

**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:

Site Addr: EPA-UIC ANNUAL SAMPLES

GTA ProjNo: 100720-1

Sampled By: VARIOUS/LER  
Date Rec: 10/6/2020  
Time Rec: 3:30 PM

| Sample No. | Sample ID            | Date Sampled | Time Sampled | Sample Matrix |
|------------|----------------------|--------------|--------------|---------------|
| 1          | ST. WHITEWATER 1-32  | 9/30/2020    | 3:00 PM      | BRINE         |
| 2          | HASTINGS C4-7        | 9/22/2020    | 1:00 PM      | BRINE         |
| 3          | MANN A2-21           | 9/22/2020    | 10:30 AM     | BRINE         |
| 4          | ST. WHITEWATER 1-36  | 9/30/2020    | 3:30 PM      | BRINE         |
| 5          | BOWMAN 6-19A         | 10/1/2020    | 8:00 AM      | BRINE         |
| 6          | ST. OSSINEKE B3-36   | 9/22/2020    | 11:45 AM     | BRINE         |
| 7          | ST. KALKASKA 2-12    | 9/30/2020    | 1:45 PM      | BRINE         |
| 8          | ST. PARADISE 1-19    | 9/30/2020    | 10:00 AM     | BRINE         |
| 9          | ST. WHITEWATER 2-32  | 9/30/2020    | 3:00 PM      | BRINE         |
| 10         | NICKERSON 5-1        | 9/30/2020    | 12:00 PM     | BRINE         |
| 11         | DAVENPORT 4-5        | 9/30/2020    | 2:00 PM      | BRINE         |
| 12         | WALTON 6-16          | 10/1/2020    | 8:30 AM      | BRINE         |
| 13         | ST. RAPID RIVER 1-24 | 9/30/2020    | 11:30 AM     | BRINE         |
| 14         | ST. WHITEWATER B1-35 | 9/30/2020    | 3:30 PM      | BRINE         |
| 15         | ST. BLUE LAKE 1-17   | 9/30/2020    | 12:45 PM     | BRINE         |
| 16         | WERTH C1-4           | 9/23/2020    | 1:00 PM      | BRINE         |
| 17         | BUREK B4-8           | 9/23/2020    | 9:30 AM      | BRINE         |
| 18         | HAAS HUNT CLUB 3-33  | 9/23/2020    | 12:00 PM     | BRINE         |
| 19         | DIAMOND D2-13        | 9/23/2020    | 12:30 PM     | BRINE         |
| 20         | TIMM C2-10           | 9/23/2020    | 9:00 AM      | BRINE         |
| 21         | KOGELMANN C1-10      | 9/23/2020    | 10:30 AM     | BRINE         |
| 22         | NORWICH WPM 5        | 9/25/2020    | 10:45 AM     | BRINE         |
| 23         | ENTERPRISE SWD       | 9/28/2020    | 10:45 AM     | BRINE         |
| 24         | NORWICH WPM 1, 7     | 9/25/2020    | 10:00 AM     | BRINE         |
| 25         | ENTERPRISE WPM 1,2   | 9/28/2020    | 10:40 AM     | BRINE         |
| 26         | NORWICH SWD          | 9/25/2020    | 11:00 AM     | BRINE         |
| 27         | NORWICH WPM 2,3,4    | 9/25/2020    | 9:30 AM      | BRINE         |
| 28         | NORWICH WPM 6        | 9/25/2020    | 10:30 AM     | 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  
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Traverse City, MI 49686  
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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: GTA PROJECT NO: 100720-1  
LOCATION: EPA-UIC ANNUAL SAMPLES  
DATE SAMPLED: 9/30/2020  
TIME SAMPLED: 3:00 PM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLED BY: MI  
VARIOUS/LER  
SAMPLE MATRIX: BRINE  
SAMPLE ID: ST. WHITEWATER 1-32

**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    | 0.19                 | 0.050      | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| CALCIUM DISS EPA 6020A   | 140                  | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| IRON TOTAL EPA 6020A     | ND                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3020A               |
| MAGNESIUM DISS EPA 6020A | 34                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 32                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |

ND = NOT DETECTED, RESULT &lt; LOD

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: ST. WHITEWATER 1-32

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 1  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 9/30/2020  
TIME SAMPLED: 3:00 PM  
SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 250                         | 10                | mg/L (PPM)          | TR                    | 10/17/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                          | 10                | mg/L (PPM)          | TR                    | 10/17/2020                   |
| CHLORIDE EPA 300.0                   | 300                         | 10                | mg/L (PPM)          | LV                    | 10/8/2020                    |
| pH EPA 150.1 - LAB                   | 8.1                         | 0.10              | s.u.                | TR                    | 10/17/2020                   |
| RESISTIVITY SM 2510A                 | 750                         | -                 | ohms x cm           | LV                    | 10/8/2020                    |
| SPECIFIC GRAVITY SM 2710F            | 1.003                       | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | ND                          | 10                | mg/L (PPM)          | LV                    | 10/8/2020                    |
| SULFIDE SM 4500S D                   | ND                          | 1.0               | mg/L (PPM)          | KC                    | 10/8/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 1,400                       | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: EPA-UIC ANNUAL SAMPLES  
LOCATION: MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: HASTINGS C4-7

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 2  
DATE SAMPLED: 9/22/2020  
TIME SAMPLED: 1:00 PM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLE MATRIX: BRINE

**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    | 49                   | 0.050      | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| CALCIUM DISS EPA 6020A   | 1,000                | 10         | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| IRON TOTAL EPA 6020A     | 54                   | 10         | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3020A               |
| MAGNESIUM DISS EPA 6020A | 1,100                | 10         | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 37,000               | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |

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GTA PROJECT NO: 100720-1

PROJECT NO:

GTA SAMPLE NO: 2

LOCATION: EPA-UIC ANNUAL SAMPLES

DATE RECEIVED: 10/6/2020

TIME RECEIVED: 3:30 PM

MI

DATE SAMPLED: 9/22/2020

TIME SAMPLED: 1:00 PM

SAMPLED BY: VARIOUS/LER

SAMPLE MATRIX: BRINE

SAMPLE ID: HASTINGS C4-7

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 680                         | 10                | mg/L (PPM)          | TR                    | 10/17/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                          | 10                | mg/L (PPM)          | TR                    | 10/17/2020                   |
| CHLORIDE EPA 300.0                   | 55,000                      | 2,000             | mg/L (PPM)          | LV                    | 10/8/2020                    |
| pH EPA 150.1 - LAB                   | 7.4                         | 0.10              | s.u.                | TR                    | 10/17/2020                   |
| RESISTIVITY SM 2510A                 | 8.8                         | -                 | ohms x cm           | LV                    | 10/8/2020                    |
| SPECIFIC GRAVITY SM 2710F            | 1.050                       | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | ND                          | 50                | mg/L (PPM)          | LV                    | 10/8/2020                    |
| SULFIDE SM 4500S D                   | ND                          | 1.0               | mg/L (PPM)          | KC                    | 10/8/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 80,000                      | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: EPA-UIC ANNUAL SAMPLES  
LOCATION: MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: MANN A2-21

