



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: 2018100137.03
GTA ProjNo: 041719-8

Site Addr: BEAR LAKE 32 CPF

Sampled By: PETE KALLIOINEN/GCES
Date Rec: 4/17/2019
Time Rec: 1:25 PM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	SB-COMP-25 (5')	4/16/2019	1:04 PM	SOIL
2	SB-COMP-25 (11')	4/16/2019	1:42 PM	SOIL
3	SB-COMP-26 (5')	4/16/2019	2:10 PM	SOIL
4	SB-COMP-26 (9.5')	4/16/2019	2:22 PM	SOIL
5	SB-COMP-27 (5.5')	4/16/2019	2:50 PM	SOIL
6	SB-COMP-27 (11')	4/16/2019	3:09 PM	SOIL
7	SB-COMP-27 (15.5')	4/16/2019	3:19 PM	SOIL

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
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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100137.03
LOCATION: BEAR LAKE 32 CPF
MI
SAMPLE MATRIX: SOIL
SAMPLE ID: SB-COMP-25 (5')
GTA PROJECT NO: 041719-8
GTA SAMPLE NO: 1
DATE SAMPLED: 4/16/2019
TIME SAMPLED: 1:04 PM
DATE RECEIVED: 4/17/2019
TIME RECEIVED: 1:25 PM
SAMPLED BY: PETE KALLIOINEN/GCES
**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

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	350	50	ug/Kg (PPB)	MR	4/16/2019	4/18/2019	EPA 5035A
Toluene	620	50					
Ethylbenzene	53	50					
Xylene(Total)	280	150					
1,2,4-Trimethylbenzene	95	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

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

COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100137.03
LOCATION: BEAR LAKE 32 CPF
MI
SAMPLE MATRIX: SOIL
SAMPLE ID: SB-COMP-25 (11')

GTA PROJECT NO: 041719-8
GTA SAMPLE NO: 2
DATE SAMPLED: 4/16/2019
TIME SAMPLED: 1:42 PM
DATE RECEIVED: 4/17/2019
TIME RECEIVED: 1:25 PM

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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	200	50	ug/Kg (PPB)	MR	4/16/2019	4/18/2019	EPA 5035A
Toluene	2,200	50					
Ethylbenzene	1,000	50					
Xylene(Total)	3,400	150					
1,2,4-Trimethylbenzene	2,300	50					
1,3,5-Trimethylbenzene	380	50					
Naphthalene	ND	250					
2-Methylnaphthalene	370	250					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100137.03
LOCATION: BEAR LAKE 32 CPF
MI
SAMPLE MATRIX: SOIL
SAMPLE ID: SB-COMP-26 (5')

GTA PROJECT NO: 041719-8
GTA SAMPLE NO: 3
DATE SAMPLED: 4/16/2019
TIME SAMPLED: 2:10 PM
DATE RECEIVED: 4/17/2019
TIME RECEIVED: 1:25 PM

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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	21,000	670	ug/Kg (PPB)	MR	4/16/2019	4/18/2019	EPA 5035A
Toluene	120,000	670					
Ethylbenzene	48,000	670					
Xylene(Total)	150,000	2,000					
1,2,4-Trimethylbenzene	89,000	670					
1,3,5-Trimethylbenzene	16,000	670					
Naphthalene	2,500	250					
2-Methylnaphthalene	10,000	1,700					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
 PROJECT NO: 2018100137.03
 LOCATION: BEAR LAKE 32 CPF
 MI

GTA PROJECT NO: 041719-8
 GTA SAMPLE NO: 4

DATE SAMPLED: 4/16/2019
 TIME SAMPLED: 2:22 PM
 DATE RECEIVED: 4/17/2019
 TIME RECEIVED: 1:25 PM

SAMPLE MATRIX: SOIL
 SAMPLE ID: SB-COMP-26 (9.5')

SAMPLED BY: PETE KALLIOINEN/GCES
 **THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

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	50	ug/Kg (PPB)	MR	4/16/2019	4/18/2019	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
 PROJECT NO: 2018100137.03
 LOCATION: BEAR LAKE 32 CPF
 MI
 SAMPLE MATRIX: SOIL
 SAMPLE ID: SB-COMP-27 (5.5')

GTA PROJECT NO: 041719-8
 GTA SAMPLE NO: 5
 DATE SAMPLED: 4/16/2019
 TIME SAMPLED: 2:50 PM
 DATE RECEIVED: 4/17/2019
 TIME RECEIVED: 1:25 PM

SAMPLED BY: PETE KALLIOINEN/GCES
 **THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

