

MAIL ORIGINAL TO:
 Louisiana Dept. of Natural Resources
 Attn: Ground Water Resources
 P.O. Box 94275
 Baton Rouge, LA 70804-9275
 (225) 342-8244 Ph.
 (225) 242-3505 Fax

**LOUISIANA DEPARTMENT OF NATURAL RESOURCES
 OFFICE OF CONSERVATION, ENVIRONMENTAL DIVISION
 WATER WELL REGISTRATION SHORT FORM (DNR-GW-1S)**

ONLINE ACCESS:
 1) Go to <http://sonris.com/>
 2) Click on **Data Access** in the left hand panel.
 3) Under the section labeled **Conservation**, click on **Ground Water Information**.

1. **USE OF WELL** (Check appropriate box):
 Domestic Rig Supply Monitoring
 Piezometer Heat Pump Hole Heat Pump Supply
 Recovery Relief Abandoned Pilot Hole
 Other (please specify) _____

2. **WELL OWNER:** LA Wetlands (Franklin Field) Joint Defense Group (c/o ERM)
 Phone: 504-831-6700

3. **WELL OWNER'S ADDRESS:** 3838 N Causeway Blvd., Ste 3000
 Metairie, LA 70002

4. **OWNER'S WELL NUMBER OR NAME:** MW-1
 Serial Number (Rig Supply Only): _____

5. **WELL INFORMATION:**
 Date completed: 5/28/20
 Depth of Hole: 20 ft. below ground surface
 Depth of Well: 20 ft.
 Static water level: 8.55 ft. below ground surface
 Date Measured: 6/18/2020
 Casing: 1 in. Metal Plastic Other Length: 15 ft.
 Screen: 1 in. Metal Plastic Other Slot size: .010 in.
 Length: 5 ft. Cemented from: 10 ft. to ground surface
 Using: Pump down Method Gravity Method

6. **LOCATION OF WELL:**
 Latitude: 29 ° 46 ' 45 " Longitude: 91 ° 30 ' 41 "
 Parish: St Mary
 Physical Address: Hwy 90 & Foster Avenue
 Well is Near, Franklin Approximately 0 miles from
 (Crossroads, Railroad, any Landmark, etc.) NE of the intersection of
 HWY 90 & Foster Avenue
 (Attach a map or sketch or registered plat if Rig Supply to registration)

FOR MONITOR/PIEZO/RECOVERY WELLS ONLY				
SECTION	TOWNSHIP	RANGE	ELEVATION	QUAD NO.
068	14S	09E		

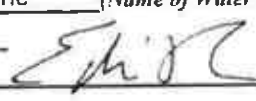
7. **REMARKS:** _____

8. **DRILLER'S LOG:**
 (Description and color of cuttings, such as shale, sand, etc. in feet below ground surface)

FROM	TO	DESCRIPTION
		See Attached

Office of Conservation
 JUN 26 2020
 Environmental Division

9. **FOR HEAT PUMP ONLY:** Avg. Depth: _____ ft. # of Holes: _____
 10. **DOES THE NEW WELL REPLACE AN EXISTING WELL?** Yes No
 If yes, has owner been informed of state regulations requiring plugging of abandoned wells? Yes No
 11. **NAME OF PERSON WHO DRILLED THE WELL:** Billy Smith

I certify that this work was done and completed in accordance with Rules and Regulations of the State of Louisiana, including Chapter XII of Title 51, Public Health – Sanitary Code, if applicable, on: 5/28/20 (Date)
 by: Walker-Hill Environmental, Inc (Name of Water Well Contractor),
 License No. WWC-574
 Authorized Signature:  Date: 6/29/20

FOR OFFICE USE ONLY	PARISH	WELL NO.	GEOLOGIC UNIT
	101	222907	112MRVAC
	LATITUDE	LONGITUDE	SECTION
	TOWNSHIP	RANGE	ELEVATION
			QUAD NO.
REGISTERED BY: TT	DATE: 6-30-20		
INSPECTED BY:	DATE:		
REMARKS:			



ERM Environmental Resources Management

Boring/Well No.: MW-1

Project: Louisiana Wetlands, et al., vs Energen, et al.

Project No.: 0494247

Location: St. Mary Parish, Louisiana

Coordinates: UTM 15R 643884.26, 3295273.08

Surface Elev.: 1.30' Boring T.D.: 20 ft. Boring Dia.: 3.25"

Date Started: 5/28/2020 Date Completed: 5/28/2020 Well Dia./Materials: 1" Pre-pack PVC

Drilling Company: Walker Hill Driller: Billy Smith

Drilling Method: Direct Push - Geoprobe 7822DT Grouting Method: Portland/Bentonite

Logged by: Shawn Wiggins, P.G. Soil Sample Method: Geoprobe tube with acetate liner

Office of Conservation

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Environmental Division

DEPTH (FEET)	LITHOLOGY (GRAPHIC LOG)	WELL CONSTRUCTION	SAMPLE RECOVERY (FEET/FEET)	FIELD EC (mS/cm)	PID (ppMV)	DESCRIPTION INTERVAL (FEET)	SOIL DESCRIPTION
0			4.0/4.0	0.13	1.5	0-4	0.0-0.7': silty CLAY: topsoil, dark olive brown (2.5Y, 3/3), medium stiff, dry, rootlets, no odor 0.7-4.0': CLAY: olive brown (2.5Y, 4/4), medium stiff, moist, minor orange and black mineral staining, no odor
				2.88	2.7		
5			2.6/4.0	2.38	0.7	4-8	4.0-6.6': CLAY: dark grayish brown (2.5Y, 4/2), medium soft to medium stiff, moist, no odor, black and orange mineral staining, large black mottle with no odor at 4.7'
				3.02	3.1		6.6-8.0': No recovery
10			3.0/4.0	2.33	2.3	8-12	8.0-11.0': CLAY: dark grayish brown (10YR, 4/2), grades to very dark gray (10YR, 3/1) at 10.4', medium soft, moist, no odor, minor orange and black mottling
				2.28	4.0		11.0-12.0': No recovery
15			2.5/4.0	1.95	1.1	12-16	12.0-14.5': CLAY: dark gray (10YR, 4/1), medium soft to medium stiff, moist, no odor, minor orange mottling
				3.79	3.3		14.5-16.0': No recovery
20			4.0/4.0	4.64	3.4	16-20	16.0-20.0': silty CLAY to clayey SILT: very dark gray (2.5Y, 3/1), soft, moist to slightly wet, no odor
				7.55	4.1		
			4.0/4.0	7.53	0.8	20-24	20.0-24.0': Clay: with silt, grades from dark gray (2.5Y, 4/1) to very dark gray (2.5Y, 3/1), soft to medium soft, moist, decreasing silt with depth, no odor
				8.51	0.8		
25			4.0/4.0	8.78	0.6	24-28	24.0-28.0': CLAY: with minor silt content, dark greenish gray (GLEYS, 4/10Y), medium soft, moist, minor shells at 25.2-25.4' and 27.5-28.0'
				9.16	0.5		
30			4.0/4.0	8.35	0.5	28-30	28.0-30.0': CLAY: with silt, dark greenish gray (GLEYS, 4/10Y), medium soft to medium stiff, dry to moist, no odor, very minor shell content

101-222907

JUN 26 2020



ERM

Environmental Resources Management

Environmental Management

Boring/Well No.:

MW-1

Project No.: 0494247

Date Drilled: 5/28/2020


DEPTH (FEET)	LITHOLOGY (GRAPHIC LOG)	WELL CONSTRUCTION	SAMPLE RECOVERY (FEET/FEET)	FIELD EC (mS/cm)	PID (PPMV)	DESCRIPTION INTERVAL (FEET)	SOIL DESCRIPTION	
30			4.0/4.0	10.69	0.3	30-32	(Cont. from page 1) 30.0-32.0': CLAY: with silt, dark greenish gray (GLEYS, 4/10Y), medium soft to medium stiff, dry to moist, no odor, very minor shell content	
			4.0/4.0	9.61	1.0	32-36	32.0-36.0': CLAY: with silt, dark gray (5Y, 4/1), medium soft, moist, no odor, minor shells throughout, orange and black mineral mottling/staining	
35				11.39	0.5			
			4.0/4.0	11.49	1.0	36-40	36.0-40.0': CLAY: with silt, olive (5Y, 5/3), medium soft, dry to moist, no odor, some mucky dark gray clay at 37.5-38.0'	
				11.71	1.0			
40				4.0/4.0	12.37	0.5	40-44	40.0-44.0': CLAY: with very minor silt content, dark gray (5Y, 4/1), medium stiff, moist, no odor, orange mottling
					10.08	0.9		
45				4.0/4.0	10.0	0.9	44-48	44.0-48.0': CLAY: gray (5Y, 5/1), stiff, moist, no odor, minor orange mottling
					11.07	0.9		
				2.6/2.0	8.62	0.7	48-50	48.0-50.0': CLAY: gray (5Y, 5/1), very stiff, moist, no odor, increasing orange mottling with depth
					7.58			
50				4.0/2.0	5.71	0.7	50-52	50.0-52.0': CLAY: gray (5Y, 5/1), very stiff, moist, no odor, some orange mottling
					5.71			
				4.0/2.0	5.77	0.1	52-54	52.0-54.0': CLAY: greenish gray (GLEYS, 5/10Y), stiff, moist, no odor
					4.58			
55				4.0/2.0	2.96	0.6	54-56	54.0-56.0': CLAY: dark gray (5Y, 4/1), very stiff, moist, no odor, orange mottling
					2.36			
				4.0/2.0	2.53	0.5	56-58	56.0-58.0': CLAY: gray (5Y, 6/1), very stiff, moist, no odor, orange mottling
			2.03					
		4.0/2.0	1.90	1.0	58-60	58.0-60.0': CLAY: olive gray (5Y, 5/2), very stiff, moist, no odor, calcium nodules at 58.3', some orange mottling		
			2.29					
60		4.0/2.0	1.88	0.4	60-62	60.0-62.0': CLAY: mottled olive (5Y, 5/3) and strong brown (7.5Y, 4/6), very stiff, moist, calcium nodules, black mineral nodules at 60.8', no odor		
			1.84					
		4.0/2.0	1.29	0.6	62-64	62.0-64.0': CLAY: light brownish gray (10YR, 6/2), very stiff, moist, no odor, -0.3' silt layer at center (brown [10YR 5/3], loose, saturated), increased silt towards bottom		
			1.19					
65		4.0/2.0	1.15	0.7	64-66	64.0-66.0': silty CLAY to CLAY: olive (5Y, 5/3), medium soft to very stiff, grades from slightly wet to moist, no odor, orange mottling		
			1.60					



