND THE CHARACTERISTICS OF PIPELINES THEMSELVES MAKE IT IMPOSSIBLE TO GUARANTEE TOTAL SUCCESS. ACCORDINGLY, IT IS INCUMBENT UPON THE OWNERS, OPERATORS AND/OR CONTRACTORS CONDUCTING OPERATIONS INCLUDING DREDGING AND EXCAVATION TO CONDUCT THEIR OPERATIONS WITH EXTREME CAUTION AND RECOGNIZE THAT HAZARDS IN ADDITION TO THOSE DETECTED AND MARKED BY TBS MAY EXIST.

I CERTIFY THAT THE SURVEY DEPICTED ON THIS PLAT WAS PERFORMED UNDER MY SUPERVISION IN ACCORDANCE WITH GENERALLY ACCEPTED SURVEY PRACTICES. THIS SURVEY DOES NOT MEET THE STANDARDS OF PRACTICE FOR BOUNDARY SURVEYS AS SET FORTH BY THE LOUISIANA PROFESSIONAL ENGINEERS AND LAND SURVEYORS BOARD.

STATE OF LOUISIANA — SHANE J. KIRKLAND License No. 5142 — PROFESSIONAL LAND SURVEYOR

05/04/2020

APPROVED:

SHANE J. KIRKLAND, P.L.S.
LA. LAND SURVEYOR REG. NO. 5142
P.O. BOX 2266 HOUMA, LA 70363 (985)868-1050

SURVEY NOTES:

1. THE FIELD SURVEY WAS PERFORMED BY CONVENTIONAL SURVEY CREW WITH TRIMBLE RTK GPS ON 03/02/20 THROUGH 04/14/20 BY T. BAKER SMITH, LLC.
2. TBS FIELD BOOK 4864 PAGES 47-71, FIELD BOOK 4853 PAGE 75, & FIELD BOOK 4898 PAGES 3-9.
3. HORIZONTAL POSITIONS SHOWN HEREON ARE BASED ON THE LOUISIANA SOUTH STATE PLANE COORDINATE SYSTEM OF 1983.
4. ALL ELEVATIONS ARE REFERENCED TO NAVD88 (GEOID 12A)
5. ALL UNITS OF MEASUREMENT SHOWN HEREON ARE IN U.S. SURVEY FEET.
6. 2016 GOOGLE EARTH IMAGERY USED FOR BACKGROUND PHOTOGRAPHY.
7. HORIZONTAL AND VERTICAL CONTROL WERE ESTABLISHED THROUGH STATIC GPS OBSERVATIONS ON MONUMENT TE112-SM-01. POSITIONS WERE CORRECTED THROUGH THE NATIONAL GEODETIC SURVEYS ONLINE POSITIONING USER SERVICE.
8. THE NEAREST CONTROLLING CORS STATION IS PAUL, PAUL GALLIANO, LA.

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEETS 14-15 FOR MAGNETOMETER CHARTS

ALL MAGNETOMETER HITS WERE INVESTIGATED WITH A 25' RADIUS AND 50' RADIUS CIRCLE.

TBS
T. BAKER SMITH
A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
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SCALE: 1" = 1000'

1000' 500' 0' 1000'

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
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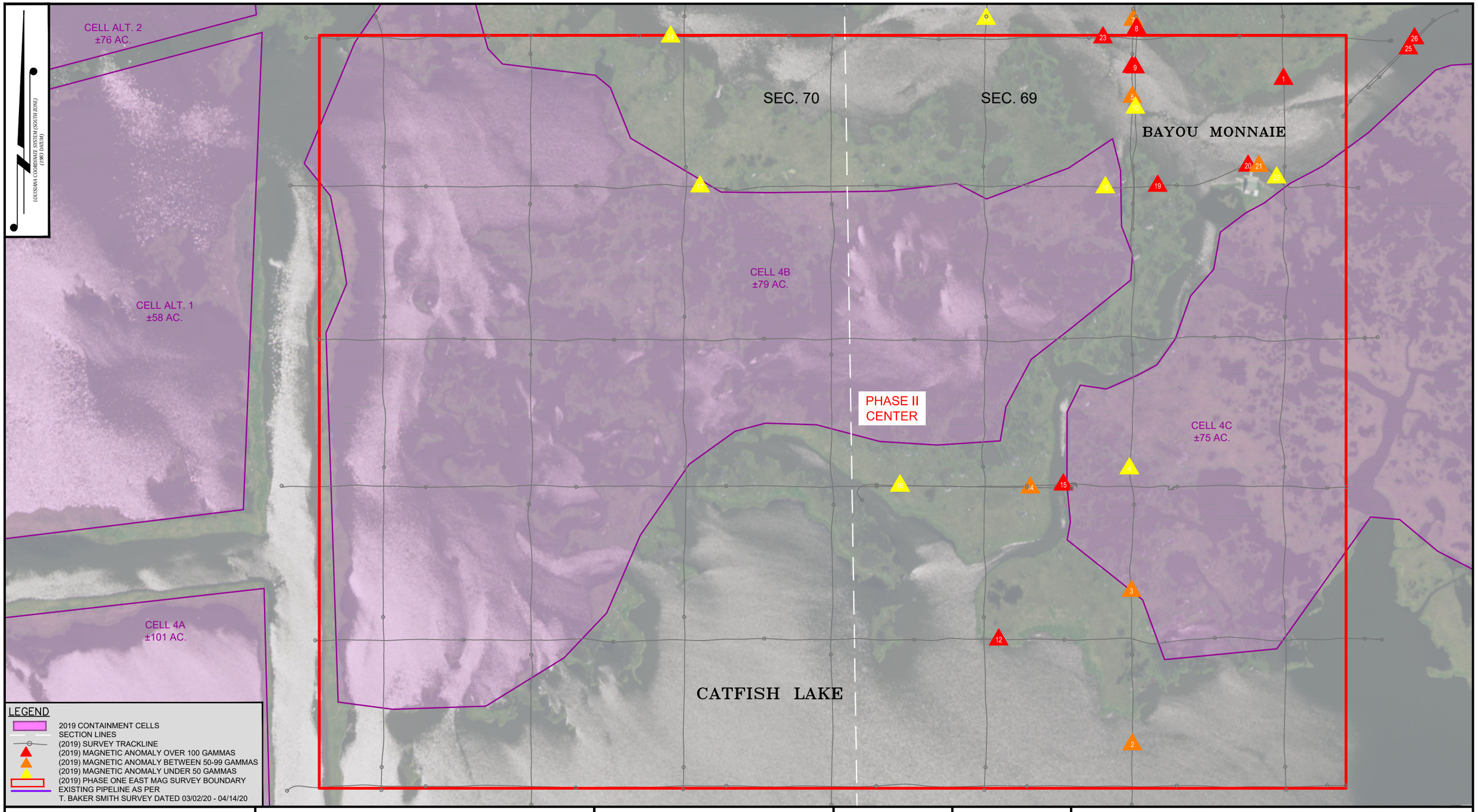
DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	05/01/2020	JOB NO:	2019.0193
DRAWING NAME:	PHASE TWO MAGNETOMETER SURVEY		
PROJECTION: LOUISIANA SOUTH GEO. DATUM: NAD83 | VERT. DATUM: NAVD88 GRID UNITS: US SURVEY FEET			
SHEET NO:	1	OF	19

PHASE TWO MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGAION SURVEY
BASE MAP OF PHASE TWO SURVEY AREAS
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,70,77,78, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

5/4/2020 - P:\Y-2019\2019.0193\DWG\PHASE TWO MAGNETOMETER SURVEY\PHASE TWO MAGNETOMETER SURVEY.DWG



LEGEND

- 2019 CONTAINMENT CELLS
- SECTION LINES
- (2019) SURVEY TRACKLINE
- (2019) MAGNETIC ANOMALY OVER 100 GAMMAS
- (2019) MAGNETIC ANOMALY BETWEEN 50-99 GAMMAS
- (2019) MAGNETIC ANOMALY UNDER 50 GAMMAS
- (2019) PHASE ONE EAST MAG SURVEY BOUNDARY
- EXISTING PIPELINE AS PER T. BAKER SMITH SURVEY DATED 03/02/20 - 04/14/20

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEETS 14-15 FOR MAGNETOMETER CHARTS

ALL MAGNETOMETER HITS WERE INVESTIGATED WITH A 25' RADIUS AND 50' RADIUS CIRCLE.

T. BAKER SMITH
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SCALE: 1" = 300'

300' 150' 0' 300'

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
--

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	05/01/2020	JOB NO:	2019.0193

DRAWING NAME: PHASE TWO MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

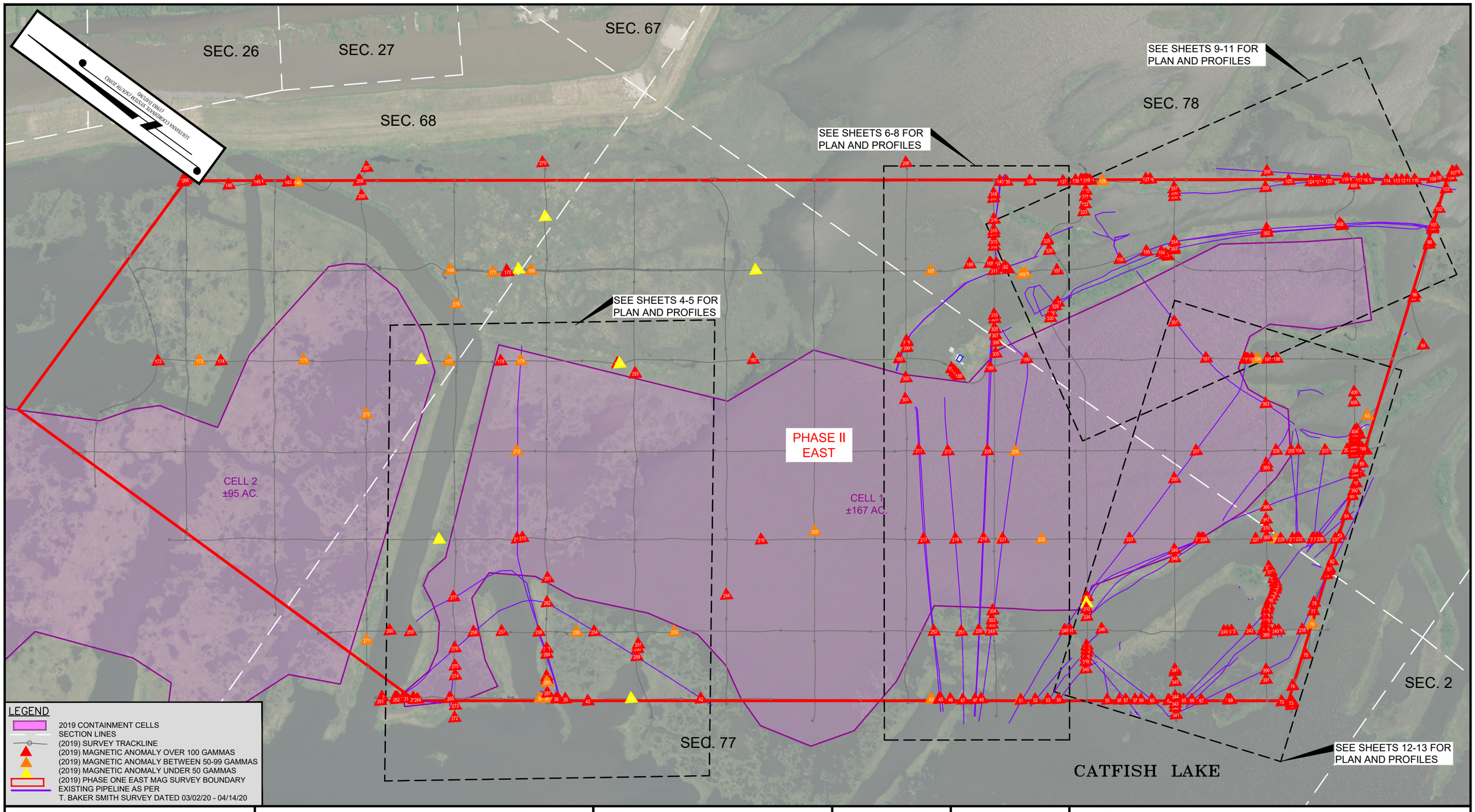
SHEET NO: 2 OF 19

PHASE TWO MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGAION SURVEY
PLAN VIEW OF PHASE II (CENTER)
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,70,77,78, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

5/4/2020 - P:\Y-2019\2019.0193\DWG\PHASE TWO MAGNETOMETER SURVEY\PHASE TWO MAGNETOMETER SURVEY.DWG



LEGEND

- 2019 CONTAINMENT CELLS
- SECTION LINES
- (2019) SURVEY TRACKLINE
- (2019) MAGNETIC ANOMALY OVER 100 GAMMAS
- (2019) MAGNETIC ANOMALY BETWEEN 50-99 GAMMAS
- (2019) MAGNETIC ANOMALY UNDER 50 GAMMAS
- (2019) PHASE ONE EAST MAG SURVEY BOUNDARY
- EXISTING PIPELINE AS PER T. BAKER SMITH SURVEY DATED 03/02/20 - 04/14/20

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEETS 14-15 FOR MAGNETOMETER CHARTS

ALL MAGNETOMETER HITS WERE INVESTIGATED WITH A 25' RADIUS AND 50' RADIUS CIRCLE.

TBS
T. BAKER SMITH
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SCALE: 1" = 500'

500' 250' 0' 500'

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
--

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	05/01/2020	JOB NO:	2019.0193

DRAWING NAME: PHASE TWO MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

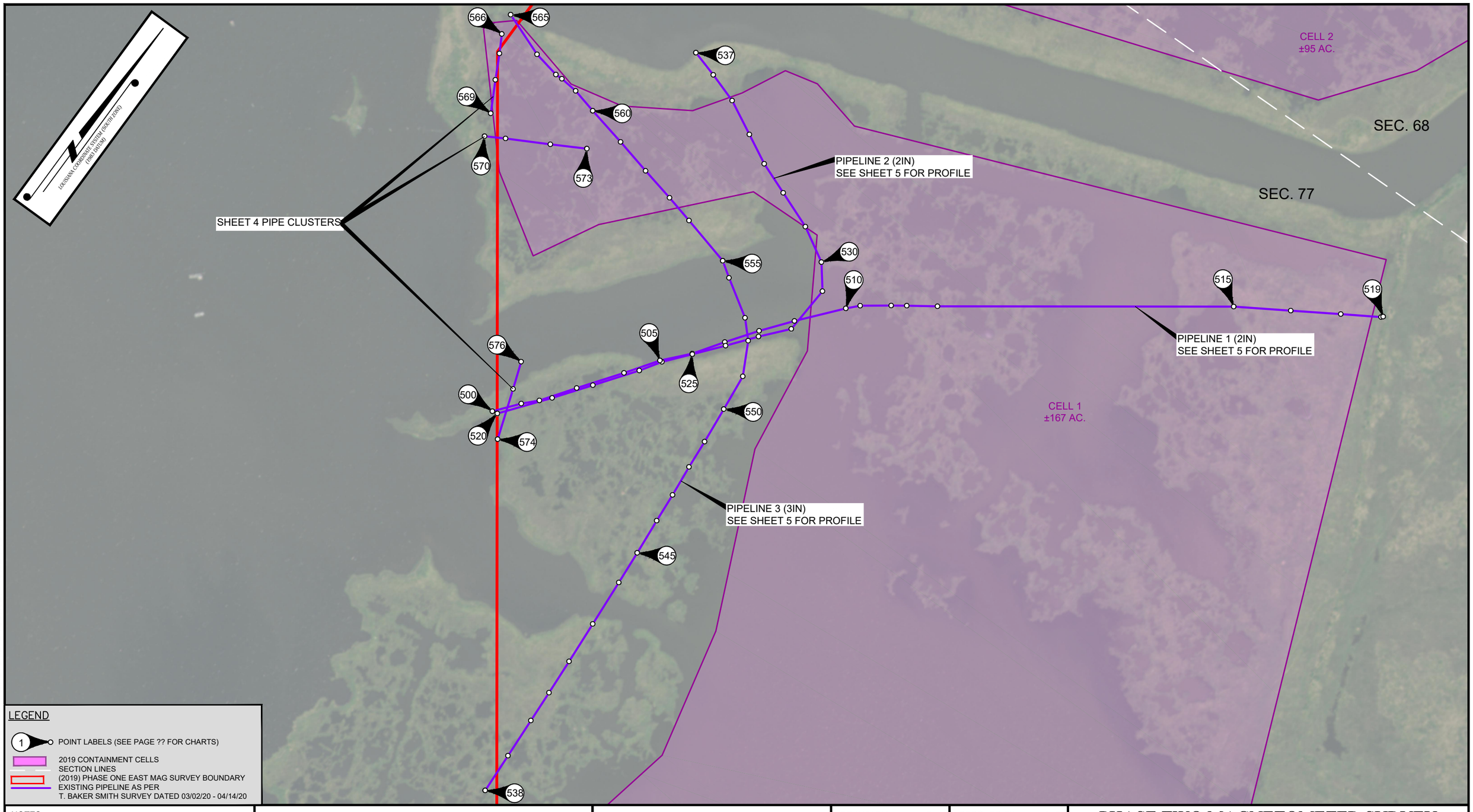
SHEET NO: 3 OF 19

PHASE TWO MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGAION SURVEY
PLAN VIEW OF PHASE II (EAST)
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,70,77,78, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

5/4/2020 - P:\Y-2019\2019.0193\DWG\PHASE TWO MAGNETOMETER SURVEY\PHASE TWO MAGNETOMETER SURVEY.DWG



LEGEND

1 POINT LABELS (SEE PAGE ?? FOR CHARTS)

2019 CONTAINMENT CELLS
SECTION LINES
(2019) PHASE ONE EAST MAG SURVEY BOUNDARY
EXISTING PIPELINE AS PER
T. BAKER SMITH SURVEY DATED 03/02/20 - 04/14/20

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEETS 16-19 FOR PIPELINE CHARTS.

T. BAKER SMITH
A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

SCALE: 1" = 200'

200' 100' 0' 200'

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
--

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	05/01/2020	JOB NO:	2019.0193

DRAWING NAME: PHASE TWO MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

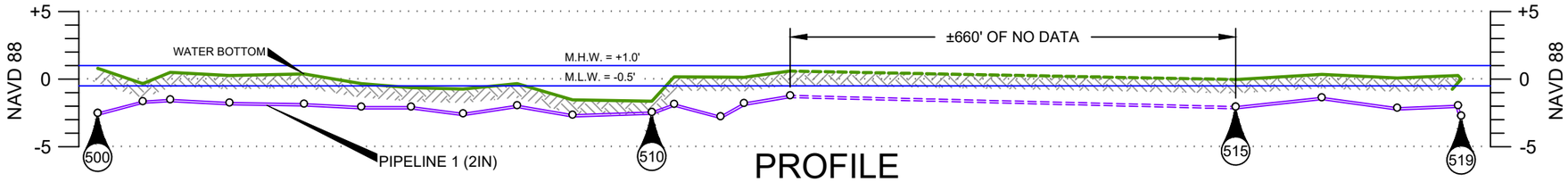
SHEET NO: 4 OF 19

PHASE TWO MAGNETOMETER SURVEY

DUCKS UNLIMITED

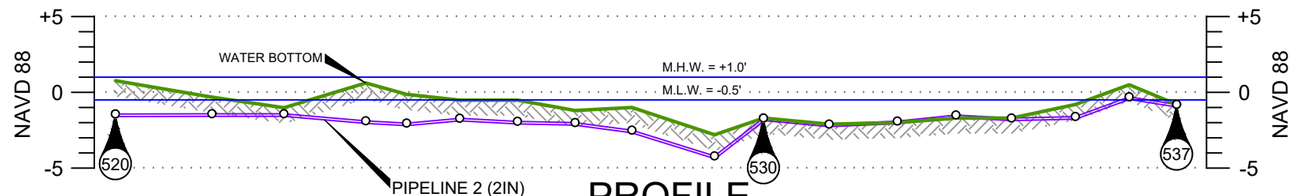
MAGNETOMETER INVESTIGAION SURVEY
PLAN AND PROFILE OF PHASE II (EAST)
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,70,77,78, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

5/4/2020 - P:\Y-2019\2019.0193\DWG\PHASE TWO MAGNETOMETER SURVEY\PHASE TWO MAGNETOMETER SURVEY.DWG



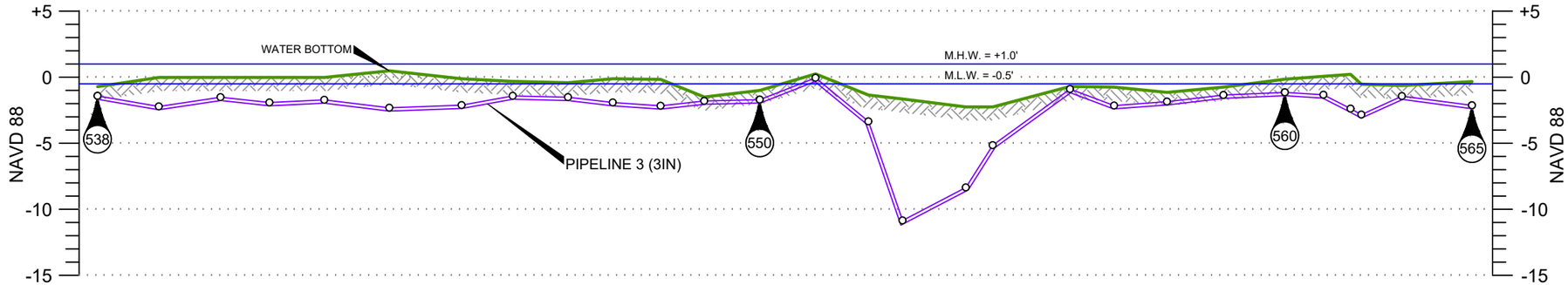
PROFILE

LOOKING NORTH WESTERLY



PROFILE

LOOKING SOUTH WESTERLY



PROFILE

LOOKING NORTH WESTERLY

LEGEND

1 POINT LABELS (SEE PAGE 7 FOR CHARTS)

WATER LINE

WATER BOTTOM

EXISTING PIPELINE AS PER T. BAKER SMITH SURVEY DATED 05/20/19 - 08/02/19

HORIZONTAL

SCALE IN FEET

200' 100' 0' 200'

VERTICAL

SCALE IN FEET

10' 5' 0' 10'

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEETS 16-19 FOR PIPELINE CHARTS.

T. BAKER SMITH
A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
--

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	05/01/2020	JOB NO:	2019.0193
DRAWING NAME:	PHASE TWO MAGNETOMETER SURVEY		

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 5 OF 19

PHASE TWO MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGAION SURVEY
PROFILES OF SURVEYED PIPELINES
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,70,77,78, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

5/4/2020 - P:\Y-2019\2019.0193\DWG\PHASE TWO MAGNETOMETER SURVEY\PHASE TWO MAGNETOMETER SURVEY.DWG

LOUISIANA COORDINATE SYSTEM (SOUTH ZONE)
(1983 DATUM)

DETAIL "B"
SCALE: 1" = 10'
10' 5' 0' 10'

DETAIL "A"
SCALE: 1" = 30'
30' 15' 0' 30'

PIPELINE 12 (2IN)
PIPELINE 13 (2IN)
PIPELINE 11 (2IN)
SEE SHEET 8 FOR PROFILE
PIPELINE 10 (2IN)
SEE SHEET 8 FOR PROFILE
PIPELINE 7 (2IN)
SEE SHEET 8 FOR PROFILE
PIPELINE 8 (2IN)
SEE SHEET 8 FOR PROFILE
SHEET 6 PIPE CLUSTER
SHEET 6 PIPE CLUSTERS
PIPELINE 4 (2IN)
SEE SHEET 7 FOR PROFILE
PIPELINE 5 (2IN)
SEE SHEET 7 FOR PROFILE
PIPELINE 6 (2IN)
SEE SHEET 7 FOR PROFILE
PIPELINE 9 (2IN)
SEE SHEET 8 FOR PROFILE
EXISTING CAMP
SEC. 77
SEC. 76
CELL 1
±167 AC.

LEGEND

1 POINT LABELS (SEE PAGE ?? FOR CHARTS)
2019 CONTAINMENT CELLS
SECTION LINES
(2019) PHASE ONE EAST MAG SURVEY BOUNDARY
EXISTING PIPELINE AS PER
T. BAKER SMITH SURVEY DATED 03/02/20 - 04/14/20

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEETS 16-19 FOR PIPELINE CHARTS.

T. BAKER SMITH
A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

SCALE: 1" = 200'
200' 100' 0' 200'

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
--

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	05/01/2020	JOB NO:	2019.0193
DRAWING NAME:	PHASE TWO MAGNETOMETER SURVEY		

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

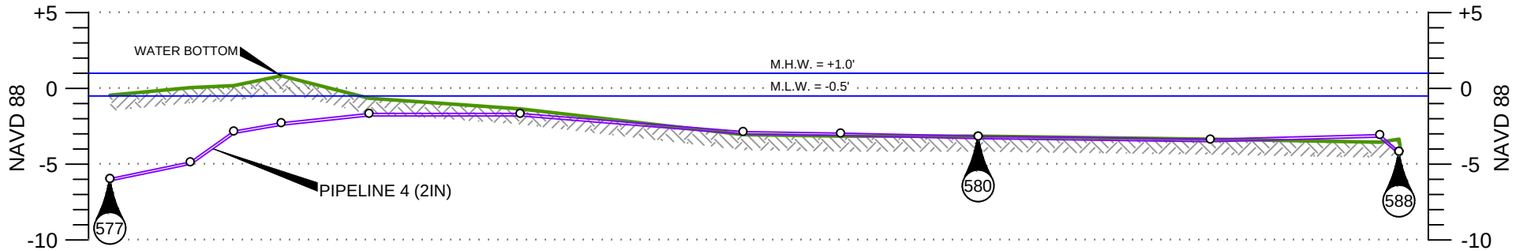
SHEET NO: 6 OF 19

PHASE TWO MAGNETOMETER SURVEY

DUCKS UNLIMITED

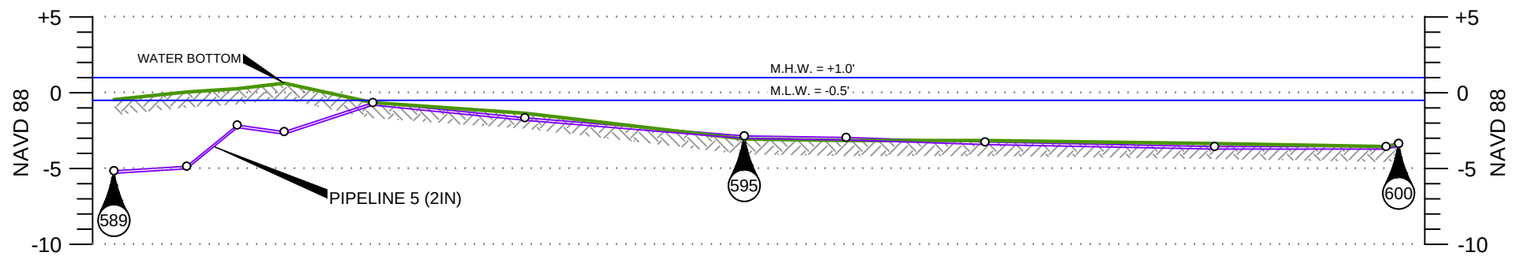
MAGNETOMETER INVESTIGAION SURVEY
PLAN VIEW OF PHASE II (EAST)
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,70,77,78, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

5/4/2020 - P:\Y-2019\2019.0193\DWG\PHASE TWO MAGNETOMETER SURVEY\PHASE TWO MAGNETOMETER SURVEY.DWG



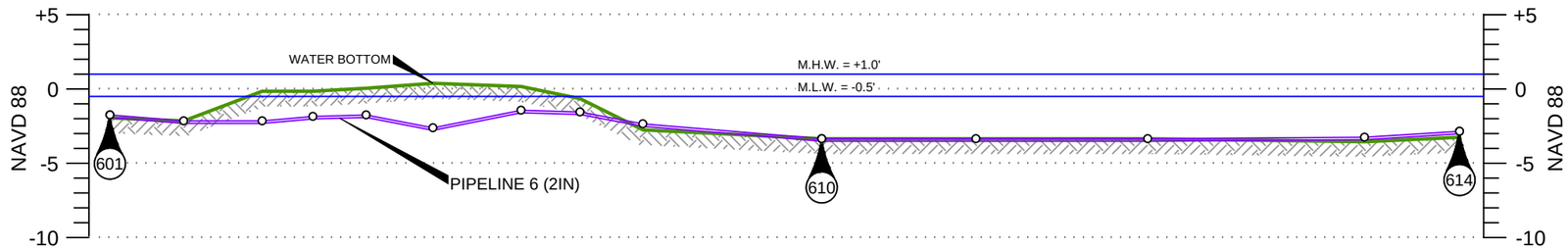
PROFILE

LOOKING NORTH WESTERLY



PROFILE

LOOKING NORTH WESTERLY



PROFILE

LOOKING NORTH WESTERLY

LEGEND

1 POINT LABELS (SEE PAGE 7 FOR CHARTS)

WATER LINE

WATER BOTTOM

EXISTING PIPELINE AS PER T. BAKER SMITH SURVEY DATED 05/20/19 - 08/02/19

HORIZONTAL

SCALE IN FEET

200' 100' 0' 200'

VERTICAL

SCALE IN FEET

10' 5' 0' 10'

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEETS 16-19 FOR PIPELINE CHARTS.

