



INDEPENDENT TESTING LAB

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

www.gtanalytical.com

Company: LAMBDA ENERGY RESOURCES, LLC
Name:
ClientProj: 2018100142.03
GTA ProjNo: 062019-10

Site Addr: WEDHOLM MCGAGUE 1-31
Sampled By: MIKE RANKENS/GCES
Date Rec: 6/20/2019
Time Rec: 5:05 PM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	PUMP BLANK	6/19/2019	4:20 PM	WATER
2	MW-4	6/20/2019	11:25 AM	WATER
3	MW-5	6/20/2019	11:49 AM	WATER
4	MW-5 (25')	6/20/2019	12:22 PM	WATER
5	MW-5 (55')	6/20/2019	12:55 PM	WATER
6	MW-6	6/20/2019	1:15 PM	WATER
7	MW-7	6/20/2019	1:32 PM	WATER
8	MW-1 (55')	6/20/2019	2:12 PM	WATER
9	MW-2	6/20/2019	2:30 PM	WATER
10	MW-3	6/20/2019	2:49 PM	WATER
11	MW-1 (25')	6/20/2019	3:12 PM	WATER
12	MW-2 (18')	6/20/2019	3:42 PM	WATER
13	MW-1	6/20/2019	4:05 PM	WATER
14	DUPLICATE	6/20/2019		WATER
15	TRIP BLANK	6/20/2019		WATER

ELECTRONIC SIGNATURE REPORT. This is a final report for the following pages of data for the samples specified above. All analysis was performed by the methods stated and all quality control measures required were completed. All quality control information is available upon request.

Kirk L Chase

Kirk L. Chase/Chemist
Grand Traverse Analytical
830 Robinwood Court
Traverse City, MI 49686
Ph: 231-929-0905
Fx: 231-929-0894
SP: 231-590-0291
kirk@gtanalytical.com



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COMPANY: LAMBDA ENERGY RESOURCES, LLC
 PROJECT NO: 2018100142.03
 LOCATION: WEDHOLM MCGAGUE 1-31
 MI
 SAMPLE MATRIX: WATER
 SAMPLE ID: PUMP BLANK

GTA PROJECT NO: 062019-10
 GTA SAMPLE NO: 1
 DATE SAMPLED: 6/19/2019
 TIME SAMPLED: 4:20 PM
 DATE RECEIVED: 6/20/2019
 TIME RECEIVED: 5:05 PM

SAMPLED BY: MIKE RANKENS/GCES

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Extracted</u>	<u>Date Complete</u>	<u>Prep Method</u>
Benzene	ND	1.0	ug/L (PPB)	MR		6/23/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					
1,2,4-Trimethylbenzene	ND	1.0					
1,3,5-Trimethylbenzene	ND	1.0					
Naphthalene	ND	5.0					
2-Methylnaphthalene	ND	5.0					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.
 ND = NOT DETECTED, RESULT < LOD
 LOD = LIMIT OF DETECTION



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COMPANY: LAMBDA ENERGY RESOURCES, LLC
 PROJECT NO: 2018100142.03
 LOCATION: WEDHOLM MCGAGUE 1-31
 MI
 SAMPLE MATRIX: WATER
 SAMPLE ID: MW-4

GTA PROJECT NO: 062019-10
 GTA SAMPLE NO: 2
 DATE SAMPLED: 6/20/2019
 TIME SAMPLED: 11:25 AM
 DATE RECEIVED: 6/20/2019
 TIME RECEIVED: 5:05 PM

SAMPLED BY: MIKE RANKENS/GCES

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Extracted</u>	<u>Date Complete</u>	<u>Prep Method</u>
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Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					
1,2,4-Trimethylbenzene	ND	1.0					
1,3,5-Trimethylbenzene	ND	1.0					
Naphthalene	ND	5.0					
2-Methylnaphthalene	ND	5.0					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
 PROJECT NO: 2018100142.03
 LOCATION: WEDHOLM MCGAGUE 1-31
 MI
 SAMPLE MATRIX: WATER
 SAMPLE ID: MW-5