ERM Environmental Resources Management

Boring/Well No.: MW-1

Project No.: 0494247 Date Drilled: 5/28/2020

DEPTH (FEET)	LITHOLOGY (GRAPHIC LOG)	WELL CONSTRUCTION	SAMPLE RECOVERY (FEET/FEET)	FIELD EC (mS/cm)	PID (PPMV)	DESCRIPTION INTERVAL (FEET)	SOIL DESCRIPTION
							(Cont. from page 2)
			4.0/2.0	2.11 1.94	1.1	66-68	66.0-67.0': CLAY: olive (5Y, 5/3), stiff, moist, no odor 67.0-68.0': Unopened and capped for geotech analysis - CLAY at top and bottom
70							
75							
80							
85							
90							
95							
100							

Office of Conservation
 JUN 26 2020
 Environmental Division

101-232902

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LOUISIANA DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CONSERVATION, ENVIRONMENTAL DIVISION
WATER WELL REGISTRATION SHORT FORM (DNR-GW-1S)

ONLINE ACCESS:
 1) Go to <http://sonris.com/>
 2) Click on **Data Access** in the left hand panel.
 3) Under the section labeled **Conservation**, click on **Ground Water Information**.

1. **USE OF WELL** (Check appropriate box):
 Domestic Rig Supply Monitoring
 Piezometer Heat Pump Hole Heat Pump Supply
 Recovery Relief Abandoned Pilot Hole
 Other (please specify) _____
2. **WELL OWNER:** LA Wetlands (Franklin Field) Joint Defense Group (c/o ERM)
 Phone: 504-831-6700
3. **WELL OWNER'S ADDRESS:** 3838 N Causeway Blvd., Ste 3000
 Metairie, LA 70002
4. **OWNER'S WELL NUMBER OR NAME:** MW-2

 Serial Number (Rig Supply Only): _____
5. **WELL INFORMATION:**
 Date completed: 6/4/20
 Depth of Hole: 20 _____ ft. below ground surface
 Depth of Well: 20 _____ ft.
 Static water level: 7.06 _____ ft. below ground surface
 Date Measured: 6/18/2020
 Casing: 1 _____ in. Metal Plastic Other Length: 15 _____ ft.
 Screen: 1 _____ in. Metal Plastic Other Slot size: .010 _____ in.
 Length: 5 _____ ft. Cemented from: 10 _____ ft. to ground surface
 Using: Pump down Method Gravity Method
6. **LOCATION OF WELL:**
 Latitude: 29 ° 46 ' 43 " Longitude: 91 ° 30 ' 47 "
 Parish: St Mary
 Physical Address: Hwy 90 & Foster Avenue
 Well is Near, Franklin Approximately 0 _____ miles from
 (Crossroads, Railroad, any Landmark, etc.) NE of the intersection of
 HWY 90 & Foster Avenue

(Attach a map or sketch or registered plat if Rig Supply to registration)

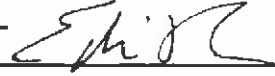
FOR MONITOR/PIEZD/RECOVERY WELLS ONLY				
SECTION	TOWNSHIP	RANGE	ELEVATION	QUAD NO.
068	14S	09E		

7. **REMARKS:** _____

8. **DRILLER'S LOG:**
 (Description and color of cuttings, such as shale, sand, etc. in feet below ground surface)

FROM	TO	DESCRIPTION
		See Attached

9. **FOR HEAT PUMP ONLY:** Avg. Depth: _____ ft. # of Holes: _____
10. **DOES THE NEW WELL REPLACE AN EXISTING WELL?** Yes No
 If yes, has owner been informed of state regulations requiring plugging of abandoned wells? Yes No
11. **NAME OF PERSON WHO DRILLED THE WELL:** Billy Smith

I certify that this work was done and completed in accordance with Rules and Regulations of the State of Louisiana, including Chapter XII of Title 51, Public Health – Sanitary Code, if applicable, on: 6/4/20 (Date)
 by: Walker-Hill Environmental, Inc (Name of Water Well Contractor),
 License No. WWC-574
 Authorized Signature:  Date: 6/29/20

FOR OFFICE USE ONLY

PARISH	WELL NO.	GEOLOGIC UNIT
101	22291Z	112MRvAc
LATITUDE	LONGITUDE	SECTION
TOWNSHIP	RANGE	ELEVATION
		QUAD NO.
REGISTERED BY: T.T.	DATE: 6-30-20	
INSPECTED BY:	DATE:	
REMARKS:		



ERM Environmental Resources Management

Boring/Well No.: MW-2

Project: Louisiana Wetlands, et al., vs Energen, et al.

Project No.: 0494247

Location: St. Mary Parish, Louisiana

Coordinates: UTM 15R 643729.14, 3295189.13

Surface Elev.: 0.85' Boring T.D.: 24 ft. Boring Dia.: 3.25"

Date Started: 6/4/2020 Date Completed: 6/4/2020 Well Dia./Materials: 1" Pre-pack PVC

Drilling Company: Walker Hill Driller: Billy Smith

Drilling Method: Direct Push - Geoprobe 7822DT Grouting Method: Portland/Bentonite

Logged by: Shawn Wiggins, P.G. Soil Sample Method: Geoprobe tube with acetate liner

DEPTH (FEET)	LITHOLOGY (GRAPHIC LOG)	WELL CONSTRUCTION	SAMPLE RECOVERY (FEET/FEET)	FIELD EC (mS/cm)	PID (PPMV)	DESCRIPTION INTERVAL (FEET)	SOIL DESCRIPTION		
0			3.2/4.0	1.18	0.6	0-4	0.0-3.2': CLAY: grades from very dark brown (10YR, 2/2) to yellowish brown (10YR, 5/4), hard to stiff, moist, some silt at bottom, no odor		
				0.59	0.6		3.2-4.0': No recovery		
5			3.0/4.0	0.66	1.4	4-8	4.0-4.9': silty CLAY: olive (5Y, 4/3), medium soft, moist, no odor		
				1.22	0.7		4.9-7.0': CLAY: dark gray (5Y, 4/1), stiff to very stiff, moist, no odor		
10			4.0/4.0	1.03	1.3	8-12	8.0-9.2': CLAY: with silt, olive gray (5Y, 4/2), stiff, moist, no odor, orange mottling		
				0.86	0.9		9.2-10.2': silty CLAY, olive gray (5Y, 4/2), soft, wet, no odor		
15			3.8/4.0	1.55	1.5	12-16	10.2-12.0': CLAY: olive gray (5Y, 4/2), grades from medium soft to very stiff, moist, no odor, minor orange mottling		
				0.87	1.2		12.0-14.0': CLAY: dark gray (10YR, 4/1), stiff, moist, no odor, orange mottling at top, large black (10YR, 2/1) spot at 12.8-13.2'		
20			4.0/4.0	0.82	1.2	16-20	14.0-14.6': clayey SILT: dark gray (10YR, 4/1), soft, slightly wet, no odor		
				1.09	1.2		14.6-15.8': CLAY: dark gray (10YR, 4/1), stiff, moist, no odor		
25			3.2/4.0	1.72	0.4	20-24	15.8-16.0': No recovery		
				1.33	0.6		16.0-17.6': silty CLAY: dark olive gray (10YR, 4/1), medium stiff, moist, no odor, increasing silt with depth		
30									17.6-19.2': clayey SILT, dark olive gray (5Y, 3/2), soft, wet, no odor
									19.2-20.0': CLAY: with silt, dark olive gray (5Y, 3/2), soft, moist, no odor
									20.0-21.7': CLAY: grades from olive gray (5Y, 4/2) to black (5Y, 2.5/1), medium stiff to stiff, moist, no odor
									21.7-23.2': silty CLAY: olive (5Y, 5/4), stiff, moist, no odor
									23.2-24.0': No recovery

Office of Conservation
JUN 26 2020
Environmental Division

101-222912

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(225) 342-8244 Ph.
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LOUISIANA DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CONSERVATION, ENVIRONMENTAL DIVISION
WATER WELL REGISTRATION SHORT FORM (DNR-GW-1S)

ONLINE ACCESS:

- 1) Go to <http://sonris.com/>
- 2) Click on **Data Access** in the left hand panel.
- 3) Under the section labeled **Conservation**, click on **Ground Water Information**.