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 3  
DATE SAMPLED: 9/22/2020  
TIME SAMPLED: 10:30 AM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLE MATRIX: BRINE

**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    | 12                   | 0.050      | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| CALCIUM DISS EPA 6020A   | 310                  | 10         | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| IRON TOTAL EPA 6020A     | 23                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3020A               |
| MAGNESIUM DISS EPA 6020A | 440                  | 10         | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 20,000               | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |

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PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: MANN A2-21

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 3  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 9/22/2020  
TIME SAMPLED: 10:30 AM  
SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 1,800                       | 10                | mg/L (PPM)          | TR                    | 10/17/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | 11                          | 10                | mg/L (PPM)          | TR                    | 10/17/2020                   |
| CHLORIDE EPA 300.0                   | 26,000                      | 2,000             | mg/L (PPM)          | LV                    | 10/8/2020                    |
| pH EPA 150.1 - LAB                   | 7.8                         | 0.10              | s.u.                | TR                    | 10/17/2020                   |
| RESISTIVITY SM 2510A                 | 15                          | -                 | ohms x cm           | LV                    | 10/8/2020                    |
| SPECIFIC GRAVITY SM 2710F            | 1.029                       | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | ND                          | 50                | mg/L (PPM)          | LV                    | 10/8/2020                    |
| SULFIDE SM 4500S D                   | ND                          | 1.0               | mg/L (PPM)          | KC                    | 10/8/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 39,000                      | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: GTA PROJECT NO: 100720-1  
LOCATION: EPA-UIC ANNUAL SAMPLES  
DATE SAMPLED: 9/30/2020  
TIME SAMPLED: 3:30 PM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLED BY: MI  
VARIOUS/LER  
SAMPLE MATRIX: BRINE  
SAMPLE ID: ST. WHITEWATER 1-36

### 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   | 30                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| MAGNESIUM DISS EPA 6020A | 8.4                  | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 8.2                  | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: ST. WHITEWATER 1-36

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 4  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 9/30/2020  
TIME SAMPLED: 3:30 PM  
SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 44                          | 10                | mg/L (PPM)          | TR                    | 10/17/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                          | 10                | mg/L (PPM)          | TR                    | 10/17/2020                   |
| CHLORIDE EPA 300.0                   | 36                          | 10                | mg/L (PPM)          | LV                    | 10/9/2020                    |
| pH EPA 150.1 - LAB                   | 6.8                         | 0.10              | s.u.                | TR                    | 10/17/2020                   |
| SPECIFIC GRAVITY SM 2710F            | 0.9982                      | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | ND                          | 10                | mg/L (PPM)          | LV                    | 10/9/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 410                         | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: GTA PROJECT NO: 100720-1  
LOCATION: EPA-UIC ANNUAL SAMPLES  
DATE SAMPLED: 10/1/2020  
TIME SAMPLED: 8:00 AM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLED BY: MI  
VARIOUS/LER  
SAMPLE MATRIX: BRINE  
SAMPLE ID: BOWMAN 6-19A

### 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   | 38,000               | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| MAGNESIUM DISS EPA 6020A | 5,700                | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 29,000               | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: BOWMAN 6-19A

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 5  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 10/1/2020  
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) | 170                  | 10         | mg/L (PPM)   | TR             | 10/18/2020            |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                   | 10         | mg/L (PPM)   | TR             | 10/18/2020            |
| CHLORIDE EPA 300.0                   | 170,000              | 2,000      | mg/L (PPM)   | LV             | 10/9/2020             |
| pH EPA 150.1 - LAB                   | 6.2                  | 0.10       | s.u.         | TR             | 10/18/2020            |
| SPECIFIC GRAVITY SM 2710F            | 1.143                | -          | -            | LV             | 10/15/2020            |
| SULFATE EPA 300.0                    | 120                  | 50         | mg/L (PPM)   | LV             | 10/9/2020             |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 190,000              | 5.0        | mg/L (PPM)   | TR             | 10/14/2020            |

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: EPA-UIC ANNUAL SAMPLES  
LOCATION: MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: ST. OSSINEKE B3-36

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 6  
DATE SAMPLED: 9/22/2020  
TIME SAMPLED: 11:45 AM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLE MATRIX: BRINE

**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    | 41                   | 0.050      | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| CALCIUM DISS EPA 6020A   | 900                  | 10         | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| IRON TOTAL EPA 6020A     | 49                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3020A               |
| MAGNESIUM DISS EPA 6020A | 960                  | 10         | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 34,000               | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: ST. OSSINEKE B3-36

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 6  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 9/22/2020  
TIME SAMPLED: 11:45 AM  
SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 810                         | 10                | mg/L (PPM)          | TR                    | 10/18/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                          | 10                | mg/L (PPM)          | TR                    | 10/18/2020                   |
| CHLORIDE EPA 300.0                   | 50,000                      | 2,000             | mg/L (PPM)          | LV                    | 10/9/2020                    |
| pH EPA 150.1 - LAB                   | 7.5                         | 0.10              | s.u.                | TR                    | 10/18/2020                   |
| RESISTIVITY SM 2510A                 | 9.3                         | -                 | ohms x cm           | LV                    | 10/8/2020                    |
| SPECIFIC GRAVITY SM 2710F            | 1.045                       | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | ND                          | 50                | mg/L (PPM)          | LV                    | 10/9/2020                    |
| SULFIDE SM 4500S D                   | ND                          | 1.0               | mg/L (PPM)          | KC                    | 10/8/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 72,000                      | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

ND = NOT DETECTED, RESULT &lt; 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  
PROJECT NO: GTA PROJECT NO: 100720-1  
LOCATION: EPA-UIC ANNUAL SAMPLES  
DATE SAMPLED: 9/30/2020  
TIME SAMPLED: 1:45 PM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLED BY: MI  
VARIOUS/LER  
SAMPLE MATRIX: BRINE  
SAMPLE ID: ST. KALKASKA 2-12

**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   | 35,000               | 10         | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| MAGNESIUM DISS EPA 6020A | 4,600                | 10         | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 16,000               | 10         | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: ST. KALKASKA 2-12