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	130	50	ug/Kg (PPB)	MR	4/16/2019	4/18/2019	EPA 5035A
Toluene	240	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.
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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100137.03
LOCATION: BEAR LAKE 32 CPF
MI
SAMPLE MATRIX: SOIL
SAMPLE ID: SB-COMP-27 (11')

GTA PROJECT NO: 041719-8
GTA SAMPLE NO: 6
DATE SAMPLED: 4/16/2019
TIME SAMPLED: 3:09 PM
DATE RECEIVED: 4/17/2019
TIME RECEIVED: 1:25 PM

SAMPLED BY: PETE KALLIOINEN/GCES
**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

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	50	ug/Kg (PPB)	MR	4/16/2019	4/18/2019	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.
ND = NOT DETECTED, RESULT < LOD
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COMPANY: LAMBDA ENERGY RESOURCES, LLC
 PROJECT NO: 2018100137.03
 LOCATION: BEAR LAKE 32 CPF
 MI
 SAMPLE MATRIX: SOIL
 SAMPLE ID: SB-COMP-27 (15.5')

GTA PROJECT NO: 041719-8
 GTA SAMPLE NO: 7
 DATE SAMPLED: 4/16/2019
 TIME SAMPLED: 3:19 PM
 DATE RECEIVED: 4/17/2019
 TIME RECEIVED: 1:25 PM

SAMPLED BY: PETE KALLIOINEN/GCES
 **THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

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	50	ug/Kg (PPB)	MR	4/16/2019	4/18/2019	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

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

COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100137.03
LOCATION: BEAR LAKE 32 CPF

GTA PROJECT NO: 041719-8
GTA SAMPLE NO: 1

DATE SAMPLED: 4/16/2019
TIME SAMPLED: 1:04 PM
DATE RECEIVED: 4/17/2019
TIME RECEIVED: 1:25 PM

MI
SAMPLED BY: PETE KALLIOINEN/GCES

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u>	<u>Sample</u>
	SAMPLE ID: SB-COMP-25 (5') CHLORIDE EPA 300.0	ND	25	mg/Kg (PPM)	LV	4/18/2019	SOIL

ND = NOT DETECTED, RESULT < LOD
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s.u. = STANDARD pH UNITS REPORTED AT 25 C



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COMPANY:	LAMBDA ENERGY RESOURCES, LLC	GTA PROJECT NO:	041719-8
PROJECT NO:	2018100137.03	GTA SAMPLE NO:	2
LOCATION:	BEAR LAKE 32 CPF	DATE SAMPLED:	4/16/2019
		TIME SAMPLED:	1:42 PM
		DATE RECEIVED:	4/17/2019
		TIME RECEIVED:	1:25 PM
	MI		
SAMPLED BY:	PETE KALLIOINEN/GCES		

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u>	<u>Sample</u>
	SAMPLE ID: SB-COMP-25 (11')						
	CHLORIDE EPA 300.0	ND	31	mg/Kg (PPM)	LV	4/18/2019	SOIL

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

COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100137.03
LOCATION: BEAR LAKE 32 CPF

GTA PROJECT NO: 041719-8
GTA SAMPLE NO: 3

DATE SAMPLED: 4/16/2019
TIME SAMPLED: 2:10 PM
DATE RECEIVED: 4/17/2019
TIME RECEIVED: 1:25 PM

MI
SAMPLED BY: PETE KALLIOINEN/GCES

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u>	<u>Sample</u>
	SAMPLE ID: SB-COMP-26 (5') CHLORIDE EPA 300.0	ND	27	mg/Kg (PPM)	LV	4/18/2019	SOIL

ND = NOT DETECTED, RESULT < LOD
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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100137.03
LOCATION: BEAR LAKE 32 CPF
MI
SAMPLED BY: PETE KALLIOINEN/GCES

GTA PROJECT NO: 041719-8
GTA SAMPLE NO: 4
DATE SAMPLED: 4/16/2019
TIME SAMPLED: 2:22 PM
DATE RECEIVED: 4/17/2019
TIME RECEIVED: 1:25 PM

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u>	<u>Sample</u>
	SAMPLE ID: SB-COMP-26 (9.5') CHLORIDE EPA 300.0	ND	30	mg/Kg (PPM)	LV	4/18/2019	SOIL

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

COMPANY: LAMBDA ENERGY RESOURCES, LLC GTA PROJECT NO: 041719-8
PROJECT NO: 2018100137.03 GTA SAMPLE NO: 5
LOCATION: BEAR LAKE 32 CPF DATE SAMPLED: 4/16/2019
TIME SAMPLED: 2:50 PM
DATE RECEIVED: 4/17/2019
TIME RECEIVED: 1:25 PM
MI
SAMPLED BY: PETE KALLIOINEN/GCES