1. USE OF WELL (Check appropriate box):

- Domestic Rig Supply Monitoring
- Piezometer Heat Pump Hole Heat Pump Supply
- Recovery Relief Abandoned Pilot Hole
- Other (please specify) _____

2. WELL OWNER: LA Wetlands (Franklin Field) Joint Defense Group (c/o ERM)
Phone: 504-831-6700

3. WELL OWNER'S ADDRESS: 3838 N Causeway Blvd., Ste 3000
Metairie, LA 70002

4. OWNER'S WELL NUMBER OR NAME: MW-3

Serial Number (Rig Supply Only): _____

5. WELL INFORMATION:

Date completed: 6/4/20
Depth of Hole: 20 ft. below ground surface
Depth of Well: 20 ft.
Static water level: 8.22 ft. below ground surface
Date Measured: 6/18/2020
Casing: 1 in. Metal Plastic Other Length: 15 ft.
Screen: 1 in. Metal Plastic Other Slot size: .010 in.
Length: 5 ft. Cemented from: 11 ft. to ground surface
Using: Pump down Method Gravity Method

6. LOCATION OF WELL:

Latitude: 29 ° 46 ' 48 " Longitude: 91 ° 30 ' 42 "
Parish: St Mary
Physical Address: Hwy 90 & Foster Avenue
Well is Near, Franklin Approximately 0 miles from
(Crossroads, Railroad, any Landmark, etc.) NE of the intersection of
HWY 90 & Foster Avenue
(Attach a map or sketch or registered plat if Rig Supply to registration)

FOR MONITOR/PIEZO/RECOVERY WELLS ONLY

SECTION	TOWNSHIP	RANGE	ELEVATION	QUAD NO.
068	14S	09E		

7. REMARKS: _____

8. DRILLER'S LOG:

(Description and color of cuttings, such as shale, sand, etc. in feet below ground surface)

FROM	TO	DESCRIPTION
		See Attached
		Office of Conservation
		JUN 26 2020
		Environmental Division

9. FOR HEAT PUMP ONLY: Avg. Depth: _____ ft. # of Holes: _____

10. DOES THE NEW WELL REPLACE AN EXISTING WELL? Yes No
If yes, has owner been informed of state regulations requiring plugging of abandoned wells? Yes No

11. NAME OF PERSON WHO DRILLED THE WELL: Billy Smith

I certify that this work was done and completed in accordance with Rules and Regulations of the State of Louisiana, including Chapter XII of Title 51, Public Health – Sanitary Code, if applicable, on: 6/4/20 (Date)

by: Walker-Hill Environmental, Inc (Name of Water Well Contractor),

License No. WWC-574

Authorized Signature: _____ *EMJ* **Date:** 6/29/20

FOR OFFICE USE ONLY

PARISH	WELL NO.	GEOLOGIC UNIT	
101	222927	112MRVAC	
LATITUDE	LONGITUDE	SECTION	
TOWNSHIP	RANGE	ELEVATION	QUAD NO.

REGISTERED BY: T.T DATE: 6-30-20
INSPECTED BY: _____ DATE: _____
REMARKS: _____



ERM Environmental Resources Management

Boring/Well No.: MW-3

Project: Louisiana Wetlands, et al., vs Energen, et al. Project No.: 0494247

Location: St. Mary Parish, Louisiana Coordinates: UTM 15R 643869.34, 3295365.83

Surface Elev.: 1.46' Boring T.D.: 24 ft. Boring Dia.: 3.25"

Date Started: 6/4/2020 Date Completed: 6/4/2020 Well Dia./Materials: 1" Pre-pack PVC

Drilling Company: Walker Hill Driller: Billy Smith

Drilling Method: Direct Push - Geoprobe 7822DT Grouting Method: Portland/Bentonite

Logged by: Shawn Wiggins, P.G. Soil Sample Method: Geoprobe tube with acetate liner

DEPTH (FEET)	LITHOLOGY (GRAPHIC LOG)	WELL CONSTRUCTION	SAMPLE RECOVERY (FEET/FEET)	FIELD EC (mS/cm)	PID (PPMV)	DESCRIPTION INTERVAL (FEET)	SOIL DESCRIPTION
0			3.6/4.0	1.44	0.9	0-4	0.0-3.6': CLAY: grades from very dark brown (10YR, 2/2) to olive (5Y, 4/3) back to very dark brown (10YR, 2/2), very stiff, moist, no odor
				1.13	0.6		3.6-4.0': No recovery
5			4.0/4.0	1.39	1.1	4-8	4.0-8.0': CLAY: very dark gray (5Y 3/1), stiff, moist, no odor, orange and black mottling, silty clay at bottom
				0.42	1.1		
10			4.0/4.0	0.50	1.4	8-12	8.0-9.5': grades from silty CLAY to SILT with clay: light olive brown (2.5Y, 5/3), moist to wet, soft, no odor
				1.75	1.2		9.5-12.0': CLAY: with silt, light olive brown (2.5Y, 5/3), grades from medium stiff to very stiff, moist, no odor, silty layer at 10.7-10.9'
15			4.0/4.0	1.21	1.8	12-16	12.0-14.4': CLAY: dark olive gray (5Y, 3/2), stiff, moist, no odor, minor orange mottling
				0.93	1.4		14.4-16.0': silty CLAY: dark olive gray (5Y, 3/2), stiff, moist, no odor
20			4.0/4.0	0.59	1.6	16-20	16.0-20.0': alternating SILT and silty CLAY: silt at 16.2-16.6', 17.1-17.7', and 18.7-20.0' and is olive gray (5Y, 4/2), medium stiff, wet, no odor, silty clay at 16.0-16.2', 16.6-17.1', and 17.7-18.7' and is olive gray (5Y, 4/2), medium soft, moist, no odor
				0.55	1.4		
25			4.0/4.0	0.72	1.9	20-24	20.0-21.9': CLAY: grades from very dark gray (2.5Y, 3/1) to olive (5Y, 5/3), stiff, moist, no odor
				0.66	1.3		21.9-24.0': silty CLAY: olive (5Y 5/3), stiff, moist, no odor
30							

Office of Conservation
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 Environmental Division

101-22092Z

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1. **USE OF WELL** (Check appropriate box):
 Domestic Rig Supply Monitoring
 Piezometer Heat Pump Hole Heat Pump Supply
 Recovery Relief Abandoned Pilot Hole
 Other (please specify) _____

2. **WELL OWNER:** LA Wetlands (Franklin Field) Joint Defense Group (c/o ERM)
 Phone: 504-831-6700

3. **WELL OWNER'S ADDRESS:** 3838 N Causeway Blvd., Ste 3000
 Metairie, LA 70002

4. **OWNER'S WELL NUMBER OR NAME:** MW-4
 Serial Number (Rig Supply Only): _____

5. **WELL INFORMATION:**
 Date completed: 6/3/20
 Depth of Hole: 36 _____ ft. below ground surface
 Depth of Well: 36 _____ ft.
 Static water level: 8.32 _____ ft. below ground surface
 Date Measured: 6/18/2020
 Casing: 1 _____ in. Metal Plastic Other Length: 26 _____ ft.
 Screen: 1 _____ in. Metal Plastic Other Slot size: .010 _____ in.
 Length: 10 _____ ft. Cemented from: 22 _____ ft. to ground surface
 Using: Pump down Method Gravity Method

6. **LOCATION OF WELL:**
 Latitude: 29 ° 46 ' 48 " Longitude: 91 ° 30 ' 35 "
 Parish: St Mary
 Physical Address: Hwy 90 & Foster Avenue
 Well is Near, Franklin _____ Approximately 0 _____ miles from
 (Crossroads, Railroad, any Landmark, etc.) NE of the intersection of
 HWY 90 & Foster Avenue
(Attach a map or sketch or registered plat if Rig Supply to registration)

FOR MONITOR/PIEZO/RECOVERY WELLS ONLY				
SECTION	TOWNSHIP	RANGE	ELEVATION	QUAD NO.
068	14S	09E		

7. **REMARKS:** _____

8. **DRILLER'S LOG:**
 (Description and color of cuttings, such as shale, sand, etc. in feet below ground surface)

FROM	TO	DESCRIPTION
		See Attached
		Office of Conservation
		JUN 26 2020
		Environmental Division

9. **FOR HEAT PUMP ONLY:** Avg. Depth: _____ ft. # of Holes: _____
 10. **DOES THE NEW WELL REPLACE AN EXISTING WELL?** Yes No
 If yes, has owner been informed of state regulations requiring plugging of abandoned wells? Yes No
 11. **NAME OF PERSON WHO DRILLED THE WELL:** Billy Smith

I certify that this work was done and completed in accordance with Rules and Regulations of the State of Louisiana, including Chapter XII of Title 51, Public Health – Sanitary Code, if applicable, on: 6/3/20 (Date) by: Walker-Hill Environmental, Inc (Name of Water Well Contractor), License No. WWC-574
 Authorized Signature: _____ Date: 6/29/20

FOR OFFICE USE ONLY

PARISH	WELL NO.	GEOLOGIC UNIT
101	222932	112MRVAC
LATITUDE	LONGITUDE	SECTION
TOWNSHIP	RANGE	ELEVATION
		QUAD NO.

