



**INDEPENDENT TESTING LAB**

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

[www.gtanalytical.com](http://www.gtanalytical.com)

Company: LAMBDA ENERGY RESOURCES, LLC  
Name:  
ClientProj: 20-117  
GTA ProjNo: 070623-4

Site Addr: FREDERIC 1-10

Sampled By: JONATHAN YOUNGSON/OMPC  
Date Rec: 7/6/2023  
Time Rec: 10:00 AM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	SS-1 @ 4.5'	7/5/2023	2:10 PM	SOIL
2	SS-2 @ 3.5'	7/5/2023	2:40 PM	SOIL
3	SS-3 @ 4'	7/5/2023	3:30 PM	SOIL
4	SS-4 @ 3'	7/5/2023	4:10 PM	SOIL
5	SS-5 @ 3'	7/5/2023	4:50 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 Chase*

Kirk L. Chase/Chemist  
Grand Traverse Analytical  
830 Robinwood Court  
Traverse City, MI 49686  
Ph: 231-929-0905  
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[kirk@gtanalytical.com](mailto:kirk@gtanalytical.com)



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COMPANY: LAMBDA ENERGY RESOURCES, LLC

PROJECT NO: 20-117  
 LOCATION: FREDERIC 1-10

MI

SAMPLE MATRIX: SOIL  
 SAMPLE ID: SS-1 @ 4.5'

GTA PROJECT NO: 070623-4  
 GTA SAMPLE NO: 1

DATE SAMPLED: 7/5/2023  
 TIME SAMPLED: 2:10 PM  
 DATE RECEIVED: 7/6/2023  
 TIME RECEIVED: 10:00 AM

SAMPLED BY: JONATHAN YOUNGSON/OMPC  
 \*\*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 Extracted</u>	<u>Date Complete</u>	<u>Prep Method</u>
Benzene	ND	50	ug/Kg (PPB)	MR	7/5/2023	7/9/2023	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: 20-117  
LOCATION: FREDERIC 1-10  
MI  
SAMPLE MATRIX: SOIL  
SAMPLE ID: SS-2 @ 3.5'

GTA PROJECT NO: 070623-4  
GTA SAMPLE NO: 2  
DATE SAMPLED: 7/5/2023  
TIME SAMPLED: 2:40 PM  
DATE RECEIVED: 7/6/2023  
TIME RECEIVED: 10:00 AM

SAMPLED BY: JONATHAN YOUNGSON/OMPC  
\*\*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	7/5/2023	7/9/2023	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.  
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LOD = LIMIT OF DETECTION

COMPANY: LAMBDA ENERGY RESOURCES, LLC

PROJECT NO: 20-117  
 LOCATION: FREDERIC 1-10

MI

SAMPLE MATRIX: SOIL  
 SAMPLE ID: SS-3 @ 4'

GTA PROJECT NO: 070623-4  
 GTA SAMPLE NO: 3

DATE SAMPLED: 7/5/2023  
 TIME SAMPLED: 3:30 PM  
 DATE RECEIVED: 7/6/2023  
 TIME RECEIVED: 10:00 AM

SAMPLED BY: JONATHAN YOUNGSON/OMPC

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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	ND	50	ug/Kg (PPB)	MR	7/5/2023	7/9/2023	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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 LOD = LIMIT OF DETECTION

COMPANY: LAMBDA ENERGY RESOURCES, LLC

PROJECT NO: 20-117  
LOCATION: FREDERIC 1-10

MI

SAMPLE MATRIX: SOIL  
SAMPLE ID: SS-4 @ 3'

GTA PROJECT NO: 070623-4  
GTA SAMPLE NO: 4

DATE SAMPLED: 7/5/2023  
TIME SAMPLED: 4:10 PM  
DATE RECEIVED: 7/6/2023  
TIME RECEIVED: 10:00 AM

SAMPLED BY: JONATHAN YOUNGSON/OMPC

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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 Extracted</u>	<u>Date Complete</u>	<u>Prep Method</u>
Benzene	ND	50	ug/Kg (PPB)	MR	7/5/2023	7/9/2023	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.  
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LOD = LIMIT OF DETECTION

COMPANY: LAMBDA ENERGY RESOURCES, LLC

PROJECT NO: 20-117  
LOCATION: FREDERIC 1-10

MI

SAMPLE MATRIX: SOIL  
SAMPLE ID: SS-5 @ 3'

GTA PROJECT NO: 070623-4  
GTA SAMPLE NO: 5

DATE SAMPLED: 7/5/2023  
TIME SAMPLED: 4:50 PM  
DATE RECEIVED: 7/6/2023  
TIME RECEIVED: 10:00 AM

SAMPLED BY: JONATHAN YOUNGSON/OMPC

\*\*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	7/5/2023	7/9/2023	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

GTA PROJECT NO: 070623-4

GTA SAMPLE NO: 1

NAME:

PROJECT NO: 20-117

DATE SAMPLED: 7/5/2023

LOCATION: FREDERIC 1-10

TIME SAMPLED: 2:10 PM

DATE RECEIVED: 7/6/2023

TIME RECEIVED: 10:00 AM

MI

SAMPLED BY: JONATHAN YOUNGSON/OMPC

**ORGANICS**

<u>No:</u>	<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>
	SAMPLE ID: SS-1 @ 4.5'							
	SAMPLE MATRIX: SOIL							
	ETHYLENE GLYCOL EPA 8015M	ND	10	mg/Kg (PPM)	KC/TR	7/7/2023	7/7/2023	EPA 3550M

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.