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 7  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 9/30/2020  
TIME SAMPLED: 1:45 PM  
SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 130                         | 10                | mg/L (PPM)          | TR                    | 10/18/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                          | 10                | mg/L (PPM)          | TR                    | 10/18/2020                   |
| CHLORIDE EPA 300.0                   | 150,000                     | 2,000             | mg/L (PPM)          | LV                    | 10/9/2020                    |
| pH EPA 150.1 - LAB                   | 5.9                         | 0.10              | s.u.                | TR                    | 10/18/2020                   |
| SPECIFIC GRAVITY SM 2710F            | 1.139                       | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | ND                          | 50                | mg/L (PPM)          | LV                    | 10/9/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 180,000                     | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: GTA PROJECT NO: 100720-1  
LOCATION: EPA-UIC ANNUAL SAMPLES  
DATE SAMPLED: 9/30/2020  
TIME SAMPLED: 10:00 AM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLED BY: MI  
VARIOUS/LER  
SAMPLE MATRIX: BRINE  
SAMPLE ID: ST. PARADISE 1-19

### 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   | 75,000               | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| MAGNESIUM DISS EPA 6020A | 8,800                | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 16,000               | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |

ND = NOT DETECTED, RESULT < LOD  
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DISS = DISSOLVED



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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: ST. PARADISE 1-19

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 8  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 9/30/2020  
TIME SAMPLED: 10:00 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) | ND                   | 10         | mg/L (PPM)   | TR             | 10/18/2020            |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                   | 10         | mg/L (PPM)   | TR             | 10/18/2020            |
| CHLORIDE EPA 300.0                   | 310,000              | 2,000      | mg/L (PPM)   | LV             | 10/10/2020            |
| pH EPA 150.1 - LAB                   | 2.7                  | 0.10       | s.u.         | TR             | 10/18/2020            |
| SPECIFIC GRAVITY SM 2710F            | 1.267                | -          | -            | LV             | 10/15/2020            |
| SULFATE EPA 300.0                    | 130                  | 50         | mg/L (PPM)   | LV             | 10/9/2020             |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 380,000              | 5.0        | mg/L (PPM)   | TR             | 10/14/2020            |

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: GTA PROJECT NO: 100720-1  
LOCATION: EPA-UIC ANNUAL SAMPLES  
DATE SAMPLED: 9/30/2020  
TIME SAMPLED: 3:00 PM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLED BY: MI  
VARIOUS/LER  
SAMPLE MATRIX: BRINE  
SAMPLE ID: ST. WHITEWATER 2-32

**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   | 140                  | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| MAGNESIUM DISS EPA 6020A | 34                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 32                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: ST. WHITEWATER 2-32

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 9  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 9/30/2020  
TIME SAMPLED: 3:00 PM  
SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 260                         | 10                | mg/L (PPM)          | TR                    | 10/18/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                          | 10                | mg/L (PPM)          | TR                    | 10/18/2020                   |
| CHLORIDE EPA 300.0                   | 310                         | 10                | mg/L (PPM)          | LV                    | 10/10/2020                   |
| pH EPA 150.1 - LAB                   | 8.4                         | 0.10              | s.u.                | TR                    | 10/18/2020                   |
| SPECIFIC GRAVITY SM 2710F            | 0.9963                      | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | ND                          | 10                | mg/L (PPM)          | LV                    | 10/9/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 2,100                       | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: GTA PROJECT NO: 100720-1  
LOCATION: EPA-UIC ANNUAL SAMPLES  
DATE SAMPLED: 9/30/2020  
TIME SAMPLED: 12:00 PM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLED BY: MI  
VARIOUS/LER  
SAMPLE MATRIX: BRINE  
SAMPLE ID: NICKERSON 5-1

### 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   | 70,000               | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| MAGNESIUM DISS EPA 6020A | 9,400                | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 24,000               | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: NICKERSON 5-1

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 10  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 9/30/2020  
TIME SAMPLED: 12:00 PM  
SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 230                         | 10                | mg/L (PPM)          | TR                    | 10/18/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                          | 10                | mg/L (PPM)          | TR                    | 10/18/2020                   |
| CHLORIDE EPA 300.0                   | 270,000                     | 2,000             | mg/L (PPM)          | LV                    | 10/10/2020                   |
| pH EPA 150.1 - LAB                   | 5.3                         | 0.10              | s.u.                | TR                    | 10/18/2020                   |
| SPECIFIC GRAVITY SM 2710F            | 1.210                       | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | 56                          | 50                | mg/L (PPM)          | LV                    | 10/9/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 290,000                     | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

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DISS = DISSOLVED

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: EPA-UIC ANNUAL SAMPLES  
LOCATION: MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: DAVENPORT 4-5

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 11  
DATE SAMPLED: 9/30/2020  
TIME SAMPLED: 2:00 PM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLE MATRIX: BRINE

**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    | 0.92                 | 0.050      | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| CALCIUM DISS EPA 6020A   | 44,000               | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| IRON TOTAL EPA 6020A     | 4.1                  | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3020A               |
| MAGNESIUM DISS EPA 6020A | 6,200                | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 13,000               | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |

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DISS = DISSOLVED

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: DAVENPORT 4-5

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 11  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 9/30/2020  
TIME SAMPLED: 2:00 PM  
SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 240                         | 10                | mg/L (PPM)          | TR                    | 10/18/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                          | 10                | mg/L (PPM)          | TR                    | 10/18/2020                   |
| CHLORIDE EPA 300.0                   | 170,000                     | 2,000             | mg/L (PPM)          | LV                    | 10/10/2020                   |
| pH EPA 150.1 - LAB                   | 6.0                         | 0.10              | s.u.                | TR                    | 10/18/2020                   |
| RESISTIVITY SM 2510A                 | 5.1                         | -                 | ohms x cm           | LV                    | 10/8/2020                    |
| SPECIFIC GRAVITY SM 2710F            | 1.147                       | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | ND                          | 50                | mg/L (PPM)          | LV                    | 10/9/2020                    |
| SULFIDE SM 4500S D                   | ND                          | 1.0               | mg/L (PPM)          | KC                    | 10/8/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 200,000                     | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

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

DISS = DISSOLVED



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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: GTA PROJECT NO: 100720-1  
LOCATION: EPA-UIC ANNUAL SAMPLES  
DATE SAMPLED: 10/1/2020  
TIME SAMPLED: 8:30 AM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLED BY: MI  
VARIOUS/LER  
SAMPLE MATRIX: BRINE  
SAMPLE ID: WALTON 6-16

### 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   | 56,000               | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| MAGNESIUM DISS EPA 6020A | 6,400                | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 12,000               | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

DISS = DISSOLVED



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PH: 231-929-0905

FAX: 231-929-0894

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: WALTON 6-16

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 12  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 10/1/2020  
TIME SAMPLED: 8:30 AM  
SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 230                         | 10                | mg/L (PPM)          | TR                    | 10/18/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                          | 10                | mg/L (PPM)          | TR                    | 10/18/2020                   |
| CHLORIDE EPA 300.0                   | 200,000                     | 2,000             | mg/L (PPM)          | LV                    | 10/10/2020                   |
| pH EPA 150.1 - LAB                   | 6.0                         | 0.10              | s.u.                | TR                    | 10/18/2020                   |
| SPECIFIC GRAVITY SM 2710F            | 1.162                       | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | 78                          | 50                | mg/L (PPM)          | LV                    | 10/9/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 210,000                     | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