REGISTERED BY: T.T. DATE: 6-30-20
 INSPECTED BY: _____ DATE: _____
 REMARKS: _____

JUN 26 2020



ERM Environmental Resources Management Environmental Division

Boring/Well No.: MVV-4

Project: Louisiana Wetlands, et al., vs Energen, et al. Project No.: 0494247
 Location: St. Mary Parish, Louisiana Coordinates: UTM 15R 644047 53. 3295358.68
 Surface Elev.: 3.35' Boring T.D.: 44 ft. Boring Dia.: 3.25"
 Date Started: 6/3/2020 Date Completed: 6/3/2020 Well Dia./Materials: 1" Pre-pack PVC
 Drilling Company: Walker Hill Driller: Billy Smith
 Drilling Method: Direct Push - Geoprobe 7822DT Grouting Method: Portland/Bentonite
 Logged by: Shawn Wiggins, P.G. Soil Sample Method: Geoprobe tube with acetate liner

DEPTH (FEET)	LITHOLOGY (GRAPHIC LOG)	WELL CONSTRUCTION	SAMPLE RECOVERY (FEET/FEET)	FIELD EC (mS/cm)	PID (PPMV)	DESCRIPTION INTERVAL (FEET)	SOIL DESCRIPTION
0							
0-0.5'			3.1/4.0	0.45	0.1	0-4	FILL: topsoil and shell hash, hard, dry, no odor
0.5-3.1'				1.53	0.1		CLAY: grades from very dark brown (10YR, 2/2) to brown (10YR, 4/3), hard to very stiff, moist, no odor
3.1-4.0'							No recovery
4-8'			4.0/4.0	1.62	0.2	4-8	CLAY: olive brown (2.5Y 4/3), stiff, moist, no odor, silty clay at 7.4-8.0'
8-12'			3.6/4.0	0.89	0.3	8-12	silty CLAY to CLAY: dark gray (2.5Y, 4/1), grades from medium soft to stiff at 10.6', moist, no odor, very minor orange mottling
11.6-12.0'				1.74	0.3		No recovery
12-16'			4.0/4.0	0.56	0.5	12-16	clayey SILT: dark gray (2.5Y, 4/1), medium soft, very slightly wet, no odor
12.8-16.0'				1.53	0.4		CLAY: grades from very dark gray (2.5Y, 3/1) to dark gray (2.5Y, 4/1) at 13.7', stiff, moist, no odor, wood fragments at 13.3-13.4'
16-20'			4.0/4.0	0.55	0.3	16-20	grades from clayey SILT to SILT: dark olive gray (5Y, 3/2), medium stiff, slightly wet to saturated, no odor
20-24'			3.5/4.0	0.65	0.6	20-24	clayey SILT: dark olive gray (5Y, 3/2), medium stiff, wet to saturated, no odor, silty clay layers at 20.3-20.8', 21.6-21.8', and 22.5-22.7'
23.5-24.0'				0.60	0.5		No recovery
24-28'			4.0/4.0	0.55	0.6	24-28	clayey SILT: dark olive gray (5Y, 3/2), medium soft, saturated, no odor
24.0-28.0'				0.54	0.9		
28-30'			4.0/4.0	0.47	0.4	28-30	clayey SILT: dark olive gray (5Y, 3/2), medium soft, saturated, no odor

101-22293Z



ERM Environmental Resources Management

Boring/Well No.: MW-4

Project No.: 0494247 Date Drilled: 6/3/2020

DEPTH (FEET)	LITHOLOGY (GRAPHIC LOG)	WELL CONSTRUCTION	SAMPLE RECOVERY (FEET/FEET)	FIELD EC (mS/cm)	PID (PPMV)	DESCRIPTION INTERVAL (FEET)	SOIL DESCRIPTION
30			4.0/4.0	0.53	0.4	30-32	(Cont. from page 1) 30.0-32.0': clayey SILT, dark olive gray (5Y, 3/2), medium soft, saturated, no odor
35			4.0/4.0	0.47	0.6	32-36	32.0-34.7': clayey SILT: dark olive gray (5Y, 3/2), loose to medium stiff, saturated to wet, no odor 34.7-36.0': SILT: with clay, dark olive gray (5Y, 3/2), medium stiff, saturated, no odor
				0.77	0.4		
40			4.0/4.0	1.05	0.7	36-40	36.0-37.3': CLAY: with silt, dark olive gray (5Y, 3/2), medium stiff, moist, no odor 37.3-40.0': clayey SILT: dark olive gray (5Y 3/2), medium stiff, wet to saturated, no odor
				0.49	0.4		
45			4.0/4.0	0.70	1.0	40-44	40.0-41.8': clayey SILT: dark olive gray (5Y, 3/2), medium stiff, wet, no odor 41.8-44.0': CLAY: with silt, olive gray (5Y, 4/2), stiff, moist, no odor
		0.86	0.5				

Office of Conservation
JUN 26 2020
Environmental Division

101-22293Z

101-22294Z

MAIL ORIGINAL TO:
Louisiana Dept. of Natural Resources
Attn: Ground Water Resources
P.O. Box 94275
Baton Rouge, LA 70804-9275
(225) 342-8244 Ph.
(225) 242-3505 Fax

LOUISIANA DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CONSERVATION, ENVIRONMENTAL DIVISION
WATER WELL REGISTRATION SHORT FORM (DNR-GW-1S)

ONLINE ACCESS:
1) Go to <http://sonris.com/>
2) Click on **Data Access** in the left hand panel.
3) Under the section labeled **Conservation**, click on **Ground Water Information**.

- 1. USE OF WELL** (Check appropriate box):
 Domestic Rig Supply Monitoring
 Piezometer Heat Pump Hole Heat Pump Supply
 Recovery Relief Abandoned Pilot Hole
 Other (please specify) _____
- 2. WELL OWNER:** LA Wetlands (Franklin Field) Joint Defense Group (c/o ERM)
Phone: 504-831-6700
- 3. WELL OWNER'S ADDRESS:** 3838 N Causeway Blvd., Ste 3000
Metairie, LA 70002
- 4. OWNER'S WELL NUMBER OR NAME:** MW-5

Serial Number (Rig Supply Only): _____
- 5. WELL INFORMATION:**
Date completed: 6/5/20 _____
Depth of Hole: 24 _____ ft. below ground surface
Depth of Well: 24 _____ ft.
Static water level: 7.08 _____ ft. below ground surface
Date Measured: 6/18/2020 _____
Casing: 1 _____ in. Metal Plastic Other Length: 14 _____ ft.
Screen: 1 _____ in. Metal Plastic Other Slot size: .010 _____ in.
Length: 10 _____ ft. Cemented from: 8.5 _____ ft. to ground surface
Using: Pump down Method Gravity Method
- 6. LOCATION OF WELL:**
Latitude: 29 ° 46 ' 39 " Longitude: 91 ° 30 ' 41 "
Parish: St Mary
Physical Address: Hwy 90 & Foster Avenue
Well is Near, Franklin _____ Approximately 0 _____ miles from
(Crossroads, Railroad, any Landmark, etc.) NE of the intersection of
HWY 90 & Foster Avenue
(Attach a map or sketch or registered plat if Rig Supply to registration)

8. DRILLER'S LOG:
(Description and color of cuttings, such as shale, sand, etc. in feet below ground surface)

FROM	TO	DESCRIPTION
		See Attached
		Office of Conservation
		JUN 26 2020
		Environmental Division

- 9. FOR HEAT PUMP ONLY:** Avg. Depth: _____ ft. # of Holes: _____
 - 10. DOES THE NEW WELL REPLACE AN EXISTING WELL?** Yes No
If yes, has owner been informed of state regulations requiring plugging of abandoned wells? Yes No
 - 11. NAME OF PERSON WHO DRILLED THE WELL:** Billy Smith
- I certify that this work was done and completed in accordance with Rules and Regulations of the State of Louisiana, including Chapter XII of Title 51, Public Health – Sanitary Code, if applicable, on: 6/5/20 _____ (Date)*
by: Walker-Hill Environmental, Inc _____ (Name of Water Well Contractor),
License No. WWC-574 _____
Authorized Signature: *[Signature]* Date: 6/29/20 _____

FOR MONITOR/PIEZO/RECOVERY WELLS ONLY

SECTION	TOWNSHIP	RANGE	ELEVATION	QUAD NO.
068	14S	09E		

FOR OFFICE USE ONLY

PARISH: 101 WELL NO.: 22294Z GEOLOGIC UNIT: 112MRVAC

LATITUDE: _____ LONGITUDE: _____ SECTION: _____

TOWNSHIP: _____ RANGE: _____ ELEVATION: _____ QUAD NO.: _____

REGISTERED BY: J.T. DATE: 6-30-20

INSPECTED BY: _____ DATE: _____

REMARKS: _____

JUN 26 2020

Environmental Division



ERM Environmental Resources Management

Boring/Well No.: MW-5

Project: Louisiana Wetlands, et al., vs Energen, et al. Project No.: 0494247

Location: St. Mary Parish, Louisiana Coordinates: UTM 15R 643893.06, 3295087.44

Surface Elev.: -0.13' Boring T.D.: 24 ft. Boring Dia.: 3.25"

Date Started: 6/5/2020 Date Completed: 6/5/2020 Well Dia./Materials: 1" Pre-pack PVC

Drilling Company: Walker Hill Driller: Billy Smith

Drilling Method: Direct Push - Geoprobe 7822DT Grouting Method: Portland/Bentonite

Logged by: Shawn Wiggins, P.G. Soil Sample Method: Geoprobe tube with acetate liner