T. BAKER SMITH
A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
--

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	05/01/2020	JOB NO:	2019.0193
DRAWING NAME:	PHASE TWO MAGNETOMETER SURVEY		

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

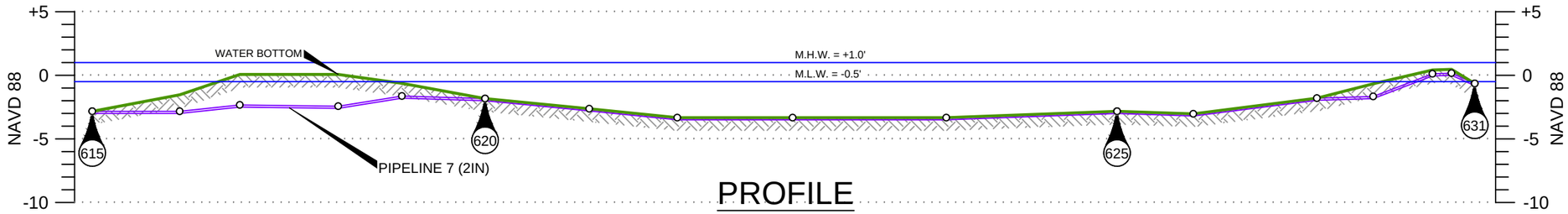
SHEET NO: 7 OF 19

PHASE TWO MAGNETOMETER SURVEY

DUCKS UNLIMITED

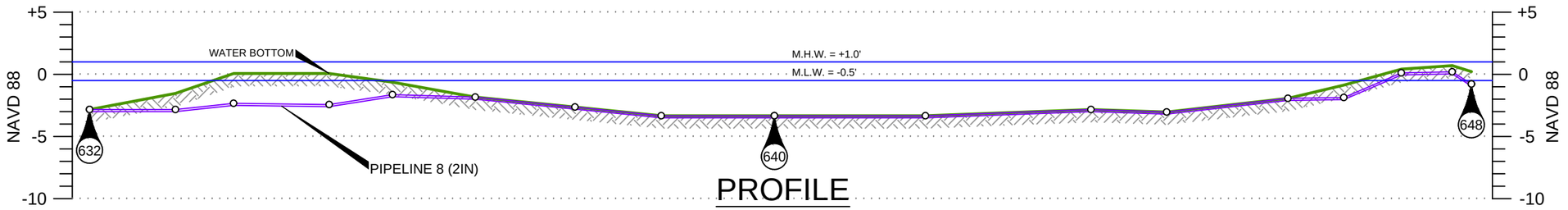
MAGNETOMETER INVESTIGAION SURVEY
PROFILES OF SURVEYED PIPELINES
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,70,77,78, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

5/4/2020 - P:\Y-2019\2019.0193\DWG\PHASE TWO MAGNETOMETER SURVEY\PHASE TWO MAGNETOMETER SURVEY.DWG



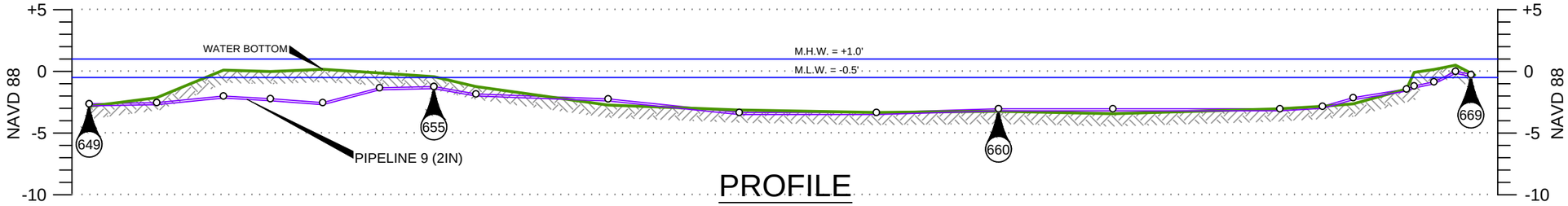
PROFILE

LOOKING NORTH WESTERLY



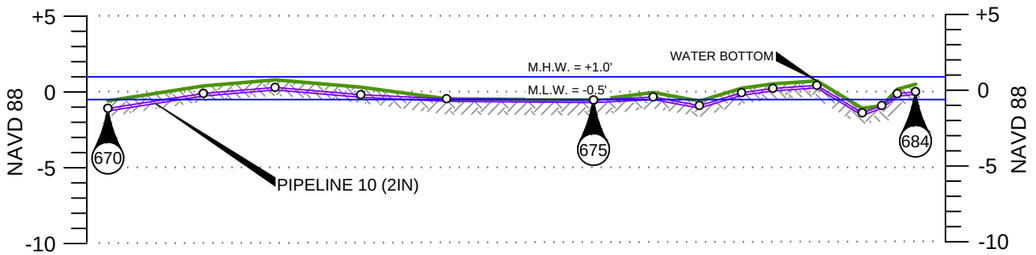
PROFILE

LOOKING NORTH WESTERLY



PROFILE

LOOKING NORTH WESTERLY



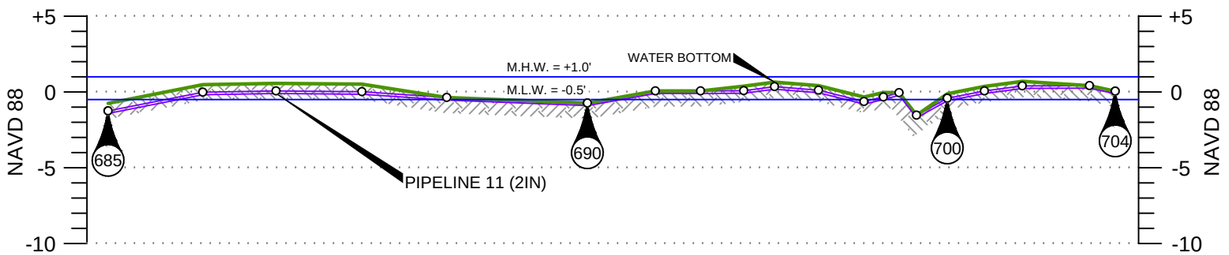
PROFILE

LOOKING NORTH EASTERLY

HORIZONTAL

SCALE IN FEET

200' 100' 0' 200'



PROFILE

LOOKING NORTH EASTERLY

VERTICAL

SCALE IN FEET

10' 5' 0' 10'

LEGEND

1 POINT LABELS (SEE PAGE 7 FOR CHARTS)

WATER LINE

WATER BOTTOM

EXISTING PIPELINE AS PER T. BAKER SMITH SURVEY DATED 05/20/19 - 08/02/19

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEETS 16-19 FOR PIPELINE CHARTS.

T. BAKER SMITH
A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
--

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	05/01/2020	JOB NO:	2019.0193
DRAWING NAME:	PHASE TWO MAGNETOMETER SURVEY		

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

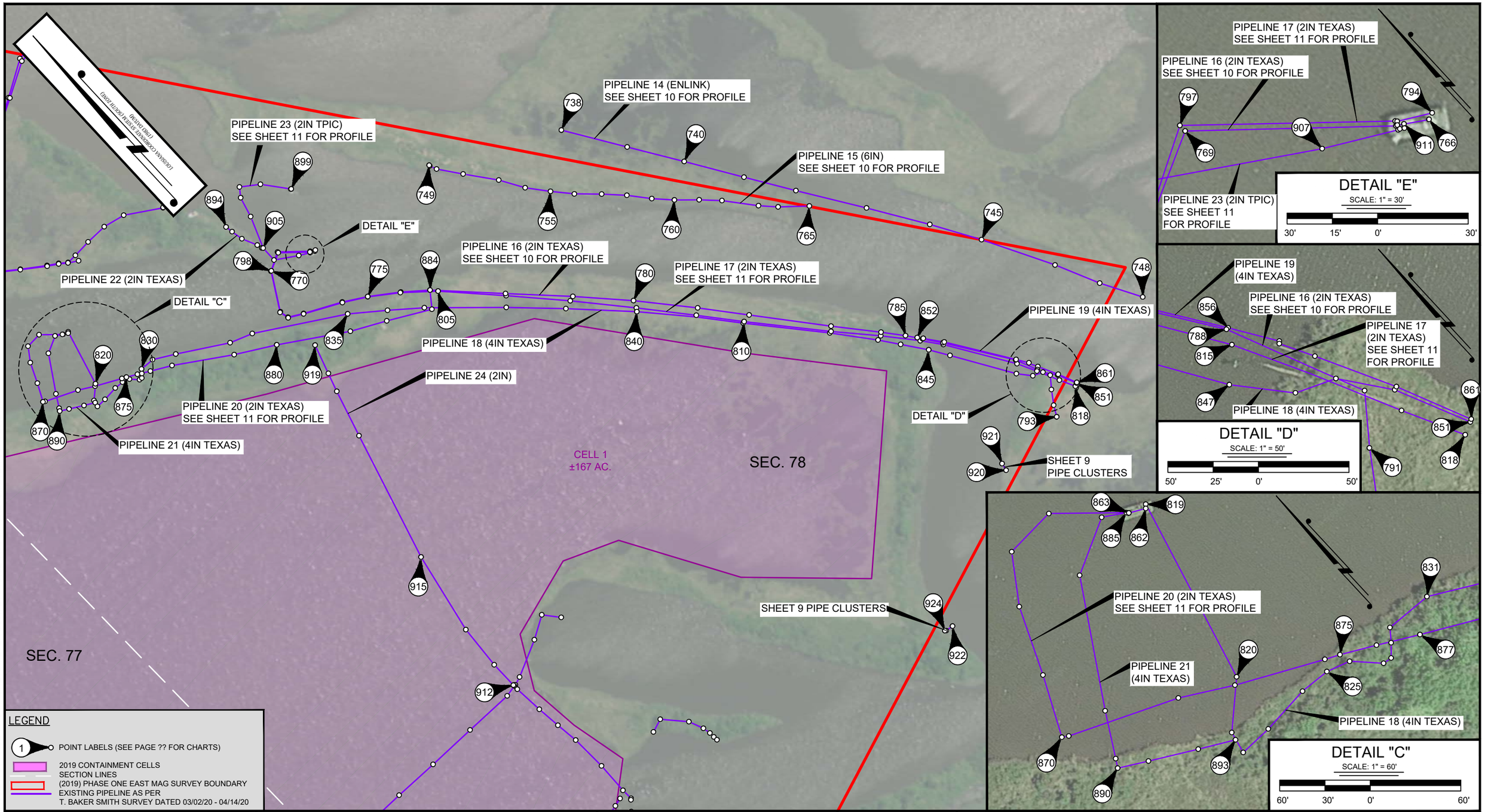
SHEET NO: 8 OF 19

PHASE TWO MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGAION SURVEY
PROFILES OF SURVEYED PIPELINES
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,70,77,78, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

5/4/2020 - P:\Y-2019\2019.0193\DWG\PHASE TWO MAGNETOMETER SURVEY\PHASE TWO MAGNETOMETER SURVEY.DWG



LEGEND

- 1 — POINT LABELS (SEE PAGE ?? FOR CHARTS)
- 2019 CONTAINMENT CELLS
- SECTION LINES
- (2019) PHASE ONE EAST MAG SURVEY BOUNDARY
- EXISTING PIPELINE AS PER T. BAKER SMITH SURVEY DATED 03/02/20 - 04/14/20

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEETS 16-19 FOR PIPELINE CHARTS.

T. BAKER SMITH
A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

SCALE: 1" = 200'
200' 100' 0' 200'

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
--

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	05/01/2020	JOB NO:	2019.0193

DRAWING NAME: PHASE TWO MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

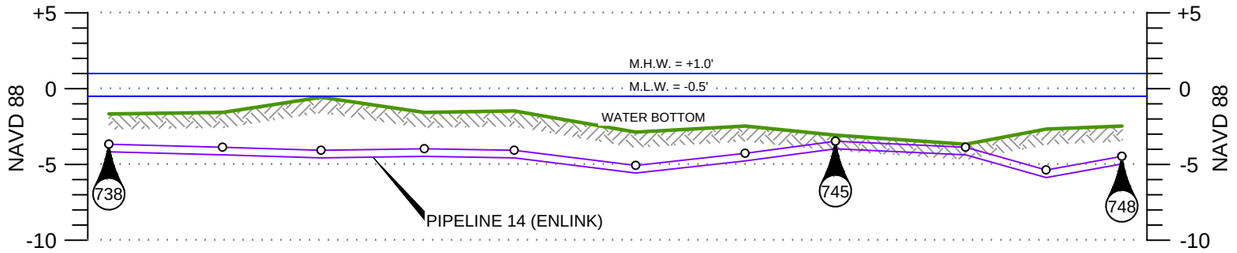
SHEET NO: 9 OF 19

PHASE TWO MAGNETOMETER SURVEY

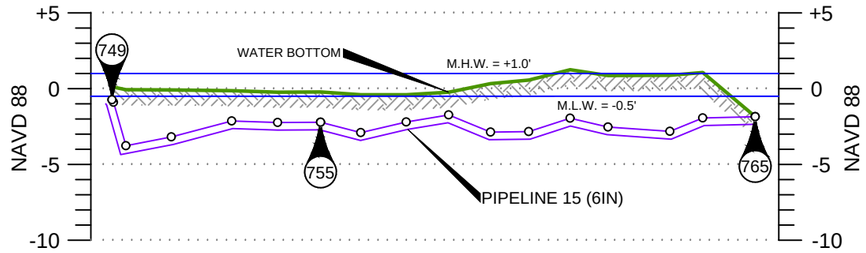
DUCKS UNLIMITED

MAGNETOMETER INVESTIGAION SURVEY
PLAN VIEW OF PHASE II (EAST)
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,70,77,78, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

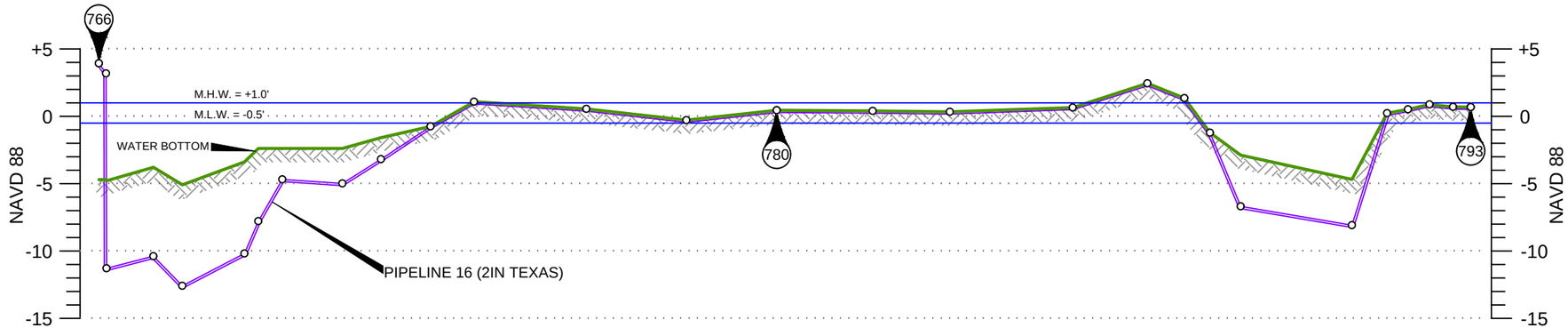
5/4/2020 - P:\Y-2019\2019.0193\DWG\PHASE TWO MAGNETOMETER SURVEY\PHASE TWO MAGNETOMETER SURVEY.DWG



PROFILE
LOOKING NORTH EASTERLY



PROFILE
LOOKING NORTH EASTERLY



PROFILE
LOOKING NORTH EASTERLY

LEGEND

1 POINT LABELS (SEE PAGE 7 FOR CHARTS)

WATER LINE

WATER BOTTOM

EXISTING PIPELINE AS PER T. BAKER SMITH SURVEY DATED 05/20/19 - 08/02/19

HORIZONTAL
SCALE IN FEET
200' 100' 0' 200'

VERTICAL
SCALE IN FEET
10' 5' 0' 10'

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEETS 16-19 FOR PIPELINE CHARTS.

T. BAKER SMITH
A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
--

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	05/01/2020	JOB NO:	2019.0193
DRAWING NAME:	PHASE TWO MAGNETOMETER SURVEY		

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

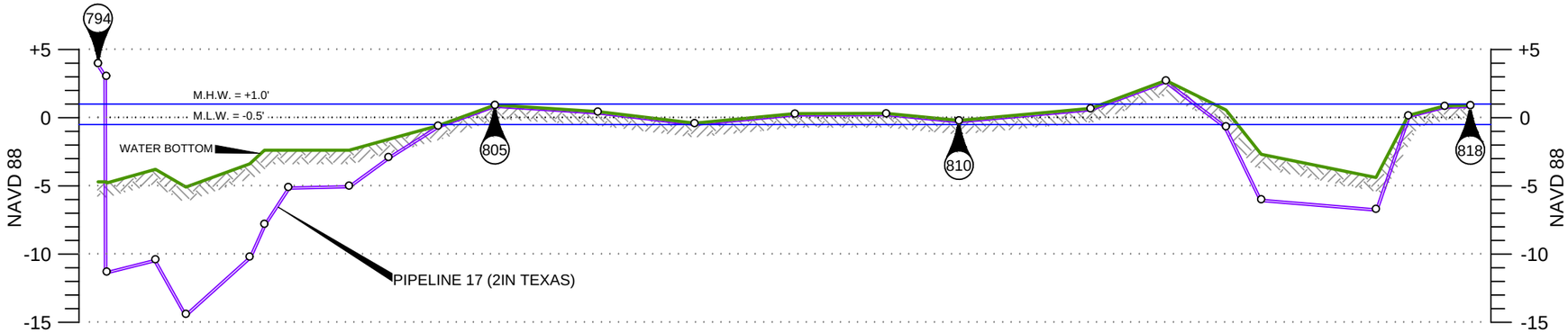
SHEET NO: 10 OF 19

PHASE TWO MAGNETOMETER SURVEY

DUCKS UNLIMITED

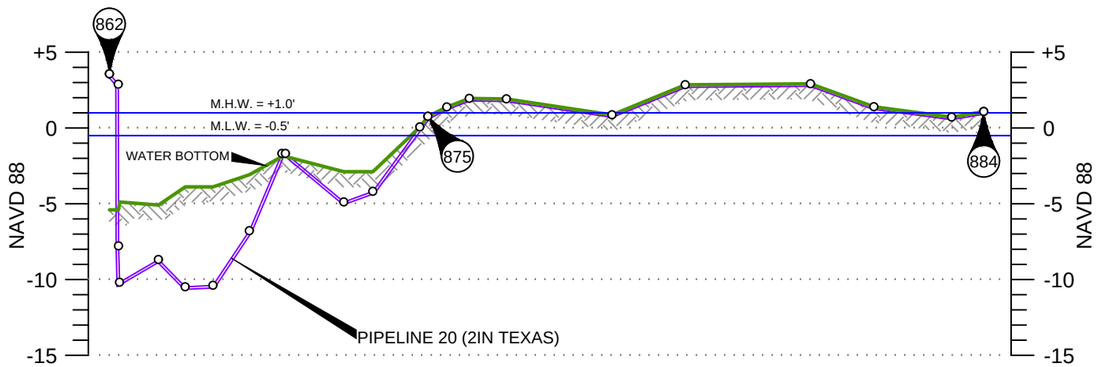
MAGNETOMETER INVESTIGAION SURVEY
PROFILES OF SURVEYED PIPELINES
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,70,77,78, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

5/4/2020 - P:\Y-2019\2019.0193\DWG\PHASE TWO MAGNETOMETER SURVEY\PHASE TWO MAGNETOMETER SURVEY.DWG



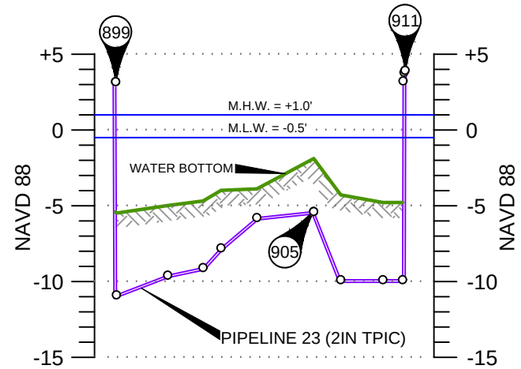
PROFILE

LOOKING NORTH EASTERLY



PROFILE

LOOKING NORTH EASTERLY



PROFILE

LOOKING NORTH WESTERLY

LEGEND

1 POINT LABELS (SEE PAGE 7 FOR CHARTS)

WATER LINE

WATER BOTTOM

EXISTING PIPELINE AS PER T. BAKER SMITH SURVEY DATED 05/20/19 - 08/02/19

HORIZONTAL

SCALE IN FEET

200' 100' 0' 200'

VERTICAL

SCALE IN FEET

10' 5' 0' 10'

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEETS 16-19 FOR PIPELINE CHARTS.

T. BAKER SMITH
A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION: --

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	05/01/2020	JOB NO:	2019.0193
DRAWING NAME:	PHASE TWO MAGNETOMETER SURVEY		

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 11 OF 19

PHASE TWO MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGAION SURVEY
PROFILES OF SURVEYED PIPELINES
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,70,77,78, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

5/4/2020 - P:\Y-2019\2019.0193\DWG\PHASE TWO MAGNETOMETER SURVEY\PHASE TWO MAGNETOMETER SURVEY.DWG

LOUISIANA COORDINATE SYSTEM (SOUTH ZONE) (1983 DATUM)

PIPELINE 25 (2IN TEXAS)
SEE SHEET 13 FOR PROFILE

PIPELINE 29(2IN)

PIPELINE 26 (2IN)

PIPELINE 27 (2IN)

PIPELINE 28 (2IN)

PIPELINE 30 (2IN)

PIPELINE 31 (3IN)

SHEET 12 PIPE CLUSTERS

PIPELINE 32 (2IN)

PIPELINE 33 (4IN TEXAS)

SHEET 12 PIPE CLUSTERS

PIPELINE 34 (4IN TEXAS)

PIPELINE 35 (2IN)

PIPELINE 36 (2IN)

PIPELINE 37 (2IN)

PIPELINE 38 (4IN TEXAS)
SEE SHEET 13 FOR PROFILE

PIPELINE 39 (2IN)

PIPELINE 40 (3IN)

PIPELINE 41 (2IN)

PIPELINE 42 (2IN)

PIPELINE 43 (2IN)

PIPELINE 44 (2IN)

PIPELINE 45 (2IN)

PIPELINE 46 (2IN)

DETAIL "F"

SHEET 12 PIPE CLUSTERS

SHEET 12 PIPE CLUSTERS

SHEET 12 PIPE CLUSTERS

SHEET 12 PIPE CLUSTERS

CELL 1
±167 AC.

SEC. 77

SEC. 78

DETAIL "F"

SCALE: 1" = 30'

30' 15' 0' 30'

LEGEND

- 1 — POINT LABELS (SEE PAGE ?? FOR CHARTS)
- 2019 CONTAINMENT CELLS
- SECTION LINES
- (2019) PHASE ONE EAST MAG SURVEY BOUNDARY
- EXISTING PIPELINE AS PER T. BAKER SMITH SURVEY DATED 03/02/20 - 04/14/20

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEETS 16-19 FOR PIPELINE CHARTS.

T. BAKER SMITH
A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

SCALE: 1" = 200'

200' 100' 0' 200'

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
--

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	05/01/2020	JOB NO:	2019.0193
DRAWING NAME:	PHASE TWO MAGNETOMETER SURVEY		

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

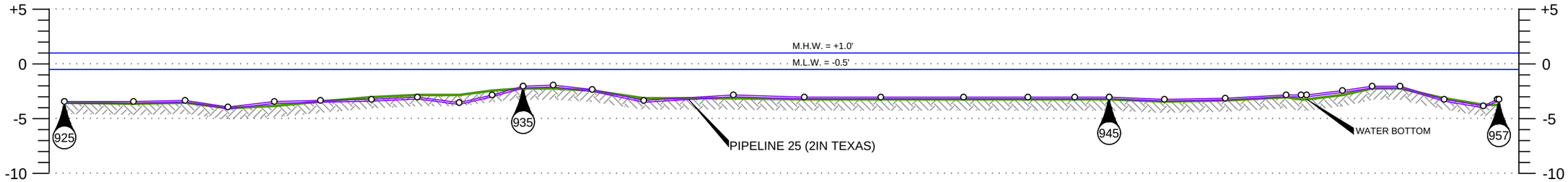
SHEET NO: 12 OF 19

PHASE TWO MAGNETOMETER SURVEY

DUCKS UNLIMITED

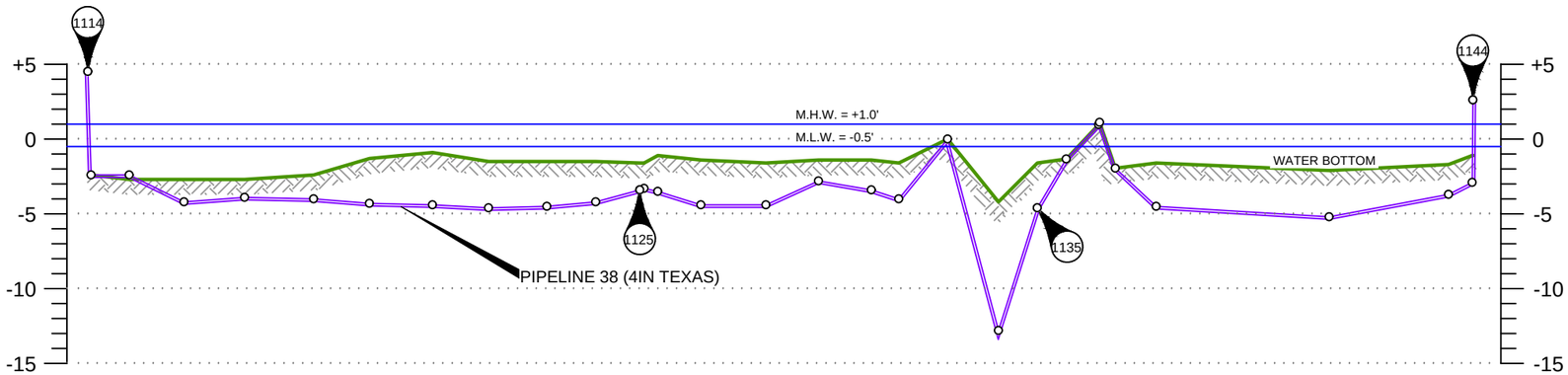
MAGNETOMETER INVESTIGAION SURVEY
PLAN VIEW OF PHASE II (EAST)
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,70,77,78, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

5/4/2020 - P:\Y-2019\2019.0193\DWG\PHASE TWO MAGNETOMETER SURVEY\PHASE TWO MAGNETOMETER SURVEY.DWG



PROFILE

LOOKING NORTHERLY



PROFILE

LOOKING NORTHERLY

LEGEND

1 POINT LABELS (SEE PAGE 7 FOR CHARTS)

WATER LINE

WATER BOTTOM

EXISTING PIPELINE AS PER T. BAKER SMITH SURVEY DATED 05/20/19 - 08/02/19

HORIZONTAL

SCALE IN FEET

200' 100' 0' 200'

VERTICAL

SCALE IN FEET

10' 5' 0' 10'

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEETS 16-19 FOR PIPELINE CHARTS.

T. BAKER SMITH
A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
--

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	05/01/2020	JOB NO:	2019.0193
DRAWING NAME:	PHASE TWO MAGNETOMETER SURVEY		

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 13 OF 19

PHASE TWO MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGAION SURVEY
PROFILES OF SURVEYED PIPELINES
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,70,77,78, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

5/4/2020 - P:\Y-2019\2019.0193\DWG\PHASE TWO MAGNETOMETER SURVEY\PHASE TWO MAGNETOMETER SURVEY.DWG

MAGNETOMETER SURVEY						
PNT NO	COORDINATES (NAD83)		COORDINATES (NAD83)		DURATION	GAMMA
	X	Y	LAT	LONG		
1	3,603,260	328,485	29°23'57.61''	90°19'14.86''	16.6	155.9
2	3,602,757	326,269	29°23'35.72''	90°19'20.77''	19.2	50.7
3	3,602,754	326,780	29°23'40.78''	90°19'20.75''	35.1	55.1
4	3,602,747	327,188	29°23'44.82''	90°19'20.79''	13.9	37.3
5	3,602,758	328,388	29°23'56.70''	90°19'20.55''	18.2	69.4
6	3,602,756	328,525	29°23'58.05''	90°19'20.55''	39.9	121.5
7	3,602,759	328,660	29°23'59.39''	90°19'20.51''	165.7	91.0
8	3,602,771	328,653	29°23'59.32''	90°19'20.37''	207.2	114.4
9	3,602,766	328,523	29°23'58.03''	90°19'20.44''	38.6	106.4
10	3,602,767	328,389	29°23'56.71''	90°19'20.44''	21.7	49.6
11	3,602,270	328,685	29°23'59.68''	90°19'26.03''	74.4	43.5
12	3,602,312	326,618	29°23'39.21''	90°19'25.76''	23.8	862.5
13	3,601,984	327,130	29°23'44.31''	90°19'29.42''	30.2	38.7
14	3,602,417	327,124	29°23'44.21''	90°19'24.53''	19.4	86.1
15	3,602,527	327,134	29°23'44.30''	90°19'23.28''	27.0	320.6
16	3,601,983	327,131	29°23'44.32''	90°19'29.43''	32.1	26.7
17	3,601,318	328,127	29°23'54.24''	90°19'36.85''	4.2	30.1
18	3,602,667	328,124	29°23'54.09''	90°19'21.60''	53.2	29.4
19	3,602,841	328,129	29°23'54.13''	90°19'19.63''	24.5	130.0
20	3,603,142	328,196	29°23'54.76''	90°19'16.22''	151.6	112.5
21	3,603,178	328,195	29°23'54.75''	90°19'15.82''	13.9	70.2
22	3,603,237	328,157	29°23'54.37''	90°19'15.15''	95.0	33.4
23	3,602,659	328,623	29°23'59.03''	90°19'21.64''	380.3	552.8
24	3,601,220	328,626	29°23'59.19''	90°19'37.91''	62.9	49.4
25	3,603,701	328,615	29°23'58.86''	90°19'09.86''	59.1	547.2
26	3,603,696	328,620	29°23'58.91''	90°19'09.92''	60.5	497.3
27	3,608,981	325,402	29°23'26.59''	90°18'10.50''	8.4	6806.7
28	3,608,978	325,409	29°23'26.66''	90°18'10.53''	6.4	1069.9
29	3,608,984	325,397	29°23'26.54''	90°18'10.47''	14.2	3912.0
30	3,608,999	325,372	29°23'26.29''	90°18'10.30''	15.2	3615.0
31	3,609,010	325,358	29°23'26.15''	90°18'10.18''	15.3	4600.8
32	3,608,937	325,470	29°23'27.27''	90°18'10.99''	49.6	504.6
33	3,609,036	325,327	29°23'25.84''	90°18'09.89''	22.7	708.6
34	3,609,153	325,163	29°23'24.21''	90°18'08.58''	25.9	995.8
35	3,609,450	324,759	29°23'20.18''	90°18'05.26''	29.3	91.9
36	3,609,472	324,728	29°23'19.87''	90°18'05.02''	14.1	63.8
37	3,609,507	324,674	29°23'19.34''	90°18'04.63''	18.9	946.3
38	3,609,500	324,684	29°23'19.44''	90°18'04.71''	14.6	158.2
39	3,609,529	324,641	29°23'19.01''	90°18'04.38''	40.5	1623.1
40	3,609,594	324,534	29°23'17.94''	90°18'03.66''	48.8	182.1
41	3,609,748	324,349	29°23'16.10''	90°18'01.94''	39.9	31.1
42	3,609,975	324,035	29°23'12.97''	90°17'59.40''	33.9	2186.6
43	3,610,730	323,002	29°23'02.68''	90°17'50.98''	27.5	95.7
44	3,610,756	322,966	29°23'02.32''	90°17'50.69''	19.2	522.0
45	3,610,762	322,959	29°23'02.25''	90°17'50.62''	20.6	293.1
46	3,610,792	322,914	29°23'01.80''	90°17'50.28''	16.9	274.9
47	3,610,830	322,857	29°23'01.23''	90°17'49.86''	14.8	314.9
48	3,610,872	322,803	29°23'00.69''	90°17'49.39''	18.7	2651.4
49	3,610,894	322,776	29°23'00.42''	90°17'49.14''	10.5	238.3
50	3,611,017	322,600	29°22'58.67''	90°17'47.77''	17.1	78.4
51	3,611,020	322,596	29°22'58.63''	90°17'47.74''	13.2	143.8
52	3,611,069	322,533	29°22'58.00''	90°17'47.19''	32.1	372.1
53	3,611,111	322,477	29°22'57.44''	90°17'46.72''	36.0	7371.1
54	3,611,147	322,429	29°22'56.97''	90°17'46.32''	30.7	1231.1
55	3,611,304	322,209	29°22'54.77''	90°17'44.57''	24.0	123.3
56	3,611,344	322,155	29°22'54.24''	90°17'44.12''	37.8	187.1
57	3,611,365	322,126	29°22'53.95''	90°17'43.89''	26.9	6190.0
58	3,611,397	322,084	29°22'53.53''	90°17'43.53''	29.9	1665.8
59	3,611,416	322,057	29°22'53.26''	90°17'43.32''	47.1	5528.4
60	3,611,451	322,008	29°22'52.77''	90°17'42.93''	11.1	1685.7
61	3,611,503	321,933	29°22'52.02''	90°17'42.35''	8.0	3583.1
62	3,611,506	321,929	29°22'51.98''	90°17'42.31''	13.0	11237.8
63	3,611,534	321,893	29°22'51.62''	90°17'42.00''	16.3	2493.0
64	3,611,543	321,883	29°22'51.53''	90°17'41.90''	13.7	20358.7
65	3,611,555	321,866	29°22'51.36''	90°17'41.77''	15.2	4462.3
66	3,611,582	321,829	29°22'50.99''	90°17'41.47''	16.6	4903.9
67	3,611,612	321,786	29°22'50.56''	90°17'41.13''	34.9	3153.9
68	3,611,701	321,669	29°22'49.39''	90°17'40.14''	24.1	3652.7
69	3,611,709	321,657	29°22'49.27''	90°17'40.05''	24.9	3412.0