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DISS = DISSOLVED

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: GTA PROJECT NO: 100720-1  
LOCATION: EPA-UIC ANNUAL SAMPLES  
DATE SAMPLED: 9/30/2020  
TIME SAMPLED: 11:30 AM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLED BY: MI  
VARIOUS/LER  
SAMPLE MATRIX: BRINE  
SAMPLE ID: ST. RAPID RIVER 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   | 74,000               | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| MAGNESIUM DISS EPA 6020A | 9,200                | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 22,000               | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |

ND = NOT DETECTED, RESULT < LOD  
LOD = LIMIT OF DETECTION

DISS = DISSOLVED

**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  
PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: ST. RAPID RIVER 1-24

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 13  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 9/30/2020  
TIME SAMPLED: 11:30 AM  
SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 220                         | 10                | mg/L (PPM)          | TR                    | 10/18/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                          | 10                | mg/L (PPM)          | TR                    | 10/18/2020                   |
| CHLORIDE EPA 300.0                   | 280,000                     | 2,000             | mg/L (PPM)          | LV                    | 10/10/2020                   |
| pH EPA 150.1 - LAB                   | 5.1                         | 0.10              | s.u.                | TR                    | 10/18/2020                   |
| SPECIFIC GRAVITY SM 2710F            | 1.236                       | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | 52                          | 50                | mg/L (PPM)          | LV                    | 10/9/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 310,000                     | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

ND = NOT DETECTED, RESULT &lt; 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  
PROJECT NO: GTA PROJECT NO: 100720-1  
LOCATION: EPA-UIC ANNUAL SAMPLES  
DATE SAMPLED: 9/30/2020  
TIME SAMPLED: 3:30 PM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLED BY: MI  
VARIOUS/LER  
SAMPLE MATRIX: BRINE  
SAMPLE ID: ST. WHITEWATER B1-35

**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   | 30                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| MAGNESIUM DISS EPA 6020A | 8.0                  | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 7.7                  | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |

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DISS = DISSOLVED

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: ST. WHITEWATER B1-35

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 14  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 9/30/2020  
TIME SAMPLED: 3:30 PM  
SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 130                         | 10                | mg/L (PPM)          | TR                    | 10/18/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                          | 10                | mg/L (PPM)          | TR                    | 10/18/2020                   |
| CHLORIDE EPA 300.0                   | 37                          | 10                | mg/L (PPM)          | LV                    | 10/10/2020                   |
| pH EPA 150.1 - LAB                   | 7.7                         | 0.10              | s.u.                | TR                    | 10/18/2020                   |
| SPECIFIC GRAVITY SM 2710F            | 0.9935                      | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | ND                          | 10                | mg/L (PPM)          | LV                    | 10/9/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 30,000                      | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

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**INDEPENDENT TESTING LAB**

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PH: 231-929-0905

FAX: 231-929-0894

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: GTA PROJECT NO: 100720-1  
LOCATION: EPA-UIC ANNUAL SAMPLES  
DATE SAMPLED: 9/30/2020  
TIME SAMPLED: 12:45 PM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLED BY: MI  
VARIOUS/LER  
SAMPLE MATRIX: BRINE  
SAMPLE ID: ST. BLUE LAKE 1-17

**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   | 35,000               | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| MAGNESIUM DISS EPA 6020A | 4,400                | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 8,400                | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: ST. BLUE LAKE 1-17

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 15  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 9/30/2020  
TIME SAMPLED: 12:45 PM  
SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 160                         | 10                | mg/L (PPM)          | TR                    | 10/18/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                          | 10                | mg/L (PPM)          | TR                    | 10/18/2020                   |
| CHLORIDE EPA 300.0                   | 130,000                     | 2,000             | mg/L (PPM)          | LV                    | 10/12/2020                   |
| pH EPA 150.1 - LAB                   | 6.2                         | 0.10              | s.u.                | TR                    | 10/18/2020                   |
| SPECIFIC GRAVITY SM 2710F            | 1.122                       | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | ND                          | 50                | mg/L (PPM)          | LV                    | 10/12/2020                   |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 160,000                     | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

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PH: 231-929-0905

FAX: 231-929-0894

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: EPA-UIC ANNUAL SAMPLES  
LOCATION: MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: WERTH C1-4

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 16  
DATE SAMPLED: 9/23/2020  
TIME SAMPLED: 1:00 PM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLE MATRIX: BRINE

**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    | 14                   | 0.050      | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| CALCIUM DISS EPA 6020A   | 230                  | 10         | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| IRON TOTAL EPA 6020A     | 7.1                  | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3020A               |
| MAGNESIUM DISS EPA 6020A | 280                  | 10         | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 15,000               | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |

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**INDEPENDENT TESTING LAB**

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COMPANY: LAMBDA ENERGY RESOURCES, LLC

PROJECT NO:

LOCATION: EPA-UIC ANNUAL SAMPLES

MI

SAMPLED BY: VARIOUS/LER

SAMPLE ID: WERTH C1-4

GTA PROJECT NO: 100720-1

GTA SAMPLE NO: 16

DATE RECEIVED: 10/6/2020

TIME RECEIVED: 3:30 PM

DATE SAMPLED: 9/23/2020

TIME SAMPLED: 1:00 PM

SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 1,600                       | 10                | mg/L (PPM)          | TR                    | 10/18/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | 12                          | 10                | mg/L (PPM)          | TR                    | 10/18/2020                   |
| CHLORIDE EPA 300.0                   | 20,000                      | 2,000             | mg/L (PPM)          | LV                    | 10/12/2020                   |
| pH EPA 150.1 - LAB                   | 7.9                         | 0.10              | s.u.                | TR                    | 10/18/2020                   |
| RESISTIVITY SM 2510A                 | 18                          | -                 | ohms x cm           | LV                    | 10/8/2020                    |
| SPECIFIC GRAVITY SM 2710F            | 1.015                       | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | ND                          | 50                | mg/L (PPM)          | LV                    | 10/12/2020                   |
| SULFIDE SM 4500S D                   | ND                          | 1.0               | mg/L (PPM)          | KC                    | 10/8/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 33,000                      | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

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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  
PROJECT NO: EPA-UIC ANNUAL SAMPLES  
LOCATION: MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: BUREK B4-8

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 17  
DATE SAMPLED: 9/23/2020  
TIME SAMPLED: 9:30 AM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLE MATRIX: BRINE