DEPTH (FEET)	LITHOLOGY (GRAPHIC LOG)	WELL CONSTRUCTION	SAMPLE RECOVERY (FEET/FEET)	FIELD EC (mS/cm)	PID (PPMV)	DESCRIPTION INTERVAL (FEET)	SOIL DESCRIPTION		
0			3.5/4.0	0.39	0.2	0-4	0.0-3.5': CLAY: grades from very dark brown (10YR, 2/2) to brown (10YR, 4/3) with orange mottling, very stiff to medium stiff, moist, no odor		
3.5-4.0': No recovery									
5			4.0/4.0	0.73	1.4	4-8	4.0-8.0': CLAY: olive gray (5Y, 4/2), very stiff, moist, no odor, orange mottling		
8-10': No recovery									
10			4.0/4.0	1.22	1.4	8-12	8.0-12.0': CLAY: grades from dark olive gray (5Y, 3/2) to black (5Y, 2.5/1) to olive (5Y, 4/2), stiff, moist, no odor, some silt at bottom		
12-10': No recovery									
15			4.0/4.0	1.11	1.4	12-16	12.0-13.8': CLAY: olive gray (5Y, 4/2), stiff, moist, no odor, orange mottling, large black mottle at 12.6'		
13.8-14.3': clayey SILT: olive gray (5Y, 4/2), soft, very slightly wet, no odor									
16			4.0/4.0	0.94	1.3	16-20	14.3-16.0': silty CLAY: olive gray (5Y, 4/2), medium stiff, moist, no odor, orange mottling		
16.0-16.8': clayey SILT: olive gray (5Y, 4/2), medium soft, wet, no odor									
20			4.0/4.0	0.60	1.3	16-20	16.8-18.0': silty CLAY: olive gray (5Y, 4/2), medium soft, moist, no odor		
18.0-20.0': clayey SILT: olive gray (5Y, 4/2), soft, wet, no odor									
20			4.0/4.0	0.75	2.1	20-24	20.0-20.9': clayey SILT: olive gray (5Y, 4/2), soft, wet, no odor		
20.9-21.7': clayey SAND: sand is very coarse and appears to be composed of calcium nodules, medium dense, wet, no odor									
25			4.0/4.0	0.58	1.3	20-24	21.7-24.0': CLAY: very dark gray (5Y, 3/1), medium stiff, moist, no odor		
24.0-25.0': No recovery									
30									

276000-101

MAIL ORIGINAL TO:
 Louisiana Dept. of Natural Resources
 Attn: Ground Water Resources
 P.O. Box 94275
 Baton Rouge, LA 70804-9275
 (225) 342-8244 Ph.
 (225) 242-3505 Fax

LOUISIANA DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CONSERVATION, ENVIRONMENTAL DIVISION
WATER WELL REGISTRATION SHORT FORM (DNR-GW-1S)

ONLINE ACCESS:
 1) Go to <http://sonris.com/>
 2) Click on **Data Access** in the left hand panel.
 3) Under the section labeled **Conservation**, click on **Ground Water Information**.

1. USE OF WELL (Check appropriate box):

- Domestic Rig Supply Monitoring
 Piezometer Heat Pump Hole Heat Pump Supply
 Recovery Relief Abandoned Pilot Hole
 Other (please specify) _____

2. WELL OWNER: LA Wellands (Franklin Field) Joint Defense Group (c/o ERM)
 Phone: 504-831-6700

3. WELL OWNER'S ADDRESS: 3838 N Causeway Blvd., Ste 3000
 Metairie, LA 70002

4. OWNER'S WELL NUMBER OR NAME: MW-6

 Serial Number (Rig Supply Only): _____

5. WELL INFORMATION:

Date completed: 6/10/20
 Depth of Hole: 24 _____ ft. below ground surface
 Depth of Well: 24 _____ ft.
 Static water level: 8.92 _____ ft. below ground surface
 Date Measured: 6/18/2020
 Casing: 1 _____ in. Metal Plastic Other Length: 14 _____ ft.
 Screen: 1 _____ in. Metal Plastic Other Slot size: .010 _____ in.
 Length: 10 _____ ft. Cemented from: 8.5 _____ ft. to ground surface
 Using: Pump down Method Gravity Method

6. LOCATION OF WELL:

Latitude: 29 ° 46 ' 26 " Longitude: 91 ° 30 ' 37 "
 Parish: St Mary
 Physical Address: Hwy 90 & Foster Avenue
 Well is Near, Franklin _____ Approximately 0 _____ miles from
 (Crossroads, Railroad, any Landmark, etc.) SW of the intersection of
 HWY 90 & Foster Avenue
 (Attach a map or sketch or registered plat if Rig Supply to registration)

FOR MONITOR/PIEZO/RECOVERY WELLS ONLY				
SECTION	TOWNSHIP	RANGE	ELEVATION	QUAD NO.
038	15S	09E		

7. REMARKS: _____

8. DRILLER'S LOG:

(Description and color of cuttings, such as shale, sand, etc. in feet below ground surface)

FROM	TO	DESCRIPTION
		See Attached
		Office of Conservation
		JUN 26 2020
		Environmental Division

9. FOR HEAT PUMP ONLY: Avg. Depth: _____ ft. # of Holes: _____

10. DOES THE NEW WELL REPLACE AN EXISTING WELL? Yes No
 If yes, has owner been informed of state regulations requiring plugging of abandoned wells? Yes No

11. NAME OF PERSON WHO DRILLED THE WELL: Billy Smith

I certify that this work was done and completed in accordance with Rules and Regulations of the State of Louisiana, including Chapter XII of Title 51, Public Health – Sanitary Code, if applicable, on: 6/10/20 (Date) by: Walker-Hill Environmental, Inc (Name of Water Well Contractor), License No. WWC-574

Authorized Signature:  **Date:** 6/29/20

FOR OFFICE USE ONLY

PARISH	WELL NO.	GEOLOGIC UNIT
101	22295Z	112MRVAC
LATITUDE	LONGITUDE	SECTION
TOWNSHIP	RANGE	ELEVATION
		QUAD NO.

REGISTERED BY: T.T. DATE: 6-30-20
 INSPECTED BY: _____ DATE: _____
 REMARKS: _____

JUN 26 2020



ERM Environmental Resources Management

Environmental Division

Well No.: MW-6

Project: Louisiana Wetlands, et al., vs Energen, et al. Project No.: 0494247
 Location: St. Mary Parish, Louisiana Coordinates: UTM 15R 644003.16, 3294681.61
 Surface Elev.: -1.32' Boring T.D.: 28 ft. Boring Dia.: 3.25"
 Date Started: 6/10/2020 Date Completed: 6/10/2020 Well Dia./Materials: 1" Pre-pack PVC
 Drilling Company: Walker Hill Driller: Billy Smith
 Drilling Method: Direct Push - Geoprobe 7822DT Grouting Method: Portland/Bentonite
 Logged by: Shawn Wiggins, P.G. Soil Sample Method: Geoprobe tube with acetate liner

DEPTH (FEET)	LITHOLOGY (GRAPHIC LOG)	WELL CONSTRUCTION	SAMPLE RECOVERY (FEET/FEET)	FIELD EC (mS/cm)	PID (PPMV)	DESCRIPTION INTERVAL (FEET)	SOIL DESCRIPTION
0	[Diagonal hatching pattern]	[Well casing diagram]	3.6/4.0	0.75	0.3	0-4	0.0-1.0': silty CLAY: topsoil, very dark brown (10YR, 2/2), soft to stiff, moist, no odor, abundant rootlets
				1.17	0.2		1.0-3.6': CLAY: olive (5Y, 4/3), very stiff to hard, moist to dry, friable, forms hard angular pieces. no odor, orange mottling
5	[Diagonal hatching pattern]	[Well casing diagram]	3.3/4.0	1.29	0.2	4-8	4.0-7.3': CLAY: dark olive brown (2.5Y, 3/3), very stiff, moist, minor silt content at top, orange mottling, no odor
				1.94	0.1		7.3-8.0': No recovery
10	[Diagonal hatching pattern]	[Well casing diagram]	3.3/4.0	1.88	0.2	8-12	8.0-9.5': CLAY: very dark grayish brown (2.5Y, 3/2), stiff, moist, no odor
				0.73	0.2		9.5-10.4': silty CLAY: olive (5Y, 4/4), medium stiff, moist, no odor
15	[Diagonal hatching pattern]	[Well casing diagram]	4.0/4.0	0.77	0.2	12-16	10.4-11.3': clayey SILT, olive (5Y, 4/3), medium stiff, slightly wet to wet, no odor
				0.81	0.1		11.3-12.0': No recovery
20	[Diagonal hatching pattern]	[Well casing diagram]	4.0/4.0	1.03	0.2	16-20	12.0-16.0': SILT: with clay, grades from olive (5Y, 4/4) to dark olive gray (5Y, 3/2), medium stiff, saturated. no odor, silty clay layer at 13.0-13.1'
				0.88	0.2		16.0-20.0': SILT: with clay, dark olive gray (5Y, 3/2), medium stiff, saturated, no odor, clayey silt at 19.3-19.6'
25	[Diagonal hatching pattern]	[Well casing diagram]	4.0/4.0	1.20	0.2	20-24	20.0-24.0': SILT: with clay, dark olive gray (5Y, 3/2), medium soft, saturated, no odor, clayey silt layers at 21.4-21.6' and 22.4-23.0'
				1.20	0.3		
30	[Diagonal hatching pattern]	[Well casing diagram]	4.0/4.0	1.17	0.3	24-28	24.0-25.3': SILT: with clay, dark olive gray (5Y, 3/3), medium soft, saturated, no odor, possible flow in
				1.14	0.2		25.3-28.0': CLAY: with silt, very dark gray (5Y, 3/1), moist, medium stiff, no odor

101-222952

MAIL ORIGINAL TO:
 Louisiana Dept. of Natural Resources
 Attn: Ground Water Resources
 P.O. Box 94275
 Baton Rouge, LA 70804-9275
 (225) 342-8244 Ph.
 (225) 242-3505 Fax

LOUISIANA DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CONSERVATION, ENVIRONMENTAL DIVISION
WATER WELL REGISTRATION SHORT FORM (DNR-GW-1S)

ONLINE ACCESS:
 1) Go to <http://sonris.com/>
 2) Click on **Data Access** in the left hand panel.
 3) Under the section labeled **Conservation**, click on **Ground Water Information**.