MAGNETOMETER SURVEY						
PNT NO	COORDINATES (NAD83)		COORDINATES (NAD83)		DURATION	GAMMA
	X	Y	LAT	LONG		
70	3,611,869	321,422	29°22'46.93''	90°17'38.26''	42.3	211.7
71	3,611,902	321,373	29°22'46.44''	90°17'37.90''	16.3	3212.0
72	3,611,884	321,366	29°22'46.38''	90°17'38.10''	19.4	8429.4
73	3,611,894	321,376	29°22'46.47''	90°17'37.99''	13.9	577.0
74	3,611,975	321,424	29°22'46.94''	90°17'37.07''	24.9	267.8
75	3,612,159	321,468	29°22'47.36''	90°17'34.98''	20.2	2241.3
76	3,612,317	321,541	29°22'48.07''	90°17'33.19''	6.9	70.5
77	3,612,379	321,578	29°22'48.43''	90°17'32.48''	13.8	263.1
78	3,612,419	321,600	29°22'48.64''	90°17'32.03''	34.8	2249.4
79	3,612,585	321,636	29°22'48.99''	90°17'30.15''	15.5	895.5
80	3,612,609	321,641	29°22'49.03''	90°17'29.88''	15.8	2489.2
81	3,612,622	321,644	29°22'49.06''	90°17'29.73''	19.4	3010.9
82	3,612,665	321,657	29°22'49.19''	90°17'29.24''	9.2	3625.9
83	3,612,806	321,707	29°22'49.67''	90°17'27.64''	32.0	2936.5
84	3,612,916	321,742	29°22'50.01''	90°17'26.40''	45.1	8835.4
85	3,613,023	321,782	29°22'50.39''	90°17'25.18''	41.0	4121.9
86	3,613,051	321,792	29°22'50.49''	90°17'24.87''	26.8	21340.6
87	3,613,092	321,807	29°22'50.63''	90°17'24.40''	19.9	405.9
88	3,613,151	321,827	29°22'50.83''	90°17'23.73''	36.3	17407.9
89	3,613,201	321,844	29°22'50.99''	90°17'23.16''	37.5	3455.5
90	3,613,272	321,870	29°22'51.24''	90°17'22.36''	15.9	445.7
91	3,613,321	321,952	29°22'52.05''	90°17'21.80''	26.9	24427.7
92	3,613,336	321,977	29°22'52.29''	90°17'21.63''	56.7	30490.7
93	3,613,434	321,978	29°22'52.30''	90°17'20.52''	36.8	59.0
94	3,613,932	321,959	29°22'52.06''	90°17'14.89''	8.9	231.8
95	3,614,113	322,157	29°22'54.01''	90°17'12.82''	8.2	34207.5
96	3,614,133	322,163	29°22'54.06''	90°17'12.60''	23.3	7509.1
97	3,614,402	322,263	29°22'55.03''	90°17'09.55''	19.9	19516.9
98	3,614,417	322,269	29°22'55.09''	90°17'09.38''	6.5	944.8
99	3,614,483	322,298	29°22'55.37''	90°17'08.63''	6.9	2374.5
100	3,614,491	322,301	29°22'55.40''	90°17'08.54''	6.7	596.1
101	3,614,508	322,308	29°22'55.47''	90°17'08.34''	14.7	1926.8
102	3,614,596	322,336	29°22'55.73''	90°17'07.35''	57.7	2961.7
103	3,614,709	322,369	29°22'56.05''	90°17'06.07''	36.5	1479.3
104	3,614,776	322,386	29°22'56.21''	90°17'05.31''	12.6	471.1
105	3,614,807	322,396	29°22'56.31''	90°17'04.96''	6.3	2013.5
106	3,614,822	322,378	29°22'56.13''	90°17'04.79''	12.9	12637.3
107	3,614,806	322,389	29°22'56.24''	90°17'04.97''	5.7	4683.5
108	3,614,734	322,442	29°22'56.77''	90°17'05.78''	26.7	31586.3
109	3,614,711	322,463	29°22'56.98''	90°17'06.03''	24.4	1235.3
110	3,614,646	322,537	29°22'57.72''	90°17'06.76''	10.9	982.3
111	3,614,620	322,571	29°22'58.06''	90°17'07.05''	20.5	23114.1
112	3,614,602	322,594	29°22'58.29''	90°17'07.25''	15.6	8029.2
113	3,614,584	322,619	29°22'58.54''	90°17'07.45''	11.1	3790.5
114	3,614,552	322,661	29°22'58.96''	90°17'07.81''	21.6	2639.4
115	3,614,492	322,748	29°22'59.82''	90°17'08.48''	23.8	859.0
116	3,614,480	322,765	29°22'59.99''	90°17'08.61''	19.7	1118.2
117	3,614,464	322,789	29°23'00.23''	90°17'08.79''	28.0	2182.8
118	3,614,431	322,838	29°23'00.72''	90°17'09.16''	26.4	1785.4
119	3,614,421	322,854	29°23'00.88''	90°17'09.27''	18.0	1461.0
120	3,614,359	322,921	29°23'01.55''	90°17'09.97''	8.6	147.9
121	3,614,328	322,956	29°23'01.90''	90°17'10.31''	18.2	837.3
122	3,614,319	322,968	29°23'02.02''	90°17'10.41''	11.9	1042.3
123	3,614,311	322,978	29°23'02.12''	90°17'10.50''	13.0	3599.5
124	3,614,298	322,999	29°23'02.32''	90°17'10.65''	18.4	3645.4
125	3,614,228	323,100	29°23'03.33''	90°17'11.43''	57.7	354.0
126	3,613,780	323,725	29°23'09.56''	90°17'16.43''	13.1	2698.9
127	3,613,767	323,746	29°23'09.77''	90°17'16.57''	13.8	1063.5
128	3,613,616	323,935	29°23'11.65''	90°17'18.26''	10.9	74.7
129	3,613,578	323,990	29°23'12.20''	90°17'18.68''	15.8	5518.9
130	3,613,571	324,000	29°23'12.30''	90°17'18.76''	6.7	5759.1
131	3,613,565	324,009	29°23'12.39''	90°17'18.83''	9.2	9622.5
132	3,613,562	324,013	29°23'12.43''	90°17'18.86''	3.4	4726.2
133	3,613,558	324,019	29°23'12.49''	90°17'18.91''	7.4	18833.1
134	3,613,553	324,026	29°23'12.56''	90°17'18.96''	11.7	18769.1
135	3,613,549	324,033	29°23'12.63''	90°17'19.01''	5.8	20398.7
136	3,613,530	324,057	29°23'12.87''	90°17'19.22''	13.5	455.7
137	3,613,485	324,110	29°23'13.40''	90°17'19.72''	12.1	383.2
138	3,613,377	324,260	29°23'14.89''	90°17'20.93''	79.9	1294.4

MAGNETOMETER SURVEY						
PNT NO	COORDINATES (NAD83)		COORDINATES (NAD83)		DURATION	GAMMA
	X	Y	LAT	LONG		
139	3,613,299	324,363	29°23'15.92''	90°17'21.80''	42.2	153.5
140	3,613,278	324,393	29°23'16.22''	90°17'22.03''	14.5	383.9
141	3,611,174	327,269	29°23'44.88''	90°17'45.52''	30.4	427.0
142	3,610,969	327,538	29°23'47.56''	90°17'47.81''	38.7	69.3
143	3,610,938	327,583	29°23'48.01''	90°17'48.16''	18.8	125.3
144	3,610,850	327,712	29°23'49.29''	90°17'49.14''	9.0	321.1
145	3,610,839	327,724	29°23'49.41''	90°17'49.26''	17.8	1314.9
146	3,610,730	327,839	29°23'50.56''	90°17'50.48''	12.6	571.9
147	3,610,593	328,054	29°23'52.70''	90°17'52.01''	61.3	2261.0
148	3,610,601	328,058	29°23'52.74''	90°17'51.92''	48.6	3969.1
149	3,611,077	326,567	29°23'37.94''	90°17'46.69''	34.3	66.4
150	3,611,258	326,311	29°23'35.38''	90°17'44.67''	108.3	104.7
151	3,611,303	326,263	29°23'34.91''	90°17'44.17''	12.8	42.4
152	3,613,494	323,395	29°23'06.32''	90°17'19.69''	8.5	1248.7
153	3,613,493	323,410	29°23'06.47''	90°17'19.70''	11.6	665.0
154	3,613,490	323,437	29°23'06.73''	90°17'19.73''	14.0	10486.7
155	3,613,444	323,506	29°23'07.42''	90°17'20.25''	27.7	342.5
156	3,613,322	323,600	29°23'08.36''	90°17'21.62''	37.0	141.4
157	3,613,066	323,845	29°23'10.81''	90°17'24.48''	64.3	291.3
158	3,612,947	323,977	29°23'12.13''	90°17'25.82''	41.0	60.3
159	3,612,933	323,990	29°23'12.26''	90°17'25.97''	22.7	91.0
160	3,612,910	324,068	29°23'13.03''	90°17'26.23''	9.9	226.6
161	3,612,911	324,085	29°23'13.20''	90°17'26.21''	13.4	6789.0
162	3,612,911	324,092	29°23'13.27''	90°17'26.21''	10.0	2993.4
163	3,612,898	324,139	29°23'13.74''	90°17'26.35''	18.2	8745.9
164	3,612,881	324,165	29°23'13.99''	90°17'26.54''	4.4	319.9
165	3,612,878	324,170	29°23'14.04''	90°17'26.58''	8.1	628.1
166	3,612,807	324,257	29°23'14.91''	90°17'27.37''	11.6	1258.2
167	3,612,650	324,410	29°23'16.44''	90°17'29.13''	107.6	85.5
168	3,612,078	325,198	29°23'24.29''	90°17'35.51''	15.1	30.1
169	3,611,340	326,202	29°23'34.30''	90°17'43.75''	21.6	87.2
170	3,611,255	326,303	29°23'35.31''	90°17'44.70''	84.8	100.5
171	3,611,205	326,370	29°23'35.97''	90°17'45.26''	13.1	55.5
172	3,609,708	327,578	29°23'48.07''	90°18'02.06''	8.0	316.9
173	3,609,845	327,393	29°23'46.22''	90°18'00.53''	17.7	52.3
174	3,609,915	327,296	29°23'45.26''	90°17'59.75''	16.0	131.4
175	3,610,191	326,928	29°23'41.59''	90°17'56.67''	7.2	62.4
176	3,610,579	326,401	29°23'36.34''	90°17'52.34''	16.5	43.6
177	3,610,662	326,274	29°23'35.07''	90°17'51.41''	11.3	52.1
178	3,610,833	326,041	29°23'32.75''	90°17'49.50''	45.8	408.2
179	3,610,901	325,952	29°23'31.86''	90°17'48.74''	19.3	88.9
180	3,611,205	325,510	29°23'27.46''	90°17'45.35''	20.5	227.2
181	3,611,212	325,500	29°23'27.36''	90°17'45.27''	3.3	36.8
182	3,611,668	324,915	29°23'21.53''	90°17'40.18''	52.3	36889.0
183	3,612,152	324,263	29°23'15.03''	90°17'34.77''	29.0	1672.6
184	3,612,280	323,996	29°23'12.38''	90°17'33.35''	16.1	426.4
185	3,612,277	323,974	29°23'12.16''	90°17'33.39''	14.8	626.4
186	3,612,274	323,962	29°23'12.04''	90°17'33.43''	8.3	831.7
187	3,612,272	323,950	29°23'11.92''	90°17'33.45''	6.1	297.9
188	3,612,271	323,940	29°23'11.82''	90°17'33.46''	9.9	3452.5
189	3,612,410	323,825	29°23'10.67''	90°17'31.90''	36.1	12555.6
190	3,612,567	323,692	29°23'09.34''	90°17'30.14''	17.3	305.8
191	3,613,161	322,888	29°23'01.33''	90°17'23.51''	47.1	2763.6
192	3,613,286	322,711	29°22'59.56''	90°17'22.12''	16.8	3342.2
193	3,613,289	322,706	29°22'59.52''	90°17'22.08''	9.6	1301.1
194	3,613,295	322,698	29°22'59.44''	90°17'22.01''	15.8	584.1
195	3,613,309	322,680	29°22'59.26''	90°17'21.86''	23.8	330.1
196	3,613,328	322,655	29°22'59.01''	90°17'21.65''	23.6	97.8
197	3,613,360	322,610	29°22'58.56''	90°17'21.29''	29.3	235.2
198	3,613,391	322,570	29°22'58.16''	90°17'20.94''	60.1	1162.1
199	3,613,270	321,891	29°22'51.45''	90°17'22.38''	33.4	1652.3
200	3,613,245	321,922	29°22'51.76''	90°17'22.66''	19.7	19696.7
201	3,613,235	321,934	29°22'51.88''	90°17'22.77''	11.4	3041.9
202	3,613,215	321,955	29°22'52.09''	90°17'23.00''	8.9	403.1
203	3,613,139	322,052	29°22'53.05''	90°17'23.84''	44.4	4389.2
204	3,613,052	322,172	29°22'54.25''	90°17'24.82''	40.4	7774.0
205	3,613,026	322,204	29°22'54.57''	90°17'25.11''	27.2	38880.9
206	3,612,977	322,271	29°22'55.24''	90°17'25.65''	20.0	2215.8
207	3,612,713	322,628	29°22'58.79''	90°17'28.60''	20.2	1881.4

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

T. BAKER SMITH
A CENTURY OF SOLUTIONS
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(985)868-1050 - tbsmith.com

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
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DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	05/01/2020	JOB NO:	2019.0193

DRAWING NAME: PHASE TWO MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 14 OF 19

PHASE TWO MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGAION SURVEY
CHARTS OF MAGNETOMETER SURVEY
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,70,77,78, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

4/29/2020 - P:\Y-2019\2019.0193\DWG\PHASE TWO MAGNETOMETER SURVEY\PHASE TWO MAGNETOMETER SURVEY.DWG

MAGNETOMETER SURVEY						
PNT NO	COORDINATES (NAD83)		COORDINATES (NAD83)		DURATION	GAMMA
	X	Y	LAT	LONG		
208	3,612,116	323,439	29°23'06.88''	90°17'35.26''	40.6	81.3
209	3,612,028	323,563	29°23'08.11''	90°17'36.25''	39.6	7621.3
210	3,611,897	323,741	29°23'09.89''	90°17'37.71''	66.8	4038.9
211	3,611,805	323,874	29°23'11.21''	90°17'38.74''	63.1	187.1
212	3,610,483	325,674	29°23'29.15''	90°17'53.49''	79.0	91.7
213	3,609,831	325,733	29°23'29.79''	90°18'00.86''	9.5	32.7
214	3,610,090	325,384	29°23'26.31''	90°17'57.97''	25.1	295.1
215	3,610,112	325,363	29°23'26.10''	90°17'57.72''	52.7	1079.1
216	3,610,886	324,287	29°23'15.38''	90°17'49.08''	33.4	148.9
217	3,611,422	323,560	29°23'08.14''	90°17'43.10''	81.0	1079.3
218	3,611,527	323,418	29°23'06.72''	90°17'41.92''	86.9	5210.5
219	3,611,622	323,294	29°23'05.49''	90°17'40.86''	31.3	55886.5
220	3,611,680	323,211	29°23'04.66''	90°17'40.22''	10.1	84.9
221	3,611,683	323,206	29°23'04.61''	90°17'40.18''	15.0	143.3
222	3,611,810	323,033	29°23'02.89''	90°17'38.77''	8.9	68.9
223	3,612,100	322,638	29°22'58.95''	90°17'35.53''	30.5	646.9
224	3,612,329	322,328	29°22'55.86''	90°17'32.97''	15.4	2091.6
225	3,612,338	322,314	29°22'55.72''	90°17'32.87''	13.5	5131.7
226	3,612,343	322,306	29°22'55.64''	90°17'32.82''	12.3	1445.1
227	3,612,513	322,071	29°22'53.30''	90°17'30.92''	97.4	437.2
228	3,612,579	321,982	29°22'52.41''	90°17'30.18''	23.2	62.2
229	3,612,596	321,959	29°22'52.18''	90°17'29.99''	21.3	258.5
230	3,612,635	321,907	29°22'51.66''	90°17'29.56''	10.6	1270.8
231	3,612,649	321,890	29°22'51.49''	90°17'29.40''	26.6	29837.1
232	3,612,658	321,878	29°22'51.38''	90°17'29.30''	9.6	5727.7
233	3,612,701	321,818	29°22'50.78''	90°17'28.82''	8.0	3276.9
234	3,612,705	321,812	29°22'50.72''	90°17'28.77''	7.6	2959.2
235	3,612,716	321,798	29°22'50.58''	90°17'28.65''	10.2	4634.1
236	3,612,727	321,784	29°22'50.44''	90°17'28.53''	17.6	25988.9
237	3,612,775	321,714	29°22'49.74''	90°17'27.99''	19.0	1048.0
238	3,612,259	321,565	29°22'48.31''	90°17'33.84''	28.7	1523.6
239	3,612,179	321,668	29°22'49.34''	90°17'34.73''	13.0	2894.1
240	3,612,166	321,683	29°22'49.49''	90°17'34.88''	22.3	3344.9
241	3,612,126	321,739	29°22'50.05''	90°17'35.33''	62.9	13981.4
242	3,612,084	321,799	29°22'50.64''	90°17'35.79''	21.9	2121.2
243	3,612,022	321,877	29°22'51.42''	90°17'36.49''	19.6	722.1
244	3,612,007	321,894	29°22'51.59''	90°17'36.66''	19.7	1485.5
245	3,611,995	321,910	29°22'51.75''	90°17'36.79''	20.8	2904.0
246	3,611,604	322,467	29°22'57.30''	90°17'41.15''	186.6	6870.7
247	3,611,495	322,604	29°22'58.67''	90°17'42.37''	14.0	150.3
248	3,611,478	322,629	29°22'58.92''	90°17'42.56''	26.9	1170.7
249	3,611,233	322,956	29°23'02.17''	90°17'45.29''	33.9	1627.1
250	3,611,194	323,013	29°23'02.74''	90°17'45.73''	46.4	5266.3
251	3,611,132	323,088	29°23'03.49''	90°17'46.42''	62.1	868.8
252	3,611,043	323,212	29°23'04.73''	90°17'47.42''	41.4	1675.8
253	3,610,189	324,374	29°23'16.31''	90°17'56.95''	67.6	65.9
254	3,609,926	324,733	29°23'19.88''	90°17'59.89''	40.5	2466.6
255	3,609,866	324,812	29°23'20.67''	90°18'00.56''	5.3	65.5
256	3,609,743	324,982	29°23'22.36''	90°18'01.93''	33.2	1558.6
257	3,609,624	325,149	29°23'24.03''	90°18'03.26''	8.6	1289.8
258	3,609,529	325,273	29°23'25.26''	90°18'04.32''	47.4	640.7
259	3,609,323	325,559	29°23'28.11''	90°18'06.62''	55.4	5238.6
260	3,609,260	325,654	29°23'29.06''	90°18'07.32''	61.6	373.3
261	3,608,913	325,465	29°23'27.22''	90°18'11.26''	18.6	3396.3
262	3,608,973	325,399	29°23'26.56''	90°18'10.59''	32.7	2850.2
263	3,609,030	325,320	29°23'25.77''	90°18'09.95''	24.0	9571.5
264	3,609,043	325,303	29°23'25.60''	90°18'09.81''	14.9	3331.4
265	3,609,156	325,160	29°23'24.18''	90°18'08.55''	25.1	1209.1
266	3,610,609	328,050	29°23'52.66''	90°17'51.83''	61.3	4429.6
267	3,611,261	327,278	29°23'44.96''	90°17'44.54''	58.7	3065.3
268	3,611,180	327,266	29°23'44.85''	90°17'45.45''	43.3	524.3
269	3,611,118	327,208	29°23'44.28''	90°17'46.16''	41.6	3580.4
270	3,610,154	326,470	29°23'37.06''	90°17'57.13''	25.3	55.4
271	3,609,141	325,726	29°23'29.78''	90°18'08.66''	34.7	60.2
272	3,609,082	325,077	29°23'23.36''	90°18'09.39''	21.0	8038.7
273	3,609,139	325,115	29°23'23.73''	90°18'08.74''	28.1	1328.3
274	3,609,273	325,213	29°23'24.69''	90°18'07.22''	55.9	1981.2
275	3,609,316	325,246	29°23'25.02''	90°18'06.73''	54.4	8536.5
276	3,609,395	325,305	29°23'25.59''	90°18'05.83''	18.8	3411.2

MAGNETOMETER SURVEY						
PNT NO	COORDINATES (NAD83)		COORDINATES (NAD83)		DURATION	GAMMA
	X	Y	LAT	LONG		
277	3,609,619	325,478	29°23'27.29''	90°18'03.28''	59.6	6494.4
278	3,610,943	326,429	29°23'36.58''	90°17'48.22''	52.4	55.8
279	3,611,861	326,505	29°23'37.25''	90°17'37.83''	39.7	479.5
280	3,611,626	326,317	29°23'35.41''	90°17'40.51''	122.2	45.0
281	3,610,013	325,118	29°23'23.69''	90°17'58.86''	37.2	698.8
282	3,609,902	325,041	29°23'22.93''	90°18'00.13''	15.1	4493.9
283	3,609,694	324,891	29°23'21.47''	90°18'02.49''	44.6	4420.2
284	3,609,670	324,873	29°23'21.29''	90°18'02.77''	37.0	8061.8
285	3,609,569	324,800	29°23'20.58''	90°18'03.92''	8.2	369.1
286	3,609,556	324,789	29°23'20.47''	90°18'04.06''	12.9	262.9
287	3,609,498	324,742	29°23'20.01''	90°18'04.72''	48.7	6121.1
288	3,609,545	324,780	29°23'20.38''	90°18'04.19''	9.0	76.7
289	3,609,954	324,462	29°23'17.20''	90°17'59.60''	39.4	106.5
290	3,609,991	324,484	29°23'17.41''	90°17'59.18''	23.7	161.9
291	3,610,014	324,495	29°23'17.52''	90°17'58.92''	24.4	635.5
292	3,611,216	325,398	29°23'26.35''	90°17'45.24''	7.1	220.3
293	3,611,219	325,398	29°23'26.35''	90°17'45.20''	5.5	255.4
294	3,610,524	324,261	29°23'15.16''	90°17'53.18''	108.2	252.4
295	3,611,100	324,074	29°23'13.25''	90°17'46.68''	38.0	65.1
296	3,613,052	324,876	29°23'21.02''	90°17'24.54''	18.4	1693.1
297	3,612,256	324,288	29°23'15.27''	90°17'33.60''	12.1	2287.5
298	3,612,250	324,284	29°23'15.23''	90°17'33.66''	9.0	1167.0
299	3,612,225	324,265	29°23'15.04''	90°17'33.95''	37.3	182.6
300	3,612,087	324,169	29°23'14.11''	90°17'35.52''	53.8	116.0
301	3,611,990	324,102	29°23'13.45''	90°17'36.62''	57.3	2660.0
302	3,611,264	322,974	29°23'02.35''	90°17'44.94''	23.1	1352.0
303	3,611,285	322,990	29°23'02.51''	90°17'44.70''	24.0	970.3
304	3,611,329	323,016	29°23'02.76''	90°17'44.20''	39.1	201.4
305	3,612,492	323,847	29°23'10.88''	90°17'30.97''	68.9	1395.4
306	3,612,543	323,884	29°23'11.24''	90°17'30.39''	48.0	587.9
307	3,612,573	323,910	29°23'11.50''	90°17'30.05''	19.0	3292.8
308	3,612,599	323,934	29°23'11.73''	90°17'29.75''	11.7	5725.5
309	3,612,643	323,967	29°23'12.06''	90°17'29.25''	23.5	1083.0
310	3,612,661	323,981	29°23'12.19''	90°17'29.05''	28.4	2537.2
311	3,612,859	324,127	29°23'13.62''	90°17'26.80''	14.2	8994.5
312	3,612,967	324,208	29°23'14.41''	90°17'25.57''	25.3	35576.6
313	3,612,988	324,223	29°23'14.56''	90°17'25.33''	19.2	26774.8
314	3,613,023	324,251	29°23'14.83''	90°17'24.93''	23.0	5547.0
315	3,613,038	324,261	29°23'14.93''	90°17'24.76''	13.5	4664.4
316	3,613,087	324,295	29°23'15.26''	90°17'24.20''	27.6	4391.6
317	3,613,181	324,367	29°23'15.97''	90°17'23.13''	27.3	3064.6
318	3,613,202	324,381	29°23'16.10''	90°17'22.89''	23.3	9748.5
319	3,613,568	324,010	29°23'12.40''	90°17'18.79''	25.4	4496.5
320	3,613,517	323,978	29°23'12.09''	90°17'19.37''	9.3	739.0
321	3,613,491	323,962	29°23'11.93''	90°17'19.67''	13.4	697.2
322	3,613,455	323,938	29°23'11.70''	90°17'20.08''	18.9	921.0
323	3,613,417	323,919	29°23'11.51''	90°17'20.51''	21.9	725.1
324	3,613,172	323,991	29°23'12.25''	90°17'23.27''	12.7	4749.4
325	3,613,166	323,989	29°23'12.23''	90°17'23.34''	5.4	1691.3
326	3,613,130	323,946	29°23'11.80''	90°17'23.75''	17.8	3433.9
327	3,612,925	323,735	29°23'09.73''	90°17'26.09''	18.8	894.8
328	3,612,900	323,736	29°23'09.75''	90°17'26.37''	30.1	3837.0
329	3,612,856	323,733	29°23'09.72''	90°17'26.87''	33.0	12394.3
330	3,612,831	323,720	29°23'09.59''	90°17'27.15''	11.7	3576.2
331	3,611,699	322,639	29°22'58.99''	90°17'40.06''	37.5	2311.3
332	3,611,671	322,620	29°22'58.81''	90°17'40.38''	9.4	35.4
333	3,611,645	322,602	29°22'58.63''	90°17'40.67''	22.3	145.3
334	3,611,611	322,575	29°22'58.37''	90°17'41.06''	45.5	219.4
335	3,611,480	322,480	29°22'57.44''	90°17'42.55''	9.7	10071.2
336	3,611,465	322,468	29°22'57.32''	90°17'42.72''	12.0	6946.4
337	3,611,448	322,457	29°22'57.22''	90°17'42.92''	6.5	8085.2
338	3,611,428	322,446	29°22'57.11''	90°17'43.14''	12.2	3125.1
339	3,611,407	322,432	29°22'56.97''	90°17'43.38''	10.1	227.9
340	3,611,372	322,408	29°22'56.74''	90°17'43.78''	13.6	587.9
341	3,611,463	321,853	29°22'51.24''	90°17'42.81''	40.3	4022.6
342	3,611,494	321,881	29°22'51.51''	90°17'42.45''	15.2	76682.2
343	3,611,511	321,893	29°22'51.63''	90°17'42.26''	20.3	25513.5
344	3,611,543	321,916	29°22'51.85''	90°17'41.90''	33.6	2689.1
345	3,611,609	321,965	29°22'52.33''	90°17'41.15''	20.7	912.9

MAGNETOMETER SURVEY						
PNT NO	COORDINATES (NAD83)		COORDINATES (NAD83)		DURATION	GAMMA
	X	Y	LAT	LONG		
346	3,611,653	321,999	29°22'52.66''	90°17'40.65''	24.7	2807.2
347	3,611,662	322,005	29°22'52.72''	90°17'40.54''	11.9	925.9
348	3,612,161	322,374	29°22'56.33''	90°17'34.87''	41.3	3815.8
349	3,612,198	322,401	29°22'56.59''	90°17'34.44''	22.8	4771.4
350	3,612,517	322,635	29°22'58.88''	90°17'30.81''	26.4	551.5
351	3,613,220	323,149	29°23'03.91''	90°17'22.82''	30.4	2347.9
352	3,613,542	323,388	29°23'06.24''	90°17'19.15''	8.1	1043.5
353	3,613,549	323,393	29°23'06.29''	90°17'19.07''	9.8	4260.6
354	3,613,581	323,414	29°23'06.50''	90°17'18.71''	20.1	12541.8
355	3,613,782	323,562	29°23'07.94''	90°17'16.42''	21.9	670.3
356	3,613,801	323,576	29°23'08.08''	90°17'16.20''	18.9	344.2
357	3,613,820	323,590	29°23'08.22''	90°17'15.99''	23.3	4291.1
358	3,614,199	323,229	29°23'04.61''	90°17'11.74''	32.7	1662.8
359	3,614,121	323,182	29°23'04.15''	90°17'12.63''	53.1	3662.1
360	3,613,940	323,041	29°23'02.77''	90°17'14.69''	21.0	1828.9
361	3,613,927	323,033	29°23'02.69''	90°17'14.84''	11.0	1566.1
362	3,613,922	323,029	29°23'02.66''	90°17'14.89''	6.3	1878.6
363	3,613,154	322,472	29°22'57.21''	90°17'23.63''	57.2	18821.8
364	3,612,886	322,272	29°22'55.26''	90°17'26.68''	24.0	1567.5
365	3,612,870	322,260	29°22'55.14''	90°17'26.86''	32.4	147.2
366	3,612,693	322,132	29°22'53.89''	90°17'28.88''	42.0	9813.6
367	3,612,635	322,090	29°22'53.48''	90°17'29.54''	24.3	13870.3
368	3,612,599	322,062	29°22'53.20''	90°17'29.95''	18.4	782.6
369	3,612,558	322,030	29°22'52.89''	90°17'30.41''	32.0	161.2
370	3,612,599	322,062	29°22'53.20''	90°17'29.95''	15.7	770.4
371	3,612,431	321,922	29°22'51.83''	90°17'31.86''	12.5	236.3
372	3,612,416	321,898	29°22'51.60''	90°17'32.03''	13.3	1021.1
373	3,612,395	321,862	29°22'51.24''	90°17'32.27''	15.8	7442.7
374	3,612,384	321,844	29°22'51.06''	90°17'32.40''	12.0	27911.1
375	3,612,373	321,832	29°22'50.95''	90°17'32.52''	13.0	33740.3
376	3,612,361	321,825	29°22'50.88''	90°17'32.66''	12.4	42288.3
377	3,612,348	321,820	29°22'50.83''	90°17'32.81''	11.6	33331.1
378	3,612,326	321,815	29°22'50.78''	90°17'33.06''	20.0	24311.4
379	3,612,307	321,812	29°22'50.75''	90°17'33.27''	12.3	31790.2
380	3,612,285	321,808	29°22'50.72''	90°17'33.52''	23.1	32048.4
381	3,612,255	321,799	29°22'50.63''	90°17'33.86''	14.8	47502.4
382	3,612,243	321,795	29°22'50.59''	90°17'34.00''	11.3	34478.7
383	3,612,231	321,789	29°22'50.53''	90°17'34.13''	22.3	13118.1
384	3,612,208	321,774	29°22'50.39''	90°17'34.40''	15.7	25178.5
385	3,612,184	321,757	29°22'50.22''	90°17'34.67''	23.5	26870.0
386	3,612,158	321,740	29°22'50.05''	90°17'34.96''	23.9	46280.4
387	3,612,147	321,733	29°22'49.99''	90°17'35.09''	4.7	63403.0
388	3,612,139	321,727	29°22'49.93''	90°17'35.18''	22.7	100862.1
389	3,612,119	321,712	29°22'49.78''	90°17'35.41''	8.7	1825.8
390	3,611,960	321,595	29°22'48.64''	90°17'37.22''	41.7	1575.0
391	3,611,917	321,564	29°22'48.33''	90°17'37.71''	18.3	4854.4
392	3,613,057	321,790	29°22'50.47''	90°17'24.80''	30.4	9534.2
393	3,613,129	321,841	29°22'50.97''	90°17'23.98''	30.9	8934.5
394	3,613,147	321,854	29°22'51.09''	90°17'23.77''	18.7	1428.0
395	3,613,219	321,910	29°22'51.64''	90°17'22.95''	18.5	565.2
396	3,613,230	321,920	29°22'51.74''	90°17'22.83''	15.1	2006.1
397	3,613,237	321,927	29°22'51.81''	90°17'22.75''	9.9	2959.4
398	3,613,252	321,938	29°22'51.92''	90°17'22.58''	17.8	6351.8
399	3,613,271	321,949	29°22'52.02''	90°17'22.36''	20.4	45843.9
400	3,613,281	321,954	29°22'52.07''	90°17'22.25''	3.8	16170.3
401	3,613,290	321,960	29°22'52.13''	90°17'22.15''	11.9	15274.4
402	3,613,302	321,967	29°22'52.20''	90°17'22.01''	11.9	58116.6
403	3,613,308	321,972	29°22'52.25''	90°17'21.94''	5.8	9644.6
404	3,613,322	321,982	29°22'52.35''	90°17'21.78''	13.6	24844.0
405	3,613,450	322,081	29°22'53.31''	90°17'20.33''	87.4	410.4
406	3,613,496	322,113	29°22'53.63''	90°17'19.80''	39.6	327.2
407	3,614,202	322,714	29°22'59.51''	90°17'11.76''	16.4	10508.5
408	3,614,203	322,730	29°22'59.67''	90°17'11.75''	18.3	2603.7
409	3,614,423	322,794	29°23'00.28''	90°17'09.26''	34.7	3203.8

