



*P. O. Box 7192 (zip 71137-7192)
1000 Grimmer Dr.
Shreveport, LA 71107
Phone: (318) 222-2424
Fax: (318) 222-2425*

November 5, 2018

Ms. Sarah A. Kirkpatrick
Bradley Murchison Kelly & Shea LLC
401 Edwards St, Suite 1000
Shreveport, LA 71101-5529

Re: LDNR Required Rig Supply Water Well Sampling
Nelson-8736Z Martin Timber "21" # 1 Rig Supply Water Well
Section 21, Township 13 N, Range 15 W
Hand Held GPS (Rig Supply Water Well): 32.10754829, -93.913280

Dear Ms. Kirkpatrick,

Approach Environmental, LLC (Approach Environmental) was retained by Bradley Murchison Kelly & Shea LLC to conduct a Water Well Sampling Project at the referenced location to analyze for Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) as requested by the Louisiana Department of Natural Resources (LDNR). On October 24, 2018, Approach Environmental collected a groundwater sample from the referenced water well to evaluate the specific groundwater quality parameters as requested by the LDNR. The groundwater parameters are listed below as well as in the attached analytical data table.

The water well sampling activities included photo documentation of the water well, water well purging, obtaining GPS coordinates (via hand-held GPS), groundwater sampling, and preparation of a brief letter report presenting the analytical data and geographic location. The rig supply water well, Serial number 8736Z, is registered with the LDNR and has a recorded total depth of 280' below ground surface and a depth to water of 145' below ground surface on the registration form. A 300' long, decontaminated, electric water probe was used to measure the depth to water of the mentioned well and found that the water level was at 38.05' below ground surface. The well was purged by using a downhole pump connected to a generator. Water quality parameters (temperature, specific conductivity, and pH) were taken until they were relatively stable. Laboratory supplied sample containers and new nitrile gloves were used for the collection of samples and packaged on ice in an ice chest. Proper chain-of-custody procedures were followed and are documented with the attached laboratory report. The sample was, then, delivered to SGS Accutest

Laboratories (SGS Accutest), a Louisiana Department of Environmental Quality (LDEQ) approved laboratory (LDEQ Certification # 2048), for appropriate analysis as described herein.

An analytical data table presenting the analytical data, a Google Earth map illustrating the location of the referenced water well and E&P wells, photographic documentation, and the analytical laboratory report are attached for review. For the purpose of this report, analytical parameters that have listed or established standards or limits as established by LDEQ RECAP are compared with those applicable standards in the analytical data table. It should be noted that all samples were analyzed using method detection limits set by the laboratory. BTEX was not detected in the water sample.

Should you have any questions and/or comments, please do not hesitate to contact me at (318) 222-2424.

Sincerely,



Mark S. Moore
Louisiana Professional Geoscientist (P.G. #490)
Approach Environmental, L.L.C.

Encl./

Attachments Table of Contents

Analytical Data Summary Table

Google Earth Map

Site Photographs

Analytical Data Report

Nelson
Martin Timber "21" # 1 Rig Supply Water Well
October 24, 2018 Analytical

ID	Purgeable Aromatics			
	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Xylenes (Total) mg/L
Analysis				
GW-SS	0.005	1.00	0.70	10
Martin Timber "21" # 1 Water Well	<0.00023	<0.00023	<0.00023	<0.00039