1. **USE OF WELL** (Check appropriate box):
 Domestic Rig Supply Monitoring
 Piezometer Heat Pump Hole Heat Pump Supply
 Recovery Relief Abandoned Pilot Hole
 Other (please specify) _____

2. **WELL OWNER:** LA Wetlands (Franklin Field) Joint Defense Group (c/o ERM)
 Phone: 504-831-6700

3. **WELL OWNER'S ADDRESS:** 3838 N Causeway Blvd., Ste 3000
 Metairie, LA 70002

4. **OWNER'S WELL NUMBER OR NAME:** MW-7
 Serial Number (Rig Supply Only): _____

5. **WELL INFORMATION:**
 Date completed: 6/11/20
 Depth of Hole: 24 ft. below ground surface
 Depth of Well: 24 ft.
 Static water level: 7.60 ft. below ground surface
 Date Measured: 6/18/2020
 Casing: 1 in. Metal Plastic Other Length: 14 ft.
 Screen: 1 in. Metal Plastic Other Slot size: .010 in.
 Length: 10 ft. Cemented from: 9.5 ft. to ground surface
 Using: Pump down Method Gravity Method

6. **LOCATION OF WELL:**
 Latitude: 29 ° 46 ' 23 " Longitude: 91 ° 30 ' 44 "
 Parish: St Mary
 Physical Address: Hwy 90 & Foster Avenue
 Well is Near, Franklin Approximately 0 miles from
 (Crossroads, Railroad, any Landmark, etc.) SW of the intersection of
 HWY 90 & Foster Avenue
 (Attach a map or sketch or registered plat if Rig Supply to registration)

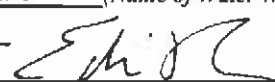
FOR MONITOR/PIEZO/RECOVERY WELLS ONLY				
SECTION	TOWNSHIP	RANGE	ELEVATION	QUAD NO.
038	155	09E		

7. **REMARKS:** _____

8. **DRILLER'S LOG:**
 (Description and color of cuttings, such as shale, sand, etc. in feet below ground surface)

FROM	TO	DESCRIPTION
		See Attached
		Office of Conservation
		JUN 26 2020
		Environmental Division

9. **FOR HEAT PUMP ONLY:** Avg. Depth: _____ ft. # of Holes: _____
 10. **DOES THE NEW WELL REPLACE AN EXISTING WELL?** Yes No
 If yes, has owner been informed of state regulations requiring plugging of abandoned wells? Yes No
 11. **NAME OF PERSON WHO DRILLED THE WELL:** Billy Smith

I certify that this work was done and completed in accordance with Rules and Regulations of the State of Louisiana, including Chapter XII of Title 51, Public Health – Sanitary Code, if applicable, on: 6/11/20 (Date) by: Walker-Hill Environmental, Inc (Name of Water Well Contractor), License No. WWC-574
Authorized Signature:  **Date:** 6/29/20

FOR OFFICE USE ONLY

PARISH	WELL NO.	GEOLOGIC UNIT
101	222962	112MRVAC
LATITUDE	LONGITUDE	SECTION
TOWNSHIP	RANGE	ELEVATION
		QUAD NO.

REGISTERED BY: T-T DATE: 6-30-20
 INSPECTED BY: _____ DATE: _____
 REMARKS: _____



ERM Environmental Resources Management

Boring/Well No.: MW-7

Project: Louisiana Wetlands, et al., vs Energen, et al.

Project No.: 0494247

Location: St. Mary Parish, Louisiana

Coordinates: UTM 15R 643801.73, 3294582.96

Surface Elev.: -1.66' Boring T.D.: 24 ft. Boring Dia.: 3.25"

Date Started: 6/11/2020 Date Completed: 6/11/2020 Well Dia./Materials: 1" Pre-pack PVC

Drilling Company: Walker Hill Driller: Billy Smith

Drilling Method: Direct Push - Geoprobe 7822DT Grouting Method: Portland/Bentonite

Logged by: Shawn Wiggins, P.G. Soil Sample Method: Geoprobe tube with acetate liner

DEPTH (FEET)	LITHOLOGY (GRAPHIC LOG)	WELL CONSTRUCTION	SAMPLE RECOVERY (FEET/FEET)	FIELD EC (mS/cm)	PID (PPMV)	DESCRIPTION INTERVAL (FEET)	SOIL DESCRIPTION		
0			3.2/4.0	1.16	0.1	0-4	0.0-0.5': silty CLAY: topsoil, very dark gray (10YR, 2/2), soft to very stiff, moist, no odor, rootlets		
				1.12	0.2		0.5-3.2': CLAY: dark olive gray (5Y, 3/2), very stiff, moist, orange and black mottling, no odor		
							3.2-4.0': No recovery		
5			2.8/4.0	1.58	0.2	4-8	4.0-6.8': CLAY: olive (5Y, 4/3), moist, very stiff, no odor, orange mottling		
				1.89	0.3		6.8-8.0': No recovery		
10			4.0/4.0	2.11	0.2	8-12	8.0-12.0': CLAY: grades from olive (5Y, 4/3) to very dark gray (5Y, 3/1), very stiff to stiff, moist, orange mottling, no odor		
				2.55	0.3				
15			4.0/4.0	1.90	0.3	12-16	12.0-13.7': CLAY: grades from black (5Y, 2.5/1) to dark olive gray (5Y, 3/2), stiff, moist, no odor		
				1.12	0.2		13.7-16.0': clayey SILT: olive (5Y, 4/3), medium soft, very slightly wet, no odor		
20			4.0/4.0	1.19	0.2	16-20	16.0-20.0': clayey SILT: olive (5Y, 4/3), medium soft, slightly wet to wet, no odor, silty clay layers at 16.5-16.6', 17.5-18.5', 19.2-19.3', and 19.8-20.0'		
				1.38	0.3				
25			4.0/4.0	1.38	0.3	20-24	20.0-24.0': CLAY: grades from dark olive gray (5Y, 3/2) to black (5Y, 2.5/1) to dark gray (5Y, 4/1), medium stiff, moist, slightly wet silty clay layers at 20.5-20.7' and 20.8-21.1', abundant small calcium nodules at 23.0-24.0'		
				1.09	0.2				
30			<p>Office of Conservation</p> <p>JUN 26 2020</p> <p>Environmental Division</p>						

101-222967

101-22297Z

MAIL ORIGINAL TO:
Louisiana Dept. of Natural Resources
Attn: Ground Water Resources
P.O. Box 94275
Baton Rouge, LA 70804-9275
(225) 342-8244 Ph.
(225) 242-3505 Fax

LOUISIANA DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CONSERVATION, ENVIRONMENTAL DIVISION
WATER WELL REGISTRATION SHORT FORM (DNR-GW-1S)

ONLINE ACCESS:
1) Go to <http://sonris.com/>
2) Click on **Data Access** in the left hand panel.
3) Under the section labeled **Conservation**, click on **Ground Water Information**.

1. **USE OF WELL** (Check appropriate box):
 Domestic Rig Supply Monitoring
 Piezometer Heat Pump Hole Heat Pump Supply
 Recovery Relief Abandoned Pilot Hole
 Other (please specify) _____
2. **WELL OWNER:** LA Wetlands (Franklin Field) Joint Defense Group (c/o ERM)
 Phone: 504-831-6700
3. **WELL OWNER'S ADDRESS:** 3838 N Causeway Blvd., Ste 3000
 Metairie, LA 70002
4. **OWNER'S WELL NUMBER OR NAME:** MW-8
 Serial Number (Rig Supply Only): _____
5. **WELL INFORMATION:**
 Date completed: 6/16/20_____
 Depth of Hole: 20 _____ ft. below ground surface
 Depth of Well: 20 _____ ft.
 Static water level: 8.75 _____ ft. below ground surface
 Date Measured: 6/18/2020
 Casing: 1 _____ in. Metal Plastic Other Length: 15 _____ ft.
 Screen: 1 _____ in. Metal Plastic Other Slot size: .010 _____ in.
 Length: 10 _____ ft. Cemented from: 9 _____ ft. to ground surface
 Using: Pump down Method Gravity Method
6. **LOCATION OF WELL:**
 Latitude: 29 ° 46 ' 20 " Longitude: 91 ° 30 ' 39 "
 Parish: St Mary
 Physical Address: Hwy 90 & Foster Avenue
 Well is Near, Franklin _____ Approximately 0 _____ miles from
 (Crossroads, Railroad, any Landmark, etc.) SW of the intersection of
 HWY 90 & Foster Avenue
 (Attach a map or sketch or registered plot if Rig Supply to registration)

FOR MONITOR/PIEZO/RECOVERY WELLS ONLY

SECTION	TOWNSHIP	RANGE	ELEVATION	QUAD NO.
038	15S	09E		

7. **REMARKS:** _____

8. **DRILLER'S LOG:**
 (Description and color of cuttings, such as shale, sand, etc. in feet below ground surface)

FROM	TO	DESCRIPTION
		See Attached

Office of Conservation
JUN 26 2020
Environmental Division

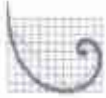
9. **FOR HEAT PUMP ONLY:** Avg. Depth: _____ ft. # of Holes: _____
10. **DOES THE NEW WELL REPLACE AN EXISTING WELL?** Yes No
 If yes, has owner been informed of state regulations requiring plugging of abandoned wells? Yes No
11. **NAME OF PERSON WHO DRILLED THE WELL:** Billy Smith

I certify that this work was done and completed in accordance with Rules and Regulations of the State of Louisiana, including Chapter XII of Title 51, Public Health – Sanitary Code, if applicable, on: 6/16/20 (Date)
 by: Walker-Hill Environmental, Inc (Name of Water Well Contractor),
 License No. WWC-574
 Authorized Signature: [Signature] Date: 6/29/20

FOR OFFICE USE ONLY

PARISH	WELL NO.	GEOLOGIC UNIT
101	22297Z	112MRVAC
LATITUDE	LONGITUDE	SECTION
TOWNSHIP	RANGE	ELEVATION
		QUAD NO.