GTA PROJECT NO: 062019-10
 GTA SAMPLE NO: 3
 DATE SAMPLED: 6/20/2019
 TIME SAMPLED: 11:49 AM
 DATE RECEIVED: 6/20/2019
 TIME RECEIVED: 5:05 PM

SAMPLED BY: MIKE RANKENS/GCES

EPA 8260B VOLATILE ORGANICS

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Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					
1,2,4-Trimethylbenzene	ND	1.0					
1,3,5-Trimethylbenzene	ND	1.0					
Naphthalene	ND	5.0					
2-Methylnaphthalene	ND	5.0					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
 PROJECT NO: 2018100142.03
 LOCATION: WEDHOLM MCGAGUE 1-31
 MI
 SAMPLE MATRIX: WATER
 SAMPLE ID: MW-5 (25')

GTA PROJECT NO: 062019-10
 GTA SAMPLE NO: 4
 DATE SAMPLED: 6/20/2019
 TIME SAMPLED: 12:22 PM
 DATE RECEIVED: 6/20/2019
 TIME RECEIVED: 5:05 PM

SAMPLED BY: MIKE RANKENS/GCES

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Extracted</u>	<u>Date Complete</u>	<u>Prep Method</u>
Benzene	ND	1.0	ug/L (PPB)	MR		6/23/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					
1,2,4-Trimethylbenzene	ND	1.0					
1,3,5-Trimethylbenzene	ND	1.0					
Naphthalene	ND	5.0					
2-Methylnaphthalene	ND	5.0					

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 PROJECT NO: 2018100142.03
 LOCATION: WEDHOLM MCGAGUE 1-31
 MI
 SAMPLE MATRIX: WATER
 SAMPLE ID: MW-5 (55')

GTA PROJECT NO: 062019-10
 GTA SAMPLE NO: 5
 DATE SAMPLED: 6/20/2019
 TIME SAMPLED: 12:55 PM
 DATE RECEIVED: 6/20/2019
 TIME RECEIVED: 5:05 PM

SAMPLED BY: MIKE RANKENS/GCES

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Extracted</u>	<u>Date Complete</u>	<u>Prep Method</u>
Benzene	ND	1.0	ug/L (PPB)	MR		6/23/2019	EPA 5030B
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Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					
1,2,4-Trimethylbenzene	ND	1.0					
1,3,5-Trimethylbenzene	ND	1.0					
Naphthalene	ND	5.0					
2-Methylnaphthalene	ND	5.0					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
 PROJECT NO: 2018100142.03
 LOCATION: WEDHOLM MCGAGUE 1-31
 MI
 SAMPLE MATRIX: WATER
 SAMPLE ID: MW-6

GTA PROJECT NO: 062019-10
 GTA SAMPLE NO: 6
 DATE SAMPLED: 6/20/2019
 TIME SAMPLED: 1:15 PM
 DATE RECEIVED: 6/20/2019
 TIME RECEIVED: 5:05 PM

SAMPLED BY: MIKE RANKENS/GCES

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Extracted</u>	<u>Date Complete</u>	<u>Prep Method</u>
Benzene	ND	1.0	ug/L (PPB)	MR		6/23/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					
1,2,4-Trimethylbenzene	ND	1.0					
1,3,5-Trimethylbenzene	ND	1.0					
Naphthalene	ND	5.0					
2-Methylnaphthalene	ND	5.0					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
 PROJECT NO: 2018100142.03
 LOCATION: WEDHOLM MCGAGUE 1-31
 MI
 SAMPLE MATRIX: WATER
 SAMPLE ID: MW-7

GTA PROJECT NO: 062019-10
 GTA SAMPLE NO: 7
 DATE SAMPLED: 6/20/2019
 TIME SAMPLED: 1:32 PM
 DATE RECEIVED: 6/20/2019
 TIME RECEIVED: 5:05 PM