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

T. BAKER SMITH
A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
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DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	05/01/2020	JOB NO:	2019.0193
DRAWING NAME:	PHASE TWO MAGNETOMETER SURVEY		
PROJECTION: LOUISIANA SOUTH			
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88			
GRID UNITS: US SURVEY FEET			
SHEET NO:	15	OF	19

PHASE TWO MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGAION SURVEY
CHARTS OF MAGNETOMETER SURVEY
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,70,77,78, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

4/29/2020 - P:\Y-2019\2019.0193\DWG\PHASE TWO MAGNETOMETER SURVEY\PHASE TWO MAGNETOMETER SURVEY.DWG

SURVEYED PIPELINE 1 (2 INCH)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
500	3,609,496.61	324,656.19	29°23'19.16''	90°18'04.75''	0.8'	-2.5'	3.3'
501	3,609,538.73	324,707.85	29°23'19.67''	90°18'04.27''	-0.3'	-1.6'	1.3'
502	3,609,566.90	324,737.53	29°23'19.96''	90°18'03.95''	0.5'	-1.5'	2.0'
503	3,609,617.36	324,808.88	29°23'20.66''	90°18'03.37''	0.3'	-1.7'	2.0'
504	3,609,682.41	324,898.22	29°23'21.54''	90°18'02.62''	0.4'	-1.8'	2.2'
505	3,609,730.63	324,967.75	29°23'22.22''	90°18'02.07''	-0.3'	-2.0'	1.7'
506	3,609,779.63	325,022.85	29°23'22.77''	90°18'01.51''	-0.6'	-2.0'	1.4'
507	3,609,822.90	325,086.40	29°23'23.39''	90°18'01.02''	-0.7'	-2.5'	1.8'
508	3,609,869.63	325,151.57	29°23'24.03''	90°18'00.48''	-0.3'	-1.9'	1.6'
509	3,609,919.92	325,215.96	29°23'24.66''	90°17'59.91''	-1.5'	-2.6'	1.1'
510	3,609,995.53	325,306.05	29°23'25.55''	90°17'59.04''	-1.6'	-2.4'	0.8'
511	3,610,017.90	325,330.08	29°23'25.79''	90°17'58.79''	0.2'	-1.8'	2.0'
512	3,610,073.17	325,370.89	29°23'26.18''	90°17'58.16''	0.2'	-2.7'	2.9'
513	3,610,101.44	325,391.18	29°23'26.38''	90°17'57.84''	0.1'	-1.8'	1.9'
514	3,610,157.19	325,430.63	29°23'26.77''	90°17'57.20''	0.6'	-1.2'	1.8'
515	3,610,689.16	325,820.13	29°23'30.58''	90°17'51.15''	0.0'	-2.0'	2.0'
516	3,610,796.74	325,888.04	29°23'31.24''	90°17'49.93''	0.4'	-1.3'	1.7'
517	3,610,891.07	325,947.71	29°23'31.82''	90°17'48.85''	0.1'	-2.1'	2.2'
518	3,610,967.38	325,995.22	29°23'32.28''	90°17'47.99''	0.3'	-1.9'	2.2'
519	3,610,970.52	325,998.83	29°23'32.32''	90°17'47.95''	0.0'	-2.7'	2.7'

SURVEYED PIPELINE 2 (2 INCH)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
520	3,609,508.64	324,658.48	29°23'19.18''	90°18'04.61''	0.8'	-1.4'	2.2'
521	3,609,586.58	324,758.80	29°23'20.17''	90°18'03.72''	-0.3'	-1.4'	1.1'
522	3,609,642.92	324,835.32	29°23'20.92''	90°18'03.08''	-1.0'	-1.4'	0.4'
523	3,609,706.68	324,922.66	29°23'21.78''	90°18'02.35''	0.6'	-1.9'	2.5'
524	3,609,735.97	324,968.08	29°23'22.23''	90°18'02.01''	-0.1'	-2.0'	1.9'
525	3,609,780.42	325,021.98	29°23'22.76''	90°18'01.50''	-0.5'	-1.7'	1.2'
526	3,609,828.95	325,080.96	29°23'23.34''	90°18'00.95''	-0.5'	-1.9'	1.4'
527	3,609,875.80	325,140.68	29°23'23.92''	90°18'00.41''	-1.2'	-2.0'	0.8'
528	3,609,924.82	325,197.48	29°23'24.48''	90°17'59.85''	-1.0'	-2.5'	1.5'
529	3,609,930.83	325,306.34	29°23'25.56''	90°17'59.77''	-2.8'	-4.2'	1.4'
530	3,609,890.93	325,357.15	29°23'26.06''	90°18'00.22''	-1.7'	-1.7'	EXPOSED
531	3,609,815.34	325,399.73	29°23'26.49''	90°18'01.07''	-2.1'	-2.1'	EXPOSED
532	3,609,730.97	325,431.31	29°23'26.81''	90°18'02.02''	-2.0'	-1.9'	EXPOSED
533	3,609,658.64	325,458.41	29°23'27.09''	90°18'02.83''	-1.7'	-1.5'	EXPOSED
534	3,609,593.21	325,491.54	29°23'27.42''	90°18'03.57''	-1.7'	-1.7'	EXPOSED
535	3,609,517.89	325,529.37	29°23'27.80''	90°18'04.42''	-0.8'	-1.6'	0.8'
536	3,609,449.97	325,550.85	29°23'28.02''	90°18'05.18''	0.5'	-0.3'	0.8'
537	3,609,389.76	325,567.88	29°23'28.20''	90°18'05.86''	-0.8'	-0.8'	EXPOSED

SURVEYED PIPELINE 3 (3 INCH)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
538	3,609,983.38	323,965.97	29°23'12.28''	90°17'59.32''	-0.7'	-1.4'	0.7'
539	3,609,978.44	324,058.25	29°23'13.20''	90°17'59.36''	0.0'	-2.2'	2.2'
540	3,609,973.23	324,151.71	29°23'14.12''	90°17'59.41''	0.0'	-1.5'	1.5'
541	3,609,969.27	324,225.48	29°23'14.85''	90°17'59.45''	0.0'	-1.9'	1.9'
542	3,609,963.91	324,308.18	29°23'15.67''	90°17'59.50''	0.0'	-1.7'	1.7'
543	3,609,957.14	324,406.34	29°23'16.65''	90°17'59.57''	0.5'	-2.3'	2.8'
544	3,609,949.03	324,515.26	29°23'17.73''	90°17'59.65''	-0.1'	-2.1'	2.0'
545	3,609,943.12	324,592.48	29°23'18.49''	90°17'59.71''	-0.3'	-1.4'	1.1'
546	3,609,935.81	324,676.00	29°23'19.32''	90°17'59.78''	-0.4'	-1.5'	1.1'
547	3,609,930.15	324,743.15	29°23'19.98''	90°17'59.84''	-0.1'	-1.9'	1.8'
548	3,609,923.17	324,815.16	29°23'20.70''	90°17'59.91''	-0.2'	-2.2'	2.0'
549	3,609,917.66	324,881.13	29°23'21.35''	90°17'59.97''	-1.5'	-1.8'	0.3'
550	3,609,909.38	324,964.54	29°23'22.18''	90°18'00.05''	-1.0'	-1.7'	0.7'
551	3,609,900.02	325,048.44	29°23'23.01''	90°18'00.15''	0.2'	-0.1'	0.3'
552	3,609,862.91	325,119.47	29°23'23.71''	90°18'00.56''	-1.3'	-3.3'	2.0'
553	3,609,826.97	325,156.53	29°23'24.08''	90°18'00.96''	-1.6'	-10.8'	9.2'
554	3,609,745.86	325,207.18	29°23'24.59''	90°18'01.87''	-2.2'	-8.3'	6.1'
555	3,609,712.00	325,229.43	29°23'24.82''	90°18'02.26''	-2.2'	-5.1'	2.9'
556	3,609,598.43	325,257.53	29°23'25.10''	90°18'03.54''	-0.7'	-0.9'	0.2'
557	3,609,533.51	325,272.51	29°23'25.26''	90°18'04.27''	-0.7'	-2.1'	1.4'
558	3,609,455.09	325,289.67	29°23'25.44''	90°18'05.15''	-1.1'	-1.8'	0.7'
559	3,609,372.05	325,308.33	29°23'25.63''	90°18'06.09''	-0.7'	-1.3'	0.6'
560	3,609,281.01	325,327.72	29°23'25.83''	90°18'07.12''	-0.1'	-1.1'	1.0'
561	3,609,224.24	325,341.08	29°23'25.96''	90°18'07.76''	0.1'	-1.3'	1.4'
562	3,609,183.47	325,344.65	29°23'26.00''	90°18'08.22''	0.2'	-2.4'	2.6'
563	3,609,167.20	325,344.03	29°23'26.00''	90°18'08.40''	-0.5'	-2.8'	2.3'
564	3,609,106.71	325,355.45	29°23'26.12''	90°18'09.08''	-0.6'	-1.4'	0.8'
565	3,609,007.40	325,392.04	29°23'26.49''	90°18'10.20''	-0.3'	-2.1'	1.8'

SURVEYED PIPELINES SHEET 4 PIPE CLUSTERS (NO PROFILES)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
566	3,609,016.93	325,345.89	29°23'26.03''	90°18'10.10''	-1.4'	-1.4'	EXPOSED
567	3,609,038.20	325,307.80	29°23'25.65''	90°18'09.86''	-1.4'	-1.6'	0.2'
568	3,609,065.56	325,255.28	29°23'25.13''	90°18'09.56''	1.0'	-1.0'	2.0'
569	3,609,101.50	325,188.89	29°23'24.47''	90°18'09.16''	-0.3'	-1.4'	1.1'
570	3,609,120.68	325,139.50	29°23'23.98''	90°18'08.95''	-1.0'	-2.0'	1.0'
571	3,609,161.27	325,163.11	29°23'24.21''	90°18'08.49''	-1.4'	-3.7'	2.3'
572	3,609,249.10	325,211.64	29°23'24.68''	90°18'07.49''	-1.6'	-3.8'	2.2'
573	3,609,320.67	325,252.01	29°23'25.07''	90°18'06.68''	-1.1'	-4.3'	3.2'
574	3,609,543.09	324,612.83	29°23'18.73''	90°18'04.23''	-1.2'	-3.7'	2.5'
575	3,609,504.33	324,723.52	29°23'19.83''	90°18'04.65''	-1.0'	-2.8'	1.8'
576	3,609,483.19	324,783.12	29°23'20.42''	90°18'04.89''	-2.4'	-3.6'	1.2'

SURVEYED PIPELINE 4 (2 INCH)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
577	3,610,706.80	322,919.47	29°23'01.86''	90°17'51.25''	-0.4'	-5.9'	5.5'
578	3,610,786.62	322,989.21	29°23'02.54''	90°17'50.34''	0.1'	-4.8'	4.9'
579	3,610,830.17	323,026.71	29°23'02.91''	90°17'49.84''	0.2'	-2.8'	3.0'
580	3,610,877.22	323,067.86	29°23'03.31''	90°17'49.30''	0.8'	-2.3'	3.1'
581	3,610,962.86	323,146.43	29°23'04.08''	90°17'48.33''	-0.6'	-1.6'	1.0'
582	3,611,109.97	323,280.79	29°23'05.40''	90°17'46.65''	-1.3'	-1.6'	0.3'
583	3,611,329.23	323,477.26	29°23'07.33''	90°17'44.15''	-3.0'	-2.8'	EXPOSED
584	3,611,425.58	323,562.29	29°23'08.16''	90°17'43.06''	-3.1'	-2.9'	EXPOSED
585	3,611,564.56	323,679.23	29°23'09.30''	90°17'41.47''	-3.1'	-3.1'	EXPOSED
586	3,611,802.70	323,872.12	29°23'11.19''	90°17'38.76''	-3.3'	-3.3'	EXPOSED
587	3,611,974.81	324,014.92	29°23'12.59''	90°17'36.80''	-3.5'	-3.0'	EXPOSED
588	3,611,990.62	324,034.76	29°23'12.79''	90°17'36.62''	-3.3'	-4.1'	0.8'

SURVEYED PIPELINE 5 (2 INCH)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
589	3,610,716.04	322,910.00	29°23'01.77''	90°17'51.14''	-0.4'	-5.1'	4.7'
590	3,610,787.42	322,974.25	29°23'02.40''	90°17'50.33''	0.1'	-4.8'	4.9'
591	3,610,836.68	323,019.48	29°23'02.84''	90°17'49.77''	0.3'	-2.1'	2.4'
592	3,610,882.81	323,060.69	29°23'03.24''	90°17'49.24''	0.6'	-2.6'	3.2'
593	3,610,966.79	323,142.00	29°23'04.04''	90°17'48.28''	-0.6'	-0.6'	EXPOSED
594	3,611,114.31	323,278.36	29°23'05.38''	90°17'46.60''	-1.3'	-1.6'	0.3'
595	3,611,330.94	323,470.47	29°23'07.26''	90°17'44.14''	-3.0'	-2.8'	EXPOSED
596	3,611,433.05	323,557.75	29°23'08.11''	90°17'42.97''	-3.1'	-2.9'	EXPOSED
597	3,611,574.48	323,674.60	29°23'09.26''	90°17'41.36''	-3.1'	-3.2'	0.1'
598	3,611,807.75	323,867.96	29°23'11.15''	90°17'38.70''	-3.3'	-3.5'	0.2'
599	3,611,981.66	324,012.59	29°23'12.57''	90°17'36.72''	-3.5'	-3.5'	EXPOSED
600	3,611,991.59	324,026.05	29°23'12.70''	90°17'36.61''	-3.3'	-3.3'	EXPOSED

SURVEYED PIPELINE 6 (2 INCH)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
601	3,610,726.29	322,774.40	29°23'00.42''	90°17'51.04''	-1.9'	-1.7'	EXPOSED
602	3,610,805.63	322,834.68	29°23'01.01''	90°17'50.14''	-2.1'	-2.1'	EXPOSED
603	3,610,891.04	322,896.86	29°23'01.62''	90°17'49.17''	-0.1'	-2.1'	2.0'
604	3,610,944.66	322,939.18	29°23'02.03''	90°17'48.56''	-0.1'	-1.8'	1.7'
605	3,611,001.45	322,982.56	29°23'02.46''	90°17'47.91''	0.1'	-1.7'	1.8'
606	3,611,073.09	323,037.29	29°23'02.99''	90°17'47.09''	0.4'	-2.6'	3.0'
607	3,611,164.73	323,112.43	29°23'03.73''	90°17'46.05''	0.2'	-1.4'	1.6'
608	3,611,225.66	323,163.22	29°23'04.23''	90°17'45.36''	-0.6'	-1.5'	0.9'
609	3,611,291.81	323,216.08	29°23'04.74''	90°17'44.60''	-2.7'	-2.3'	EXPOSED
610	3,611,474.18	323,373.75	29°23'06.29''	90°17'42.53''	-3.3'	-3.3'	EXPOSED
611	3,611,630.49	323,510.29	29°23'07.63''	90°17'40.75''	-3.3'	-3.3'	EXPOSED
612	3,611,805.47	323,661.78	29°23'09.11''	90°17'38.75''	-3.3'	-3.3'	EXPOSED
613	3,612,025.61	323,853.67	29°23'10.99''	90°17'36.24''	-3.5'	-3.2'	EXPOSED
614	3,612,126.83	323,931.65	29°23'11.75''	90°17'35.09''	-3.2'	-2.8'	EXPOSED

SURVEYED PIPELINE 7 (2 INCH)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
615	3,610,795.50	322,753.68	29°23'00.21''	90°17'50.26''	-2.8'	-2.8'	EXPOSED
616	3,610,911.63	322,827.91	29°23'00.94''	90°17'48.94''	-1.5'	-2.8'	1.3'
617	3,610,990.88	322,879.57	29°23'01.44''	90°17'48.04''	0.1'	-2.3'	2.4'
618	3,611,120.32	322,964.65	29°23'02.27''	90°17'46.57''	0.1'	-2.4'	2.5'
619	3,611,204.06	323,020.02	29°23'02.81''	90°17'45.62''	-0.6'	-1.6'	1.0'
620	3,611,311.74	323,094.54	29°23'03.54''	90°17'44.39''	-1.8'	-1.8'	EXPOSED
621	3,611,449.18	323,183.87	29°23'04.41''	90°17'42.83''	-2.6'	-2.6'	EXPOSED
622	3,611,564.38	323,261.22	29°23'05.17''	90°17'41.52''	-3.3'	-3.3'	EXPOSED
623	3,611,715.65	323,361.95	29°23'06.15''	90°17'39.80''	-3.3'	-3.3'	EXPOSED
624	3,611,916.79	323,496.39	29°23'07.46''	90°17'37.51''	-3.3'	-3.3'	EXPOSED
625	3,612,139.80	323,646.52	29°23'08.93''	90°17'34.97''	-2.8'	-2.8'	EXPOSED
626	3,612,239.22	323,714.00	29°23'09.59''	90°17'33.84''	-3.0'	-3.0'	EXPOSED
627	3,612,400.47	323,823.20	29°23'10.65''	90°17'32.01''	-1.8'	-1.8'	EXPOSED
628	3,612,474.04	323,872.75	29°23'11.14''	90°17'31.17''	-0.7'	-1.7'	1.0'
629	3,612,552.84	323,922.42	29°23'11.62''	90°17'30.28''	0.4'	0.1'	0.3'
630	3,612,579.12	323,937.12	29°23'11.77''	90°17'29.98''	0.5'	0.2'	0.3'
631	3,612,614.83	323,929.93	29°23'11.69''	90°17'29.58''	-0.6'	-0.6'	EXPOSED

SURVEYED PIPELINE 8 (2 INCH)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
632	3,610,798.71	322,749.69	29°23'00.17''	90°17'50.22''	-2.8'	-2.8'	EXPOSED
633	3,610,914.68	322,825.27	29°23'00.91''	90°17'48.91''	-1.5'	-2.8'	1.3'
634	3,610,992.98	322,876.61	29°23'01.41''	90°17'48.02''	0.1'	-2.3'	2.4'
635	3,611,121.61	322,961.02	29°23'02.23''	90°17'46.55''	0.1'	-2.4'	2.5'
636	3,611,206.29	323,018.21	29°23'02.79''	90°17'45.59''	-0.6'	-1.6'	1.0'
637	3,611,317.80	323,091.15	29°23'03.51''	90°17'44.32''	-1.8'	-1.8'	EXPOSED
638	3,611,451.87	323,179.69	29°23'04.37''	90°17'42.80''	-2.6'	-2.6'	EXPOSED
639	3,611,566.97	323,257.40	29°23'05.13''	90°17'41.49''	-3.3'	-3.3'	EXPOSED
640	3,611,719.06	323,358.23	29°23'06.11''	90°17'39.76''	-3.3'	-3.3'	EXPOSED
641	3,611,921.41	323,493.53	29°23'07.43''	90°17'37.46''	-3.3'	-3.3'	EXPOSED
642	3,612,143.06	323,641.82	29°23'08.88''	90°17'34.94''	-2.8'	-2.8'	EXPOSED
643	3,612,244.20	323,709.53	29°23'09.54''	90°17'33.79''	-3.0'	-3.0'	EXPOSED
644	3,612,407.35	323,817.43	29°23'10.60''	90°17'31.93''	-1.9'	-1.9'	EXPOSED
645	3,612,482.31	323,866.93	29°23'11.08''	90°17'31.08''	-0.9'	-1.9'	1.0'
646	3,612,560.36	323,916.63	29°23'11.57''	90°17'30.19''	0.4'	0.1'	0.3'
647	3,612,633.25	323,878.85	29°23'11.18''	90°17'29.37''	0.7'	0.2'	0.5'
648	3,612,661.03	323,865.18	29°23'11.05''	90°17'29.06''	0.2'	-0.8'	1.0'

SURVEYED PIPELINE 9 (2 INCH)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
649	3,610,788.49	322,716.60	29°22'59.84''	90°17'50.34''	-2.8'	-2.6'	EXPOSED
650	3,610,886.25	322,765.33	29°23'00.32''	90°17'49.23''	-2.1'	-2.5'	0.4'
651	3,610,980.99	322,817.24	29°23'00.82''	90°17'48.16''	0.1'	-2.0'	2.1'
652	3,611,047.92	322,853.55	29°23'01.18''	90°17'47.40''	0.0'	-2.2'	2.2'
653	3,611,122.17	322,894.29	29°23'01.57''	90°17'46.55''	0.2'	-2.5'	2.7'
654	3,611,202.36	322,939.20	29°23'02.01''	90°17'45.64''	-0.1'	-1.3'	1.2'
655	3,611,279.41	322,981.56	29°23'02.42''	90°17'44.77''	-0.4'	-1.2'	0.8'
656	3,611,338.92	323,014.55	29°23'02.74''	90°17'44.09''	-1.2'	-1.8'	0.6'
657	3,611,525.26	323,120.08	29°23'03.77''	90°17'41.97''	-2.7'	-2.2'	EXPOSED
658	3,611,710.55	323,223.72	29°23'04.78''	90°17'39.87''	-3.1'	-3.3'	0.2'
659	3,611,905.42	323,329.97	29°23'05.82''	90°17'37.66''	-3.3'	-3.3'	EXPOSED
660	3,612,078.88	323,424.36	29°23'06.74''	90°17'35.69''	-3.2'	-3.0'	EXPOSED
661	3,612,244.75	323,506.68	29°23'07.54''	90°17'33.80''	-3.4'	-3.0'	EXPOSED
662	3,612,486.67	323,626.86	29°23'08.70''	90°17'31.06''	-3.0'	-3.0'	EXPOSED
663	3,612,543.57	323,666.04	29°23'09.09''	90°17'30.41''	-2.8'	-2.8'	EXPOSED
664	3,612,571.33	323,707.42	29°23'09.49''	90°17'30.09''	-2.6'	-2.1'	EXPOSED
665	3,612,581.84	323,792.87	29°23'10.34''	90°17'29.96''	-1.4'	-1.4'	EXPOSED
666	3,612,584.80	323,805.10	29°23'10.46''	90°17'29.93''	-0.1'	-1.2'	1.1'
667	3,612,594.95	323,835.36	29°23'10.76''	90°17'29.81''	0.1'	-0.9'	1.0'
668	3,612,607.86	323,867.73	29°23'11.08''	90°17'29.66''	0.5'	0.0'	0.5'
669	3,612,620.75	323,895.86	29°23'11.35''	90°17'29.51''	-0.3'	-0.3'	EXPOSED

SURVEYED PIPELINE 10 (2 INCH TEXAS)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
670	3,612,089.84	324,235.69	29°23'14.77''	90°17'35.48''	-0.6'	-1.1'	0.5'
671	3,612,208.65	324,277.49	29°23'15.17''	90°17'34.13''	0.4'	-0.1'	0.5'
672	3,612,302.24	324,292.99	29°23'15.31''	90°17'33.07''	0.8'	0.3'	0.5'
673	3,612,414.28	324,279.43	29°23'15.17''	90°17'31.81''	0.3'	-0.2'	0.5'
674	3,612,524.65	324,254.30	29°23'14.91''	90°17'30.56''	-0.4'	-0.4'	EXPOSED
675	3,612,713.78	324,211.04	29°23'14.47''	90°17'28.43''	-0.5'	-0.5'	EXPOSED
676	3,612,781.74	324,171.33	29°23'14.07''	90°17'27.66''	0.0'	-0.3'	0.3'
677	3,612,833.40	324,139.07	29°23'13.74''	90°17'27.08''	-0.6'	-0.9'	0.3'
678	3,612,882.63	324,112.75	29°23'13.48''	90°17'26.53''	0.3'	0.0'	0.3'
679	3,612,914.09	324,085.88	29°23'13.21''	90°17'26.18''	0.5'	0.2'	0.3'
680	3,612,961.08	324,051.75	29°23'12.87''	90°17'25.65''	0.7'	0.4'	0.3'
681	3,613,009.86	324,017.03	29°23'12.52''	90°17'25.10''	-1.1'	-1.4'	0.3'
682	3,613,031.86	324,003.52	29°23'12.38''	90°17'24.85''	-0.9'	-0.9'	EXPOSED
683	3,613,048.38	323,991.38	29°23'12.26''	90°17'24.67''	0.2'	-0.1'	0.3'
684	3,613,068.73	323,978.79	29°23'12.13''	90°17'24.44''	0.5'	0.0'	0.5'

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

T. BAKER SMITH
A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
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DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	05/01/2020	JOB NO:	2019.0193

DRAWING NAME: PHASE TWO MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 16 OF 19

PHASE TWO MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGAION SURVEY
CHARTS OF SURVEYED ABANDONED PIPELINES
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,70,77,78, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

4/30/2020 - P:\Y-2019\2019.0193\DWG\PHASE TWO MAGNETOMETER SURVEY\PHASE TWO MAGNETOMETER SURVEY.DWG

SURVEYED PIPELINE 11 (2 INCH TEXAS)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	COORDINATES (NAD 83) LAT	COORDINATES (NAD 83) LONG	WATER BOTTOM	TOP OF PIPE	COVER
685	3,612,089.56	324,239.88	29°23'14.81''	90°17'35.48''	-0.7'	-1.2'	0.5'
686	3,612,206.92	324,282.49	29°23'15.22''	90°17'34.15''	0.5'	0.0'	0.5'
687	3,612,302.85	324,294.72	29°23'15.33''	90°17'33.06''	0.6'	0.1'	0.5'
688	3,612,415.42	324,282.05	29°23'15.20''	90°17'31.79''	0.5'	0.0'	0.5'
689	3,612,524.48	324,255.84	29°23'14.93''	90°17'30.56''	-0.4'	-0.4'	EXPOSED
690	3,612,706.37	324,218.26	29°23'14.54''	90°17'28.51''	-0.7'	-0.7'	EXPOSED
691	3,612,782.61	324,171.47	29°23'14.07''	90°17'27.65''	0.1'	0.1'	EXPOSED
692	3,612,833.52	324,140.00	29°23'13.75''	90°17'27.08''	0.1'	0.1'	EXPOSED
693	3,612,883.59	324,113.28	29°23'13.48''	90°17'26.52''	0.4'	0.1'	0.3'
694	3,612,914.80	324,087.05	29°23'13.22''	90°17'26.17''	0.6'	0.3'	0.3'
695	3,612,961.59	324,052.60	29°23'12.88''	90°17'25.64''	0.4'	0.1'	0.3'
696	3,613,010.77	324,018.53	29°23'12.53''	90°17'25.09''	-0.3'	-0.6'	0.3'
697	3,613,032.55	324,004.44	29°23'12.39''	90°17'24.85''	0.0'	-0.3'	0.3'
698	3,613,048.96	323,992.00	29°23'12.27''	90°17'24.66''	-0.1'	-0.1'	EXPOSED
699	3,613,071.85	323,992.23	29°23'12.27''	90°17'24.40''	-1.5'	-1.5'	EXPOSED
700	3,613,112.53	323,995.13	29°23'12.29''	90°17'23.94''	-0.1'	-0.4'	0.3'
701	3,613,161.42	323,995.59	29°23'12.29''	90°17'23.39''	0.4'	0.1'	0.3'
702	3,613,210.22	323,984.70	29°23'12.18''	90°17'22.84''	0.7'	0.4'	0.3'
703	3,613,285.27	323,937.72	29°23'11.71''	90°17'22.00''	0.4'	0.4'	EXPOSED
704	3,613,313.63	323,918.67	29°23'11.52''	90°17'21.68''	0.1'	0.1'	EXPOSED

SURVEYED PIPELINE 12 (2 INCH NO PROFILE)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	COORDINATES (NAD 83) LAT	COORDINATES (NAD 83) LONG	WATER BOTTOM	TOP OF PIPE	COVER
705	3,612,880.55	324,124.90	29°23'13.60''	90°17'26.55''	0.7'	0.7'	EXPOSED
706	3,612,897.87	324,139.83	29°23'13.74''	90°17'26.36''	0.5'	0.5'	EXPOSED
707	3,613,036.80	324,258.85	29°23'14.91''	90°17'24.77''	-1.0'	-1.8'	0.8'
708	3,613,200.14	324,348.31	29°23'15.78''	90°17'22.92''	-2.6'	-2.6'	EXPOSED
709	3,613,277.07	324,394.54	29°23'16.23''	90°17'22.04''	-3.2'	-4.2'	1.0'
710	3,613,304.97	324,396.62	29°23'16.25''	90°17'21.73''	-4.0'	-5.3'	1.3'
711	3,613,329.23	324,394.90	29°23'16.23''	90°17'21.45''	-3.2'	-4.2'	1.0'

SURVEYED PIPELINE 13 (2 INCH NO PROFILE)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	COORDINATES (NAD 83) LAT	COORDINATES (NAD 83) LONG	WATER BOTTOM	TOP OF PIPE	COVER
712	3,612,882.97	324,123.49	29°23'13.58''	90°17'26.53''	1.0'	1.0'	EXPOSED
713	3,612,899.11	324,138.77	29°23'13.73''	90°17'26.34''	0.4'	0.4'	EXPOSED
714	3,613,037.37	324,258.53	29°23'14.91''	90°17'24.77''	-1.0'	-1.8'	0.8'
715	3,613,201.83	324,345.77	29°23'15.76''	90°17'22.90''	-2.4'	-2.4'	EXPOSED
716	3,613,276.52	324,387.54	29°23'16.16''	90°17'22.05''	-3.2'	-4.4'	1.2'
717	3,613,305.83	324,390.59	29°23'16.19''	90°17'21.72''	-4.0'	-5.3'	1.3'
718	3,613,327.34	324,387.62	29°23'16.16''	90°17'21.48''	-3.2'	-4.2'	1.0'