REGISTERED BY: T.T. DATE: 6-30-20
 INSPECTED BY: _____ DATE: _____
 REMARKS: _____



ERM Environmental Resources Management

Boring/Well No.: MW-8

Project: Louisiana Wetlands, et al., vs Energen, et al. Project No.: 0494247

Location: St. Mary Parish, Louisiana Coordinates: UTM 15R 643952.98, 3294498.88

Surface Elev.: -1.36' Boring T.D.: 24 ft. Boring Dia.: 3.25"

Date Started: 6/11/2020 Date Completed: 6/11/2020 Well Dia./Materials: 1" Pre-pack PVC

Drilling Company: Walker Hill Driller: Billy Smith

Drilling Method: Direct Push - Geoprobe 7822DT Grouting Method: Portland/Bentonite

Logged by: Shawn Wiggins, P.G. Soil Sample Method: Geoprobe tube with acetate liner

DEPTH (FEET)	LITHOLOGY (GRAPHIC LOG)	WELL CONSTRUCTION	SAMPLE RECOVERY (FEET/FEET)	FIELD EC (mS/cm)	PID (PPMV)	DESCRIPTION INTERVAL (FEET)	SOIL DESCRIPTION
0			3.2/4.0	1.73	0.2	0-4	0.0-1.2': CLAY: with silt, topsoil, very dark brown (10YR, 2/2), soft to very stiff, dry to moist, no odor
				2.08	0.4		1.2-3.2': CLAY: dark olive gray (5Y, 3/2), very stiff to hard, moist, no odor, orange mottling
					3.2-4.0': No recovery		
5			3.4/4.0	1.85	0.3	4-8	4.0-7.4': CLAY: dark olive gray (5Y, 3/2), very stiff, moist, no odor, orange mottling, minor silt content
				2.23	0.3		7.4-8.0': No recovery
10			3.4/4.0	1.91	0.2	8-12	8.0-9.6': CLAY: dark olive gray (5Y, 3/2), very stiff, moist, no odor, some orange and black mottling
				1.50	0.2		9.6-10.0': CLAY: with silt, very dark brown (10YR, 2/2), medium soft, moist, no odor
							10.0-10.9': CLAY: dark olive gray (5Y, 3/2), very stiff, moist, no odor, orange mottling
							10.9-11.4': silty CLAY: olive (5Y, 4/3), medium soft, moist, no odor
15			2.6/4.0	1.21	0.2	12-16	11.4-12.0': No recovery
				1.95	0.1		12.0-12.9': silty CLAY: olive (5Y, 4/3), soft, moist, no odor
							12.9-14.6': CLAY: olive (5Y, 4/3), stiff, moist, no odor
							14.6-16.0': No recovery
20			4.0/4.0	1.17	0.2	16-20	16.0-19.0': silty CLAY: olive (5Y, 4/3), medium soft, moist to very slightly wet, no odor
				0.95	0.2		19.0-20.0': clayey SILT: olive (5Y, 4/3), soft, wet, no odor
25			4.0/4.0	1.21	0.2	20-24	20.0-24.0': CLAY: grades from olive (5Y, 4/3) to black (5Y, 2.5/1) to very dark gray (5Y, 3/1), medium soft to medium stiff, moist, no odor, some silt content at top and bottom, abundant small calcium nodules at bottom
				1.26	0.1		

Office of Conservation
 JUN 26 2020
 Environmental Division

101-200972

MAIL ORIGINAL TO:
 Louisiana Dept. of Natural Resources
 Attn: Ground Water Resources
 P.O. Box 94275
 Baton Rouge, LA 70804-9275
 (225) 342-8244 Ph.
 (225) 242-3505 Fax

LOUISIANA DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CONSERVATION, ENVIRONMENTAL DIVISION
WATER WELL REGISTRATION SHORT FORM (DNR-GW-1S)

ONLINE ACCESS:
 1) Go to <http://sonris.com/>
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1. **USE OF WELL** (Check appropriate box):
 Domestic Rig Supply Monitoring
 Piezometer Heat Pump Hole Heat Pump Supply
 Recovery Relief Abandoned Pilot Hole
 Other *(please specify)* _____

2. **WELL OWNER:** LA Wetlands (Franklin Field) Joint Defense Group (c/o ERM)
 Phone: 504-831-6700

3. **WELL OWNER'S ADDRESS:** 3838 N Causeway Blvd., Ste 3000
 Metairie, LA 70002

4. **OWNER'S WELL NUMBER OR NAME:** DMW-1
 Serial Number (Rig Supply Only): _____

5. **WELL INFORMATION:**
 Date completed: 5/27/20
 Depth of Hole: 68 ft. below ground surface
 Depth of Well: 68 ft.
 Static water level: 6.65 ft. below ground surface
 Date Measured: 6/18/2020
 Casing: 1 in. Metal Plastic Other Length: 63 ft.
 Screen: 1 in. Metal Plastic Other Slot size: .010 in.
 Length: 5 ft. Cemented from: 57.5 ft. to ground surface
 Using: Pump down Method Gravity Method

6. **LOCATION OF WELL:**
 Latitude: 29 ° 46 ' 45 " Longitude: 91 ° 30 ' 41 "
 Parish: St Mary
 Physical Address: Hwy 90 & Foster Avenue
 Well is Near, Franklin Approximately 0 miles from
 (Crossroads, Railroad, any Landmark, etc.) NE of the intersection of
 HWY 90 & Foster Avenue
(Attach a map or sketch or registered plat if Rig Supply to registration)

FOR MONITOR/PIEZO/RECOVERY WELLS ONLY				
SECTION	TOWNSHIP	RANGE	ELEVATION	QUAD NO.
068	145	09E		

7. **REMARKS:** _____

8. **DRILLER'S LOG:**
 (Description and color of cuttings, such as shale, sand, etc. in feet below ground surface)

FROM	TO	DESCRIPTION
		See Attached

9. **FOR HEAT PUMP ONLY:** Avg. Depth: _____ ft. # of Holes: _____
 10. **DOES THE NEW WELL REPLACE AN EXISTING WELL?** Yes No
 If yes, has owner been informed of state regulations requiring plugging of abandoned wells? Yes No
 11. **NAME OF PERSON WHO DRILLED THE WELL:** Billy Smith

I certify that this work was done and completed in accordance with Rules and Regulations of the State of Louisiana, including Chapter XII of Title 51, Public Health – Sanitary Code, if applicable, on: 5/27/20 (Date) by: Walker-Hill Environmental, Inc (Name of Water Well Contractor), License No. WWC-574
 Authorized Signature: *[Signature]* Date: 6/29/20

FOR OFFICE USE ONLY

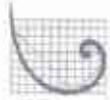
PARISH: 101 WELL NO: 22298Z GEOLOGIC UNIT: 112MRVAC

LATITUDE: [] [] [] [] LONGITUDE: [] [] [] [] SECTION: [] [] [] []

TOWNSHIP: [] [] [] RANGE: [] [] [] ELEVATION: [] [] [] [] QUAD NO: [] [] [] []

REGISTERED BY: I. J. DATE: 6-30-20
 INSPECTED BY: _____ DATE: _____
 REMARKS: _____

JUN 26 2020



Environmental Resources Management

Environmental Division

Boring/Well No.: DMW-1Project: Louisiana Wetlands, et al., vs Energen, et al. Project No.: 0494247Location: St. Mary Parish, Louisiana Coordinates: UTM 15R 643882.96, 3295272.29Surface Elev.: 1.25' Boring T.D.: 68 ft. Boring Dia.: 3.25"Date Started: 5/27/2020 Date Completed: 5/27/2020 Well Dia./Materials: 1" Pre-pack PVCDrilling Company: Walker Hill Driller: Billy SmithDrilling Method: Direct Push - Geoprobe 7822DT Grouting Method: Portland/BentoniteLogged by: Shawn Wiggins, P.G. Soil Sample Method: Geoprobe tube with acetate liner

DEPTH (FEET)	LITHOLOGY (GRAPHIC LOG)	WELL CONSTRUCTION	SAMPLE RECOVERY (FEET/FEET)	FIELD EC (mS/cm)	PID (PPMV)	DESCRIPTION INTERVAL (FEET)	SOIL DESCRIPTION
0							
			4.0/4.0	0.13	1.5	0-4	0.0-0.7': silty CLAY: topsoil, dark olive brown (2.5Y, 3/3), medium stiff, dry, rootlets, no odor 0.7-4.0': CLAY: olive brown (2.5Y, 4/4), medium stiff, moist, minor orange and black mineral staining, no odor
				2.88	2.7		
5			2.6/4.0	2.38	0.7	4-8	4.0-6.6': CLAY: dark grayish brown (2.5Y, 4/2), medium soft to medium stiff, moist, no odor, black and orange mineral staining, large black mottle with no odor at 4.7' 6.6-8.0': No recovery
				3.02	3.1		
10			3.0/4.0	2.33	2.3	8-12	8.0-11.0': CLAY: dark grayish brown (10YR, 4/2), grades to very dark gray (10YR, 3/1) at 10.4', medium soft, moist, no odor, minor orange and black mottling 11.0-12.0': No recovery
				2.28	4.0		
15			2.5/4.0	1.95	1.1	12-16	12.0-14.5': CLAY: dark gray (10YR, 4/1), medium soft to medium stiff, moist, no odor, minor orange mottling 14.5-16.0': No recovery
				3.79	3.3		
20			4.0/4.0	4.64	3.4	16-20	16.0-20.0': silty CLAY to clayey SILT: very dark gray (2.5Y, 3/1), soft, moist to slightly wet, no odor
				7.55	4.1		
25			4.0/4.0	7.53	0.8	20-24	20.0-24.0': Clay: with silt, grades from dark gray (2.5Y, 4/1) to very dark gray (2.5Y, 3/1), soft to medium soft, moist, decreasing silt with depth, no odor
				8.51	0.8		
30			4.0/4.0	8.78	0.6	24-28	24.0-28.0': CLAY: with minor silt content, dark greenish gray (GLE Y1, 4/10Y), medium soft, moist, minor shells at 25.2-25.4' and 27.5-28.0'
				9.16	0.5		
			4.0/4.0	8.35	0.5	28-30	28.0-30.0': CLAY: with silt, dark greenish gray (GLE Y1, 4/10Y), medium soft to medium stiff, dry to moist, no odor, very minor shell content