**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    | 4.9                  | 0.050      | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| CALCIUM DISS EPA 6020A   | 110                  | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| IRON TOTAL EPA 6020A     | 3.3                  | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3020A               |
| MAGNESIUM DISS EPA 6020A | 66                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 3,700                | 10         | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: BUREK B4-8

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 17  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 9/23/2020  
TIME SAMPLED: 9:30 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) | 1,800                | 10         | mg/L (PPM)   | TR             | 10/18/2020            |
| ALKALINITY SM 4500CO2D (CARBONATE)   | 30                   | 10         | mg/L (PPM)   | TR             | 10/18/2020            |
| CHLORIDE EPA 300.0                   | 4,600                | 1,000      | mg/L (PPM)   | LV             | 10/12/2020            |
| pH EPA 150.1 - LAB                   | 8.2                  | 0.10       | s.u.         | TR             | 10/18/2020            |
| RESISTIVITY SM 2510A                 | 61                   | -          | ohms x cm    | LV             | 10/8/2020             |
| SPECIFIC GRAVITY SM 2710F            | 0.9981               | -          | -            | LV             | 10/15/2020            |
| SULFATE EPA 300.0                    | ND                   | 50         | mg/L (PPM)   | LV             | 10/12/2020            |
| SULFIDE SM 4500S D                   | ND                   | 1.0        | mg/L (PPM)   | KC             | 10/8/2020             |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 9,600                | 5.0        | mg/L (PPM)   | TR             | 10/14/2020            |

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**INDEPENDENT TESTING LAB**

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FAX: 231-929-0894

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: EPA-UIC ANNUAL SAMPLES  
LOCATION: MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: HAAS HUNT CLUB 3-33

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 18  
DATE SAMPLED: 9/23/2020  
TIME SAMPLED: 12:00 PM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLE MATRIX: BRINE

**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    | 36                   | 0.050      | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| CALCIUM DISS EPA 6020A   | 840                  | 10         | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| IRON TOTAL EPA 6020A     | 34                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3020A               |
| MAGNESIUM DISS EPA 6020A | 780                  | 10         | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 31,000               | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |

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LOD = LIMIT OF DETECTION

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: HAAS HUNT CLUB 3-33

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 18  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 9/23/2020  
TIME SAMPLED: 12:00 PM  
SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 1,200                       | 10                | mg/L (PPM)          | TR                    | 10/19/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                          | 10                | mg/L (PPM)          | TR                    | 10/19/2020                   |
| CHLORIDE EPA 300.0                   | 42,000                      | 2,000             | mg/L (PPM)          | LV                    | 10/12/2020                   |
| pH EPA 150.1 - LAB                   | 7.6                         | 0.10              | s.u.                | TR                    | 10/19/2020                   |
| RESISTIVITY SM 2510A                 | 11                          | -                 | ohms x cm           | LV                    | 10/8/2020                    |
| SPECIFIC GRAVITY SM 2710F            | 1.029                       | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | ND                          | 50                | mg/L (PPM)          | LV                    | 10/12/2020                   |
| SULFIDE SM 4500S D                   | ND                          | 1.0               | mg/L (PPM)          | KC                    | 10/8/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 54,000                      | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

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DISS = DISSOLVED

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: EPA-UIC ANNUAL SAMPLES  
LOCATION: MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: DIAMOND D2-13

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 19  
DATE SAMPLED: 9/23/2020  
TIME SAMPLED: 12:30 PM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLE MATRIX: BRINE

**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    | 85                   | 0.050      | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| CALCIUM DISS EPA 6020A   | 1,500                | 10         | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| IRON TOTAL EPA 6020A     | 36                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3020A               |
| MAGNESIUM DISS EPA 6020A | 1,500                | 10         | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 52,000               | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |

ND = NOT DETECTED, RESULT &lt; LOD

LOD = LIMIT OF DETECTION

DISS = DISSOLVED

**INDEPENDENT TESTING LAB**

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

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COMPANY: LAMBDA ENERGY RESOURCES, LLC

PROJECT NO:

LOCATION: EPA-UIC ANNUAL SAMPLES

MI

SAMPLED BY: VARIOUS/LER

SAMPLE ID: DIAMOND D2-13

GTA PROJECT NO: 100720-1

GTA SAMPLE NO: 19

DATE RECEIVED: 10/6/2020

TIME RECEIVED: 3:30 PM

DATE SAMPLED: 9/23/2020

TIME SAMPLED: 12:30 PM

SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 740                         | 10                | mg/L (PPM)          | TR                    | 10/19/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                          | 10                | mg/L (PPM)          | TR                    | 10/19/2020                   |
| CHLORIDE EPA 300.0                   | 80,000                      | 2,000             | mg/L (PPM)          | LV                    | 10/13/2020                   |
| pH EPA 150.1 - LAB                   | 7.3                         | 0.10              | s.u.                | TR                    | 10/19/2020                   |
| RESISTIVITY SM 2510A                 | 6.9                         | -                 | ohms x cm           | LV                    | 10/8/2020                    |
| SPECIFIC GRAVITY SM 2710F            | 1.062                       | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | ND                          | 50                | mg/L (PPM)          | LV                    | 10/13/2020                   |
| SULFIDE SM 4500S D                   | ND                          | 1.0               | mg/L (PPM)          | KC                    | 10/8/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 120,000                     | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

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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

www.gtanalytical.com

COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: GTA PROJECT NO: 100720-1  
LOCATION: EPA-UIC ANNUAL SAMPLES  
DATE SAMPLED: 9/23/2020  
TIME SAMPLED: 9:00 AM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLED BY: MI  
VARIOUS/LER  
SAMPLE MATRIX: BRINE  
SAMPLE ID: TIMM C2-10

**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    | 5.1                  | 0.050      | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| CALCIUM DISS EPA 6020A   | 87                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| IRON TOTAL EPA 6020A     | 1.4                  | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3020A               |
| MAGNESIUM DISS EPA 6020A | 66                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 5,900                | 100        | mg/L (PPM)   | MR/TR          | 10/27/2020            | EPA 3005A               |

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**INDEPENDENT TESTING LAB**

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PH: 231-929-0905

FAX: 231-929-0894

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: TIMM C2-10

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 20  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 9/23/2020  
TIME SAMPLED: 9:00 AM  
SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 2,100                       | 10                | mg/L (PPM)          | TR                    | 10/19/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | 32                          | 10                | mg/L (PPM)          | TR                    | 10/19/2020                   |
| CHLORIDE EPA 300.0                   | 4,800                       | 1,000             | mg/L (PPM)          | LV                    | 10/13/2020                   |
| pH EPA 150.1 - LAB                   | 8.3                         | 0.10              | s.u.                | TR                    | 10/19/2020                   |
| RESISTIVITY SM 2510A                 | 58                          | -                 | ohms x cm           | LV                    | 10/8/2020                    |
| SPECIFIC GRAVITY SM 2710F            | 0.9981                      | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | ND                          | 50                | mg/L (PPM)          | LV                    | 10/13/2020                   |
| SULFIDE SM 4500S D                   | ND                          | 1.0               | mg/L (PPM)          | KC                    | 10/8/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 8,800                       | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