ND = NON DETECT

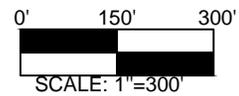
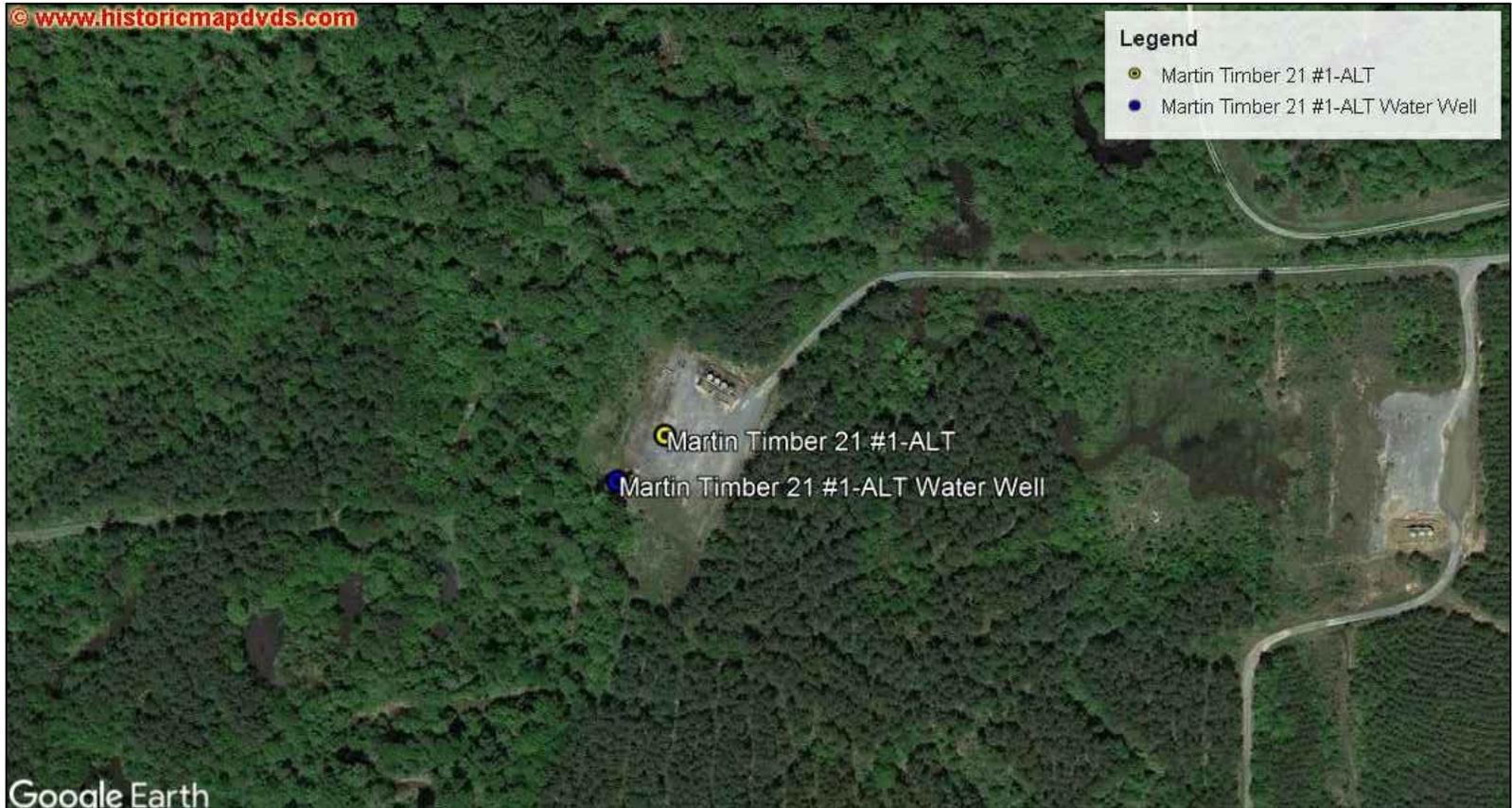
NA=NOT APPLICABLE

All samples analyzed at Labarotory Method Detection Limits

© www.historicmapdvds.com

Legend

- Martin Timber 21 #1-ALT
- Martin Timber 21 #1-ALT Water Well



 Approach Environmental 151 Freestate Blvd., Suite B Shreveport, Louisiana 71107 Toll Free: (866) 674-1993 Fax: (318) 222-2425		
DRAWN DATE: 10/29/2018	DRAWN BY: TEM	SCALE: Approx. 1"=300'

