

**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:

Site Addr: EPA-UIC ANNUAL SAMPLES

GTA ProjNo: 110620-17

Sampled By: LER

Date Rec: 11/6/2020

Time Rec: 4:35 PM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	ST. ALBERT A2-25	10/30/2020	8:00 AM	BRINE
2	LARRISON C4-21	10/30/2020	10:35 AM	BRINE
3	ST. FOREST 1-24	11/4/2020	8:05 AM	BRINE
4	ST. LOUD B3-29	10/30/2020	1:40 PM	BRINE

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
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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: GTA PROJECT NO: 110620-17
LOCATION: EPA-UIC ANNUAL SAMPLES
DATE SAMPLED: 10/30/2020
TIME SAMPLED: 8:00 AM
DATE RECEIVED: 11/6/2020
TIME RECEIVED: 4:35 PM
SAMPLED BY: MI
LER
SAMPLE MATRIX: BRINE
SAMPLE ID: ST. ALBERT A2-25

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
CALCIUM DISS EPA 6020A	5,000	100	mg/L (PPM)	MR/TR	11/20/2020	EPA 3005A
MAGNESIUM DISS EPA 6020A	4,100	100	mg/L (PPM)	MR/TR	11/20/2020	EPA 3005A
SODIUM DISS EPA 6020A	100,000	100	mg/L (PPM)	MR/TR	11/20/2020	EPA 3005A

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

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PROJECT NO:
LOCATION: EPA-UIC ANNUAL SAMPLES
MI
SAMPLED BY: LER
SAMPLE ID: ST. ALBERT A2-25

GTA PROJECT NO: 110620-17
GTA SAMPLE NO: 1
DATE RECEIVED: 11/6/2020
TIME RECEIVED: 4:35 PM
DATE SAMPLED: 10/30/2020
TIME SAMPLED: 8:00 AM
SAMPLE MATRIX: BRINE

SAMPLE RESULTS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	230	10	mg/L (PPM)	TR	11/13/2020
ALKALINITY SM 4500CO2D (CARBONATE)	ND	10	mg/L (PPM)	TR	11/13/2020
CHLORIDE EPA 300.0	85,000	2,000	mg/L (PPM)	LV	11/12/2020
pH EPA 150.1 - LAB	6.5	0.10	s.u.	TR	11/13/2020
SPECIFIC GRAVITY SM 2710F	1.085	-	-	LV	11/16/2020
SULFATE EPA 300.0	ND	50	mg/L (PPM)	LV	11/12/2020
TOTAL DISSOLVED SOLIDS EPA 160.1	110,000	5.0	mg/L (PPM)	TR	11/18/2020

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: GTA PROJECT NO: 110620-17
LOCATION: EPA-UIC ANNUAL SAMPLES
DATE SAMPLED: 10/30/2020
TIME SAMPLED: 10:35 AM
DATE RECEIVED: 11/6/2020
TIME RECEIVED: 4:35 PM
SAMPLED BY: MI
LER
SAMPLE MATRIX: BRINE
SAMPLE ID: LARRISON C4-21

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
BARIUM DISS EPA 6020A	170	1.0	mg/L (PPM)	MR/TR	11/20/2020	EPA 3005A
CALCIUM DISS EPA 6020A	15,000	100	mg/L (PPM)	MR/TR	11/20/2020	EPA 3005A
IRON TOTAL EPA 6020A	61	10	mg/L (PPM)	MR/TR	11/20/2020	EPA 3020A
MAGNESIUM DISS EPA 6020A	9,200	100	mg/L (PPM)	MR/TR	11/20/2020	EPA 3005A
SODIUM DISS EPA 6020A	190,000	100	mg/L (PPM)	MR/TR	11/20/2020	EPA 3005A

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO:
LOCATION: EPA-UIC ANNUAL SAMPLES
MI
SAMPLED BY: LER
SAMPLE ID: LARRISON C4-21

GTA PROJECT NO: 110620-17
GTA SAMPLE NO: 2
DATE RECEIVED: 11/6/2020
TIME RECEIVED: 4:35 PM
DATE SAMPLED: 10/30/2020
TIME SAMPLED: 10:35 AM
SAMPLE MATRIX: BRINE

SAMPLE RESULTS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	55	10	mg/L (PPM)	TR	11/13/2020
ALKALINITY SM 4500CO2D (CARBONATE)	ND	10	mg/L (PPM)	TR	11/13/2020
CHLORIDE EPA 300.0	210,000	2,000	mg/L (PPM)	LV	11/12/2020
pH EPA 150.1 - LAB	6.1	0.10	s.u.	TR	11/13/2020
RESISTIVITY SM 2510A	2.4	-	ohms x cm	LV	11/12/2020
SPECIFIC GRAVITY SM 2710F	1.178	-	-	LV	11/16/2020
SULFATE EPA 300.0	ND	50	mg/L (PPM)	LV	11/12/2020
SULFIDE SM 4500S D	ND	1.0	mg/L (PPM)	KC	11/7/2020
TOTAL DISSOLVED SOLIDS EPA 160.1	230,000	5.0	mg/L (PPM)	TR	11/18/2020