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u>	<u>Sample</u>
	SAMPLE ID: SB-COMP-27 (5.5') CHLORIDE EPA 300.0	ND	27	mg/Kg (PPM)	LV	4/18/2019	SOIL

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

COMPANY:	LAMBDA ENERGY RESOURCES, LLC	GTA PROJECT NO:	041719-8
PROJECT NO:	2018100137.03	GTA SAMPLE NO:	6
LOCATION:	BEAR LAKE 32 CPF	DATE SAMPLED:	4/16/2019
		TIME SAMPLED:	3:09 PM
		DATE RECEIVED:	4/17/2019
		TIME RECEIVED:	1:25 PM
	MI		
SAMPLED BY:	PETE KALLIOINEN/GCES		

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u>	<u>Sample</u>
	SAMPLE ID: SB-COMP-27 (11')						
	CHLORIDE EPA 300.0	ND	26	mg/Kg (PPM)	LV	4/18/2019	SOIL

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

COMPANY: LAMBDA ENERGY RESOURCES, LLC GTA PROJECT NO: 041719-8
PROJECT NO: 2018100137.03 GTA SAMPLE NO: 7
LOCATION: BEAR LAKE 32 CPF DATE SAMPLED: 4/16/2019
TIME SAMPLED: 3:19 PM
DATE RECEIVED: 4/17/2019
TIME RECEIVED: 1:25 PM

MI
SAMPLED BY: PETE KALLIOINEN/GCES

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u>	<u>Sample</u>
	SAMPLE ID: SB-COMP-27 (15.5') CHLORIDE EPA 300.0	ND	31	mg/Kg (PPM)	LV	4/18/2019	SOIL

ND = NOT DETECTED, RESULT < LOD
LOD = LIMIT OF DETECTION
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NAME:
PROJECT NO: 2018100137.03

LOCATION: BEAR LAKE 32 CPF

MI

GTA PROJECT NO: 041719-8
SAMPLED BY: PETE KALLIOINEN/GCES

DATE SAMPLED: 4/16/2019
TIME SAMPLED: 1:04 PM
SAMPLE MATRIX: SOIL

DATE RECEIVED: 4/17/2019
TIME RECEIVED: 1:25 PM

MOISTURE

<u>No:</u> <u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
SAMPLE ID: SB-COMP-25 (5') % MOISTURE EPA 3550C	5.1	0.050	% OF SAMPLE	AS	4/17/2019
SAMPLE ID: SB-COMP-25 (11') % MOISTURE EPA 3550C	18	0.050	% OF SAMPLE	AS	4/17/2019
SAMPLE ID: SB-COMP-26 (5') % MOISTURE EPA 3550C	8.9	0.050	% OF SAMPLE	AS	4/17/2019
SAMPLE ID: SB-COMP-26 (9.5') % MOISTURE EPA 3550C	19	0.050	% OF SAMPLE	AS	4/17/2019
SAMPLE ID: SB-COMP-27 (5.5') % MOISTURE EPA 3550C	7.4	0.050	% OF SAMPLE	AS	4/17/2019
SAMPLE ID: SB-COMP-27 (11') % MOISTURE EPA 3550C	6.5	0.050	% OF SAMPLE	AS	4/17/2019
SAMPLE ID: SB-COMP-27 (15.5') % MOISTURE EPA 3550C	19	0.050	% OF SAMPLE	AS	4/17/2019

CHAIN OF CUSTODY

PROJECT NUMBER 2018100137.03	SITE NAME/ADDRESS Bear Lake 32 CPF	COMPANY/NAME Lambda Energy
SAMPLED BY Pete Kallioinen	COMPANY Gosling Czubak Eng.	GTA PROJECT # 041719-8

SAMPLE INFORMATION

#	SAMPLE ID	DATE SAMPLED	TIME	MATRIX	ANALYSIS
1	SB-Comp-25 (5')	4-16-19	1:04 pm	Soil	BTEX+4 Chloride
2	SB-Comp-25 (11')		1:42 pm		
3	SB-Comp-26 (5')		2:10 pm		
4	SB-Comp-26 (9.5')		2:22 pm		
5	SB-Comp-27 (5.5')		2:50 pm		
6	SB-Comp-27 (11')		3:09 pm		
7	SB-Comp-27 (15.5')	↓	3:19 pm	↓	↓

BILL TO: Lambda Energy Resources, LLC Attn: Nick Summerland	REPORT TO: Gosling Czubak Engineering Attn: Jeff SimSci
---	--

RELEASED BY 	DATE/TIME 4-17-19 1:25 pm	RECEIVED BY 	DATE/TIME 4/17/19 1:25 p
		see below	

REQUESTED TAT STANDARD 1 BUSINESS DAY 2 BUSINESS DAYS 3 BUSINESS DAYS