SURVEYED PIPELINES SHEET 6 PIPE CLUSTERS (NO PROFILES)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	COORDINATES (NAD 83) LAT	COORDINATES (NAD 83) LONG	WATER BOTTOM	TOP OF PIPE	COVER
719	3,612,401.62	323,822.24	29°23'10.64''	90°17'32.00''	-1.8'	-1.8'	EXPOSED
720	3,612,475.18	323,871.72	29°23'11.13''	90°17'31.16''	0.1'	-0.9'	1.0'
721	3,612,554.87	323,921.51	29°23'11.61''	90°17'30.25''	0.5'	0.2'	0.3'
722	3,612,579.34	323,935.04	29°23'11.75''	90°17'29.98''	0.6'	0.3'	0.3'
723	3,612,614.21	323,928.41	29°23'11.68''	90°17'29.58''	-0.6'	-0.6'	EXPOSED
724	3,612,402.07	323,819.36	29°23'10.62''	90°17'31.99''	-1.8'	-1.8'	EXPOSED
725	3,612,477.96	323,871.00	29°23'11.12''	90°17'31.13''	-0.1'	-1.1'	1.0'
726	3,612,556.90	323,920.75	29°23'11.61''	90°17'30.23''	0.6'	0.3'	0.3'
727	3,612,579.12	323,933.85	29°23'11.73''	90°17'29.98''	0.5'	0.2'	0.3'
728	3,612,614.96	323,925.77	29°23'11.65''	90°17'29.57''	-0.5'	-0.5'	EXPOSED
729	3,612,404.02	323,817.59	29°23'10.60''	90°17'31.97''	-1.9'	-1.9'	EXPOSED
730	3,612,480.80	323,869.18	29°23'11.10''	90°17'31.10''	-0.8'	-1.8'	1.0'
731	3,612,559.01	323,919.32	29°23'11.59''	90°17'30.21''	0.5'	0.2'	0.3'
732	3,612,578.51	323,931.55	29°23'11.71''	90°17'29.99''	0.5'	0.2'	0.3'
733	3,612,615.01	323,923.87	29°23'11.63''	90°17'29.57''	-0.4'	-0.4'	EXPOSED
734	3,612,621.63	323,895.57	29°23'11.35''	90°17'29.50''	-0.6'	-0.6'	EXPOSED
735	3,612,619.10	323,890.10	29°23'11.30''	90°17'29.53''	0.7'	0.7'	EXPOSED
736	3,613,285.78	323,938.31	29°23'11.71''	90°17'21.99''	0.3'	0.3'	EXPOSED
737	3,613,314.58	323,919.48	29°23'11.53''	90°17'21.67''	0.2'	0.2'	EXPOSED

SURVEYED PIPELINE 14 (ENLINK)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	COORDINATES (NAD 83) LAT	COORDINATES (NAD 83) LONG	WATER BOTTOM	TOP OF PIPE	COVER
738	3,614,047.16	323,466.04	29°23'06.97''	90°17'13.43''	-1.7'	-3.7'	2.0'
739	3,614,128.16	323,339.87	29°23'05.71''	90°17'12.53''	-1.6'	-3.9'	2.3'
740	3,614,198.96	323,230.71	29°23'04.63''	90°17'11.74''	-0.6'	-4.1'	3.5'
741	3,614,272.28	323,115.65	29°23'03.48''	90°17'10.93''	-1.6'	-4.0'	2.4'
742	3,614,336.38	323,016.10	29°23'02.49''	90°17'10.21''	-1.5'	-4.1'	2.6'
743	3,614,424.43	322,881.94	29°23'01.15''	90°17'09.23''	-2.9'	-5.1'	2.2'
744	3,614,502.43	322,760.47	29°22'59.94''	90°17'08.36''	-2.5'	-4.3'	1.8'
745	3,614,563.45	322,658.00	29°22'58.92''	90°17'07.68''	-3.1'	-3.5'	0.4'
746	3,614,644.53	322,506.73	29°22'57.42''	90°17'06.78''	-3.7'	-3.9'	0.2'
747	3,614,689.61	322,410.21	29°22'56.46''	90°17'06.28''	-2.7'	-5.4'	2.7'
748	3,614,738.36	322,323.05	29°22'55.59''	90°17'05.74''	-2.5'	-4.5'	2.0'

SURVEYED PIPELINE 15 (6 INCH)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	COORDINATES (NAD 83) LAT	COORDINATES (NAD 83) LONG	WATER BOTTOM	TOP OF PIPE	COVER
749	3,613,779.99	323,607.48	29°23'08.39''	90°17'16.44''	0.0'	-0.7'	0.7'
750	3,613,780.00	323,605.34	29°23'08.37''	90°17'16.44''	0.1'	-0.9'	1.0'
751	3,613,786.24	323,590.26	29°23'08.22''	90°17'16.37''	-0.1'	-3.8'	3.7'
752	3,613,822.03	323,542.28	29°23'07.75''	90°17'15.97''	-0.1'	-3.2'	3.1'
753	3,613,870.77	323,479.15	29°23'07.12''	90°17'15.43''	-0.1'	-2.1'	2.0'
754	3,613,901.92	323,427.05	29°23'06.60''	90°17'15.08''	-0.2'	-2.2'	2.0'
755	3,613,937.53	323,383.22	29°23'06.16''	90°17'14.68''	-0.2'	-2.2'	2.0'
756	3,613,972.37	323,343.27	29°23'05.76''	90°17'14.29''	-0.4'	-2.9'	2.5'
757	3,614,016.30	323,302.09	29°23'05.35''	90°17'13.80''	-0.4'	-2.2'	1.8'
758	3,614,055.28	323,262.06	29°23'04.95''	90°17'13.36''	-0.2'	-1.7'	1.5'
759	3,614,090.65	323,219.43	29°23'04.53''	90°17'12.97''	0.3'	-2.9'	3.2'
760	3,614,125.37	323,183.19	29°23'04.16''	90°17'12.58''	0.6'	-2.8'	3.4'
761	3,614,165.58	323,146.18	29°23'03.79''	90°17'12.13''	1.2'	-2.0'	3.2'
762	3,614,201.35	323,110.94	29°23'03.44''	90°17'11.73''	0.9'	-2.5'	3.4'
763	3,614,252.89	323,047.75	29°23'02.81''	90°17'11.15''	0.9'	-2.8'	3.7'
764	3,614,282.73	323,016.46	29°23'02.50''	90°17'10.82''	1.1'	-1.9'	3.0'
765	3,614,334.87	322,970.72	29°23'02.04''	90°17'10.23''	-1.9'	-1.9'	EXPOSED

SURVEYED PIPELINE 16 (2 INCH TEXAS)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	COORDINATES (NAD 83) LAT	COORDINATES (NAD 83) LONG	WATER BOTTOM	TOP OF PIPE	COVER
766	3,613,466.09	323,639.96	29°23'08.74''	90°17'19.98''	-4.7'	3.9'	EXPOSED
767	3,613,457.09	323,645.71	29°23'08.80''	90°17'20.08''	-4.7'	3.2'	RISER
768	3,613,456.58	323,645.87	29°23'08.80''	90°17'20.09''	-4.8'	-11.3'	6.5'
769	3,613,404.19	323,692.09	29°23'09.27''	90°17'20.68''	-3.8'	-10.4'	6.6'
770	3,613,365.68	323,673.15	29°23'09.08''	90°17'21.12''	-5.1'	-12.6'	7.5'
771	3,613,318.89	323,593.39	29°23'08.30''	90°17'21.65''	-3.4'	-10.2'	6.8'
772	3,613,323.04	323,573.12	29°23'08.10''	90°17'21.61''	-2.4'	-7.8'	5.4'
773	3,613,354.30	323,555.88	29°23'07.92''	90°17'21.26''	-2.4'	-4.7'	2.3'
774	3,613,434.15	323,516.39	29°23'07.52''	90°17'20.36''	-2.4'	-5.0'	2.6'
775	3,613,483.39	323,486.92	29°23'07.23''	90°17'19.80''	-1.6'	-3.2'	1.6'
776	3,613,543.68	323,444.68	29°23'06.80''	90°17'19.13''	-0.7'	-0.7'	EXPOSED
777	3,613,594.01	323,404.04	29°23'06.40''	90°17'18.56''	1.1'	1.1'	EXPOSED
778	3,613,711.28	323,284.86	29°23'05.21''	90°17'17.25''	0.6'	0.6'	EXPOSED
779	3,613,816.09	323,179.45	29°23'04.15''	90°17'16.08''	-0.3'	-0.3'	EXPOSED
780	3,613,907.92	323,081.42	29°23'03.18''	90°17'15.05''	0.4'	0.4'	EXPOSED
781	3,614,001.08	322,973.61	29°23'02.10''	90°17'14.01''	0.4'	0.4'	EXPOSED
782	3,614,073.79	322,884.71	29°23'01.21''	90°17'13.19''	0.3'	0.3'	EXPOSED
783	3,614,189.85	322,743.79	29°22'59.81''	90°17'11.90''	0.7'	0.7'	EXPOSED
784	3,614,261.56	322,659.05	29°22'58.96''	90°17'11.09''	2.5'	2.5'	EXPOSED
785	3,614,296.15	322,616.47	29°22'58.54''	90°17'10.71''	1.4'	1.4'	EXPOSED
786	3,614,318.80	322,585.96	29°22'58.23''	90°17'10.45''	-1.2'	-1.2'	EXPOSED
787	3,614,346.01	322,549.19	29°22'57.87''	90°17'10.15''	-2.9'	-6.7'	3.8'
788	3,614,438.17	322,412.00	29°22'56.50''	90°17'09.12''	-4.7'	-8.1'	3.4'
789	3,614,458.79	322,363.72	29°22'56.02''	90°17'08.89''	0.2'	0.2'	EXPOSED
790	3,614,471.16	322,335.31	29°22'55.74''	90°17'08.76''	0.5'	0.5'	EXPOSED
791	3,614,451.61	322,310.26	29°22'55.49''	90°17'08.98''	0.9'	0.9'	EXPOSED
792	3,614,431.72	322,281.38	29°22'55.21''	90°17'09.21''	0.7'	0.7'	EXPOSED
793	3,614,419.18	322,258.10	29°22'54.98''	90°17'09.35''	0.7'	0.7'	EXPOSED

SURVEYED PIPELINE 17 (4 INCH TEXAS)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	COORDINATES (NAD 83) LAT	COORDINATES (NAD 83) LONG	WATER BOTTOM	TOP OF PIPE	COVER
794	3,613,468.32	323,640.86	29°23'08.75''	90°17'19.96''	-4.7'	4.0'	EXPOSED
795	3,613,457.91	323,646.71	29°23'08.81''	90°17'20.08''	-4.7'	3.1'	RISER
796	3,613,457.50	323,647.23	29°23'08.82''	90°17'20.08''	-4.8'	-11.3'	6.5'
797	3,613,404.17	323,694.62	29°23'09.29''	90°17'20.68''	-3.8'	-10.4'	6.6'
798	3,613,364.93	323,673.15	29°23'09.08''	90°17'21.12''	-5.1'	-14.4'	9.3'
799	3,613,317.63	323,592.82	29°23'08.29''	90°17'21.67''	-3.4'	-10.2'	6.8'
800	3,613,322.77	323,571.94	29°23'08.08''	90°17'21.61''	-2.4'	-7.8'	5.4'
801	3,613,353.64	323,555.00	29°23'07.91''	90°17'21.26''	-2.4'	-5.1'	2.7'
802	3,613,433.41	323,515.31	29°23'07.51''	90°17'20.37''	-2.4'	-5.0'	2.6'
803	3,613,483.03	323,486.42	29°23'07.22''	90°17'19.81''	-1.6'	-2.9'	1.3'
804	3,613,542.25	323,444.27	29°23'06.80''	90°17'19.14''	-0.6'	-0.6'	EXPOSED
805	3,613,605.61	323,390.19	29°23'06.26''	90°17'18.43''	0.9'	0.9'	EXPOSED
806	3,613,709.12	323,280.78	29°23'05.17''	90°17'17.27''	0.5'	0.5'	EXPOSED
807	3,613,805.28	323,176.34	29°23'04.12''	90°17'16.20''	-0.4'	-0.4'	EXPOSED
808	3,613,901.71	323,065.54	29°23'03.02''	90°17'15.12''	0.3'	0.3'	EXPOSED
809	3,613,987.82	322,963.58	29°23'02.00''	90°17'14.16''	0.3'	0.3'	EXPOSED
810	3,614,055.77	322,881.32	29°23'01.18''	90°17'13.40''	-0.2'	-0.2'	EXPOSED
811	3,614,181.69	322,735.16	29°22'59.72''	90°17'11.99''	0.7'	0.7'	EXPOSED
812	3,614,255.70	322,653.60	29°22'58.91''	90°17'11.16''	2.7'	2.7'	EXPOSED
813	3,614,312.46	322,586.24	29°22'58.24''	90°17'10.53''	0.6'	-0.6'	1.2'
814	3,614,344.11	322,545.30	29°22'57.83''	90°17'10.17''	-2.7'	-6.0'	3.3'
815	3,614,434.61	322,403.72	29°22'56.42''	90°17'09.16''	-4.4'	-6.7'	2.3'
816	3,614,455.89	322,361.78	29°22'56.00''	90°17'08.93''	0.2'	0.2'	EXPOSED
817	3,614,478.62	322,313.39	29°22'55.52''	90°17'08.68''	0.9'	0.9'	EXPOSED
818	3,614,495.33	322,279.66	29°22'55.19''	90°17'08.49''	0.9'	0.9'	EXPOSED

SURVEYED PIPELINE 18 (4 INCH TEXAS NO PROFILE)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	COORDINATES (NAD 83) LAT	COORDINATES (NAD 83) LONG	WATER BOTTOM	TOP OF PIPE	COVER
819	3,612,945.06	323,879.07	29°23'11.16''	90°17'25.85''	-4.7'	2.3'	EXPOSED
820	3,612,911.45	323,754.20	29°23'09.93''	90°17'26.24''	-2.9'	-3.9'	1.0'
821	3,612,884.00	323,729.30	29°23'09.68''	90°17'26.55''	0.7'	0.7'	EXPOSED
822	3,612,880.69	323,714.44	29°23'09.53''	90°17'26.59''	3.1'	3.1'	EXPOSED
823	3,612,903.43	323,714.58	29°23'09.53''	90°17'26.34''	1.4'	1.4'	EXPOSED
824	3,612,937.10	323,717.58	29°23'09.56''	90°17'25.95''	1.0'	1.0'	EXPOSED
825	3,612,957.70	323,716.10	29°23'09.54''	90°17'25.72''	0.7'	0.7'	EXPOSED
826	3,612,973.42	323,710.90	29°23'09.49''	90°17'25.55''	1.5'	1.5'	EXPOSED
827	3,612,989.03	323,694.64	29°23'09.33''	90°17'25.37''	1.8'	1.8'	EXPOSED
828	3,612,995.10	323,693.78	29°23'09.32''	90°17'25.30''	2.0'	2.0'	EXPOSED
829	3,613,001.96	323,701.18	29°23'09.39''	90°17'25.22''	2.0'	2.0'	EXPOSED
830	3,613,008.24	323,709.17	29°23'09.47''	90°17'25.15''	0.9'	0.9'	EXPOSED
831	3,613,040.15	323,707.51	29°23'09.45''	90°17'24.79''	1.2'	1.2'	EXPOSED
832	3,613,086.22	323,681.89	29°23'09.19''	90°17'24.27''	1.1'	1.1'	EXPOSED
833	3,613,191.02	323,618.57	29°23'08.56''	90°17'23.10''	0.6'	0.6'	EXPOSED
834	3,613,241.05	323,600.32	29°23'08.37''	90°17'22.53''	-1.0'	-1.0'	EXPOSED
835	3,613,424.94	323,488.93	29°23'07.25''	90°17'20.46''	-0.9'	-0.9'	EXPOSED
836	3,613,494.80	323,435.06	29°23'06.71''	90°17'19.68''	1.4'	1.4'	EXPOSED
837	3,613,558.31	323,383.81	29°23'06.20''	90°17'18.97''	1.1'	1.1'	EXPOSED
838	3,613,691.73	323,261.38	29°23'04.98''	90°17'17.47''	-0.7'	-0.7'	EXPOSED
839	3,613,786.53	323,169.90	29°23'04.06''	90°17'16.41''	0.2'	0.2'	EXPOSED
840	3,613,896.96	323,058.63	29°23'02.95''	90°17'15.17''	0.1'	0.1'	EXPOSED
841	3,614,052.13	322,880.45	29°23'01.17''	90°17'13.44''	-0.3'	-0.3'	EXPOSED
842	3,614,177.69	322,734.46	29°22'59.72''	90°17'12.03''	0.8'	0.8'	EXPOSED
843	3,614,244.96	322,650.76	29°22'58.88''	90°17'11.28''	3.2'	3.2'	EXPOSED
844	3,614,275.04	322,609.62	29°22'58.47''	90°17'10.95''	4.2'	4.2'	EXPOSED
845	3,614,312.26	322,558.76	29°22'57.97''	90°17'10.53''	0.3'	0.3'	EXPOSED
846	3,614,338.34	322,517.83	29°22'57.56''	90°17'10.24''	-3.4'	-7.4'	4.0'
847	3,614,418.60	322,388.45	29°22'56.27''	90°17'09.35''	-4.7'	-7.9'	3.2'
848	3,614,442.25	322,360.31	29°22'55.99''	90°17'09.08''	0.2'	0.2'	EXPOSED
849	3,614,464.02	322,350.99	29°22'55.89''	90°17'08.84''	1.2'	1.2'	EXPOSED
850	3,614,483.67	322,324.33	29°22'55.63''	90°17'08.62''	0.7'	0.7'	EXPOSED
851	3,614,502.21	322,282.89	29°22'55.22''	90°17'08.41''	1.0'	1.0'	EXPOSED

SURVEYED PIPELINE 19 (4 INCH TEXAS NO PROFILE)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	COORDINATES (NAD 83) LAT	COORDINATES (NAD 83) LONG	WATER BOTTOM	TOP OF PIPE	COVER
852	3,614,312.24	322,595.64	29°22'58.33''	90°17'10.53''	1.3'	1.3'	EXPOSED
853	3,614,320.73	322,585.47	29°22'58.23''	90°17'10.43''	0.4'	0.4'	RISER
854	3,614,320.58	322,585.25	29°22'58.23''	90°17'10.43''	0.4'	0.4'	EXPOSED
855	3,614,349.38	322,548.04	29°22'57.86''	90°17'10.11''	-2.9'	-7.7'	4.8'
856	3,614,439.37	322,411.96	29°22'56.50''	90°17'09.11''	-4.5'	-10.0'	5.5'
857	3,614,455.14	322,387.39	29°22'56.26''	90°17'08.93''	0.3'	0.3'	EXPOSED
858	3,614,454.18	322,386.37	29°22'56.25''	90°17'08.94''	0.4'	0.4'	RISER
859	3,614,463.95	322,367.89	29°22'56.06''	90°17'08.84''	1.6'	1.6'	EXPOSED
860	3,614,485.47	322,324.95	29°22'55.63''	90°17'08.60''	0.7'	0.7'	EXPOSED
861	3,614,503.60	322,283.72	29°22'55.23''	90°17'08.40''	0.6'	0.6'	EXPOSED

SURVEYED PIPELINE 20 (2 INCH TEXAS)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	COORDINATES (NAD 83) LAT	COORDINATES (NAD 83) LONG	WATER BOTTOM	TOP OF PIPE	COVER
862	3,612,943.13	323,876.97	29°23'11.14''	90°17'25.87''	-5.4'	3.6'	EXPOSED
863	3,612,932.83	323,882.42	29°23'11.19''	90°17'25.99''	-5.4'	2.9'	RISER
864	3,612,932.57	323,882.41	29°23'11.19''	90°17'25.99''	-5.4'	-7.8'	2.4'
865	3,612,931.80	323,883.65	29°23'11.21''	90°17'26.00''	-4.9'	-10.2'	5.3'
866	3,612,893.73	323,918.19	29°23'11.55''	90°17'26.42''	-5.1'	-8.7'	3.6'
867	3,612,858.44	323,916.27	29°23'11.53''	90°17'26.82''	-3.9'	-10.5'	6.6'
868	3,612,837.41	323,886.19	29°23'11.24''	90°17'27.06''	-3.9'	-10.4'	6.5'
869	3,612,818.14	323,842.27	29°23'10.81''	90°17'27.29''	-3.1'	-6.8'	3.7'
870	3,612,799.29	323,803.53	29°23'10.42''	90°17'27.50''	-1.9'	-1.7'	EXPOSED
871	3,612,803.24	323,801.07	29°23'10.40''	90°17'27.46''	-1.9'	-1.7'	EXPOSED
872	3,612,873.64	323,770.15	29°23'10.09''	90°17'26.67''	-2.9'	-4.9'	2.0'
873	3,612,906.91	323,750.93	29°23'09.89''	90°17'26.29''	-2.9'	-4.2'	1.3'
874	3,612,962.28	323,722.95	29°23'09.61''	90°17'25.67''	0.1'	0.1'	EXPOSED
875	3,612,971.75	323,718.44	29°23'09.57''	90°17'25.56''	0.8'	0.8'	EXPOSED
876	3,612,993.70	323,706.60	29°23'09.45''	90°17'25.32''	1.4'	1.4'	EXPOSED
877	3,613,019.60	323,692.16	29°23'09.30''	90°17'25.03''	2.0'	2.0'	EXPOSED
878	3,613,062.88	323,669.04	29°23'09.07''	90°17'24.54''	1.9'	1.9'	EXPOSED
879	3,613,179.80	323,593.33	29°23'08.31''	90°17'23.22''	0.9'	0.9'	EXPOSED
880	3,613,263.61	323,545.20	29°23'07.82''	90°17'22.28''	2.9'	2.9'	EXPOSED
881	3,613,403.17	323,456.70	29°23'06.94''	90°17'20.71''	2.9'	2.9'	EXPOSED
882	3,613,477.92	323,418.96	29°23'06.56''	90°17'19.87''	1.4'	1.4'	EXPOSED
883	3,613,568.41	323,370.23	29°23'06.07''	90°17'18.85''	0.7'	0.7'	EXPOSED
884	3,613,594.01	323,404.04	29°23'06.40''	90°17'18.56''	1.1'	1.1'	EXPOSED

SURVEYED PIPELINE 21 (4 INCH TEXAS NO PROFILE)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	COORDINATES (NAD 83) LAT	COORDINATES (NAD 83) LONG	WATER BOTTOM	TOP OF PIPE	COVER
885	3,612,931.83	323,883.60	29°23'11.20''	90°17'26.00''	-4.9'	0.1'	RISER
886	3,612,917.74	323,892.50	29°23'11.29''	90°17'26.16''	-4.9'	-10.2'	5.3'
887	3,612,880.90	323,874.23	29°23'11.12''	90°17'26.57''	-4.9'	-10.1'	5.2'
888	3,612,832.27	323,796.91	29°23'10.36''	90°17'27.13''	-2.4'	-3.6'	1.2'
889	3,612,815.87	323,768.91	29°23'10.08''	90°17'27.32''	0.6'	0.6'	EXPOSED
890	3,612,812.57	323,763.37	29°23'10.03''	90°17'27.36''	1.4'	1.4'	EXPOSED
891	3,612,830.70	323,752.98	29°23'09.92''	90°17'27.15''	1.0'	1.0'	EXPOSED
892	3,612,860.32	323,736.30	29°23'09.75''	90°17'26.82''	1.2'	1.2'	EXPOSED
893	3,612,882.65	323,724.07	29°23'09.63''	90°17'26.57''	1.1'	1.1'	EXPOSED

SURVEYED PIPELINE 22 (2 INCH TEXAS NO PROFILE)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	COORDINATES (NAD 83) LAT	COORDINATES (NAD 83) LONG	WATER BOTTOM	TOP OF PIPE	COVER
894	3,613,358.51	323,812.28	29°23'10.46''	90°17'21.18''	0.9'	0.9'	EXPOSED
895	3,613,360.95	323,795.72	29°23'10.30''	90°17'21.16''	1.4'	1.4'	EXPOSED
896	3,613,366.46	323,769.39	29°23'10.03''	90°17'21.10''	2.2'	2.2'	EXPOSED
897	3,613,381.65	323,736.03	29°23'09.70''	90°17'20.93''	0.2'	0.2'	EXPOSED
898	3,613,384.89	323,724.59	29°23'09.59''	90°17'20.89''	-1.4'	-1.4'	EXPOSED

4/30/2020 - P:\Y-2019\2019.0193\DWG\PHASE TWO MAGNETOMETER SURVEY\PHASE TWO MAGNETOMETER SURVEY.DWG

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

T. BAKER SMITH
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REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
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SURVEYED PIPELINE 23 (2 INCH TPIC)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	LAT	LONG	WATER BOTTOM	TOP OF PIPE	COVER
899	3,613,520.85	323,776.07	29°23'10.09''	90°17'19.35''	-5.4'	3.2'	RISER
900	3,613,520.15	323,776.65	29°23'10.09''	90°17'19.36''	-5.5'	-10.9'	5.4'
901	3,613,478.28	323,829.78	29°23'10.62''	90°17'19.83''	-5.0'	-9.6'	4.6'
902	3,613,440.24	323,856.88	29°23'10.89''	90°17'20.25''	-4.7'	-9.1'	4.4'
903	3,613,425.90	323,837.93	29°23'10.71''	90°17'20.42''	-4.0'	-7.8'	3.8'
904	3,613,413.71	323,792.33	29°23'10.26''	90°17'20.56''	-3.9'	-5.8'	1.9'
905	3,613,386.82	323,722.26	29°23'09.57''	90°17'20.87''	-1.9'	-5.4'	3.5'
906	3,613,386.58	323,686.65	29°23'09.21''	90°17'20.88''	-4.3'	-9.9'	5.6'
907	3,613,433.52	323,656.94	29°23'08.92''	90°17'20.35''	-4.8'	-9.9'	5.1'
908	3,613,456.26	323,644.41	29°23'08.79''	90°17'20.09''	-4.8'	-9.9'	5.1'
909	3,613,456.86	323,644.21	29°23'08.79''	90°17'20.09''	-4.7'	3.2'	RISER
910	3,613,458.14	323,643.38	29°23'08.78''	90°17'20.07''	3.8'	3.8'	EXPOSED
911	3,613,458.97	323,644.54	29°23'08.79''	90°17'20.06''	3.9'	3.9'	EXPOSED

SURVEYED PIPELINE 24 (2 INCH NO PROFILE)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	LAT	LONG	WATER BOTTOM	TOP OF PIPE	COVER
912	3,613,136.21	322,638.80	29°22'58.86''	90°17'23.82''	-2.5'	-2.5'	EXPOSED
913	3,613,135.81	322,700.37	29°22'59.47''	90°17'23.81''	-2.5'	-2.5'	EXPOSED
914	3,613,142.67	322,800.09	29°23'00.46''	90°17'23.73''	-2.6'	-2.6'	EXPOSED
915	3,613,178.95	322,984.69	29°23'02.28''	90°17'23.30''	-2.4'	-2.4'	EXPOSED
916	3,613,260.38	323,274.52	29°23'05.15''	90°17'22.35''	-2.6'	-2.6'	EXPOSED
917	3,613,291.08	323,379.89	29°23'06.19''	90°17'21.99''	-1.2'	-1.2'	EXPOSED
918	3,613,304.35	323,421.72	29°23'06.60''	90°17'21.83''	0.4'	0.4'	EXPOSED
919	3,613,325.36	323,487.10	29°23'07.24''	90°17'21.59''	3.1'	-	EXPOSED

SURVEYED PIPELINES SHEET 9 PIPE CLUSTERS (NO PROFILES)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	LAT	LONG	WATER BOTTOM	TOP OF PIPE	COVER
920	3,614,257.13	322,247.25	29°22'54.89''	90°17'11.19''	1.2'	1.2'	EXPOSED
921	3,614,260.50	322,264.38	29°22'55.06''	90°17'11.15''	-0.9'	-0.9'	EXPOSED
922	3,613,936.42	322,075.10	29°22'53.21''	90°17'14.83''	-1.3'	-1.3'	EXPOSED
923	3,613,919.47	322,077.46	29°22'53.24''	90°17'15.02''	1.0'	1.0'	EXPOSED
924	3,613,917.23	322,079.53	29°22'53.26''	90°17'15.05''	1.1'	0.3'	0.8'

SURVEYED PIPELINE 25 (2 INCH NO PROFILE)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	LAT	LONG	WATER BOTTOM	TOP OF PIPE	COVER
925	3,610,879.01	322,575.18	29°22'58.44''	90°17'49.33''	-3.5'	-3.4'	EXPOSED
926	3,611,004.17	322,591.84	29°22'58.59''	90°17'47.92''	-3.6'	-3.4'	EXPOSED
927	3,611,098.27	322,599.15	29°22'58.65''	90°17'46.85''	-3.5'	-3.3'	EXPOSED
928	3,611,175.96	322,608.47	29°22'58.74''	90°17'45.98''	-4.0'	-3.9'	EXPOSED
929	3,611,260.45	322,618.08	29°22'58.83''	90°17'45.02''	-3.8'	-3.4'	EXPOSED
930	3,611,344.49	322,622.23	29°22'58.86''	90°17'44.07''	-3.4'	-3.3'	EXPOSED
931	3,611,437.32	322,631.37	29°22'58.94''	90°17'43.02''	-3.0'	-3.2'	0.2'
932	3,611,521.36	322,637.12	29°22'58.99''	90°17'42.07''	-2.8'	-3.0'	0.2'
933	3,611,597.33	322,641.57	29°22'59.03''	90°17'41.21''	-2.8'	-3.5'	0.7'
934	3,611,657.70	322,642.09	29°22'59.03''	90°17'40.53''	-2.4'	-2.8'	0.4'
935	3,611,714.38	322,643.62	29°22'59.04''	90°17'39.89''	-2.2'	-2.0'	EXPOSED
936	3,611,769.26	322,643.93	29°22'59.04''	90°17'39.27''	-2.2'	-1.9'	EXPOSED
937	3,611,840.77	322,642.49	29°22'59.02''	90°17'38.46''	-2.4'	-2.3'	EXPOSED
938	3,611,935.01	322,639.44	29°22'58.98''	90°17'37.39''	-3.1'	-3.3'	0.2'
939	3,612,099.00	322,635.68	29°22'58.93''	90°17'35.54''	-3.1'	-2.8'	EXPOSED
940	3,612,228.75	322,633.96	29°22'58.90''	90°17'34.07''	-3.2'	-3.0'	EXPOSED
941	3,612,368.62	322,632.74	29°22'58.87''	90°17'32.49''	-3.2'	-3.0'	EXPOSED
942	3,612,519.92	322,632.51	29°22'58.86''	90°17'30.78''	-3.2'	-3.0'	EXPOSED
943	3,612,637.70	322,630.58	29°22'58.83''	90°17'29.45''	-3.2'	-3.0'	EXPOSED
944	3,612,723.25	322,631.40	29°22'58.83''	90°17'28.48''	-3.2'	-3.0'	EXPOSED
945	3,612,786.10	322,631.86	29°22'58.83''	90°17'27.77''	-3.2'	-3.0'	EXPOSED
946	3,612,887.27	322,630.75	29°22'58.81''	90°17'26.63''	-3.4'	-3.2'	EXPOSED
947	3,612,998.69	322,631.01	29°22'58.80''	90°17'25.37''	-3.3'	-3.1'	EXPOSED
948	3,613,110.01	322,630.62	29°22'58.79''	90°17'24.11''	-3.0'	-2.8'	EXPOSED
949	3,613,136.53	322,636.23	29°22'58.84''	90°17'23.81''	-3.2'	-2.8'	EXPOSED
950	3,613,136.44	322,626.19	29°22'58.74''	90°17'23.81''	-3.2'	-2.8'	EXPOSED
951	3,613,141.98	322,560.66	29°22'58.09''	90°17'23.76''	-2.8'	-2.4'	EXPOSED
952	3,613,148.09	322,506.66	29°22'57.55''	90°17'23.69''	-2.2'	-2.0'	EXPOSED
953	3,613,154.71	322,456.11	29°22'57.05''	90°17'23.63''	-2.2'	-2.0'	EXPOSED
954	3,613,157.72	322,375.52	29°22'56.26''	90°17'23.60''	-3.1'	-3.2'	0.1'
955	3,613,155.94	322,303.80	29°22'55.55''	90°17'23.63''	-3.7'	-3.8'	0.1'
956	3,613,157.02	322,278.45	29°22'55.29''	90°17'23.62''	-3.7'	-3.2'	EXPOSED
957	3,613,154.56	322,276.42	29°22'55.27''	90°17'23.65''	-3.7'	-3.2'	EXPOSED