NELSON O&G, INC
MARTIN TIMBER 21 #1-ALT WATER WELL; MARTIN TIMBER 21 #1-ALT
SERIAL NOS. 8736Z; 240328
BETHANY LONGSTREET FIELD

AERIAL MAP
SEC:21, TWN: 13N, RGE: 15W
MARTIN TIMBER 21 #1-ALT WATER WELL (Via Handheld): LAT: 32.107342, LONG: -93.913280
MARTIN TIMBER 21 #1-ALT: LAT: 32.10754829, LONG: -93.91302555
DESOTO PARISH

FIGURE
NUMBER
1

8736Z Martin Timber"21" # 1 Rig Supply Water Well
Photos taken by Drake Duhon on October 24, 2018



Location sign



Water well before taking off top



Purging of well



Taking field water quality readings

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Approach Environmental, LLC

Nelson Energy-Desoto Parish, LA

8736Z Martin Timber

SGS Job Number: LA49085

Sampling Date: 10/24/18

Report to:

**Approach Environmental, LLC
1000 Grimmitt Drive
Shreveport, LA 71107
marksm@approachenv.com**

ATTN: Mark S. Moore

Total number of pages in report: 14



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Ron Benjamin
Ron Benjamin
Lab Director

Client Service contact: Amy Jackson 337-237-4775

Certifications: LDEQ(2048), LDHH(LA150012), AR(14-045-04), AZ(AZ0805), FL(E87657), IL(200082), KY(#31), NC(487), SC(73004001), NJ(LA007), TX(T104704186-15-7), WV(257)

This report shall not be reproduced, except in its entirety, without the written approval of SGS.
Test results relate only to samples analyzed.

Table of Contents

-1-

Section 1: Sample Summary	3
Section 2: Summary of Hits	4
Section 3: Sample Results	5
3.1: LA49085-1: WATER SUPPLY WELL	6
Section 4: Misc. Forms	7
4.1: Chain of Custody	8
Section 5: MS Volatiles - QC Data Summaries	11
5.1: Method Blank Summary	12
5.2: Blank Spike/Blank Spike Duplicate Summary	13
5.3: Matrix Spike/Matrix Spike Duplicate Summary	14

1

2

3

4

5



Sample Summary

Approach Environmental, LLC

Job No: LA49085

Nelson Energy-Desoto Parish, LA
Project No: 8736Z Martin Timber

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
LA49085-1	10/24/18	11:15 JM	10/25/18	AQ	Ground Water	WATER SUPPLY WELL

Summary of Hits

Job Number: LA49085
Account: Approach Environmental, LLC
Project: Nelson Energy-Desoto Parish, LA
Collected: 10/24/18

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

LA49085-1 WATER SUPPLY WELL

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

3.1
3

Client Sample ID: WATER SUPPLY WELL	
Lab Sample ID: LA49085-1	Date Sampled: 10/24/18
Matrix: AQ - Ground Water	Date Received: 10/25/18
Method: SW846 8260B	Percent Solids: n/a
Project: Nelson Energy-Desoto Parish, LA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2J0056919.D	1	10/26/18 16:26	NN	n/a	n/a	V2J1650
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0010	0.00023	mg/l	
108-88-3	Toluene	ND	0.0010	0.00023	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00023	mg/l	
1330-20-7	Xylene (total)	ND	0.0020	0.00039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	111%		84-124%
2037-26-5	Toluene-D8	98%		83-115%
460-00-4	4-Bromofluorobenzene	97%		89-111%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

1 From
 Date: 10/24/18
 Sender's Name: TONY MACHIO Phone: 318 222-2424
 Company: APPROACH ENV.
 Address: 1000 GRIZZMETH DR.
 City: SHREVEPORT State: LA ZIP: 71107

2 Your Internal Billing Reference

3 To
 Recipient's Name: SAMPLE RECEIVING Phone: (337) 237-4775
 Company: SGS Accutest
 Address: 100 Commission Blvd
Lafayette, LA 70508
 City: _____ State: _____ ZIP: _____



4 Express Package Service *To most locations. Packages up to 150 lbs. For packages over 150 lbs., see the FedEx Express Freight US Airbill.