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LOD = LIMIT OF DETECTION



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COMPANY: LAMBDA ENERGY RESOURCES, LLC

GTA PROJECT NO: 070623-4

GTA SAMPLE NO: 2

NAME:

PROJECT NO: 20-117

DATE SAMPLED: 7/5/2023

LOCATION: FREDERIC 1-10

TIME SAMPLED: 2:40 PM

DATE RECEIVED: 7/6/2023

TIME RECEIVED: 10:00 AM

MI

SAMPLED BY: JONATHAN YOUNGSON/OMPC

**ORGANICS**

<u>No:</u>	<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>
SAMPLE ID:	SS-2 @ 3.5'							
SAMPLE MATRIX:	SOIL							
ETHYLENE GLYCOL EPA 8015M		530	10	mg/Kg (PPM)	KC/TR	7/7/2023	7/7/2023	EPA 3550M

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION



COMPANY: LAMBDA ENERGY RESOURCES, LLC

GTA PROJECT NO: 070623-4

GTA SAMPLE NO: 4

NAME:

PROJECT NO: 20-117

DATE SAMPLED: 7/5/2023

LOCATION: FREDERIC 1-10

TIME SAMPLED: 4:10 PM

DATE RECEIVED: 7/6/2023

TIME RECEIVED: 10:00 AM

MI

SAMPLED BY: JONATHAN YOUNGSON/OMPC

**ORGANICS**

<u>No:</u>	<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>
	SAMPLE ID: SS-4 @ 3'							
	SAMPLE MATRIX: SOIL							
	ETHYLENE GLYCOL EPA 8015M	940	10	mg/Kg (PPM)	KC/TR	7/7/2023	7/7/2023	EPA 3550M

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

COMPANY: LAMBDA ENERGY RESOURCES, LLC

GTA PROJECT NO: 070623-4

GTA SAMPLE NO: 5

NAME:

PROJECT NO: 20-117

DATE SAMPLED: 7/5/2023

LOCATION: FREDERIC 1-10

TIME SAMPLED: 4:50 PM

DATE RECEIVED: 7/6/2023

TIME RECEIVED: 10:00 AM

MI

SAMPLED BY: JONATHAN YOUNGSON/OMPC

**ORGANICS**

<u>No:</u>	<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>
	SAMPLE ID: SS-5 @ 3'							
	SAMPLE MATRIX: SOIL							
	ETHYLENE GLYCOL EPA 8015M	340	10	mg/Kg (PPM)	KC/TR	7/7/2023	7/7/2023	EPA 3550M

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: 20-117  
 LOCATION: FREDERIC 1-10

GTA PROJECT NO: 070623-4  
 GTA SAMPLE NO: 1

DATE SAMPLED: 7/5/2023  
 TIME SAMPLED: 2:10 PM  
 DATE RECEIVED: 7/6/2023  
 TIME RECEIVED: 10:00 AM

MI  
 SAMPLED BY: JONATHAN YOUNGSON/OMPC

**SAMPLE ANALYSIS**

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Sample Matrix</u>
	SAMPLE ID: SS-1 @ 4.5' CHLORIDE EPA 300.0	ND	93	mg/Kg (PPM)	KC/AS	7/6/2023	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: 20-117  
 LOCATION: FREDERIC 1-10

GTA PROJECT NO: 070623-4  
 GTA SAMPLE NO: 2

DATE SAMPLED: 7/5/2023  
 TIME SAMPLED: 2:40 PM  
 DATE RECEIVED: 7/6/2023  
 TIME RECEIVED: 10:00 AM

MI  
 SAMPLED BY: JONATHAN YOUNGSON/OMPC

**SAMPLE ANALYSIS**

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Sample Matrix</u>
	SAMPLE ID: SS-2 @ 3.5' CHLORIDE EPA 300.0	ND	93	mg/Kg (PPM)	KC/AS	7/6/2023	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: 20-117  
 LOCATION: FREDERIC 1-10