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**INDEPENDENT TESTING LAB**

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PH: 231-929-0905

FAX: 231-929-0894

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: EPA-UIC ANNUAL SAMPLES  
LOCATION: MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: KOGELMANN C1-10

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 21  
DATE SAMPLED: 9/23/2020  
TIME SAMPLED: 10:30 AM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLE MATRIX: BRINE

**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    | 98                   | 1.0        | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| CALCIUM DISS EPA 6020A   | 1,600                | 10         | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| IRON TOTAL EPA 6020A     | 39                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3020A               |
| MAGNESIUM DISS EPA 6020A | 1,900                | 10         | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 55,000               | 100        | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |

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**INDEPENDENT TESTING LAB**

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FAX: 231-929-0894

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: KOGELMANN C1-10

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 21  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 9/23/2020  
TIME SAMPLED: 10:30 AM  
SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 710                         | 10                | mg/L (PPM)          | TR                    | 10/19/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                          | 10                | mg/L (PPM)          | TR                    | 10/19/2020                   |
| CHLORIDE EPA 300.0                   | 79,000                      | 2,000             | mg/L (PPM)          | LV                    | 10/13/2020                   |
| pH EPA 150.1 - LAB                   | 7.3                         | 0.10              | s.u.                | TR                    | 10/19/2020                   |
| RESISTIVITY SM 2510A                 | 6.9                         | -                 | ohms x cm           | LV                    | 10/8/2020                    |
| SPECIFIC GRAVITY SM 2710F            | 1.062                       | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | ND                          | 50                | mg/L (PPM)          | LV                    | 10/13/2020                   |
| SULFIDE SM 4500S D                   | ND                          | 1.0               | mg/L (PPM)          | KC                    | 10/8/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 110,000                     | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

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**INDEPENDENT TESTING LAB**

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PH: 231-929-0905

FAX: 231-929-0894

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: EPA-UIC ANNUAL SAMPLES  
LOCATION: MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: NORWICH WPM 5

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 22  
DATE SAMPLED: 9/25/2020  
TIME SAMPLED: 10:45 AM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLE MATRIX: BRINE

**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    | 0.076                | 0.050      | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| CALCIUM DISS EPA 6020A   | 60                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| IRON TOTAL EPA 6020A     | ND                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3020A               |
| MAGNESIUM DISS EPA 6020A | 14                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 6.2                  | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |

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PH: 231-929-0905

FAX: 231-929-0894

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: NORWICH WPM 5

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 22  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 9/25/2020  
TIME SAMPLED: 10:45 AM  
SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 280                         | 10                | mg/L (PPM)          | TR                    | 10/19/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                          | 10                | mg/L (PPM)          | TR                    | 10/19/2020                   |
| CHLORIDE EPA 300.0                   | ND                          | 10                | mg/L (PPM)          | LV                    | 10/13/2020                   |
| pH EPA 150.1 - LAB                   | 8.5                         | 0.10              | s.u.                | TR                    | 10/19/2020                   |
| RESISTIVITY SM 2510A                 | 2,600                       | -                 | ohms x cm           | LV                    | 10/8/2020                    |
| SPECIFIC GRAVITY SM 2710F            | 0.9914                      | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | ND                          | 10                | mg/L (PPM)          | LV                    | 10/13/2020                   |
| SULFIDE SM 4500S D                   | ND                          | 1.0               | mg/L (PPM)          | KC                    | 10/8/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 300                         | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

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**INDEPENDENT TESTING LAB**

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PH: 231-929-0905

FAX: 231-929-0894

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: GTA PROJECT NO: 100720-1  
LOCATION: EPA-UIC ANNUAL SAMPLES  
DATE SAMPLED: 9/28/2020  
TIME SAMPLED: 10:45 AM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLED BY: MI  
VARIOUS/LER  
SAMPLE MATRIX: BRINE  
SAMPLE ID: ENTERPRISE SWD

**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    | 0.16                 | 0.050      | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| CALCIUM DISS EPA 6020A   | 38,000               | 100        | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| IRON TOTAL EPA 6020A     | 7.8                  | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3020A               |
| MAGNESIUM DISS EPA 6020A | 6,300                | 100        | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 21,000               | 100        | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |

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**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

PROJECT NO:

LOCATION: EPA-UIC ANNUAL SAMPLES

MI

SAMPLED BY: VARIOUS/LER

SAMPLE ID: ENTERPRISE SWD

GTA PROJECT NO: 100720-1

GTA SAMPLE NO: 23

DATE RECEIVED: 10/6/2020

TIME RECEIVED: 3:30 PM

DATE SAMPLED: 9/28/2020

TIME SAMPLED: 10:45 AM

SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 130                         | 10                | mg/L (PPM)          | TR                    | 10/19/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                          | 10                | mg/L (PPM)          | TR                    | 10/19/2020                   |
| CHLORIDE EPA 300.0                   | 130,000                     | 2,000             | mg/L (PPM)          | LV                    | 10/13/2020                   |
| pH EPA 150.1 - LAB                   | 6.1                         | 0.10              | s.u.                | TR                    | 10/19/2020                   |
| RESISTIVITY SM 2510A                 | 5.9                         | -                 | ohms x cm           | LV                    | 10/8/2020                    |
| SPECIFIC GRAVITY SM 2710F            | 1.114                       | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | 590                         | 50                | mg/L (PPM)          | LV                    | 10/13/2020                   |
| SULFIDE SM 4500S D                   | ND                          | 1.0               | mg/L (PPM)          | KC                    | 10/8/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 160,000                     | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

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**INDEPENDENT TESTING LAB**

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PH: 231-929-0905

FAX: 231-929-0894

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: EPA-UIC ANNUAL SAMPLES  
LOCATION: MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: NORWICH WPM 1, 7

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 24  
DATE SAMPLED: 9/25/2020  
TIME SAMPLED: 10:00 AM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLE MATRIX: BRINE

**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    | 0.12                 | 0.050      | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| CALCIUM DISS EPA 6020A   | 70                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| IRON TOTAL EPA 6020A     | 23                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3020A               |
| MAGNESIUM DISS EPA 6020A | 24                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 45                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |

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PH: 231-929-0905

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: NORWICH WPM 1, 7

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 24  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 9/25/2020  
TIME SAMPLED: 10:00 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) | 240                  | 10         | mg/L (PPM)   | TR             | 10/19/2020            |
| ALKALINITY SM 4500CO2D (CARBONATE)   | 12                   | 10         | mg/L (PPM)   | TR             | 10/19/2020            |
| CHLORIDE EPA 300.0                   | 54                   | 10         | mg/L (PPM)   | LV             | 10/13/2020            |
| pH EPA 150.1 - LAB                   | 8.7                  | 0.10       | s.u.         | TR             | 10/19/2020            |
| RESISTIVITY SM 2510A                 | 1,000                | -          | ohms x cm    | LV             | 10/8/2020             |
| SPECIFIC GRAVITY SM 2710F            | 0.9909               | -          | -            | LV             | 10/15/2020            |
| SULFATE EPA 300.0                    | 22                   | 10         | mg/L (PPM)   | LV             | 10/13/2020            |
| SULFIDE SM 4500S D                   | ND                   | 1.0        | mg/L (PPM)   | KC             | 10/8/2020             |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 1,700                | 5.0        | mg/L (PPM)   | TR             | 10/14/2020            |

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: EPA-UIC ANNUAL SAMPLES  
LOCATION: MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: ENTERPRISE WPM 1,2

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 25  
DATE SAMPLED: 9/28/2020  
TIME SAMPLED: 10:40 AM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLE MATRIX: BRINE

**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    | 0.068                | 0.050      | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| CALCIUM DISS EPA 6020A   | 37                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| IRON TOTAL EPA 6020A     | 0.70                 | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3020A               |
| MAGNESIUM DISS EPA 6020A | 14                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 17                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |

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**INDEPENDENT TESTING LAB**

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PH: 231-929-0905

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: ENTERPRISE WPM 1,2

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 25  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 9/28/2020  
TIME SAMPLED: 10:40 AM  
SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 150                         | 10                | mg/L (PPM)          | TR                    | 10/19/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                          | 10                | mg/L (PPM)          | TR                    | 10/19/2020                   |
| CHLORIDE EPA 300.0                   | 43                          | 10                | mg/L (PPM)          | LV                    | 10/13/2020                   |
| pH EPA 150.1 - LAB                   | 8.3                         | 0.10              | s.u.                | TR                    | 10/19/2020                   |
| RESISTIVITY SM 2510A                 | 2,700                       | -                 | ohms x cm           | LV                    | 10/8/2020                    |
| SPECIFIC GRAVITY SM 2710F            | 0.9900                      | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | ND                          | 10                | mg/L (PPM)          | LV                    | 10/13/2020                   |
| SULFIDE SM 4500S D                   | ND                          | 1.0               | mg/L (PPM)          | KC                    | 10/8/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 780                         | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

ND = NOT DETECTED, RESULT &lt; 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

www.gtanalytical.com

COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: EPA-UIC ANNUAL SAMPLES  
LOCATION: MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: NORWICH SWD

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 26  
DATE SAMPLED: 9/25/2020  
TIME SAMPLED: 11:00 AM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLE MATRIX: BRINE

**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    | 0.16                 | 0.050      | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| CALCIUM DISS EPA 6020A   | 28,000               | 100        | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| IRON TOTAL EPA 6020A     | ND                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3020A               |
| MAGNESIUM DISS EPA 6020A | 4,300                | 100        | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 13,000               | 100        | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |

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COMPANY: LAMBDA ENERGY RESOURCES, LLC

PROJECT NO:

LOCATION: EPA-UIC ANNUAL SAMPLES

MI

SAMPLED BY: VARIOUS/LER

SAMPLE ID: NORWICH SWD

GTA PROJECT NO: 100720-1

GTA SAMPLE NO: 26

DATE RECEIVED: 10/6/2020

TIME RECEIVED: 3:30 PM

DATE SAMPLED: 9/25/2020

TIME SAMPLED: 11:00 AM

SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 230                         | 10                | mg/L (PPM)          | TR                    | 10/19/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                          | 10                | mg/L (PPM)          | TR                    | 10/19/2020                   |
| CHLORIDE EPA 300.0                   | 110,000                     | 2,000             | mg/L (PPM)          | LV                    | 10/13/2020                   |
| pH EPA 150.1 - LAB                   | 6.4                         | 0.10              | s.u.                | TR                    | 10/19/2020                   |
| RESISTIVITY SM 2510A                 | 6.8                         | -                 | ohms x cm           | LV                    | 10/8/2020                    |
| SPECIFIC GRAVITY SM 2710F            | 1.084                       | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | 930                         | 50                | mg/L (PPM)          | LV                    | 10/13/2020                   |
| SULFIDE SM 4500S D                   | ND                          | 1.0               | mg/L (PPM)          | KC                    | 10/8/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 130,000                     | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

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**INDEPENDENT TESTING LAB**

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FAX: 231-929-0894

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: EPA-UIC ANNUAL SAMPLES  
LOCATION: MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: NORWICH WPM 2,3,4

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 27  
DATE SAMPLED: 9/25/2020  
TIME SAMPLED: 9:30 AM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLE MATRIX: BRINE

**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    | ND                   | 0.050      | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| CALCIUM DISS EPA 6020A   | 50                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| IRON TOTAL EPA 6020A     | 7.1                  | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3020A               |
| MAGNESIUM DISS EPA 6020A | 16                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 9.9                  | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |

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www.gtanalytical.com

COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: NORWICH WPM 2,3,4

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 27  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 9/25/2020  
TIME SAMPLED: 9:30 AM  
SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 150                         | 10                | mg/L (PPM)          | TR                    | 10/19/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                          | 10                | mg/L (PPM)          | TR                    | 10/19/2020                   |
| CHLORIDE EPA 300.0                   | 64                          | 10                | mg/L (PPM)          | LV                    | 10/13/2020                   |
| pH EPA 150.1 - LAB                   | 8.0                         | 0.10              | s.u.                | TR                    | 10/19/2020                   |
| RESISTIVITY SM 2510A                 | 1,800                       | -                 | ohms x cm           | LV                    | 10/8/2020                    |
| SPECIFIC GRAVITY SM 2710F            | 0.9895                      | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | ND                          | 10                | mg/L (PPM)          | LV                    | 10/13/2020                   |
| SULFIDE SM 4500S D                   | ND                          | 1.0               | mg/L (PPM)          | KC                    | 10/8/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 6,900                       | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

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www.gtanalytical.com

COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: EPA-UIC ANNUAL SAMPLES  
LOCATION: MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: NORWICH WPM 6

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 28  
DATE SAMPLED: 9/25/2020  
TIME SAMPLED: 10:30 AM  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
SAMPLE MATRIX: BRINE

**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    | 0.15                 | 0.050      | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| CALCIUM DISS EPA 6020A   | 58                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| IRON TOTAL EPA 6020A     | ND                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3020A               |
| MAGNESIUM DISS EPA 6020A | 14                   | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |
| SODIUM DISS EPA 6020A    | 4.5                  | 0.50       | mg/L (PPM)   | MR/TR          | 10/28/2020            | EPA 3005A               |