SURVEYED PIPELINE 26 (4 INCH TEXAS NO PROFILE)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	LAT	LONG	WATER BOTTOM	TOP OF PIPE	COVER
958	3,611,676.84	322,610.06	29°22'58.71''	90°17'40.31''	-1.7'	-3.5'	1.8'
959	3,611,698.70	322,615.35	29°22'58.76''	90°17'40.07''	-0.9'	-2.6'	1.7'
960	3,611,738.42	322,627.94	29°22'58.88''	90°17'39.62''	-0.6'	-0.6'	EXPOSED
961	3,611,769.74	322,630.58	29°22'58.91''	90°17'39.26''	-0.5'	-0.5'	EXPOSED
962	3,611,803.94	322,628.09	29°22'58.88''	90°17'38.88''	-1.3'	-1.3'	EXPOSED
963	3,611,875.19	322,599.88	29°22'58.59''	90°17'38.07''	-1.6'	-1.6'	EXPOSED
964	3,611,942.85	322,560.91	29°22'58.20''	90°17'37.31''	-1.8'	-1.8'	EXPOSED
965	3,612,005.76	322,523.57	29°22'57.82''	90°17'36.60''	-1.6'	-1.6'	EXPOSED
966	3,612,044.64	322,500.80	29°22'57.60''	90°17'36.17''	-1.7'	-1.7'	EXPOSED
967	3,612,171.90	322,419.69	29°22'56.78''	90°17'34.74''	-1.9'	-1.9'	EXPOSED
968	3,612,255.21	322,367.68	29°22'56.26''	90°17'33.80''	-1.6'	-1.6'	EXPOSED
969	3,612,313.78	322,331.49	29°22'55.90''	90°17'33.14''	-1.5'	-1.5'	EXPOSED
970	3,612,317.46	322,324.70	29°22'55.83''	90°17'33.10''	-1.1'	-1.1'	EXPOSED
971	3,612,337.25	322,328.81	29°22'55.87''	90°17'32.88''	-1.9'	-1.9'	EXPOSED
972	3,612,348.03	322,331.06	29°22'55.89''	90°17'32.76''	-2.4'	-2.4'	EXPOSED

SURVEYED PIPELINE 27 (4 INCH TEXAS NO PROFILE)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	LAT	LONG	WATER BOTTOM	TOP OF PIPE	COVER
973	3,611,606.45	322,555.14	29°22'58.17''	90°17'41.11''	-2.5'	-2.5'	EXPOSED
974	3,611,640.10	322,564.58	29°22'58.26''	90°17'40.73''	-2.2'	-3.2'	1.0'
975	3,611,679.36	322,563.98	29°22'58.25''	90°17'40.29''	0.2'	-3.5'	3.7'
976	3,611,704.49	322,563.06	29°22'58.24''	90°17'40.01''	0.6'	-2.6'	3.2'
977	3,611,772.63	322,560.51	29°22'58.21''	90°17'39.24''	1.0'	-0.8'	1.8'
978	3,611,800.52	322,558.50	29°22'58.19''	90°17'38.92''	1.1'	-0.9'	2.0'
979	3,611,826.28	322,556.12	29°22'58.16''	90°17'38.63''	0.9'	-1.0'	1.9'
980	3,611,856.30	322,553.16	29°22'58.13''	90°17'38.29''	-0.3'	-0.3'	EXPOSED
981	3,611,898.30	322,543.31	29°22'58.03''	90°17'37.82''	-0.4'	-0.4'	EXPOSED
982	3,611,973.56	322,515.80	29°22'57.75''	90°17'36.97''	-0.2'	-0.2'	EXPOSED
983	3,611,995.43	322,505.86	29°22'57.65''	90°17'36.72''	-0.6'	-0.6'	EXPOSED
984	3,612,055.94	322,474.67	29°22'57.34''	90°17'36.04''	-0.8'	-0.8'	EXPOSED
985	3,612,161.12	322,418.38	29°22'56.77''	90°17'34.86''	-1.9'	-1.9'	EXPOSED
986	3,612,252.53	322,364.27	29°22'56.23''	90°17'33.83''	-1.5'	-1.5'	EXPOSED
987	3,612,312.78	322,326.58	29°22'55.85''	90°17'33.15''	-1.1'	-1.1'	EXPOSED
988	3,612,345.26	322,306.92	29°22'55.65''	90°17'32.79''	-1.0'	-1.0'	EXPOSED
989	3,612,354.76	322,307.64	29°22'55.66''	90°17'32.68''	-1.4'	-1.4'	EXPOSED
990	3,612,358.47	322,301.29	29°22'55.59''	90°17'32.64''	-1.7'	-1.7'	EXPOSED

SURVEYED PIPELINE 28 (2 INCH TEXAS NO PROFILE)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	LAT	LONG	WATER BOTTOM	TOP OF PIPE	COVER
991	3,611,617.40	322,571.36	29°22'58.33''	90°17'40.99''	-2.1'	-2.9'	0.8'
992	3,611,663.86	322,560.18	29°22'58.22''	90°17'40.47''	-0.9'	-1.9'	1.0'
993	3,611,685.31	322,556.90	29°22'58.18''	90°17'40.22''	-1.1'	-2.2'	1.1'
994	3,611,711.83	322,550.50	29°22'58.12''	90°17'39.92''	-1.1'	-2.4'	1.3'
995	3,611,737.38	322,543.11	29°22'58.04''	90°17'39.64''	-1.7'	-2.7'	1.0'
996	3,611,765.28	322,534.29	29°22'57.95''	90°17'39.32''	-1.6'	-4.2'	2.6'
997	3,611,803.84	322,518.48	29°22'57.79''	90°17'38.89''	-1.9'	-4.4'	2.5'
998	3,611,839.29	322,501.66	29°22'57.62''	90°17'38.49''	-3.9'	-4.4'	0.5'
999	3,611,871.43	322,485.72	29°22'57.46''	90°17'38.13''	-3.9'	-4.7'	0.8'
1000	3,611,906.95	322,471.69	29°22'57.32''	90°17'37.73''	-2.8'	-4.1'	1.3'
1001	3,611,945.26	322,462.35	29°22'57.22''	90°17'37.29''	-1.6'	-3.4'	1.8'
1002	3,611,967.07	322,455.38	29°22'57.15''	90°17'37.05''	-2.3'	-2.3'	EXPOSED
1003	3,611,998.09	322,441.54	29°22'57.01''	90°17'36.70''	-0.6'	-0.6'	EXPOSED
1004	3,612,030.12	322,423.65	29°22'56.83''	90°17'36.34''	0.0'	0.0'	EXPOSED
1005	3,612,071.48	322,404.46	29°22'56.64''	90°17'35.87''	-0.1'	-0.1'	EXPOSED
1006	3,612,113.47	322,391.94	29°22'56.51''	90°17'35.40''	0.3'	0.3'	EXPOSED
1007	3,612,147.54	322,378.00	29°22'56.37''	90°17'35.02''	-0.4'	-0.4'	EXPOSED
1008	3,612,171.61	322,368.31	29°22'56.27''	90°17'34.75''	-0.4'	-0.4'	EXPOSED
1009	3,612,205.22	322,355.66	29°22'56.14''	90°17'34.37''	-0.1'	-0.1'	EXPOSED
1010	3,612,231.47	322,346.10	29°22'56.05''	90°17'34.07''	0.0'	0.0'	EXPOSED
1011	3,612,260.92	322,335.44	29°22'55.94''	90°17'33.74''	-0.3'	-0.3'	EXPOSED
1012	3,612,311.57	322,315.37	29°22'55.74''	90°17'33.17''	0.2'	0.2'	EXPOSED

SURVEYED PIPELINE 29 (2 INCH NO PROFILE)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	LAT	LONG	WATER BOTTOM	TOP OF PIPE	COVER
1013	3,611,024.85	322,534.09	29°22'58.02''	90°17'47.69''	-3.5'	-3.5'	EXPOSED
1014	3,611,248.56	322,521.55	29°22'57.87''	90°17'45.16''	-3.4'	-3.4'	EXPOSED
1015	3,611,319.45	322,514.83	29°22'57.80''	90°17'44.36''	-3.1'	-3.1'	EXPOSED
1016	3,611,377.91	322,506.97	29°22'57.72''	90°17'43.70''	-2.6'	-2.6'	EXPOSED

SURVEYED PIPELINE 30 (2 INCH NO PROFILE)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	LAT	LONG	WATER BOTTOM	TOP OF PIPE	COVER
1017	3,611,112.08	322,473.04	29°22'57.40''	90°17'46.71''	-3.4'	-3.4'	EXPOSED
1018	3,611,268.01	322,479.48	29°22'57.45''	90°17'44.95''	-2.9'	-2.9'	EXPOSED
1019	3,611,297.87	322,469.46	29°22'57.35''	90°17'44.61''	-2.8'	-2.8'	EXPOSED
1020	3,611,311.47	322,477.11	29°22'57.43''	90°17'44.46''	-2.8'	-2.8'	EXPOSED
1021	3,611,397.27	322,471.20	29°22'57.36''	90°17'43.49''	-2.4'	-2.4'	EXPOSED

SURVEYED PIPELINE 31 (2 INCH NO PROFILE)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	LAT	LONG	WATER BOTTOM	TOP OF PIPE	COVER
1022	3,611,137.30	322,425.72	29°22'56.93''	90°17'46.43''	-3.6'	-3.3'	EXPOSED
1023	3,611,193.88	322,426.59	29°22'56.94''	90°17'45.79''	-3.6'	-3.2'	EXPOSED
1024	3,611,239.54	322,426.72	29°22'56.93''	90°17'45.27''	-3.5'	-3.2'	EXPOSED
1025	3,611,280.97	322,425.87	29°22'56.92''	90°17'44.81''	-3.2'	-2.9'	EXPOSED
1026	3,611,319.71	322,423.33	29°22'56.89''	90°17'44.37''	-3.2'	-2.8'	EXPOSED
1027	3,611,329.16	322,421.68	29°22'56.88''	90°17'44.26''	-3.2'	-2.8'	EXPOSED
1028	3,611,368.43	322,412.84	29°22'56.79''	90°17'43.82''	-3.1'	-2.9'	EXPOSED
1029	3,611,399.95	322,401.48	29°22'56.67''	90°17'43.46''	-2.9'	-2.5'	EXPOSED
1030	3,611,418.12	322,392.97	29°22'56.58''	90°17'43.26''	-2.5'	-2.7'	0.2'
1031	3,611,440.52	322,381.02	29°22'56.46''	90°17'43.01''	-1.2'	-3.4'	2.2'

SURVEYED PIPELINE 32 (2 INCH NO PROFILE)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	LAT	LONG	WATER BOTTOM	TOP OF PIPE	COVER
1032	3,611,308.86	322,203.34	29°22'54.72''	90°17'44.51''	-3.0'	-3.0'	EXPOSED
1033	3,611,317.68	322,211.90	29°22'54.80''	90°17'44.41''	-2.9'	-2.9'	EXPOSED
1034	3,611,340.96	322,234.49	29°22'55.02''	90°17'44.15''	-2.8'	-2.8'	EXPOSED
1035	3,611,382.43	322,277.08	29°22'55.44''	90°17'43.68''	-2.5'	-2.5'	EXPOSED
1036	3,611,422.65	322,318.49	29°22'55.85''	90°17'43.22''	-1.8'	-1.8'	EXPOSED
1037	3,611,436.42	322,332.43	29°22'55.98''	90°17'43.06''	-2.2'	-2.2'	EXPOSED

SURVEYED PIPELINE 33 (4 INCH TEXAS NO PROFILE)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	LAT	LONG	WATER BOTTOM	TOP OF PIPE	COVER
1038	3,611,339.15	322,010.61	29°22'52.81''	90°17'44.19''	-0.5'	-0.5'	EXPOSED
1039	3,611,361.31	322,094.29	29°22'53.63''	90°17'43.93''	-1.4'	-1.4'	EXPOSED
1040	3,611,387.69	322,211.32	29°22'54.79''	90°17'43.62''	-1.9'	-1.9'	EXPOSED
1041	3,611,408.73	322,296.14	29°22'55.63''	90°17'43.38''	-1.8'	-1.8'	EXPOSED
1042	3,611,439.73	322,427.96	29°22'56.93''	90°17'43.01''	-0.7'	-0.7'	EXPOSED
1043	3,611,455.79	322,493.66	29°22'57.58''	90°17'42.82''	0.8'	0.8'	EXPOSED
1044	3,611,465.42	322,491.65	29°22'57.56''	90°17'42.72''	0.0'	0.0'	EXPOSED
1045	3,611,468.83	322,504.77	29°22'57.69''	90°17'42.68''	-0.1'	-0.1'	EXPOSED
1046	3,611,478.26	322,488.56	29°22'57.53''	90°17'42.57''	-1.7'	-1.7'	EXPOSED
1047	3,611,536.08	322,476.11	29°22'57.40''	90°17'41.92''	-3.4'	-7.7'	4.3'
1048	3,611,584.20	322,466.76	29°22'57.30''	90°17'41.38''	-4.4'	3.8'	RISER
1049	3,611,584.30	322,466.72	29°22'57.30''	90°17'41.37''	-4.5'	-12.9'	8.4'
1050	3,611,598.73	322,464.34	29°22'57.27''	90°17'41.21''	4.1'	4.1'	EXPOSED

SURVEYED PIPELINE 34 (2 INCH TEXAS NO PROFILE)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	LAT	LONG	WATER BOTTOM	TOP OF PIPE	COVER
1051	3,611,431.42	321,882.12	29°22'51.53''	90°17'43.16''	-3.0'	5.1'	EXPOSED
1052	3,611,432.85	321,885.08	29°22'51.56''	90°17'43.15''	-3.0'	4.5'	RISER
1053	3,611,432.81	321,885.08	29°22'51.56''	90°17'43.15''	-3.0'	4.4'	EXPOSED
1054	3,611,433.64	321,885.88	29°22'51.56''	90°17'43.14''	0.1'	0.1'	EXPOSED
1055	3,611,448.18	321,940.20	29°22'52.10''	90°17'42.97''	-0.3'	-0.3'	EXPOSED
1056	3,611,454.77	322,061.37	29°22'53.30''	90°17'42.88''	-0.6'	-0.6'	EXPOSED
1057	3,611,456.70	322,184.99	29°22'54.52''	90°17'42.85''	-0.7'	-0.7'	EXPOSED
1058	3,611,459.57	322,280.98	29°22'55.47''	90°17'42.80''	-0.5'	-0.5'	EXPOSED
1059	3,611,466.34	322,418.49	29°22'56.83''	90°17'42.71''	-1.3'	-1.3'	EXPOSED
1060	3,611,472.55	322,487.36	29°22'57.51''	90°17'42.64''	-1.7'	-1.7'	EXPOSED
1061	3,611,478.00	322,486.27	29°22'57.50''	90°17'42.57''	-1.7'	-1.7'	EXPOSED
1062	3,611,535.26	322,475.85	29°22'57.39''	90°17'41.93''	-3.4'	-8.3'	4.9'
1063	3,611,583.47	322,466.20	29°22'57.29''	90°17'41.38''	-4.5'	-13.3'	8.8'
1064	3,611,584.15	322,466.03	29°22'57.29''	90°17'41.38''	-4.5'	3.9'	EXPOSED
1065	3,611,584.08	322,465.41	29°22'57.29''	90°17'41.38''	-4.5'	4.0'	RISER
1066	3,611,598.35	322,462.50	29°22'57.26''	90°17'41.22''	-4.5'	4.1'	EXPOSED

SURVEYED PIPELINE 35 (2 INCH NO PROFILE)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	LAT	LONG	WATER BOTTOM	TOP OF PIPE	COVER
1067	3,611,497.65	321,886.52	29°22'51.56''	90°17'42.41''	-0.2'	-1.7'	1.5'
1068	3,611,526.99	321,881.40	29°22'51.51''	90°17'42.08''	-1.6'	-1.6'	EXPOSED
1069	3,611,622.69	321,867.13	29°22'51.36''	90°17'41.00''	-1.3'	-1.3'	EXPOSED
1070	3,611,675.65	321,859.95	29°22'51.28''	90°17'40.40''	-1.3'	-1.3'	EXPOSED
1071	3,611,755.78	321,849.35	29°22'51.17''	90°17'39.50''	-1.4'	-1.4'	EXPOSED
1072	3,611,815.52	321,841.55	29°22'51.09''	90°17'38.82''	-2.1'	-2.1'	EXPOSED
1073	3,611,904.94	321,829.98	29°22'50.97''	90°17'37.82''	-2.1'	-2.1'	EXPOSED
1074	3,611,955.17	321,821.82	29°22'50.88''	90°17'37.25''	-1.9'	-1.9'	EXPOSED
1075	3,612,025.28	321,811.85	29°22'50.78''	90°17'36.46''	-2.1'	-2.1'	EXPOSED
1076	3,612,093.42	321,802.13	29°22'50.68''	90°17'35.69''	-2.1'	-2.1'	EXPOSED
1077	3,612,142.07	321,795.36	29°22'50.60''	90°17'35.14''	-1.2'	-1.2'	EXPOSED
1078	3,612,205.00	321,792.74	29°22'50.57''	90°17'34.43''	0.1'	0.1'	EXPOSED
1079	3,612,261.42	321,802.81	29°22'50.67''	90°17'33.79''	-0.9'	-0.9'	EXPOSED
1080	3,612,301.47	321,815.34	29°22'50.79''	90°17'33.34''	-1.6'	-1.6'	EXPOSED
1081	3,612,321.99	321,821.60	29°22'50.85''	90°17'33.10''	-1.1'	-1.1'	EXPOSED
1082	3,612,346.81	321,827.80	29°22'50.91''	90°17'32.82''	-0.5'	-0.5'	EXPOSED
1083	3,612,349.72	321,830.79	29°22'50.94''	90°17'32.79''	-0.5'	-0.5'	EXPOSED
1084	3,612,385.23	321,834.85	29°22'50.97''	90°17'32.39''	-0.8'	-0.8'	EXPOSED
1085	3,612,410.63	321,837.40	29°22'51.00''	90°17'32.10''	-1.1'	-3.0'	1.9'
1086	3,612,437.84	321,839.07	29°22'51.01''	90°17'31.79''	-2.0'	-5.5'	3.5'
1087	3,612,457.22	321,838.45	29°22'51.00''	90°17'31.57''	-2.8'	-6.6'	3.8'
1088	3,612,466.08	321,837.75	29°22'50.99''	90°17'31.47''	-3.2'	-7.9'	4.7'
1089	3,612,587.10	321,838.98	29°22'51.00''	90°17'30.10''	-2.0'	-5.5'	3.5'
1090	3,612,627.39	321,833.50	29°22'50.94''	90°17'29.65''	0.6'	0.6'	EXPOSED
1091	3,612,641.02	321,824.20	29°22'50.84''	90°17'29.50''	0.6'	0.6'	EXPOSED
1092	3,612,688.62	321,795.64	29°22'50.56''	90°17'28.96''	0.0'	0.0'	EXPOSED
1093	3,612,734.18	321,779.78	29°22'50.40''	90°17'28.45''	-1.4'	-1.4'	EXPOSED
1094	3,612,810.00	321,763.48	29°22'50.23''	90°17'27.59''	-1.9'	-1.9'	EXPOSED
1095	3,612,899.26	321,741.20	29°22'50.00''	90°17'26.59''	-2.5'	-2.5'	EXPOSED
1096	3,612,960.24	321,724.73	29°22'49.83''	90°17'25.90''	-2.6'	-2.6'	EXPOSED

SURVEYED PIPELINE 36 (2 INCH NO PROFILE)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	LAT	LONG	WATER BOTTOM	TOP OF PIPE	COVER
1097	3,611,530.28	321,867.61	29°22'51.37''	90°17'42.05''	-1.6'	-1.6'	EXPOSED
1098	3,611,626.54	321,842.48	29°22'51.12''	90°17'40.96''	-1.6'	-1.6'	EXPOSED
1099	3,611,724.36	321,821.26	29°22'50.90''	90°17'39.86''	-1.4'	-1.4'	EXPOSED
1100	3,611,799.82	321,802.49	29°22'50.71''	90°17'39.01''	-1.2'	-1.2'	EXPOSED
1101	3,611,845.36	321,791.93	29°22'50.60''	90°17'38.49''	-1.7'	-1.7'	EXPOSED
1102	3,611,863.03	321,774.38	29°22'50.42''	90°17'38.29''	-1.8'	-1.8'	EXPOSED
1103	3,611,924.65	321,764.34	29°22'50.32''	90°17'37.60''	-1.7'	-1.7'	EXPOSED

SURVEYED PIPELINE 37 (2 INCH NO PROFILE)

PNT NO	COORDINATES (NAD 83) X	COORDINATES (NAD 83) Y	LAT	LONG	WATER BOTTOM	TOP OF PIPE	COVER
1104	3,611,530.59	321,835.20	29°22'51.05''	90°17'42.05''	-2.0'	-2.0'	EXPOSED
1105	3,611,650.81	321,811.18	29°22'50.80''	90°17'40.69''	-1.9'	-1.9'	EXPOSED
1106	3,611,699.16	321,802.40	29°22'50.71''	90°17'40.14''	-1.2'	-1.2'	EXPOSED
1107	3,611,797.56	321,784.54	29°22'50.53''	90°17'39.03''	-1.6'	-1.6'	EXPOSED
1108	3,611,870.47	321,786.10	29°22'50.54''	90°17'38.21''	-1.3'	-1.3'	EXPOSED
1109	3,611,923.28	321,788.36	29°22'50.55''	90°17'37.61''	-1.3'	-1.3'	EXPOSED
1110	3,611,948.88	321,780.59	29°22'50.47''	90°17'37.32''	-1.6'	-1.6'	EXPOSED
1111	3,611,992.97	321,766.31	29°22'50.33''	90°17'36.83''	-1.9'	-1.9'	EXPOSED
1112	3,612,060.89	321,747.01	29°22'50.13''	90°17'36.06''	-1.8'	-1.8'	EXPOSED
1113	3,612,109.38	321,731.88	29°22'49.98''	90°17'35.51''	-2.4'	-2.4'	EXPOSED

NOTES:

WATER BOTTOMS AND TOP OF PIP

SURVEYED PIPELINE 38 (4 INCH)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
1114	3,611,431.78	321,881.42	29°22'51.52''	90°17'43.16''	-2.4'	4.5'	EXPOSED
1115	3,611,435.23	321,879.04	29°22'51.50''	90°17'43.12''	-2.4'	-2.4'	EXPOSED
1116	3,611,479.79	321,853.61	29°22'51.24''	90°17'42.62''	-2.7'	-2.4'	EXPOSED
1117	3,611,543.76	321,818.16	29°22'50.88''	90°17'41.90''	-2.7'	-4.2'	1.5'
1118	3,611,616.18	321,781.45	29°22'50.51''	90°17'41.08''	-2.7'	-3.9'	1.2'
1119	3,611,698.68	321,739.97	29°22'50.10''	90°17'40.16''	-2.4'	-4.0'	1.6'
1120	3,611,764.59	321,705.56	29°22'49.75''	90°17'39.41''	-1.3'	-4.3'	3.0'
1121	3,611,838.91	321,665.70	29°22'49.35''	90°17'38.58''	-0.9'	-4.4'	3.5'
1122	3,611,904.74	321,629.74	29°22'48.99''	90°17'37.84''	-1.5'	-4.6'	3.1'
1123	3,611,973.73	321,592.78	29°22'48.61''	90°17'37.06''	-1.5'	-4.5'	3.0'
1124	3,612,031.50	321,562.67	29°22'48.31''	90°17'36.41''	-1.5'	-4.2'	2.7'
1125	3,612,084.54	321,536.86	29°22'48.05''	90°17'35.82''	-1.6'	-3.4'	1.8'
1126	3,612,089.99	321,535.22	29°22'48.03''	90°17'35.75''	-1.6'	-3.3'	1.7'
1127	3,612,108.42	321,536.57	29°22'48.04''	90°17'35.55''	-1.1'	-3.5'	2.4'
1128	3,612,165.04	321,546.12	29°22'48.13''	90°17'34.90''	-1.4'	-4.4'	3.0'
1129	3,612,249.93	321,565.96	29°22'48.32''	90°17'33.94''	-1.6'	-4.4'	2.8'
1130	3,612,318.29	321,582.15	29°22'48.48''	90°17'33.17''	-1.4'	-2.8'	1.4'
1131	3,612,387.93	321,593.53	29°22'48.58''	90°17'32.38''	-1.4'	-3.4'	2.0'
1132	3,612,423.90	321,600.68	29°22'48.65''	90°17'31.97''	-1.6'	-4.0'	2.4'
1133	3,612,487.77	321,614.91	29°22'48.79''	90°17'31.25''	ELECTRONIC READING		
1134	3,612,553.48	321,631.97	29°22'48.95''	90°17'30.51''	-4.2'	-12.8'	8.6'
1135	3,612,603.23	321,647.59	29°22'49.10''	90°17'29.94''	-1.6'	-4.6'	3.0'
1136	3,612,641.10	321,654.62	29°22'49.17''	90°17'29.51''	-1.3'	-1.3'	EXPOSED
1137	3,612,684.24	321,659.52	29°22'49.21''	90°17'29.02''	1.0'	1.0'	EXPOSED
1138	3,612,684.72	321,658.17	29°22'49.20''	90°17'29.02''	1.1'	1.1'	EXPOSED
1139	3,612,705.80	321,658.97	29°22'49.20''	90°17'28.78''	-1.9'	-1.9'	EXPOSED
1140	3,612,759.87	321,666.71	29°22'49.27''	90°17'28.17''	-1.6'	-4.5'	2.9'
1141	3,612,987.32	321,708.49	29°22'49.67''	90°17'25.59''	-2.1'	-5.2'	3.1'
1142	3,613,143.65	321,740.97	29°22'49.98''	90°17'23.82''	-1.7'	-3.7'	2.0'
1143	3,613,174.76	321,747.14	29°22'50.03''	90°17'23.47''	-1.1'	-2.9'	1.8'
1144	3,613,174.75	321,748.08	29°22'50.04''	90°17'23.47''	-1.1'	2.6'	EXPOSED

SURVEYED PIPELINE 39 (2 INCH NO PROFILE)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
1145	3,612,488.16	322,281.74	29°22'55.39''	90°17'31.18''	-3.6'	-3.8'	0.2'
1146	3,612,503.10	322,284.06	29°22'55.41''	90°17'31.01''	-3.6'	-3.3'	EXPOSED
1147	3,612,541.05	322,287.48	29°22'55.44''	90°17'30.58''	-3.3'	-3.3'	EXPOSED
1148	3,612,598.65	322,287.77	29°22'55.44''	90°17'29.93''	-3.2'	-3.0'	EXPOSED
1149	3,612,721.17	322,284.84	29°22'55.40''	90°17'28.54''	-3.3'	-3.1'	EXPOSED
1150	3,612,798.38	322,282.38	29°22'55.37''	90°17'27.67''	-3.3'	-3.0'	EXPOSED
1151	3,612,885.37	322,278.41	29°22'55.32''	90°17'26.69''	-3.3'	-3.0'	EXPOSED
1152	3,612,935.54	322,276.41	29°22'55.29''	90°17'26.12''	-3.1'	-2.8'	EXPOSED
1153	3,612,997.85	322,274.93	29°22'55.27''	90°17'25.42''	-3.2'	-3.0'	EXPOSED
1154	3,613,035.77	322,274.67	29°22'55.27''	90°17'24.99''	-3.2'	-2.9'	EXPOSED
1155	3,613,075.15	322,279.26	29°22'55.31''	90°17'24.54''	-3.3'	-2.6'	EXPOSED
1156	3,613,120.34	322,289.91	29°22'55.41''	90°17'24.03''	-3.3'	-2.8'	EXPOSED
1157	3,613,139.08	322,294.92	29°22'55.46''	90°17'23.82''	-3.3'	-2.8'	EXPOSED

SURVEYED PIPELINE 40 (3 INCH NO RPOFILE)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
1158	3,612,474.57	322,270.51	29°22'55.28''	90°17'31.33''	-3.1'	-3.3'	0.2'
1159	3,612,500.46	322,258.39	29°22'55.16''	90°17'31.04''	-2.6'	-3.3'	0.7'
1160	3,612,562.02	322,218.57	29°22'54.76''	90°17'30.35''	-2.2'	-2.5'	0.3'
1161	3,612,633.28	322,172.62	29°22'54.29''	90°17'29.55''	0.4'	-0.5'	0.9'
1162	3,612,691.78	322,136.16	29°22'53.93''	90°17'28.89''	-0.3'	-0.3'	EXPOSED
1163	3,612,736.17	322,108.48	29°22'53.65''	90°17'28.39''	-1.0'	-1.0'	EXPOSED
1164	3,612,787.61	322,075.48	29°22'53.32''	90°17'27.81''	-0.5'	-1.4'	0.9'
1165	3,612,837.46	322,040.23	29°22'52.97''	90°17'27.25''	-1.2'	-1.3'	0.1'
1166	3,612,924.10	321,977.66	29°22'52.34''	90°17'26.28''	-1.0'	-1.1'	0.1'
1167	3,612,985.58	321,937.27	29°22'51.93''	90°17'25.59''	-1.2'	-1.1'	EXPOSED
1168	3,613,049.57	321,893.50	29°22'51.49''	90°17'24.87''	-1.3'	-1.2'	EXPOSED
1169	3,613,126.20	321,842.96	29°22'50.99''	90°17'24.01''	-2.0'	-2.4'	0.4'
1170	3,613,180.56	321,808.02	29°22'50.64''	90°17'23.40''	-1.2'	-0.9'	EXPOSED

SURVEYED PIPELINE 41 (2 INCH NO PROFILE)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
1171	3,612,646.90	321,888.20	29°22'51.48''	90°17'29.42''	-0.1'	-0.1'	EXPOSED
1172	3,612,716.98	321,945.88	29°22'52.04''	90°17'28.63''	-1.6'	-1.6'	EXPOSED
1173	3,612,757.59	321,973.20	29°22'52.31''	90°17'28.16''	-1.2'	-1.2'	EXPOSED
1174	3,612,806.95	322,008.52	29°22'52.65''	90°17'27.60''	-1.2'	-1.2'	EXPOSED
1175	3,612,860.72	322,059.57	29°22'53.15''	90°17'26.99''	-1.7'	-1.7'	EXPOSED
1176	3,612,905.82	322,100.57	29°22'53.56''	90°17'26.47''	0.6'	-2.1'	2.7'
1177	3,612,951.39	322,140.47	29°22'53.95''	90°17'25.96''	-1.6'	-1.6'	EXPOSED
1178	3,613,000.90	322,184.26	29°22'54.38''	90°17'25.39''	-1.7'	-1.7'	EXPOSED
1179	3,613,031.82	322,207.89	29°22'54.61''	90°17'25.04''	-2.0'	-2.0'	EXPOSED
1180	3,613,061.14	322,226.97	29°22'54.79''	90°17'24.71''	-1.6'	-1.6'	EXPOSED
1181	3,613,099.48	322,248.93	29°22'55.01''	90°17'24.27''	-1.4'	-1.4'	EXPOSED
1182	3,613,120.79	322,261.38	29°22'55.13''	90°17'24.03''	-1.7'	-1.7'	EXPOSED