SAMPLED BY: MIKE RANKENS/GCES

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Complete</u>	<u>Prep Method</u>
Benzene	ND	1.0	ug/L (PPB)	MR		6/23/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					
1,2,4-Trimethylbenzene	ND	1.0					
1,3,5-Trimethylbenzene	ND	1.0					
Naphthalene	ND	5.0					
2-Methylnaphthalene	ND	5.0					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
 PROJECT NO: 2018100142.03
 LOCATION: WEDHOLM MCGAGUE 1-31
 MI
 SAMPLE MATRIX: WATER
 SAMPLE ID: MW-1 (55')

GTA PROJECT NO: 062019-10
 GTA SAMPLE NO: 8
 DATE SAMPLED: 6/20/2019
 TIME SAMPLED: 2:12 PM
 DATE RECEIVED: 6/20/2019
 TIME RECEIVED: 5:05 PM

SAMPLED BY: MIKE RANKENS/GCES

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Complete</u>	<u>Prep Method</u>
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Xylene(Total)	ND	3.0					
1,2,4-Trimethylbenzene	ND	1.0					
1,3,5-Trimethylbenzene	ND	1.0					
Naphthalene	ND	5.0					
2-Methylnaphthalene	ND	5.0					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
 PROJECT NO: 2018100142.03
 LOCATION: WEDHOLM MCGAGUE 1-31
 MI
 SAMPLE MATRIX: WATER
 SAMPLE ID: MW-2

GTA PROJECT NO: 062019-10
 GTA SAMPLE NO: 9
 DATE SAMPLED: 6/20/2019
 TIME SAMPLED: 2:30 PM
 DATE RECEIVED: 6/20/2019
 TIME RECEIVED: 5:05 PM

SAMPLED BY: MIKE RANKENS/GCES

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Complete</u>	<u>Prep Method</u>
Benzene	ND	1.0	ug/L (PPB)	MR		6/23/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					
1,2,4-Trimethylbenzene	ND	1.0					
1,3,5-Trimethylbenzene	ND	1.0					
Naphthalene	ND	5.0					
2-Methylnaphthalene	ND	5.0					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
 PROJECT NO: 2018100142.03
 LOCATION: WEDHOLM MCGAGUE 1-31
 MI
 SAMPLE MATRIX: WATER
 SAMPLE ID: MW-3

GTA PROJECT NO: 062019-10
 GTA SAMPLE NO: 10
 DATE SAMPLED: 6/20/2019
 TIME SAMPLED: 2:49 PM
 DATE RECEIVED: 6/20/2019
 TIME RECEIVED: 5:05 PM

SAMPLED BY: MIKE RANKENS/GCES

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Complete</u>	<u>Prep Method</u>
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Ethylbenzene	ND	1.0					
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1,2,4-Trimethylbenzene	ND	1.0					
1,3,5-Trimethylbenzene	ND	1.0					
Naphthalene	ND	5.0					
2-Methylnaphthalene	ND	5.0					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100142.03
LOCATION: WEDHOLM MCGAGUE 1-31
MI
SAMPLE MATRIX: WATER
SAMPLE ID: MW-1 (25')

GTA PROJECT NO: 062019-10
GTA SAMPLE NO: 11
DATE SAMPLED: 6/20/2019
TIME SAMPLED: 3:12 PM
DATE RECEIVED: 6/20/2019
TIME RECEIVED: 5:05 PM

SAMPLED BY: MIKE RANKENS/GCES

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Extracted</u>	<u>Date Complete</u>	<u>Prep Method</u>
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Xylene(Total)	ND	3.0					
1,2,4-Trimethylbenzene	ND	1.0					
1,3,5-Trimethylbenzene	ND	1.0					
Naphthalene	ND	5.0					
2-Methylnaphthalene	ND	5.0					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100142.03
LOCATION: WEDHOLM MCGAGUE 1-31
MI
SAMPLE MATRIX: WATER
SAMPLE ID: MW-2 (18')

GTA PROJECT NO: 062019-10
GTA SAMPLE NO: 12
DATE SAMPLED: 6/20/2019
TIME SAMPLED: 3:42 PM
DATE RECEIVED: 6/20/2019
TIME RECEIVED: 5:05 PM