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: GTA PROJECT NO: 110620-17
LOCATION: EPA-UIC ANNUAL SAMPLES
DATE SAMPLED: 11/4/2020
TIME SAMPLED: 8:05 AM
DATE RECEIVED: 11/6/2020
TIME RECEIVED: 4:35 PM
SAMPLED BY: MI
LER
SAMPLE MATRIX: BRINE
SAMPLE ID: ST. FOREST 1-24

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
CALCIUM DISS EPA 6020A	4,800	100	mg/L (PPM)	MR/TR	11/20/2020	EPA 3005A
MAGNESIUM DISS EPA 6020A	1,800	100	mg/L (PPM)	MR/TR	11/20/2020	EPA 3005A
SODIUM DISS EPA 6020A	5,600	100	mg/L (PPM)	MR/TR	11/20/2020	EPA 3005A

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO:
LOCATION: EPA-UIC ANNUAL SAMPLES
MI
SAMPLED BY: LER
SAMPLE ID: ST. FOREST 1-24

GTA PROJECT NO: 110620-17
GTA SAMPLE NO: 3
DATE RECEIVED: 11/6/2020
TIME RECEIVED: 4:35 PM
DATE SAMPLED: 11/4/2020
TIME SAMPLED: 8:05 AM
SAMPLE MATRIX: BRINE

SAMPLE RESULTS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	200	10	mg/L (PPM)	TR	11/13/2020
ALKALINITY SM 4500CO2D (CARBONATE)	ND	10	mg/L (PPM)	TR	11/13/2020
CHLORIDE EPA 300.0	59,000	2,000	mg/L (PPM)	LV	11/12/2020
pH EPA 150.1 - LAB	7.0	0.10	s.u.	TR	11/13/2020
SPECIFIC GRAVITY SM 2710F	1.056	-	-	LV	11/16/2020
SULFATE EPA 300.0	ND	50	mg/L (PPM)	LV	11/12/2020
TOTAL DISSOLVED SOLIDS EPA 160.1	110,000	5.0	mg/L (PPM)	TR	11/18/2020

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: GTA PROJECT NO: 110620-17
LOCATION: EPA-UIC ANNUAL SAMPLES
DATE SAMPLED: 10/30/2020
TIME SAMPLED: 1:40 PM
DATE RECEIVED: 11/6/2020
TIME RECEIVED: 4:35 PM
SAMPLED BY: MI
LER
SAMPLE MATRIX: BRINE
SAMPLE ID: ST. LOUD B3-29

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
CALCIUM DISS EPA 6020A	2,100	10	mg/L (PPM)	MR/TR	11/20/2020	EPA 3005A
MAGNESIUM DISS EPA 6020A	1,300	10	mg/L (PPM)	MR/TR	11/20/2020	EPA 3005A
SODIUM DISS EPA 6020A	45,000	100	mg/L (PPM)	MR/TR	11/20/2020	EPA 3005A

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COMPANY: LAMBDA ENERGY RESOURCES, LLC

PROJECT NO:

LOCATION: EPA-UIC ANNUAL SAMPLES

MI

SAMPLED BY: LER

SAMPLE ID: ST. LOUD B3-29

GTA PROJECT NO: 110620-17

GTA SAMPLE NO: 4

DATE RECEIVED: 11/6/2020

TIME RECEIVED: 4:35 PM

DATE SAMPLED: 10/30/2020

TIME SAMPLED: 1:40 PM

SAMPLE MATRIX: BRINE

SAMPLE RESULTS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	110	10	mg/L (PPM)	TR	11/13/2020
ALKALINITY SM 4500CO2D (CARBONATE)	ND	10	mg/L (PPM)	TR	11/13/2020
CHLORIDE EPA 300.0	190,000	2,000	mg/L (PPM)	LV	11/12/2020
pH EPA 150.1 - LAB	6.6	0.10	s.u.	TR	11/13/2020
SPECIFIC GRAVITY SM 2710F	1.156	-	-	LV	11/16/2020
SULFATE EPA 300.0	ND	50	mg/L (PPM)	LV	11/12/2020
TOTAL DISSOLVED SOLIDS EPA 160.1	200,000	5.0	mg/L (PPM)	TR	11/18/2020

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CHAIN OF CUSTODY

PROJECT NUMBER	SITE NAME/ADDRESS	COMPANY/NAME
	Various	Lambda Energy Resources
SAMPLED BY:	COMPANY	GTA PROJECT #
	same	110620-17

SAMPLE INFORMATION

#	SAMPLE ID	DATE SAMPLED	TIME	MATRIX	ANALYSIS
1	St. Albert 12-25	10/30/2020	8:00AM	Brine	parameter # 1
2	Larrison C4-21	10/30/2020	10:30AM	↓	2
3	St. Forest 1-24	11/4/2020	8:05AM		1
4	St. Louis B3-29	10/30/2020	1:40PM		1

BILL TO:

same

REPORT TO:

RELEASED BY

DATE/TIME

Neil Ford 11-6-20-4:35P

RECEIVED BY

DATE/TIME

AW 11/6/20 4:35

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