SURVEYED PIPELINE 42 (2 INCH NO PROFILE)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
1183	3,612,652.47	321,883.76	29°22'51.43''	90°17'29.36''	-0.2'	-0.2'	EXPOSED
1184	3,612,669.59	321,895.35	29°22'51.55''	90°17'29.17''	-1.0'	-1.0'	EXPOSED
1185	3,612,722.35	321,940.73	29°22'51.99''	90°17'28.57''	-1.6'	-1.6'	EXPOSED
1186	3,612,761.19	321,969.03	29°22'52.27''	90°17'28.12''	-1.5'	-1.5'	EXPOSED
1187	3,612,783.39	321,987.44	29°22'52.45''	90°17'27.87''	-1.5'	-1.5'	EXPOSED
1188	3,612,810.00	322,009.06	29°22'52.66''	90°17'27.57''	-1.3'	-1.3'	EXPOSED
1189	3,612,859.91	322,042.52	29°22'52.99''	90°17'27.00''	-1.5'	-1.5'	EXPOSED
1190	3,612,895.60	322,066.51	29°22'53.22''	90°17'26.59''	-1.4'	-1.4'	EXPOSED
1191	3,612,942.56	322,097.90	29°22'53.53''	90°17'26.06''	-1.6'	-1.6'	EXPOSED
1192	3,612,988.79	322,128.74	29°22'53.83''	90°17'25.53''	-1.4'	-1.4'	EXPOSED
1193	3,613,018.40	322,147.18	29°22'54.01''	90°17'25.20''	-1.5'	-1.5'	EXPOSED
1194	3,613,050.82	322,169.10	29°22'54.22''	90°17'24.83''	-1.7'	-1.7'	EXPOSED
1195	3,613,079.51	322,191.46	29°22'54.44''	90°17'24.50''	-1.3'	-1.3'	EXPOSED
1196	3,613,100.99	322,211.15	29°22'54.63''	90°17'24.26''	-0.8'	-0.8'	EXPOSED
1197	3,613,116.81	322,229.52	29°22'54.81''	90°17'24.08''	0.2'	0.2'	EXPOSED
1198	3,613,132.17	322,249.87	29°22'55.01''	90°17'23.90''	-0.1'	-0.1'	EXPOSED
1199	3,613,137.49	322,257.48	29°22'55.09''	90°17'23.84''	-1.7'	-1.7'	EXPOSED

SURVEYED PIPELINE 43 (2 INCH NO PROFILE)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
1200	3,612,631.19	321,801.46	29°22'50.62''	90°17'29.61''	0.6'	-0.4'	1.0'
1201	3,612,659.41	321,805.06	29°22'50.65''	90°17'29.29''	0.2'	-0.5'	0.7'
1202	3,612,696.26	321,809.24	29°22'50.69''	90°17'28.87''	0.5'	-0.2'	0.7'
1203	3,612,731.12	321,827.90	29°22'50.87''	90°17'28.48''	-0.9'	-0.9'	EXPOSED
1204	3,612,794.54	321,865.28	29°22'51.24''	90°17'27.76''	-2.5'	-2.5'	EXPOSED
1205	3,612,863.00	321,905.43	29°22'51.63''	90°17'26.98''	-1.9'	-1.9'	EXPOSED
1206	3,612,912.53	321,933.42	29°22'51.90''	90°17'26.42''	-1.5'	-1.5'	EXPOSED
1207	3,612,975.07	321,966.14	29°22'52.22''	90°17'25.71''	-0.2'	-0.7'	0.5'
1208	3,613,068.70	322,014.76	29°22'52.69''	90°17'24.64''	-1.5'	-1.5'	EXPOSED
1209	3,613,154.50	322,061.58	29°22'53.15''	90°17'23.67''	-1.1'	-1.1'	EXPOSED

SURVEYED PIPELINE 44 (2 INCH NO PROFILE)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
1210	3,613,157.95	322,229.69	29°22'54.81''	90°17'23.61''	-1.7'	-1.7'	EXPOSED
1211	3,613,173.50	322,177.10	29°22'54.29''	90°17'23.44''	-0.3'	-0.3'	EXPOSED
1212	3,613,206.58	322,100.45	29°22'53.53''	90°17'23.08''	0.5'	-1.0'	1.5'
1213	3,613,221.47	322,067.58	29°22'53.20''	90°17'22.91''	0.1'	0.1'	EXPOSED
1214	3,613,241.16	322,038.07	29°22'52.91''	90°17'22.69''	-0.6'	-0.6'	EXPOSED
1215	3,613,271.24	322,003.05	29°22'52.56''	90°17'22.35''	-0.4'	-0.4'	EXPOSED
1216	3,613,358.41	321,968.29	29°22'52.21''	90°17'21.37''	0.0'	0.0'	EXPOSED
1217	3,613,391.18	321,953.16	29°22'52.05''	90°17'21.00''	0.9'	0.6'	0.3'
1218	3,613,400.20	321,938.10	29°22'51.90''	90°17'20.90''	1.1'	0.3'	0.8'

SURVEYED PIPELINE 45 (2 INCH NO PROFILE)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
1219	3,613,151.33	322,235.40	29°22'54.87''	90°17'23.69''	-1.5'	-1.5'	EXPOSED
1220	3,613,148.43	322,188.54	29°22'54.41''	90°17'23.72''	-1.5'	-1.5'	EXPOSED
1221	3,613,152.93	322,165.31	29°22'54.17''	90°17'23.68''	-1.2'	-1.2'	EXPOSED
1222	3,613,177.94	322,117.76	29°22'53.70''	90°17'23.40''	0.3'	-2.5'	2.8'

SURVEYED PIPELINE 46 (2 INCH NO PROFILE)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
1223	3,613,292.95	322,352.86	29°22'56.02''	90°17'22.07''	0.0'	0.0'	EXPOSED
1224	3,613,322.89	322,363.12	29°22'56.12''	90°17'21.73''	1.9'	1.9'	EXPOSED
1225	3,613,365.81	322,316.24	29°22'55.65''	90°17'21.25''	2.1'	2.1'	EXPOSED
1226	3,613,379.46	322,283.59	29°22'55.33''	90°17'21.10''	2.0'	2.0'	EXPOSED
1227	3,613,382.74	322,266.35	29°22'55.15''	90°17'21.07''	2.0'	2.0'	EXPOSED
1228	3,613,383.35	322,254.17	29°22'55.03''	90°17'21.06''	0.6'	0.6'	EXPOSED
1229	3,613,384.10	322,244.74	29°22'54.94''	90°17'21.05''	-0.7'	-0.7'	EXPOSED

SURVEYED PIPELINES SHEET 12 PIPE CLUSTERS (NO PROFILES)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
1230	3,611,437.76	322,397.58	29°22'56.63''	90°17'43.04''	0.3'	0.3'	EXPOSED
1231	3,611,440.79	322,399.30	29°22'56.65''	90°17'43.00''	-0.3'	-0.8'	0.5'
1232	3,611,458.04	322,405.53	29°22'56.71''	90°17'42.81''	0.7'	0.7'	EXPOSED
1233	3,611,465.97	322,403.22	29°22'56.68''	90°17'42.72''	-1.0'	-1.0'	EXPOSED
1234	3,611,608.79	322,342.53	29°22'56.07''	90°17'41.11''	-2.3'	-2.3'	EXPOSED
1235	3,611,597.89	322,340.74	29°22'56.05''	90°17'41.23''	-0.9'	-0.9'	EXPOSED
1236	3,611,586.92	322,330.98	29°22'55.96''	90°17'41.36''	0.3'	0.3'	EXPOSED
1237	3,611,572.27	322,318.69	29°22'55.84''	90°17'41.53''	1.0'	1.0'	EXPOSED
1238	3,611,322.31	322,056.24	29°22'53.26''	90°17'44.38''	0.6'	0.6'	EXPOSED
1239	3,611,326.93	322,070.19	29°22'53.40''	90°17'44.32''	-2.3'	-4.5'	2.2'
1240	3,611,338.85	322,029.94	29°22'53.00''	90°17'44.19''	0.9'	0.9'	EXPOSED
1241	3,611,345.38	322,049.83	29°22'53.19''	90°17'44.12''	0.2'	0.2'	EXPOSED
1242	3,612,241.17	321,986.07	29°22'52.48''	90°17'34.00''	-1.7'	-1.7'	EXPOSED
1243	3,612,248.51	321,989.79	29°22'52.52''	90°17'33.92''	-0.8'	-0.8'	EXPOSED
1244	3,612,218.91	321,906.13	29°22'51.69''	90°17'34.26''	-1.3'	-1.3'	EXPOSED
1245	3,612,223.80	321,905.34	29°22'51.69''	90°17'34.20''	-0.8'	-0.8'	EXPOSED
1246	3,612,234.02	321,891.31	29°22'51.55''	90°17'34.09''	-0.9'	-0.9'	EXPOSED
1247	3,612,236.62	321,891.61	29°22'51.55''	90°17'34.06''	-0.7'	-0.7'	EXPOSED
1248	3,612,281.99	321,841.22	29°22'51.05''	90°17'33.55''	-1.2'	-1.2'	EXPOSED
1249	3,612,220.66	321,756.65	29°22'50.21''	90°17'34.25''	0.1'	0.1'	EXPOSED
1250	3,612,208.93	321,751.42	29°22'50.16''	90°17'34.39''	0.2'	0.2'	EXPOSED
1251	3,612,220.33	321,752.95	29°22'50.18''	90°17'34.26''	0.2'	0.2'	EXPOSED
1252	3,612,209.07	321,751.22	29°22'50.16''	90°17'34.39''	0.4'	0.4'	EXPOSED
1253	3,612,224.55	321,744.87	29°22'50.10''	90°17'34.21''	-1.0'	-1.0'	EXPOSED
1254	3,612,221.62	321,745.96	29°22'50.11''	90°17'34.24''	0.0'	0.0'	EXPOSED
1255	3,612,203.03	321,734.63	29°22'50.00''	90°17'34.46''	0.6'	0.6'	EXPOSED
1256	3,612,197.78	321,734.12	29°22'49.99''	90°17'34.52''	0.3'	0.3'	EXPOSED
1257	3,612,195.78	321,712.60	29°22'49.78''	90°17'34.54''	-0.3'	-0.3'	EXPOSED
1258	3,612,189.50	321,706.75	29°22'49.72''	90°17'34.61''	0.0'	0.0'	EXPOSED
1259	3,612,160.54	321,635.72	29°22'49.02''	90°17'34.95''	-1.1'	-1.1'	EXPOSED
1260	3,612,165.53	321,642.97	29°22'49.09''	90°17'34.89''	-0.5'	-0.5'	EXPOSED
1261	3,612,149.75	321,652.57	29°22'49.19''	90°17'35.07''	-1.2'	-1.2'	EXPOSED
1262	3,612,153.97	321,660.89	29°22'49.27''	90°17'35.02''	-0.8'	-0.8'	EXPOSED
1263	3,612,601.00	321,686.98	29°22'49.49''	90°17'29.96''	-0.9'	-0.9'	EXPOSED
1264	3,612,587.46	321,739.04	29°22'50.01''	90°17'30.11''	-2.1'	-4.3'	2.2'
1265	3,612,622.15	321,749.42	29°22'50.11''	90°17'29.72''	0.4'	-3.1'	3.5'
1266	3,612,671.30	321,739.32	29°22'50.00''	90°17'29.16''	0.6'	-2.4'	3.0'
1267	3,612,728.55	321,726.38	29°22'49.87''	90°17'28.52''	-2.1'	-1.9'	EXPOSED
1268	3,612,788.58	321,710.57	29°22'49.71''	90°17'27.84''	-2.1'	-2.0'	EXPOSED
1269	3,613,080.31	321,790.79	29°22'50.47''	90°17'24.53''	-2.5'	-2.5'	EXPOSED
1270	3,612,944.01	321,801.00	29°22'50.59''	90°17'26.07''	-2.5'	-2.5'	EXPOSED
1271	3,612,816.54	321,810.28	29°22'50.69''	90°17'27.51''	-2.1'	-2.1'	EXPOSED
1272	3,612,727.78	321,816.30	29°22'50.76''	90°17'28.52''	-0.7'	-0.7'	EXPOSED
1273	3,612,671.24	321,820.72	29°22'50.81''	90°17'29.16''	-0.2'	-0.2'	EXPOSED
1274	3,612,649.24	321,822.25	29°22'50.82''	90°17'29.40''	0.0'	0.0'	EXPOSED
1275	3,613,139.77	322,636.27	29°22'58.84''	90°17'23.78''	-2.8'	-2.8'	EXPOSED
1276	3,613,158.50	322,642.51	29°22'58.90''	90°17'23.56''	-2.6'	-2.6'	EXPOSED
1277	3,613,238.26	322,680.71	29°22'59.27''	90°17'22.66''	-2.2'	-2.2'	EXPOSED
1278	3,613,287.75	322,710.18	29°22'59.56''	90°17'22.10''	-2.2'	-2.0'	EXPOSED
1279	3,613,315.53	322,676.75	29°22'59.22''	90°17'21.78''	-2.9'	-4.3'	1.4'

SURVEYED PIPELINES SHEET 12 PIPE CLUSTERS (NO PROFILES)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
1280	3,612,139.69	321,742.46	29°22'50.08''	90°17'35.17''	-0.6'	-0.6'	EXPOSED
1281	3,612,138.05	321,739.56	29°22'50.05''	90°17'35.19''	-0.8'	-0.8'	EXPOSED
1282	3,612,136.59	321,736.85	29°22'50.02''	90°17'35.21''	-0.7'	-0.7'	EXPOSED
1283	3,612,136.26	321,736.15	29°22'50.02''	90°17'35.21''	-0.6'	-0.6'	EXPOSED
1284	3,612,133.17	321,704.35	29°22'49.70''	90°17'35.25''	-0.5'	-0.5'	EXPOSED
1285	3,612,121.42	321,712.68	29°22'49.79''	90°17'35.38''	-1.1'	-1.1'	EXPOSED
1286	3,612,622.58	321,800.77	29°22'50.61''	90°17'29.71''	0.6'	-0.4'	1.0'
1287	3,612,630.79	321,800.32	29°22'50.61''	90°17'29.61''	0.6'	-0.4'	1.0'
1288	3,612,672.64	321,799.35	29°22'50.60''	90°17'29.14''	0.4'	-0.3'	0.7'
1289	3,612,717.51	321,798.10	29°22'50.58''	90°17'28.63''	-0.7'	-0.7'	EXPOSED
1290	3,612,783.15	321,796.08	29°22'50.55''	90°17'27.89''	-1.6'	-1.6'	EXPOSED
1291	3,612,877.11	321,794.47	29°22'50.53''	90°17'26.83''	-1.9'	-1.9'	EXPOSED
1292	3,612,952.80	321,794.44	29°22'50.52''	90°17'25.98''	-2.4'	-2.4'	EXPOSED
1293	3,613,079.73	321,790.17	29°22'50.47''	90°17'24.54''	-2.1'	-2.1'	EXPOSED

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

T. BAKER SMITH
A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
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REV. NO: 00 | REV. DATE: --/--/-- | REV. BY: ---

REVISION DESCRIPTION:
--

DRAWN BY: J.P.W. | APPROVED BY: J.M.B.

DATE: 05/01/2020 | JOB NO: 2019.0193

DRAWING NAME: PHASE TWO MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 19 OF 19

PHASE TWO MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGAION SURVEY
CHARTS OF SURVEYED ABANDONED PIPELINES
LOCATED NEAR CATFISH LAKE IN
SECTIONS 68,69,70,77,78, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

4/29/2020 - P:\Y-2019\2019.0193\DWG\PHASE TWO MAGNETOMETER SURVEY\PHASE TWO MAGNETOMETER SURVEY.DWG

LAFOURCHE PARISH
T19S-R12E

SEC. 69

SEC. 75

SEC. 68

SEC. 74

SEC. 76

CATFISH LAKE

CELL 4A
±101 AC.

PHASE III

PIPELINE 6 (12 INCH)
NO PROFILE

PIPELINE 7 (2 INCH)
NO PROFILE

PIPELINE 2 (UNKNOWN)
SEE SHEET 2 FOR PROFILE

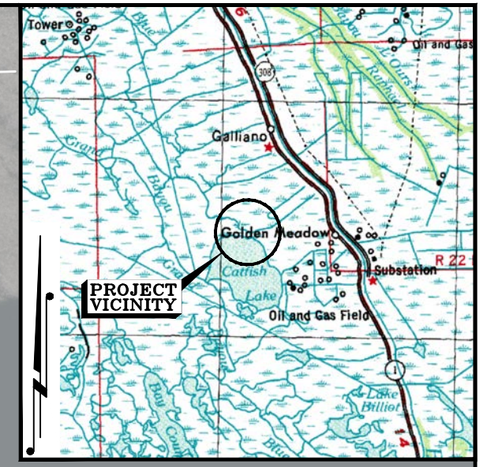
PIPELINE 1 (UNKNOWN)
SEE SHEET 2 FOR PROFILE

PIPELINE 3 (2 INCH)
SEE SHEET 3 FOR PROFILE

PIPELINE 4 (HARVEST)
SEE SHEET 3 FOR PROFILE

PIPELINE 5 (2 INCH)
SEE SHEET 3 FOR PROFILE

LOUISIANA COORDINATE SYSTEM, (SOUTH ZONE)
(1983 DATUM)



VICINITY MAP
SCALE: 1"= 4 MILES

LEGEND
- 2019 CONTAINMENT CELLS
- SECTION LINES
- (2019) SURVEY TRACKLINE
- (2019) MAGNETIC ANOMALY OVER 100 GAMMAS
- (2019) MAGNETIC ANOMALY BETWEEN 50-99 GAMMAS
- (2019) MAGNETIC ANOMALY UNDER 50 GAMMAS
- (2019) PHASE THREE MAG SURVEY BOUNDARY
- EXISTING PIPELINE AS PER T. BAKER SMITH SURVEY DATED 05/26/20 - 06/04/20

SURVEY NOTES:

1. THE FIELD SURVEY WAS PERFORMED BY CONVENTIONAL SURVEY CREW WITH TRIMBLE RTK GPS ON 05/26/20 THROUGH 06/04/20 BY T. BAKER SMITH, LLC.
2. TBS FIELD BOOK 4899 PAGES 6-12.
3. HORIZONTAL POSITIONS SHOWN HEREON ARE BASED ON THE LOUISIANA SOUTH STATE PLANE COORDINATE SYSTEM OF 1983.
4. ALL ELEVATIONS ARE REFERENCED TO NAVD88 (GEOID 12A)
5. ALL UNITS OF MEASUREMENT SHOWN HEREON ARE IN U.S. SURVEY FEET.
6. 2016 GOOGLE EARTH IMAGERY USED FOR BACKGROUND PHOTOGRAPHY.
7. HORIZONTAL AND VERTICAL CONTROL WERE ESTABLISHED THROUGH STATIC GPS OBSERVATIONS ON MONUMENT TE112-SM-01. POSITIONS WERE CORRECTED THROUGH THE NATIONAL GEODETIC SURVEYS ONLINE POSITIONING USER SERVICE.
8. THE NEAREST CONTROLLING CORS STATION IS PAUL, PAUL GALLIANO, LA.

DISCLAIMER:

WHILE REASONABLE EFFORTS ARE MADE TO LOCATE ALL PIPELINES, METAL OBJECTS OR OTHER SUBSURFACE OBSTRUCTIONS IN THE SURVEYED AREA, THE EQUIPMENT USED AND THE CHARACTERISTICS OF PIPELINES THEMSELVES MAKE IT IMPOSSIBLE TO GUARANTEE TOTAL SUCCESS. ACCORDINGLY, IT IS INCUMBENT UPON THE OWNERS, OPERATORS AND/OR CONTRACTORS CONDUCTING OPERATIONS INCLUDING DREDGING AND EXCAVATION TO CONDUCT THEIR OPERATIONS WITH EXTREME CAUTION AND RECOGNIZE THAT HAZARDS IN ADDITION TO THOSE DETECTED AND MARKED BY TBS MAY EXIST.

I CERTIFY THAT THE SURVEY DEPICTED ON THIS PLAT WAS PERFORMED UNDER MY SUPERVISION IN ACCORDANCE WITH GENERALLY ACCEPTED SURVEY PRACTICES. THIS SURVEY DOES NOT MEET THE STANDARDS OF PRACTICE FOR BOUNDARY SURVEYS AS SET FORTH BY THE LOUISIANA PROFESSIONAL ENGINEERS AND LAND SURVEYORS BOARD.

STATE OF LOUISIANA
SHANE J. KIRKLAND
License No. 5142
PROFESSIONAL
LAND SURVEYOR

06/15/2020

APPROVED: _____

SHANE J. KIRKLAND, P.L.S.
LA. LAND SURVEYOR REG. NO. 5142
P.O. BOX 2769, HOUMA, LA 70361 (985)868-1050

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEET 4 FOR MAGNETOMETER CHARTS

ALL MAGNETOMETER HITS WERE INVESTIGATED WITH A 25' RADIUS AND 50' RADIUS CIRCLE.

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A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

SCALE: 1" = 500'
500' 250' 0' 500'

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
--

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	06/12/2020	JOB NO:	2019.0193
DRAWING NAME:	PHASE TWO MAGNETOMETER SURVEY		

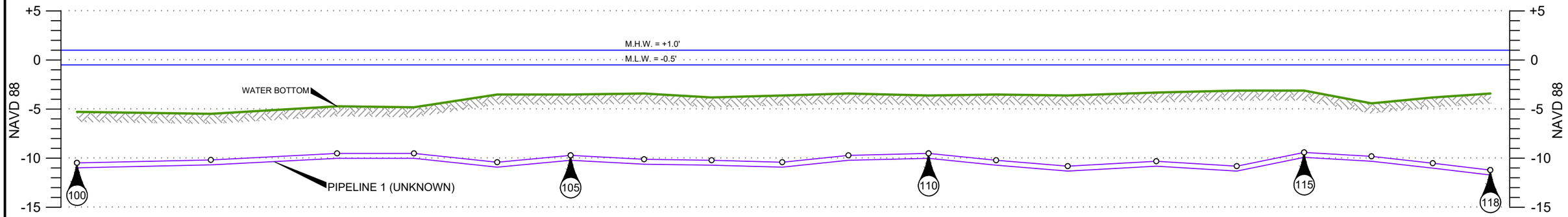
PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 1 OF 6

PHASE THREE MAGNETOMETER SURVEY

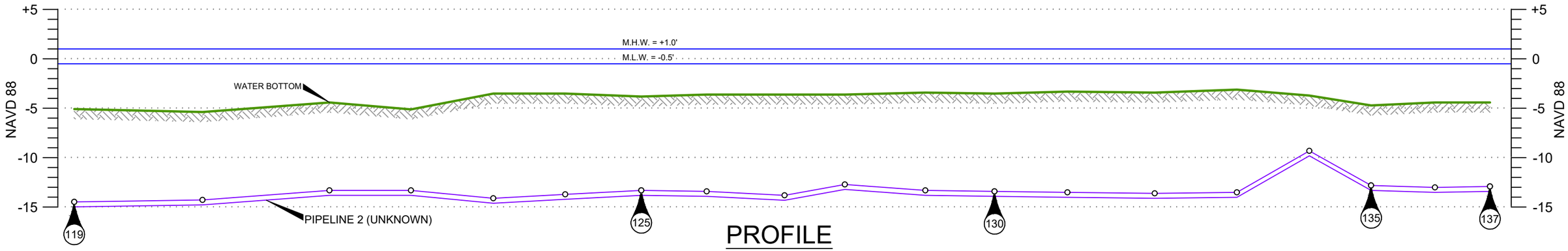
DUCKS UNLIMITED
MAGNETOMETER INVESTIGAION SURVEY
BASE MAP OF PHASE THREE SURVEY AREA
LOCATED NEAR CATFISH LAKE IN
SECTION 75, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

6/15/2020 - P:\Y-2019\2019.0193\DWG\PHASE THREE MAGNETOMETER SURVEY\PHASE THREE MAGNETOMETER SURVEY.DWG



PROFILE

LOOKING NORTH EASTERLY



PROFILE

LOOKING NORTH EASTERLY

HORIZONTAL

SCALE IN FEET

200' 100' 0' 200'

VERTICAL

SCALE IN FEET

10' 5' 0' 10'

LEGEND

1 POINT LABELS (SEE PAGE 7 FOR CHARTS)

WATER LINE

WATER BOTTOM

EXISTING PIPELINE AS PER T. BAKER SMITH SURVEY DATED 05/20/19 - 08/02/19

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEETS 5-6 FOR PIPELINE CHARTS.

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(985)868-1050 - tbsmith.com

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
--

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	05/01/2020	JOB NO:	2019.0193

DRAWING NAME: PHASE TWO MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

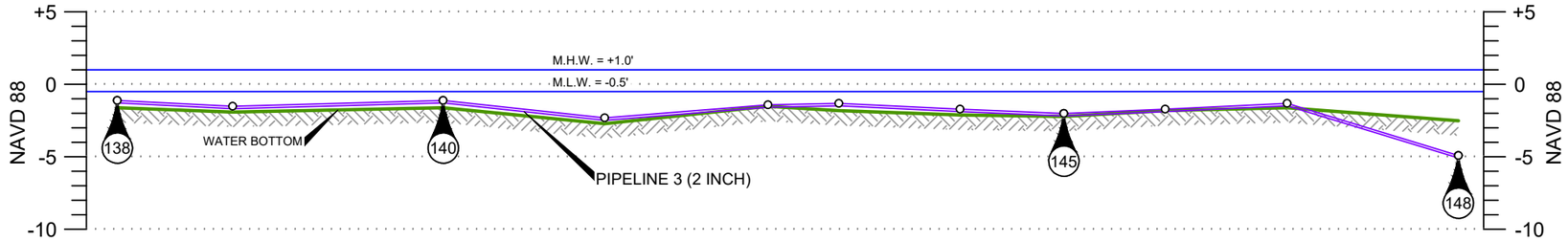
SHEET NO: 2 OF 6

PHASE TWO MAGNETOMETER SURVEY

DUCKS UNLIMITED

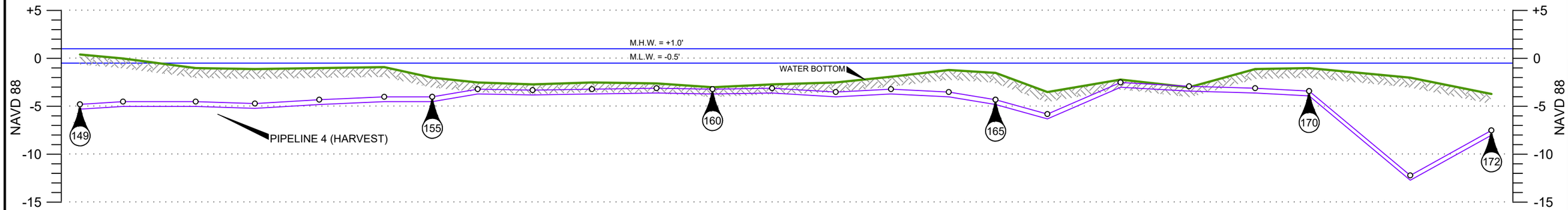
MAGNETOMETER INVESTIGAION SURVEY
PROFILES OF SURVEYED PIPELINES
LOCATED NEAR CATFISH LAKE IN
SECTIONS 75, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

6/15/2020 - P:\Y-2019\2019.0193\DWG\PHASE THREE MAGNETOMETER SURVEY\PHASE THREE MAGNETOMETER SURVEY.DWG



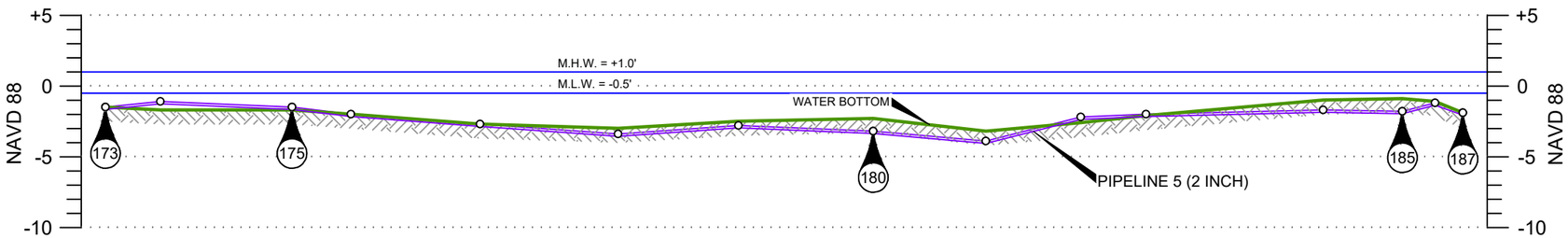
PROFILE

LOOKING NORTH EASTERLY



PROFILE

LOOKING NORTHERLY



PROFILE

LOOKING NORTH WESTERLY

HORIZONTAL

SCALE IN FEET

200' 100' 0' 200'

VERTICAL

SCALE IN FEET

10' 5' 0' 10'

LEGEND

1 POINT LABELS (SEE PAGE 7 FOR CHARTS)

WATER LINE

WATER BOTTOM

EXISTING PIPELINE AS PER T. BAKER SMITH SURVEY DATED 05/20/19 - 08/02/19

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

SEE SHEETS 5-6 FOR PIPELINE CHARTS.