SAMPLED BY: MIKE RANKENS/GCES

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Extracted</u>	<u>Date Complete</u>	<u>Prep Method</u>
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Toluene	ND	1.0					
Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					
1,2,4-Trimethylbenzene	ND	1.0					
1,3,5-Trimethylbenzene	ND	1.0					
Naphthalene	ND	5.0					
2-Methylnaphthalene	ND	5.0					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
 PROJECT NO: 2018100142.03
 LOCATION: WEDHOLM MCGAGUE 1-31
 MI
 SAMPLE MATRIX: WATER
 SAMPLE ID: MW-1

GTA PROJECT NO: 062019-10
 GTA SAMPLE NO: 13
 DATE SAMPLED: 6/20/2019
 TIME SAMPLED: 4:05 PM
 DATE RECEIVED: 6/20/2019
 TIME RECEIVED: 5:05 PM

SAMPLED BY: MIKE RANKENS/GCES

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Extracted</u>	<u>Date Complete</u>	<u>Prep Method</u>
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1,2,4-Trimethylbenzene	ND	1.0					
1,3,5-Trimethylbenzene	ND	1.0					
Naphthalene	ND	5.0					
2-Methylnaphthalene	ND	5.0					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
 PROJECT NO: 2018100142.03
 LOCATION: WEDHOLM MCGAGUE 1-31
 MI
 SAMPLE MATRIX: WATER
 SAMPLE ID: DUPLICATE

GTA PROJECT NO: 062019-10
 GTA SAMPLE NO: 14
 DATE SAMPLED: 6/20/2019
 TIME SAMPLED:
 DATE RECEIVED: 6/20/2019
 TIME RECEIVED: 5:05 PM

SAMPLED BY: MIKE RANKENS/GCES

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Extracted</u>	<u>Date Complete</u>	<u>Prep Method</u>
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Xylene(Total)	ND	3.0					
1,2,4-Trimethylbenzene	ND	1.0					
1,3,5-Trimethylbenzene	ND	1.0					
Naphthalene	ND	5.0					
2-Methylnaphthalene	ND	5.0					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100142.03
LOCATION: WEDHOLM MCGAGUE 1-31
MI
SAMPLE MATRIX: WATER
SAMPLE ID: TRIP BLANK

GTA PROJECT NO: 062019-10
GTA SAMPLE NO: 15
DATE SAMPLED: 6/20/2019
TIME SAMPLED:
DATE RECEIVED: 6/20/2019
TIME RECEIVED: 5:05 PM

SAMPLED BY: MIKE RANKENS/GCES

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Extracted</u>	<u>Date Complete</u>	<u>Prep Method</u>
Benzene	ND	1.0	ug/L (PPB)	MR		6/24/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					
1,2,4-Trimethylbenzene	ND	1.0					
1,3,5-Trimethylbenzene	ND	1.0					
Naphthalene	ND	5.0					
2-Methylnaphthalene	ND	5.0					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100142.03
LOCATION: WEDHOLM MCGAGUE 1-31
MI
SAMPLED BY: MIKE RANKENS/GCES
SAMPLE ID: MW-4

GTA PROJECT NO: 062019-10
GTA SAMPLE NO: 2
DATE RECEIVED: 6/20/2019
TIME RECEIVED: 5:05 PM
DATE SAMPLED: 6/20/2019
TIME SAMPLED: 11:25 AM
SAMPLE MATRIX: WATER

SAMPLE ANALYSIS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	100	10	mg/L (PPM)	TR	6/25/2019
CHLORIDE EPA 300.0	ND	10	mg/L (PPM)	LV	6/24/2019
CONDUCTIVITY SM2510-B	190	1.0	uS/cm@25C	LV	6/24/2019
TDS MINUS BICARBONATE	60	5.0	mg/L (PPM)	TR	6/27/2019
TOTAL DISSOLVED SOLIDS EPA 160.1	160	5.0	mg/L (PPM)	TR	6/27/2019