Next Business Day
 FedEx First Overnight
 FedEx Priority Overnight
 FedEx Standard Overnight

2 or 3 Business Days
 FedEx 2Day A.M.
 FedEx 2Day
 FedEx Express Saver

5 Packaging *Declared value limit \$500.

FedEx Envelope* FedEx Pak* FedEx Box FedEx Tube Other

6 Special Handling and Delivery Signature Options Fees may apply. See the FedEx Service Guide.

Saturday Delivery
 No Signature Required
 Direct Signature
 Indirect Signature
 Signature Required

Does this shipment contain dangerous goods?
 No Yes Yes (Shipper's Declaration not required) Dry Ice Cargo Aircraft Only

7 Payment Bill to: Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No.

Sender Recipient Third Party Credit Card Cash/Check

Total Packages: _____ Total Weight: _____ Credit Card Auth: _____

4. Our liability is limited to \$500 unless you declare a higher value. See the current FedEx Service Guide for details. Rev. Date 3/15 • Part #57902 • ©2012-2015 FedEx • PRINTED IN U.S.A. 8024 0000

5 = 40ml w/ HCL (RS-30) 1/5/1

SGS Sample Receipt Summary

Job Number: LA49085

Client: APPROACH ENV.

Project: NELSON ENERGY

Date / Time Received: 10/25/2018 10:20:00 AM

Delivery Method: FedEx

Airbill #'s: 8101 2970 6860

Cooler Temps (Initial/Adjusted): #1: (1.2/1.2); DV439

Cooler Security

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <u>Y or N</u> | <u>Y or N</u> |
| 1. Custody Seals Present: <input checked="" type="checkbox"/> <input type="checkbox"/> | 3. COC Present: <input checked="" type="checkbox"/> <input type="checkbox"/> |
| 2. Custody Seals Intact: <input checked="" type="checkbox"/> <input type="checkbox"/> | 4. Smpl Dates/Time OK: <input checked="" type="checkbox"/> <input type="checkbox"/> |

Cooler Temperature

- | | |
|-----------------------------------------------------------------------------------------|--|
| <u>Y or N</u> | |
| 1. Temp criteria achieved: <input checked="" type="checkbox"/> <input type="checkbox"/> | |
| 2. Thermometer ID: <u>DV439;</u> | |
| 3. Cooler media: <u>Ice (direct contact)</u> | |
| 4. No. Coolers: <u>1</u> | |

Quality Control Preservation

- | | | | |
|-----------------------------------------------------------------------------------------------------------------------|-----------|----------|------------|
| <u>Y</u> | <u>or</u> | <u>N</u> | <u>N/A</u> |
| 1. Trip Blank present / cooler: <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> | | | |
| 2. Trip Blank listed on COC: <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> | | | |
| 3. Samples preserved properly: <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | | |
| 4. VOCs headspace free: <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | | |

Sample Integrity - Documentation

- | | |
|-----------------------------------------------------------------------------------------------------|---------------|
| | <u>Y or N</u> |
| 1. Sample labels present on bottles: <input checked="" type="checkbox"/> <input type="checkbox"/> | |
| 2. Container labeling complete: <input checked="" type="checkbox"/> <input type="checkbox"/> | |
| 3. Sample container label / COC agree: <input checked="" type="checkbox"/> <input type="checkbox"/> | |