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(985)868-1050 - tbsmith.com

REV. NO:	REV. DATE:	REV. BY:
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REVISION DESCRIPTION:
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DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	05/01/2020	JOB NO:	2019.0193
DRAWING NAME:	PHASE TWO MAGNETOMETER SURVEY		

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 3 OF 6

PHASE TWO MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGAION SURVEY
PROFILES OF SURVEYED PIPELINES
LOCATED NEAR CATFISH LAKE IN
SECTIONS 75, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

6/15/2020 - P:\Y-2019\2019.0193\DWG\PHASE THREE MAGNETOMETER SURVEY\PHASE THREE MAGNETOMETER SURVEY.DWG

MAGNETOMETER SURVEY						
PNT NO	COORDINATES (NAD83)		COORDINATES (NAD83)		DURATION	GAMMA
	X	Y	LAT	LONG		
1	3,599,755	322,539	29°22'59.06''	90°19'55.07''	30.7'	1584.5
2	3,599,755	322,684	29°23'00.49''	90°19'55.06''	25.1'	423.8
3	3,599,757	322,708	29°23'00.73''	90°19'55.03''	15.8'	335.5
4	3,599,756	322,762	29°23'01.27''	90°19'55.04''	13.3'	281.4
5	3,599,259	323,148	29°23'05.13''	90°20'00.62''	14.2'	38.3
6	3,599,261	322,693	29°23'00.62''	90°20'00.64''	66.3'	739.3
7	3,599,261	322,639	29°23'00.09''	90°20'00.65''	41.4'	828.6
8	3,599,265	322,571	29°22'59.42''	90°20'00.61''	24.2'	185.1
9	3,599,265	322,479	29°22'58.51''	90°20'00.62''	19.8'	49.0
10	3,598,754	322,418	29°22'57.95''	90°20'06.40''	17.2'	88.8
11	3,598,753	322,433	29°22'58.09''	90°20'06.41''	24.7'	240.9
12	3,598,755	322,748	29°23'01.21''	90°20'06.35''	62.8'	1988.5
13	3,598,755	324,219	29°23'15.77''	90°20'06.21''	45.7'	76.5
14	3,598,754	324,611	29°23'19.66''	90°20'06.18''	70.9'	712.1
15	3,598,754	324,722	29°23'20.75''	90°20'06.17''	136.9'	2021.3
16	3,598,265	322,856	29°23'02.32''	90°20'11.88''	23.1'	1144.1
17	3,598,264	322,615	29°22'59.94''	90°20'11.92''	13.6'	2691.8
18	3,598,264	322,609	29°22'59.88''	90°20'11.92''	9.1'	2799.6
19	3,598,262	322,291	29°22'56.73''	90°20'11.97''	18.3'	706.4
20	3,598,257	322,292	29°22'56.74''	90°20'12.03''	11.9'	264.0
21	3,598,256	322,608	29°22'59.87''	90°20'12.01''	13.0'	1929.2
22	3,598,256	322,618	29°22'59.97''	90°20'12.01''	11.1'	2041.9
23	3,598,256	322,855	29°23'02.32''	90°20'11.98''	40.2'	1614.6
24	3,597,754	322,958	29°23'03.38''	90°20'17.65''	82.7'	1170.7
25	3,597,756	323,204	29°23'05.81''	90°20'17.60''	44.2'	12034.7
26	3,597,756	323,214	29°23'05.91''	90°20'17.60''	20.7'	8158.9
27	3,597,553	324,948	29°23'23.09''	90°20'19.72''	35.2'	10551.3
28	3,597,551	324,918	29°23'22.80''	90°20'19.75''	21.0'	3626.9
29	3,597,548	324,894	29°23'22.56''	90°20'19.79''	14.8'	13271.9
30	3,597,547	324,886	29°23'22.48''	90°20'19.80''	7.4'	11137.7
31	3,597,553	323,446	29°23'08.23''	90°20'19.87''	34.3'	5315.7
32	3,597,557	322,998	29°23'03.79''	90°20'19.87''	24.9'	648.8
33	3,597,554	322,366	29°22'57.53''	90°20'19.97''	38.0'	142.8
34	3,597,553	322,448	29°22'58.35''	90°20'19.97''	26.0'	53.9
35	3,597,384	324,620	29°23'19.86''	90°20'21.67''	92.6'	122.1
36	3,598,743	324,632	29°23'19.86''	90°20'06.30''	50.3'	1095.6

MAGNETOMETER SURVEY						
PNT NO	COORDINATES (NAD83)		COORDINATES (NAD83)		DURATION	GAMMA
	X	Y	LAT	LONG		
37	3,598,776	324,631	29°23'19.85''	90°20'05.93''	49.9'	412.9
38	3,599,314	324,619	29°23'19.69''	90°19'59.85''	10.1'	7146.6
39	3,598,778	324,619	29°23'19.73''	90°20'05.91''	49.4'	319.5
40	3,598,745	324,619	29°23'19.74''	90°20'06.28''	53.7'	951.0
41	3,597,354	324,617	29°23'19.84''	90°20'22.01''	7.2'	1482.1
42	3,597,336	324,617	29°23'19.84''	90°20'22.21''	5.2'	6360.8
43	3,598,887	324,128	29°23'14.86''	90°20'04.73''	161.3'	716.1
44	3,599,024	323,622	29°23'09.84''	90°20'03.23''	57.5'	283.8
45	3,598,999	323,622	29°23'09.84''	90°20'03.51''	73.5'	301.7
46	3,597,408	323,621	29°23'09.97''	90°20'21.49''	16.3'	2818.6
47	3,597,646	323,127	29°23'05.06''	90°20'18.85''	31.6'	3179.2
48	3,597,667	323,127	29°23'05.06''	90°20'18.61''	32.2'	711.3
49	3,597,819	323,130	29°23'05.08''	90°20'16.90''	44.5'	3341.6
50	3,599,140	323,127	29°23'04.93''	90°20'01.97''	100.0'	244.8
51	3,599,140	323,127	29°23'04.93''	90°20'01.97''	30.5'	244.8
52	3,600,036	322,619	29°22'59.83''	90°19'51.89''	50.8'	170.6
53	3,599,514	322,620	29°22'59.88''	90°19'57.79''	40.4'	1575.1
54	3,599,340	322,618	29°22'59.88''	90°19'59.75''	117.4'	2129.0
55	3,599,260	322,621	29°22'59.91''	90°20'00.66''	85.0'	765.2
56	3,598,255	322,617	29°22'59.96''	90°20'12.02''	20.0'	1993.6
57	3,598,249	322,618	29°22'59.97''	90°20'12.09''	19.2'	2526.7
58	3,597,505	322,619	29°23'00.04''	90°20'20.50''	16.0'	55.3
59	3,597,466	322,618	29°23'00.04''	90°20'20.94''	13.7'	38.4
60	3,597,452	322,618	29°23'00.04''	90°20'21.09''	16.0'	209.9
61	3,598,464	322,342	29°22'57.22''	90°20'09.68''	28.3'	14152.2
62	3,598,476	322,342	29°22'57.22''	90°20'09.55''	41.4'	4075.7
63	3,598,622	322,336	29°22'57.15''	90°20'07.90''	59.3'	115.1
64	3,598,715	322,339	29°22'57.17''	90°20'06.85''	44.4'	80.1
65	3,599,346	322,346	29°22'57.18''	90°19'59.71''	155.8'	284.4
66	3,600,258	322,432	29°22'57.95''	90°19'49.40''	98.3'	1662.7
67	3,600,255	322,724	29°23'00.85''	90°19'49.40''	85.1'	41.8
68	3,600,270	322,430	29°22'57.93''	90°19'49.26''	81.1'	1278.9
69	3,600,267	322,482	29°22'58.45''	90°19'49.29''	56.0'	72.2
70	3,600,265	322,723	29°23'00.83''	90°19'49.29''	39.2'	94.4
71	3,600,268	325,750	29°23'30.80''	90°19'48.96''	36.9'	91.8
72	3,600,257	322,726	29°23'00.87''	90°19'49.38''	22.7'	367.7
73	3,600,254	322,430	29°22'57.94''	90°19'49.44''	32.3'	1986.2

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

T. BAKER SMITH
A CENTURY OF SOLUTIONS
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(985)868-1050 - tbsmith.com

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
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DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	06/12/2020	JOB NO:	2019.0193

DRAWING NAME: PHASE TWO MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 4 OF 6

PHASE THREE MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGAION SURVEY
CHARTS OF MAGNETOMETER SURVEY
LOCATED NEAR CATFISH LAKE IN
SECTION 75, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

6/11/2020 - P:\Y-2019\2019.0193\DWG\PHASE THREE MAGNETOMETER SURVEY\PHASE THREE MAGNETOMETER SURVEY.DWG

SURVEYED PIPELINE 1 (UNKNOWN)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
100	3,598,640.60	325,035.34	29°23'23.87''	90°20'07.42''	-5.3'	-10.5'	5.2'
101	3,598,710.48	324,772.34	29°23'21.26''	90°20'06.66''	-5.5'	-10.2'	4.7'
102	3,598,774.56	324,523.66	29°23'18.79''	90°20'05.96''	-4.7'	-9.5'	4.8'
103	3,598,814.83	324,372.79	29°23'17.29''	90°20'05.52''	-4.8'	-9.5'	4.7'
104	3,598,858.27	324,209.08	29°23'15.67''	90°20'05.04''	-3.5'	-10.4'	6.9'
105	3,598,896.36	324,064.68	29°23'14.23''	90°20'04.63''	-3.5'	-9.7'	6.2'
106	3,598,935.27	323,920.37	29°23'12.80''	90°20'04.20''	-3.4'	-10.1'	6.7'
107	3,598,970.31	323,787.55	29°23'11.49''	90°20'03.82''	-3.8'	-10.2'	6.4'
108	3,599,006.27	323,648.59	29°23'10.11''	90°20'03.43''	-3.6'	-10.4'	6.8'
109	3,599,040.12	323,518.08	29°23'08.81''	90°20'03.06''	-3.4'	-9.7'	6.3'
110	3,599,081.26	323,360.58	29°23'07.25''	90°20'02.61''	-3.6'	-9.5'	5.9'
111	3,599,116.07	323,227.60	29°23'05.93''	90°20'02.23''	-3.5'	-10.2'	6.7'
112	3,599,152.76	323,086.74	29°23'04.53''	90°20'01.83''	-3.6'	-10.8'	7.2'
113	3,599,199.16	322,912.72	29°23'02.81''	90°20'01.32''	-3.3'	-10.3'	7.0'
114	3,599,241.07	322,754.65	29°23'01.24''	90°20'00.86''	-3.1'	-10.8'	7.7'
115	3,599,275.03	322,621.87	29°22'59.92''	90°20'00.49''	-3.1'	-9.4'	6.3'
116	3,599,310.03	322,489.33	29°22'58.60''	90°20'00.11''	-4.4'	-9.8'	5.4'
117	3,599,342.14	322,368.84	29°22'57.41''	90°19'59.76''	-3.8'	-10.5'	6.7'
118	3,599,371.15	322,255.54	29°22'56.28''	90°19'59.44''	-3.4'	-11.2'	7.8'

SURVEYED PIPELINE 2 (UNKNOWN)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
119	3,598,673.75	325,036.52	29°23'23.87''	90°20'07.05''	-5.1'	-14.5'	9.4'
120	3,598,738.52	324,784.91	29°23'21.38''	90°20'06.34''	-5.4'	-14.3'	8.9'
121	3,598,804.71	324,536.59	29°23'18.91''	90°20'05.62''	-4.4'	-13.3'	8.9'
122	3,598,847.16	324,377.12	29°23'17.33''	90°20'05.15''	-5.1'	-13.3'	8.2'
123	3,598,888.71	324,215.74	29°23'15.73''	90°20'04.70''	-3.5'	-14.1'	10.6'
124	3,598,926.26	324,074.86	29°23'14.33''	90°20'04.29''	-3.5'	-13.7'	10.2'
125	3,598,967.81	323,926.82	29°23'12.86''	90°20'03.83''	-3.8'	-13.3'	9.5'
126	3,599,002.98	323,799.22	29°23'11.60''	90°20'03.45''	-3.6'	-13.4'	9.8'
127	3,599,039.05	323,645.54	29°23'10.07''	90°20'03.06''	-3.6'	-13.8'	10.2'
128	3,599,069.12	323,527.45	29°23'08.90''	90°20'02.73''	-3.6'	-12.7'	9.1'
129	3,599,112.64	323,370.28	29°23'07.34''	90°20'02.25''	-3.4'	-13.3'	9.9'
130	3,599,150.30	323,235.50	29°23'06.00''	90°20'01.84''	-3.5'	-13.4'	9.9'
131	3,599,184.80	323,092.02	29°23'04.58''	90°20'01.46''	-3.3'	-13.5'	10.2'
132	3,599,229.25	322,921.13	29°23'02.89''	90°20'00.98''	-3.4'	-13.6'	10.2'
133	3,599,276.03	322,761.30	29°23'01.30''	90°20'00.46''	-3.1'	-13.5'	10.4'
134	3,599,314.95	322,619.82	29°22'59.90''	90°20'00.04''	-3.7'	-9.3'	5.6'
135	3,599,344.38	322,498.44	29°22'58.69''	90°19'59.72''	-4.7'	-12.8'	8.1'
136	3,599,375.25	322,372.83	29°22'57.45''	90°19'59.38''	-4.4'	-13.0'	8.6'
137	3,599,402.56	322,264.99	29°22'56.38''	90°19'59.08''	-4.4'	-12.9'	8.5'

SURVEYED PIPELINE 3 (2 IN)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
138	3,597,387.92	323,641.48	29°23'10.18''	90°20'21.72''	-1.6'	-1.1'	EXPOSED
139	3,597,490.17	323,519.73	29°23'08.96''	90°20'20.57''	-1.9'	-1.5'	EXPOSED
140	3,597,681.01	323,301.14	29°23'06.78''	90°20'18.44''	-1.6'	-1.1'	EXPOSED
141	3,597,818.87	323,126.63	29°23'05.04''	90°20'16.90''	-2.7'	-2.3'	EXPOSED
142	3,597,964.24	322,954.77	29°23'03.33''	90°20'15.27''	-1.5'	-1.4'	EXPOSED
143	3,598,031.65	322,884.12	29°23'02.62''	90°20'14.52''	-1.8'	-1.3'	EXPOSED
144	3,598,139.80	322,756.93	29°23'01.35''	90°20'13.31''	-2.1'	-1.7'	EXPOSED
145	3,598,232.36	322,647.91	29°23'00.27''	90°20'12.27''	-2.2'	-2.0'	EXPOSED
146	3,598,322.85	322,541.25	29°22'59.20''	90°20'11.26''	-1.8'	-1.7'	EXPOSED
147	3,598,434.92	322,416.10	29°22'57.95''	90°20'10.00''	-1.6'	-1.3'	EXPOSED
148	3,598,590.17	322,238.70	29°22'56.19''	90°20'08.27''	-2.5'	-4.9'	2.4'

SURVEYED PIPELINE 4 (HARVEST)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
149	3,597,322.99	323,051.13	29°23'04.34''	90°20'22.51''	0.4'	-4.8'	5.2'
150	3,597,410.68	323,032.41	29°23'04.14''	90°20'21.52''	0.0'	-4.5'	4.5'
151	3,597,558.66	323,001.57	29°23'03.83''	90°20'19.85''	-1.0'	-4.5'	3.5'
152	3,597,679.35	322,975.69	29°23'03.56''	90°20'18.49''	-1.1'	-4.7'	3.6'
153	3,597,810.27	322,947.59	29°23'03.27''	90°20'17.01''	-1.0'	-4.3'	3.3'
154	3,597,942.83	322,920.20	29°23'02.99''	90°20'15.52''	-0.9'	-4.0'	3.1'
155	3,598,040.95	322,899.87	29°23'02.78''	90°20'14.41''	-2.0'	-4.0'	2.0'
156	3,598,133.60	322,880.77	29°23'02.58''	90°20'13.36''	-2.5'	-3.2'	0.7'
157	3,598,245.24	322,856.58	29°23'02.33''	90°20'12.11''	-2.7'	-3.3'	0.6'
158	3,598,366.38	322,831.17	29°23'02.07''	90°20'10.74''	-2.5'	-3.2'	0.7'
159	3,598,497.56	322,803.47	29°23'01.78''	90°20'09.26''	-2.6'	-3.1'	0.5'
160	3,598,611.77	322,779.11	29°23'01.53''	90°20'07.97''	-3.0'	-3.2'	0.2'
161	3,598,733.32	322,754.05	29°23'01.27''	90°20'06.60''	-2.7'	-3.1'	0.4'
162	3,598,862.91	322,726.45	29°23'00.99''	90°20'05.14''	-2.5'	-3.5'	1.0'
163	3,598,975.57	322,702.58	29°23'00.74''	90°20'03.87''	-1.9'	-3.2'	1.3'
164	3,599,092.73	322,676.10	29°23'00.47''	90°20'02.54''	-1.2'	-3.5'	2.3'
165	3,599,187.47	322,652.88	29°23'00.23''	90°20'01.48''	-1.5'	-4.3'	2.8'
166	3,599,293.00	322,629.55	29°22'59.99''	90°20'00.28''	-3.5'	-5.8'	2.3'
167	3,599,442.81	322,602.45	29°22'59.71''	90°19'58.59''	-2.2'	-2.5'	0.3'
168	3,599,582.62	322,574.14	29°22'59.42''	90°19'57.02''	-3.0'	-2.9'	EXPOSED
169	3,599,717.59	322,546.96	29°22'59.14''	90°19'55.49''	-1.1'	-3.1'	2.0'
170	3,599,827.71	322,524.89	29°22'58.91''	90°19'54.25''	-1.0'	-3.4'	2.4'
171	3,600,033.96	322,482.55	29°22'58.47''	90°19'51.92''	-2.0'	-12.2'	10.2'
172	3,600,198.85	322,444.63	29°22'58.09''	90°19'50.06''	-3.7'	-7.5'	3.8'

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

T. BAKER SMITH
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REVISION NO: 00 | REV. DATE: --/--/-- | REV. BY: ---

REVISION DESCRIPTION:
--

DRAWN BY: J.P.W. | APPROVED BY: J.M.B.

DATE: 06/12/2020 | JOB NO: 2019.0193

DRAWING NAME: PHASE TWO MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 5 OF 6

PHASE THREE MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGAION SURVEY
CHARTS OF SURVEYED ABANDONED PIPELINES
LOCATED NEAR CATFISH LAKE IN
SECTION 75, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

6/11/2020 - P:\Y-2019\2019.0193\DWG\PHASE THREE MAGNETOMETER SURVEY\PHASE THREE MAGNETOMETER SURVEY.DWG

SURVEYED PIPELINE 5 (2 IN)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
173	3,598,152.16	322,260.98	29°22'56.44''	90°20'13.22''	-1.5'	-1.5'	EXPOSED
174	3,598,226.23	322,284.22	29°22'56.67''	90°20'12.38''	-1.7'	-1.1'	EXPOSED
175	3,598,406.73	322,330.07	29°22'57.11''	90°20'10.33''	-1.7'	-1.5'	EXPOSED
176	3,598,487.47	322,351.95	29°22'57.32''	90°20'09.42''	-2.0'	-2.0'	EXPOSED
177	3,598,663.55	322,399.54	29°22'57.77''	90°20'07.42''	-2.7'	-2.7'	EXPOSED
178	3,598,851.82	322,451.86	29°22'58.27''	90°20'05.29''	-3.0'	-3.4'	0.4'
179	3,599,015.90	322,497.85	29°22'58.71''	90°20'03.43''	-2.5'	-2.8'	0.3'
180	3,599,199.01	322,550.87	29°22'59.22''	90°20'01.36''	-2.3'	-3.2'	0.9'
181	3,599,355.56	322,580.73	29°22'59.51''	90°19'59.58''	-3.2'	-3.9'	0.7'
182	3,599,485.12	322,615.92	29°22'59.84''	90°19'58.11''	-2.6'	-2.2'	EXPOSED
183	3,599,573.17	322,643.28	29°23'00.11''	90°19'57.12''	-2.1'	-2.0'	EXPOSED
184	3,599,818.14	322,697.35	29°23'00.62''	90°19'54.34''	-1.0'	-1.7'	0.7'
185	3,599,926.65	322,725.00	29°23'00.88''	90°19'53.11''	-0.9'	-1.8'	0.9'
186	3,599,972.00	322,733.54	29°23'00.96''	90°19'52.60''	-1.1'	-1.2'	0.1'
187	3,600,011.29	322,737.70	29°23'01.00''	90°19'52.16''	-1.9'	-1.9'	EXPOSED
SURVEYED PIPELINE 6 (12 IN NO PROFILE)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
188	3,597,631.15	325,030.42	29°23'23.90''	90°20'18.83''	N/A	1.6'	EXPOSED
189	3,597,573.14	324,949.24	29°23'23.11''	90°20'19.50''	N/A	1.6'	EXPOSED
190	3,597,531.30	324,873.17	29°23'22.36''	90°20'19.98''	N/A	1.6'	EXPOSED
191	3,597,490.50	324,809.09	29°23'21.73''	90°20'20.44''	N/A	1.8'	EXPOSED
192	3,597,442.23	324,746.77	29°23'21.11''	90°20'21.00''	N/A	1.8'	EXPOSED
193	3,597,384.96	324,678.05	29°23'20.44''	90°20'21.65''	N/A	1.7'	EXPOSED
SURVEYED PIPELINE 7 (2 IN NO PROFILE)							
PNT NO	COORDINATES (NAD 83)		COORDINATES (NAD 83)		WATER BOTTOM	TOP OF PIPE	COVER
	X	Y	LAT	LONG			
194	3,597,575.65	324,951.36	29°23'23.13''	90°20'19.47''	N/A	0.5'	EXPOSED
195	3,597,515.62	324,863.34	29°23'22.26''	90°20'20.16''	N/A	0.4'	EXPOSED
196	3,597,444.31	324,755.91	29°23'21.20''	90°20'20.97''	N/A	0.8'	EXPOSED
197	3,597,392.81	324,676.92	29°23'20.43''	90°20'21.56''	N/A	0.6'	EXPOSED

NOTES:

WATER BOTTOMS AND TOP OF PIPE ELEVATIONS ARE REFERENCED TO 0.0' NAVD88 (GEOID 12A).

T. BAKER SMITH
A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

REV. NO: 00 | REV. DATE: --/--/-- | REV. BY: ---

REVISION DESCRIPTION:
--

DRAWN BY: J.P.W. | APPROVED BY: J.M.B.

DATE: 06/12/2020 | JOB NO: 2019.0193

DRAWING NAME: PHASE TWO MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 6 OF 6

PHASE THREE MAGNETOMETER SURVEY

DUCKS UNLIMITED

MAGNETOMETER INVESTIGAION SURVEY
CHARTS OF SURVEYED ABANDONED PIPELINES
LOCATED NEAR CATFISH LAKE IN
SECTION 75, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

6/11/2020 - P:\Y-2019\2019.0193\DWG\PHASE THREE MAGNETOMETER SURVEY\PHASE THREE MAGNETOMETER SURVEY.DWG

LAFOURCHE PARISH
T19S-R12E



VICINITY MAP
SCALE: 1" = 4 MILES

SEC. 69

SEC. 75

SEC. 74

CELL 4A
±101 AC.

SEC. 68

CATFISH LAKE

PHASE IV

SEC. 76

LOUISIANA COORDINATE SYSTEM, (SOUTH ZONE)
(1983 DATUM)

LEGEND

- 2019 CONTAINMENT CELLS
- SECTION LINES
- (2019) SURVEY TRACKLINE
- (2019) MAGNETIC ANOMALY OVER 100 GAMMAS
- (2019) MAGNETIC ANOMALY BETWEEN 50-99 GAMMAS
- (2019) MAGNETIC ANOMALY UNDER 50 GAMMAS
- (2019) PHASE FOUR MAG SURVEY BOUNDARY

DISCLAIMER:

WHILE REASONABLE EFFORTS ARE MADE TO LOCATE ALL PIPELINES, METAL OBJECTS OR OTHER SUBSURFACE OBSTRUCTIONS IN THE SURVEYED AREA, THE EQUIPMENT USED AND THE CHARACTERISTICS OF PIPELINES THEMSELVES MAKE IT IMPOSSIBLE TO GUARANTEE TOTAL SUCCESS. ACCORDINGLY, IT IS INCUMBENT UPON THE OWNERS, OPERATORS AND/OR CONTRACTORS CONDUCTING OPERATIONS INCLUDING DREDGING AND EXCAVATION TO CONDUCT THEIR OPERATIONS WITH EXTREME CAUTION AND RECOGNIZE THAT HAZARDS IN ADDITION TO THOSE DETECTED AND MARKED BY TBS MAY EXIST.

I CERTIFY THAT THE SURVEY DEPICTED ON THIS PLAT WAS PERFORMED UNDER MY SUPERVISION IN ACCORDANCE WITH GENERALLY ACCEPTED SURVEY PRACTICES. THIS SURVEY DOES NOT MEET THE STANDARDS OF PRACTICE FOR BOUNDARY SURVEYS AS SET FORTH BY THE LOUISIANA PROFESSIONAL ENGINEERS AND LAND SURVEYORS BOARD.

LICENSED PROFESSIONAL LAND SURVEYOR STATE OF LOUISIANA
SHANE J. KIRKLAND
License No. 5142
PROFESSIONAL

06/15/2020

APPROVED:

SHANE J. KIRKLAND, P.L.S.
LA. LAND SURVEYOR REG. NO. 5142
P.O. BOX 2266 HOUMA, LA 70363 (985)868-1050

SURVEY NOTES:

1. THE FIELD SURVEY WAS PERFORMED BY CONVENTIONAL SURVEY CREW WITH TRIMBLE RTK GPS ON 05/12/20 BY T. BAKER SMITH, LLC.
2. HORIZONTAL POSITIONS SHOWN HEREON ARE BASED ON THE LOUISIANA SOUTH STATE PLANE COORDINATE SYSTEM OF 1983.
3. ALL ELEVATIONS ARE REFERENCED TO NAVD88 (GEOID 12A)
4. ALL UNITS OF MEASUREMENT SHOWN HEREON ARE IN U.S. SURVEY FEET.
5. 2016 GOOGLE EARTH IMAGERY USED FOR BACKGROUND PHOTOGRAPHY.
6. HORIZONTAL AND VERTICAL CONTROL WERE ESTABLISHED THROUGH STATIC GPS OBSERVATIONS ON MONUMENT TE112-SM-01. POSITIONS WERE CORRECTED THROUGH THE NATIONAL GEODETIC SURVEYS ONLINE POSITIONING USER SERVICE.
7. THE NEAREST CONTROLLING CORS STATION IS PAUL, PAUL GALLIANO, LA.

NOTES:

SEE SHEET 2 FOR MAGNETOMETER CHARTS

T. BAKER SMITH
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412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

SCALE: 1" = 500'

500' 250' 0' 500'

REV. NO:	REV. DATE:	REV. BY:
00	--/--/--	---

REVISION DESCRIPTION:
--

DRAWN BY:	J.P.W.	APPROVED BY:	J.M.B.
DATE:	06/15/2020	JOB NO:	2019.0193
DRAWING NAME:	PHASE TWO MAGNETOMETER SURVEY		

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 1 OF 2

PHASE FOUR MAGNETOMETER SURVEY

DUCKS UNLIMITED
MAGNETOMETER SURVEY
BASE MAP OF PHASE FOUR SURVEY AREA
LOCATED NEAR CATFISH LAKE IN
SECTIONS 75 & 76, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

6/15/2020 - P:\Y-2019\2019.0193\DWG\PHASE THREE MAGNETOMETER SURVEY\PHASE FOUR MAGNETOMETER SURVEY.DWG

MAGNETOMETER SURVEY						
PNT NO	COORDINATES (NAD83)		COORDINATES (NAD83)		DURATION	GAMMA
	X	Y	LAT	LONG		
74	3,600,749	325,361	29°23'26.91''	90°19'43.56''	47.9'	1295.7
75	3,600,744	323,099	29°23'04.52''	90°19'43.84''	37.8'	27.9
76	3,600,757	322,742	29°23'00.98''	90°19'43.73''	15.8'	34.0
77	3,600,749	322,325	29°22'56.85''	90°19'43.86''	55.5'	756.4
78	3,601,268	322,188	29°22'55.45''	90°19'38.01''	79.5'	103.8
79	3,601,257	322,719	29°23'00.71''	90°19'38.08''	53.1'	62.6
80	3,601,263	323,210	29°23'05.57''	90°19'37.96''	55.1'	31.6
81	3,601,274	324,749	29°23'20.80''	90°19'37.68''	40.1'	22.9
82	3,601,748	324,858	29°23'21.84''	90°19'32.31''	159.0'	186.6
83	3,601,751	322,806	29°23'01.53''	90°19'32.48''	52.4'	59.0
84	3,601,752	322,723	29°23'00.71''	90°19'32.48''	52.1'	1298.7
85	3,602,289	322,099	29°22'54.48''	90°19'26.47''	75.7'	447.5
86	3,602,268	322,747	29°23'00.90''	90°19'26.65''	91.4'	1093.5
87	3,602,265	324,253	29°23'15.81''	90°19'26.53''	89.6'	61.8
88	3,602,256	324,494	29°23'18.19''	90°19'26.61''	48.4'	28.4
89	3,602,263	325,502	29°23'28.17''	90°19'26.43''	36.6'	138.9
90	3,602,747	325,737	29°23'30.46''	90°19'20.93''	54.6'	39.2
91	3,602,749	325,682	29°23'29.91''	90°19'20.92''	64.6'	44.5
92	3,602,748	322,968	29°23'03.04''	90°19'21.20''	167.5'	650.2
93	3,602,757	322,780	29°23'01.18''	90°19'21.12''	80.0'	389.9
94	3,603,291	323,374	29°23'07.02''	90°19'15.02''	55.1'	255.8
95	3,603,290	323,436	29°23'07.63''	90°19'15.03''	67.1'	3213.2
96	3,603,280	323,509	29°23'08.35''	90°19'15.13''	44.5'	800.1
97	3,603,269	325,127	29°23'24.37''	90°19'15.10''	49.1'	122.4
98	3,603,266	325,228	29°23'25.37''	90°19'15.12''	34.2'	25.2
99	3,602,616	325,614	29°23'29.25''	90°19'22.43''	82.4'	32.2

MAGNETOMETER SURVEY						
PNT NO	COORDINATES (NAD83)		COORDINATES (NAD83)		DURATION	GAMMA
	X	Y	LAT	LONG		
100	3,602,692	325,618	29°23'29.28''	90°19'21.57''	75.0'	103.8
101	3,603,259	325,135	29°23'24.45''	90°19'15.21''	47.5'	62.7
102	3,602,213	325,137	29°23'24.56''	90°19'27.03''	79.1'	119.0
103	3,601,234	325,129	29°23'24.57''	90°19'38.10''	33.3'	207.3
104	3,601,463	324,614	29°23'19.45''	90°19'35.56''	79.5'	20.6
105	3,601,464	324,606	29°23'19.37''	90°19'35.55''	108.1'	15.1
106	3,601,675	324,606	29°23'19.35''	90°19'33.16''	33.3'	20.2
107	3,602,858	324,617	29°23'19.36''	90°19'19.79''	42.5'	55.3
108	3,602,923	324,607	29°23'19.25''	90°19'19.06''	28.2'	31.7
109	3,602,985	324,598	29°23'19.16''	90°19'18.36''	21.9'	70.8
110	3,603,613	324,140	29°23'14.57''	90°19'11.31''	71.1'	1943.5
111	3,603,507	324,130	29°23'14.48''	90°19'12.50''	56.2'	235.4
112	3,603,368	324,135	29°23'14.54''	90°19'14.08''	31.1'	22.3
113	3,603,291	324,132	29°23'14.52''	90°19'14.95''	29.6'	43.6
114	3,603,325	323,610	29°23'09.35''	90°19'14.61''	39.6'	2942.4
115	3,603,350	323,607	29°23'09.32''	90°19'14.33''	29.6'	562.2
116	3,603,279	323,137	29°23'04.67''	90°19'15.18''	32.8'	1025.2
117	3,603,258	323,133	29°23'04.63''	90°19'15.42''	53.8'	587.6
118	3,602,715	323,135	29°23'04.70''	90°19'21.56''	349.7'	33.4
119	3,602,049	323,134	29°23'04.75''	90°19'29.08''	73.6'	39.9
120	3,601,554	323,127	29°23'04.72''	90°19'34.68''	48.9'	27.3
121	3,600,220	322,629	29°22'59.91''	90°19'49.81''	26.5'	558.4
122	3,600,734	322,614	29°22'59.72''	90°19'44.00''	59.4'	45.9
123	3,600,784	322,609	29°22'59.66''	90°19'43.43''	42.0'	26.7
124	3,601,327	322,621	29°22'59.73''	90°19'37.30''	76.4'	399.7
125	3,601,966	322,612	29°22'59.59''	90°19'30.07''	28.3'	25.9

NOTES:

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REV. NO: 00 | REV. DATE: --/--/-- | REV. BY: ---

REVISION DESCRIPTION:
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DRAWN BY: J.P.W. | APPROVED BY: J.M.B.

DATE: 06/15/2020 | JOB NO: 2019.0193

DRAWING NAME: PHASE FOUR MAGNETOMETER SURVEY

PROJECTION: LOUISIANA SOUTH
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88
GRID UNITS: US SURVEY FEET

SHEET NO: 2 OF 2

PHASE FOUR MAGNETOMETER SURVEY

DUCKS UNLIMITED
MAGNETOMETER SURVEY
CHARTS OF MAGNETOMETER SURVEY
LOCATED NEAR CATFISH LAKE IN
SECTIONS 75 & 76, T19S-R12E
LAFOURCHE PARISH, LOUISIANA

6/15/2020 - P:\Y-2019\2019.0193\DWG\PHASE THREE MAGNETOMETER SURVEY\PHASE FOUR MAGNETOMETER SURVEY.DWG