ND = NOT DETECTED, RESULT < LOD
LOD = LIMIT OF DETECTION
s.u. = STANDARD pH UNITS REPORTED AT 25 C
DISS = DISSOLVED



INDEPENDENT TESTING LAB

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PH: 231-929-0905

FAX: 231-929-0894

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COMPANY: LAMBDA ENERGY RESOURCES, LLC GTA PROJECT NO: 062019-10
PROJECT NO: 2018100142.03 GTA SAMPLE NO: 3
LOCATION: WEDHOLM MCGAGUE 1-31 DATE RECEIVED: 6/20/2019
MI TIME RECEIVED: 5:05 PM
SAMPLED BY: MIKE RANKENS/GCES DATE SAMPLED: 6/20/2019
MI TIME SAMPLED: 11:49 AM
SAMPLE ID: MW-5 SAMPLE MATRIX: WATER

SAMPLE ANALYSIS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	180	10	mg/L (PPM)	TR	6/25/2019
CHLORIDE EPA 300.0	26	10	mg/L (PPM)	LV	6/24/2019
CONDUCTIVITY SM2510-B	410	1.0	uS/cm@25C	LV	6/24/2019
TDS MINUS BICARBONATE	60	5.0	mg/L (PPM)	TR	6/27/2019
TOTAL DISSOLVED SOLIDS EPA 160.1	240	5.0	mg/L (PPM)	TR	6/27/2019

ND = NOT DETECTED, RESULT < LOD
LOD = LIMIT OF DETECTION
s.u. = STANDARD pH UNITS REPORTED AT 25 C
DISS = DISSOLVED



INDEPENDENT TESTING LAB

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

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COMPANY: LAMBDA ENERGY RESOURCES, LLC GTA PROJECT NO: 062019-10
PROJECT NO: 2018100142.03 GTA SAMPLE NO: 4
LOCATION: WEDHOLM MCGAGUE 1-31 DATE RECEIVED: 6/20/2019
MI TIME RECEIVED: 5:05 PM
DATE SAMPLED: 6/20/2019
SAMPLED BY: MIKE RANKENS/GCES TIME SAMPLED: 12:22 PM
SAMPLE MATRIX: WATER
SAMPLE ID: MW-5 (25')

SAMPLE ANALYSIS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	180	10	mg/L (PPM)	TR	6/25/2019
CHLORIDE EPA 300.0	16	10	mg/L (PPM)	LV	6/24/2019
CONDUCTIVITY SM2510-B	360	1.0	uS/cm@25C	LV	6/24/2019
TDS MINUS BICARBONATE	50	5.0	mg/L (PPM)	TR	6/27/2019
TOTAL DISSOLVED SOLIDS EPA 160.1	230	5.0	mg/L (PPM)	TR	6/27/2019

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100142.03
LOCATION: WEDHOLM MCGAGUE 1-31
MI
SAMPLED BY: MIKE RANKENS/GCES
SAMPLE ID: MW-5 (55')

GTA PROJECT NO: 062019-10
GTA SAMPLE NO: 5
DATE RECEIVED: 6/20/2019
TIME RECEIVED: 5:05 PM
DATE SAMPLED: 6/20/2019
TIME SAMPLED: 12:55 PM
SAMPLE MATRIX: WATER

SAMPLE ANALYSIS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	180	10	mg/L (PPM)	TR	6/25/2019
CHLORIDE EPA 300.0	29	10	mg/L (PPM)	LV	6/24/2019
CONDUCTIVITY SM2510-B	410	1.0	uS/cm@25C	LV	6/24/2019
TDS MINUS BICARBONATE	90	5.0	mg/L (PPM)	TR	6/27/2019
TOTAL DISSOLVED SOLIDS EPA 160.1	270	5.0	mg/L (PPM)	TR	6/27/2019

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COMPANY: LAMBDA ENERGY RESOURCES, LLC GTA PROJECT NO: 062019-10
PROJECT NO: 2018100142.03 GTA SAMPLE NO: 6
LOCATION: WEDHOLM MCGAGUE 1-31 DATE RECEIVED: 6/20/2019
MI TIME RECEIVED: 5:05 PM
DATE SAMPLED: 6/20/2019
SAMPLED BY: MIKE RANKENS/GCES TIME SAMPLED: 1:15 PM
SAMPLE MATRIX: WATER
SAMPLE ID: MW-6