Sample Integrity - Condition

- | | |
|-----------------------------------------------------------------------------------------------|---------------|
| | <u>Y or N</u> |
| 1. Sample recvd within HT: <input checked="" type="checkbox"/> <input type="checkbox"/> | |
| 2. All containers accounted for: <input checked="" type="checkbox"/> <input type="checkbox"/> | |
| 3. Condition of sample: <u>Intact</u> | |

Sample Integrity - Instructions

- | | | | | |
|---------------------------------------------------------------------------------------------------------|----------|-----------|----------|-------------------------------------|
| | <u>Y</u> | <u>or</u> | <u>N</u> | <u>N/A</u> |
| 1. Analysis requested is clear: <input checked="" type="checkbox"/> <input type="checkbox"/> | | | | |
| 2. Bottles received for unspecified tests: <input type="checkbox"/> <input checked="" type="checkbox"/> | | | | |
| 3. Sufficient volume recvd for analysis: <input checked="" type="checkbox"/> <input type="checkbox"/> | | | | |
| 4. Compositing instructions clear: <input type="checkbox"/> <input type="checkbox"/> | | | | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: <input type="checkbox"/> <input type="checkbox"/> | | | | <input checked="" type="checkbox"/> |

Comments

4.1
4

LA49085: Chain of Custody

Page 3 of 3

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: LA49085
Account: APPRLAS Approach Environmental, LLC
Project: Nelson Energy-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2J1650-MB2	2J0056911.D	1	10/26/18	NN	n/a	n/a	V2J1650

The QC reported here applies to the following samples:

Method: SW846 8260B

LA49085-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.23	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.39	ug/l	

CAS No.	Surrogate Recoveries	Limits	
17060-07-0	1,2-Dichloroethane-D4	108%	84-124%
2037-26-5	Toluene-D8	98%	83-115%
460-00-4	4-Bromofluorobenzene	96%	89-111%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA49085
Account: APPRLAS Approach Environmental, LLC
Project: Nelson Energy-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2J1650-BS1	2J0056905.D	1	10/26/18	NN	n/a	n/a	V2J1650
V2J1650-BSD1	2J0056907.D	1	10/26/18	NN	n/a	n/a	V2J1650

The QC reported here applies to the following samples:

Method: SW846 8260B

LA49085-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	18.9	95	19.5	98	3	82-119/30
100-41-4	Ethylbenzene	20	19.6	98	20.6	103	5	84-117/30
108-88-3	Toluene	20	18.8	94	19.7	99	5	80-121/30
1330-20-7	Xylene (total)	60	59.3	99	61.9	103	4	81-122/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
17060-07-0	1,2-Dichloroethane-D4	101%	98%	84-124%
2037-26-5	Toluene-D8	99%	99%	83-115%
460-00-4	4-Bromofluorobenzene	101%	101%	89-111%

* = Outside of Control Limits.

5.2.1
5

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA49085
Account: APPRLAS Approach Environmental, LLC
Project: Nelson Energy-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA49027-3MS	2J0056943.D	5	10/26/18	NN	n/a	n/a	V2J1650
LA49027-3MSD	2J0056945.D	5	10/26/18	NN	n/a	n/a	V2J1650
LA49027-3	2J0056941.D	1	10/26/18	NN	n/a	n/a	V2J1650

The QC reported here applies to the following samples:

Method: SW846 8260B

LA49085-1

CAS No.	Compound	LA49027-3 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	100	98.4	98	100	98.8	99	0	31-161/15
100-41-4	Ethylbenzene	ND	100	101	101	100	102	102	1	47-146/30
108-88-3	Toluene	ND	100	98.2	98	100	96.8	97	1	36-155/17
1330-20-7	Xylene (total)	ND	300	305	102	300	309	103	1	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA49027-3	Limits
17060-07-0	1,2-Dichloroethane-D4	104%	102%	114%	84-124%
2037-26-5	Toluene-D8	98%	97%	98%	83-115%
460-00-4	4-Bromofluorobenzene	100%	100%	96%	89-111%

* = Outside of Control Limits.

5.3.1
5