GTA PROJECT NO: 070623-4  
 GTA SAMPLE NO: 3

DATE SAMPLED: 7/5/2023  
 TIME SAMPLED: 3:30 PM  
 DATE RECEIVED: 7/6/2023  
 TIME RECEIVED: 10:00 AM

MI  
 SAMPLED BY: JONATHAN YOUNGSON/OMPC

**SAMPLE ANALYSIS**

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Sample Matrix</u>
	SAMPLE ID: SS-3 @ 4' CHLORIDE EPA 300.0	ND	97	mg/Kg (PPM)	KC/AS	7/6/2023	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: 20-117  
 LOCATION: FREDERIC 1-10

GTA PROJECT NO: 070623-4  
 GTA SAMPLE NO: 4

DATE SAMPLED: 7/5/2023  
 TIME SAMPLED: 4:10 PM  
 DATE RECEIVED: 7/6/2023  
 TIME RECEIVED: 10:00 AM

MI  
 SAMPLED BY: JONATHAN YOUNGSON/OMPC

**SAMPLE ANALYSIS**

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Sample Matrix</u>
	SAMPLE ID: SS-4 @ 3' CHLORIDE EPA 300.0	190	92	mg/Kg (PPM)	KC/AS	7/6/2023	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: 20-117  
 LOCATION: FREDERIC 1-10

GTA PROJECT NO: 070623-4  
 GTA SAMPLE NO: 5

DATE SAMPLED: 7/5/2023  
 TIME SAMPLED: 4:50 PM  
 DATE RECEIVED: 7/6/2023  
 TIME RECEIVED: 10:00 AM

MI  
 SAMPLED BY: JONATHAN YOUNGSON/OMPC

**SAMPLE ANALYSIS**

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Sample Matrix</u>
	SAMPLE ID: SS-5 @ 3' CHLORIDE EPA 300.0	150	100	mg/Kg (PPM)	KC/AS	7/6/2023	SOIL

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



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COMPANY: LAMBDA ENERGY RESOURCES, LLC

NAME:  
PROJECT NO: 20-117

LOCATION: FREDERIC 1-10  
  
MI

GTA PROJECT NO: 070623-  
SAMPLED BY: JONATHAN YOUNGSON/OMPC

DATE SAMPLED: 7/5/2023

SAMPLE MATRIX: SOIL

DATE RECEIVED: 7/6/2023  
TIME RECEIVED: 10:00 AM

**MOISTURE**

<u>No:</u> <u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>
SAMPLE ID: SS-1 @ 4.5' % MOISTURE EPA 3550C	5.8	0.10	% OF SAMPLE	AS	7/6/2023
SAMPLE ID: SS-2 @ 3.5' % MOISTURE EPA 3550C	4.3	0.10	% OF SAMPLE	AS	7/6/2023
SAMPLE ID: SS-3 @ 4' % MOISTURE EPA 3550C	4.9	0.10	% OF SAMPLE	AS	7/6/2023
SAMPLE ID: SS-4 @ 3' % MOISTURE EPA 3550C	5.3	0.10	% OF SAMPLE	AS	7/6/2023
SAMPLE ID: SS-5 @ 3' % MOISTURE EPA 3550C	7.8	0.10	% OF SAMPLE	AS	7/6/2023

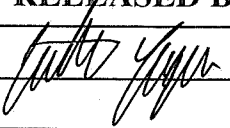
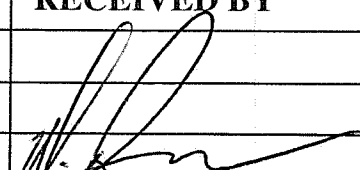
**CHAIN OF CUSTODY**

PROJECT NUMBER <b>20-117</b>	SITE NAME/ADDRESS <b>Frederic 1-10</b>	COMPANY/NAME <b>Lambda</b>
SAMPLED BY <b>Jonathan Youngson</b>	COMPANY <b>Otwell Mawby</b>	GTA PROJECT # <b>010623-4</b>

**SAMPLE INFORMATION**

#	SAMPLE ID	DATE SAMPLED	TIME	MATRIX	ANALYSIS
1	SS-1 @ 4.5'	7/5/23	14:10	Soil	HIPs, Chlorides, ethylene glycol
2	SS-2 @ 3.5'	7/5/23	14:40	Soil	↓
3	SS-3 @ 4'	7/5/23	15:30	Soil	
4	SS-4 @ 3'	7/5/23	16:10	Soil	
5	SS-5 @ 3'	7/5/23	16:50	Soil	

BILL TO: <b>Lambda</b>	TempRec: <input type="checkbox"/> <b>0.1°C</b>	On Ice? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	REPORT TO: <b>Dan Barten</b> <b>dbarten@otwellmawby.com</b>
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RELEASED BY 	DATE/TIME <b>7/6/23 9:53</b>	RECEIVED BY 	DATE/TIME <b>7-6-23 10A</b>
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REQUESTED TAT  STANDARD  1 BUSINESS DAY  2 BUSINESS DAYS  3 BUSINESS DAYS