SAMPLE ANALYSIS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	200	10	mg/L (PPM)	TR	6/25/2019
CHLORIDE EPA 300.0	21	10	mg/L (PPM)	LV	6/24/2019
CONDUCTIVITY SM2510-B	390	1.0	uS/cm@25C	LV	6/24/2019
TDS MINUS BICARBONATE	40	5.0	mg/L (PPM)	TR	6/27/2019
TOTAL DISSOLVED SOLIDS EPA 160.1	240	5.0	mg/L (PPM)	TR	6/27/2019

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100142.03
LOCATION: WEDHOLM MCGAGUE 1-31
MI
SAMPLED BY: MIKE RANKENS/GCES
SAMPLE ID: MW-7

GTA PROJECT NO: 062019-10
GTA SAMPLE NO: 7
DATE RECEIVED: 6/20/2019
TIME RECEIVED: 5:05 PM
DATE SAMPLED: 6/20/2019
TIME SAMPLED: 1:32 PM
SAMPLE MATRIX: WATER

SAMPLE ANALYSIS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	160	10	mg/L (PPM)	TR	6/25/2019
CHLORIDE EPA 300.0	16	10	mg/L (PPM)	LV	6/24/2019
CONDUCTIVITY SM2510-B	320	1.0	uS/cm@25C	LV	6/24/2019
TDS MINUS BICARBONATE	50	5.0	mg/L (PPM)	TR	6/27/2019
TOTAL DISSOLVED SOLIDS EPA 160.1	210	5.0	mg/L (PPM)	TR	6/27/2019

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COMPANY:	LAMBDA ENERGY RESOURCES, LLC	GTA PROJECT NO:	062019-10
PROJECT NO:	2018100142.03	GTA SAMPLE NO:	8
LOCATION:	WEDHOLM MCGAGUE 1-31	DATE RECEIVED:	6/20/2019
	MI	TIME RECEIVED:	5:05 PM
SAMPLED BY:	MIKE RANKENS/GCES	DATE SAMPLED:	6/20/2019
SAMPLE ID:	MW-1 (55')	TIME SAMPLED:	2:12 PM
		SAMPLE MATRIX:	WATER

SAMPLE ANALYSIS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	140	10	mg/L (PPM)	TR	6/25/2019
CHLORIDE EPA 300.0	17	10	mg/L (PPM)	LV	6/24/2019
CONDUCTIVITY SM2510-B	370	1.0	uS/cm@25C	LV	6/24/2019
TDS MINUS BICARBONATE	100	5.0	mg/L (PPM)	TR	6/27/2019
TOTAL DISSOLVED SOLIDS EPA 160.1	240	5.0	mg/L (PPM)	TR	6/27/2019

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 LOD = LIMIT OF DETECTION
 s.u. = STANDARD pH UNITS REPORTED AT 25 C
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COMPANY:	LAMBDA ENERGY RESOURCES, LLC	GTA PROJECT NO:	062019-10
PROJECT NO:	2018100142.03	GTA SAMPLE NO:	10
LOCATION:	WEDHOLM MCGAGUE 1-31	DATE RECEIVED:	6/20/2019
	MI	TIME RECEIVED:	5:05 PM
SAMPLED BY:	MIKE RANKENS/GCES	DATE SAMPLED:	6/20/2019
		TIME SAMPLED:	2:49 PM
SAMPLE ID:	MW-3	SAMPLE MATRIX:	WATER

SAMPLE ANALYSIS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	150	10	mg/L (PPM)	TR	6/25/2019
CHLORIDE EPA 300.0	ND	10	mg/L (PPM)	LV	6/24/2019
CONDUCTIVITY SM2510-B	340	1.0	uS/cm@25C	LV	6/24/2019
TDS MINUS BICARBONATE	90	5.0	mg/L (PPM)	TR	6/27/2019
TOTAL DISSOLVED SOLIDS EPA 160.1	240	5.0	mg/L (PPM)	TR	6/27/2019