101-222782

JUN 26 2020



ERM Environmental Resources Management

Boring/Well No.: DMW-1

Project No.: 0494247 Date Drilled: 5/27/2020

DEPTH (FEET)	LITHOLOGY (GRAPHIC LOG)	WELL CONSTRUCTION	SAMPLE RECOVERY (FEET/FEET)	FIELD EC (mS/cm)	PID (PPMV)	DESCRIPTION INTERVAL (FEET)	SOIL DESCRIPTION		
30			4.0/4.0	10.69	0.3	30-32	(Cont. from page 1) 30.0-32.0': CLAY: with silt, dark greenish gray (GLE Y1, 4/10Y), medium soft to medium stiff, dry to moist, no odor, very minor shell content		
			4.0/4.0	9.61	1.0	32-36	32.0-36.0': CLAY: with silt, dark gray (5Y, 4/1), medium soft, moist, no odor, minor shells throughout, orange and black mineral mottling/staining		
35					11.39	0.5			
					4.0/4.0	11.49	1.0	36-40	36.0-40.0': CLAY: with silt, olive (5Y, 5/3), medium soft, dry to moist, no odor, some mucky dark gray clay at 37.5-38.0'
						11.71	1.0		
40					4.0/4.0	12.37	0.5	40-44	40.0-44.0': CLAY: with very minor silt content, dark gray (5Y, 4/1), medium stiff, moist, no odor, orange mottling
						10.08	0.9		
45					4.0/4.0	10.0	0.9	44-48	44.0-48.0': CLAY: gray (5Y, 5/1), stiff, moist, no odor, minor orange mottling
						11.07	0.9		
50					2.6/2.0	8.62	0.7	48-50	48.0-50.0': CLAY: gray (5Y, 5/1), very stiff, moist, no odor, increasing orange mottling with depth
						7.58			
					4.0/2.0	5.71	0.7	50-52	50.0-52.0': CLAY: gray (5Y, 5/1), very stiff, moist, no odor, some orange mottling
						5.71			
					4.0/2.0	5.77	0.1	52-54	52.0-54.0': CLAY: greenish gray (GLE Y1, 5/10Y), stiff, moist, no odor
						4.58			
55					4.0/2.0	2.96	0.6	54-56	54.0-56.0': CLAY: dark gray (5Y, 4/1), very stiff, moist, no odor, orange mottling
						2.36			
					4.0/2.0	2.53	0.5	56-58	56.0-58.0': CLAY: gray (5Y, 6/1), very stiff, moist, no odor, orange mottling
						2.03			
60					4.0/2.0	1.90	1.0	58-60	58.0-60.0': CLAY: olive gray (5Y, 5/2), very stiff, moist, no odor, calcium nodules at 58.3', some orange mottling
				2.29					
			4.0/2.0	1.88	0.4	60-62	60.0-62.0': CLAY: mottled olive (5Y, 5/3) and strong brown (7.5Y, 4/6), very stiff, moist, calcium nodules, black mineral nodules at 60.8', no odor		
				1.84					
			4.0/2.0	1.29	0.6	62-64	62.0-64.0': CLAY: light brownish gray (10YR, 6/2), very stiff, moist, no odor, -0.3' silt layer at center (brown [10YR 5/3], loose, saturated), increased silt towards bottom		
				1.19					
65			4.0/2.0	1.15	0.7	64-66	64.0-66.0': silty CLAY to CLAY: olive (5Y, 5/3), medium soft to very stiff, grades from slightly wet to moist, no odor, orange mottling		
				1.60					

101-222982



ERM Environmental Resources Management

Boring/Well No.: DMW-1

Project No.: 0494247 Date Drilled: 5/27/2020

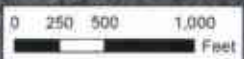
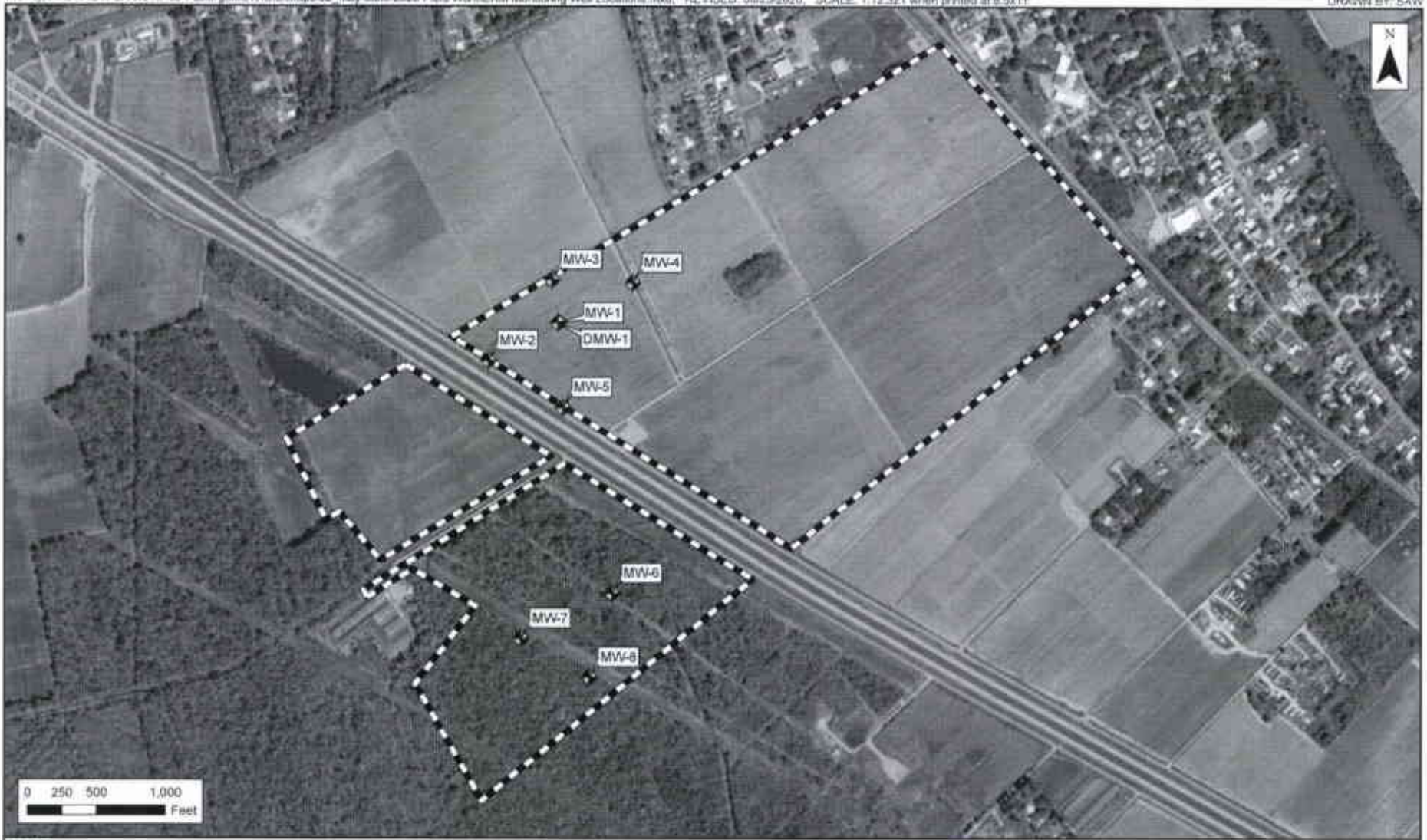
DEPTH (FEET)	LITHOLOGY (GRAPHIC LOG)	WELL CONSTRUCTION	SAMPLE RECOVERY (FEET/FEET)	FIELD EC (mS/cm)	PID (PPMV)	DESCRIPTION INTERVAL (FEET)	SOIL DESCRIPTION
							(Cont. from page 2)
			4.0/2.0	2.11 1.94	1.1	66-68	66.0-67.0': CLAY: olive (5Y, 5/3), stiff, moist, no odor 67.0-68.0': Unopened and capped for geotech analysis - CLAY at top and bottom
70							
75							
80							
85							
90							
95							
100							



Office of Conservation

JUN 26 2020

Environmental Division

786222-101



-  Property Boundary
-  ERM Monitoring Well Location

Office of Conservation

JUN 26 2020

Environmental Division

Notes:
Imagery basemap via ArcGIS Online.

Figure 1
ERM Monitoring Well Locations
 Louisiana Wetlands, LLC and New 90, LLC vs
 Energen Resources Corporation, et al.
 Franklin Oil & Gas Field
 St. Mary Parish, Louisiana