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 LOD = LIMIT OF DETECTION
 s.u. = STANDARD pH UNITS REPORTED AT 25 C
 DISS = DISSOLVED



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COMPANY: LAMBDA ENERGY RESOURCES, LLC GTA PROJECT NO: 062019-10
PROJECT NO: 2018100142.03 GTA SAMPLE NO: 11
LOCATION: WEDHOLM MCGAGUE 1-31 DATE RECEIVED: 6/20/2019
MI TIME RECEIVED: 5:05 PM
DATE SAMPLED: 6/20/2019
SAMPLED BY: MIKE RANKENS/GCES TIME SAMPLED: 3:12 PM
SAMPLE MATRIX: WATER
SAMPLE ID: MW-1 (25')

SAMPLE ANALYSIS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	190	10	mg/L (PPM)	TR	6/25/2019
CHLORIDE EPA 300.0	27	10	mg/L (PPM)	LV	6/24/2019
CONDUCTIVITY SM2510-B	390	1.0	uS/cm@25C	LV	6/24/2019
TDS MINUS BICARBONATE	30	5.0	mg/L (PPM)	TR	6/27/2019
TOTAL DISSOLVED SOLIDS EPA 160.1	220	5.0	mg/L (PPM)	TR	6/27/2019

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s.u. = STANDARD pH UNITS REPORTED AT 25 C
DISS = DISSOLVED



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COMPANY:	LAMBDA ENERGY RESOURCES, LLC	GTA PROJECT NO:	062019-10
PROJECT NO:	2018100142.03	GTA SAMPLE NO:	12
LOCATION:	WEDHOLM MCGAGUE 1-31	DATE RECEIVED:	6/20/2019
	MI	TIME RECEIVED:	5:05 PM
SAMPLED BY:	MIKE RANKENS/GCES	DATE SAMPLED:	6/20/2019
SAMPLE ID:	MW-2 (18')	TIME SAMPLED:	3:42 PM
		SAMPLE MATRIX:	WATER

SAMPLE ANALYSIS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	220	10	mg/L (PPM)	TR	6/25/2019
CHLORIDE EPA 300.0	40	10	mg/L (PPM)	LV	6/24/2019
CONDUCTIVITY SM2510-B	440	1.0	uS/cm@25C	LV	6/24/2019
TDS MINUS BICARBONATE	60	5.0	mg/L (PPM)	TR	6/27/2019
TOTAL DISSOLVED SOLIDS EPA 160.1	280	5.0	mg/L (PPM)	TR	6/27/2019

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 s.u. = STANDARD pH UNITS REPORTED AT 25 C
 DISS = DISSOLVED



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COMPANY: LAMBDA ENERGY RESOURCES, LLC GTA PROJECT NO: 062019-10
PROJECT NO: 2018100142.03 GTA SAMPLE NO: 13
LOCATION: WEDHOLM MCGAGUE 1-31 DATE RECEIVED: 6/20/2019
MI TIME RECEIVED: 5:05 PM
SAMPLED BY: MIKE RANKENS/GCES DATE SAMPLED: 6/20/2019
MI TIME SAMPLED: 4:05 PM
SAMPLE ID: MW-1 SAMPLE MATRIX: WATER

SAMPLE ANALYSIS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	130	10	mg/L (PPM)	TR	6/25/2019
CHLORIDE EPA 300.0	270	10	mg/L (PPM)	LV	6/24/2019
CONDUCTIVITY SM2510-B	1,000	1.0	uS/cm@25C	LV	6/24/2019
TDS MINUS BICARBONATE	720	5.0	mg/L (PPM)	TR	6/27/2019
TOTAL DISSOLVED SOLIDS EPA 160.1	850	5.0	mg/L (PPM)	TR	6/27/2019

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s.u. = STANDARD pH UNITS REPORTED AT 25 C
DISS = DISSOLVED



INDEPENDENT TESTING LAB

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COMPANY: LAMBDA ENERGY RESOURCES, LLC GTA PROJECT NO: 062019-10
PROJECT NO: 2018100142.03 GTA SAMPLE NO: 14
LOCATION: WEDHOLM MCGAGUE 1-31 DATE RECEIVED: 6/20/2019
MI TIME RECEIVED: 5:05 PM
DATE SAMPLED: 6/20/2019
SAMPLED BY: MIKE RANKENS/GCES TIME SAMPLED:
SAMPLE MATRIX: WATER
SAMPLE ID: DUPLICATE

SAMPLE ANALYSIS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	120	10	mg/L (PPM)	TR	6/25/2019
CHLORIDE EPA 300.0	210	10	mg/L (PPM)	LV	6/24/2019
CONDUCTIVITY SM2510-B	850	1.0	uS/cm@25C	LV	6/24/2019
TDS MINUS BICARBONATE	700	5.0	mg/L (PPM)	TR	6/27/2019
TOTAL DISSOLVED SOLIDS EPA 160.1	820	5.0	mg/L (PPM)	TR	6/27/2019

ND = NOT DETECTED, RESULT < LOD
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DISS = DISSOLVED

CHAIN OF CUSTODY

PROJECT NUMBER 2018100142.03	SITE NAME/ADDRESS Wedholm McGague 1-31	COMPANY/NAME Lambda Energy Resources, LLC
SAMPLED BY Mike Rankens	COMPANY GCES	GTA PROJECT # 062019-10

SAMPLE INFORMATION

#	SAMPLE ID	DATE SAMPLED	TIME	MATRIX	ANALYSIS
1	Pump Blank	6/19/19	1620	Water	BTEX + 4
2	MW-4	6/20/19	1125	Water	BTEX + 4 / Chloride / Conductivity / TDS Minus Bicarbonate
3	MW-5	6/20/19	1149	Water	BTEX + 4 / Chloride / Conductivity / TDS Minus Bicarbonate
4	MW-5 (25')	6/20/19	1222	Water	BTEX + 4 / Chloride / Conductivity / TDS Minus Bicarbonate
5	MW-5 (55')	6/20/19	1255	Water	BTEX + 4 / Chloride / Conductivity / TDS Minus Bicarbonate
6	MW-6	6/20/19	1315	Water	BTEX + 4 / Chloride / Conductivity / TDS Minus Bicarbonate
7	MW-7	6/20/19	1332	Water	BTEX + 4 / Chloride / Conductivity / TDS Minus Bicarbonate
8	MW-1 (55')	6/20/19	1412	Water	BTEX + 4 / Chloride / Conductivity / TDS Minus Bicarbonate
9	MW-2	6/20/19	1430	Water	BTEX + 4 / Chloride / Conductivity / TDS Minus Bicarbonate
10	MW-3	6/20/19	1449	Water	BTEX + 4 / Chloride / Conductivity / TDS Minus Bicarbonate
11	MW-1 (25')	6/20/19	1512	Water	BTEX + 4 / Chloride / Conductivity / TDS Minus Bicarbonate
12	MW-2 (18')	6/20/19	1542	Water	BTEX + 4 / Chloride / Conductivity / TDS Minus Bicarbonate
13	MW-1	6/20/19	1605	Water	BTEX + 4 / Chloride / Conductivity / TDS Minus Bicarbonate
14	DUPLICATE	6/20/19	=	Water	BTEX + 4 / Chloride / Conductivity / TDS Minus Bicarbonate
15	Trip Blank	6/20/19	=	Water	BTEX + 4

BILL TO:

Lambda Energy Resources, LLC

REPORT TO:

JEFF SIMSA - GCES
MIKE RANKENS - GCES

RELEASED BY	DATE/TIME	RECEIVED BY	DATE/TIME
<i>[Signature]</i>	6/19/19 @ 1630	GCES Cold Storage	6/19/19 @ 1630
GCES Cold Storage	6/20/19 @ 0800	<i>[Signature]</i>	6/20/19 @ 0800
<i>[Signature]</i>	6/20/19 @ 1705	<i>[Signature]</i>	6/20/19 @ 1705 rec'd
REQUESTED TAT <input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> 1 BUSINESS DAY <input type="checkbox"/> 2 BUSINESS DAYS <input type="checkbox"/> 3 BUSINESS DAYS			