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www.gtanalytical.com

COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO:  
LOCATION: EPA-UIC ANNUAL SAMPLES  
MI  
SAMPLED BY: VARIOUS/LER  
SAMPLE ID: NORWICH WPM 6

GTA PROJECT NO: 100720-1  
GTA SAMPLE NO: 28  
DATE RECEIVED: 10/6/2020  
TIME RECEIVED: 3:30 PM  
DATE SAMPLED: 9/25/2020  
TIME SAMPLED: 10:30 AM  
SAMPLE MATRIX: BRINE

**SAMPLE RESULTS**

| <b><u>Analysis</u></b>               | <b><u>Concentration</u></b> | <b><u>LOD</u></b> | <b><u>Units</u></b> | <b><u>Analyst</u></b> | <b><u>Date Completed</u></b> |
|--------------------------------------|-----------------------------|-------------------|---------------------|-----------------------|------------------------------|
| ALKALINITY SM 4500CO2D (BICARBONATE) | 220                         | 10                | mg/L (PPM)          | TR                    | 10/19/2020                   |
| ALKALINITY SM 4500CO2D (CARBONATE)   | ND                          | 10                | mg/L (PPM)          | TR                    | 10/19/2020                   |
| CHLORIDE EPA 300.0                   | ND                          | 10                | mg/L (PPM)          | LV                    | 10/13/2020                   |
| pH EPA 150.1 - LAB                   | 8.5                         | 0.10              | s.u.                | TR                    | 10/19/2020                   |
| RESISTIVITY SM 2510A                 | 2,700                       | -                 | ohms x cm           | LV                    | 10/8/2020                    |
| SPECIFIC GRAVITY SM 2710F            | 0.9872                      | -                 | -                   | LV                    | 10/15/2020                   |
| SULFATE EPA 300.0                    | ND                          | 10                | mg/L (PPM)          | LV                    | 10/13/2020                   |
| SULFIDE SM 4500S D                   | ND                          | 1.0               | mg/L (PPM)          | KC                    | 10/8/2020                    |
| TOTAL DISSOLVED SOLIDS EPA 160.1     | 470                         | 5.0               | mg/L (PPM)          | TR                    | 10/14/2020                   |

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1 of 2

**CHAIN OF CUSTODY**

|                |                   |                             |
|----------------|-------------------|-----------------------------|
| PROJECT NUMBER | SITE NAME/ADDRESS | COMPANY/NAME                |
|                | Various           | Lambda Energy Resources LLC |
| SAMPLED BY     | COMPANY           | GTA PROJECT #               |
| Various        | Same              | 100720-1                    |

**SAMPLE INFORMATION**

| #  | SAMPLE ID            | DATE SAMPLED | TIME    | MATRIX | ANALYSIS      |
|----|----------------------|--------------|---------|--------|---------------|
| 1  | St. Whitewater 1-32  | 9/30/2020    | 3:00 P  | Brine  | parameter # 2 |
| 2  | Hastings C4-7        | 9/22/2020    | 1:00 P  |        | 2             |
| 3  | Mann A2-21           | 9/22/2020    | 10:30 A |        | 2             |
| 4  | St. Whitewater 1-36  | 9/30/2020    | 3:30 P  |        | 1             |
| 5  | Bowman 6-19A         | 10/1/2020    | 8:00 A  |        | 1             |
| 6  | St. Ossineke 8-3-36  | 9/22/2020    | 11:45 A |        | 2             |
| 7  | St. Kalkaska 2-12    | 9/30/2020    | 1:45 P  |        | 1             |
| 8  | St. Paradise 1-19    | 9/30/2020    | 10:00 A |        | 1             |
| 9  | St. Whitewater 2-32  | 9/30/2020    | 3:00 P  |        | 1             |
| 10 | Nickerson 5-1        | 9/30/2020    | 12:00 P |        | 1             |
| 11 | Davenport 4-5        | 9/30/2020    | 2:00 P  |        | 2             |
| 12 | Walton 6-16          | 10/1/2020    | 8:30 A  |        | 1             |
| 13 | St. Rapid River 1-24 | 9/30/2020    | 11:30 A |        | 1             |
| 14 | St. Whitewater B1-35 | 9/30/2020    | 3:30 P  |        | 1             |
| 15 | St. Blue Lake 1-17   | 9/30/2020    | 12:45 P |        | 1             |

**BILL TO:**

**REPORT TO:**

|              |           |             |               |
|--------------|-----------|-------------|---------------|
| RELEASED BY  | DATE/TIME | RECEIVED BY | DATE/TIME     |
| Deana Altman |           | K. Altman   | 10/6/20 3:30p |
|              |           |             |               |

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

### CHAIN OF CUSTODY

|                |                   |                             |
|----------------|-------------------|-----------------------------|
| PROJECT NUMBER | SITE NAME/ADDRESS | COMPANY/NAME                |
|                | Various           | Lambda Energy Resources LLC |
| SAMPLED BY     | COMPANY           | GTA PROJECT #               |
| Various        | Same              | 100720-1                    |

### SAMPLE INFORMATION

| #  | SAMPLE ID           | DATE SAMPLED | TIME   | MATRIX | ANALYSIS      |
|----|---------------------|--------------|--------|--------|---------------|
| 16 | Werth C1-4          | 9/23/2020    | 1:00P  | Brine  | Parameter # 2 |
| 17 | Burek B4-8          | 9/23/2020    | 9:30A  |        | 2             |
| 18 | HAAS Hunt Club 3-33 | 9/23/2020    | 12:00P |        | 2             |
| 19 | Diamond D2-13       | 9/23/2020    | 12:30P |        | 2             |
| 20 | Timm C2-10          | 9/23/2020    | 9:00A  |        | 2             |
| 21 | Kogelmann C1-10     | 9/23/2020    | 10:30A |        | 2             |
| 22 | Norwich WPM 5       | 9/25/2020    | 10:45A |        | 2             |
| 23 | Enterprise SWD      | 9/28/2020    | 10:45A |        | 2             |
| 24 | Norwich WPM 1, 7    | 9/25/2020    | 10:00A |        | 2             |
| 25 | Enterprise WPM 1, 2 | 9/28/2020    | 10:40A |        | 2             |
| 26 | Norwich SWD         | 9/25/2020    | 11:00A |        | 2             |
| 27 | Norwich WPM 2, 3, 4 | 9/25/2020    | 9:30A  |        | 2             |
| 28 | Norwich WPM 6       | 9/25/2020    | 10:30A |        | 2             |
|    |                     |              |        |        |               |
|    |                     |              |        |        |               |

BILL TO:

REPORT TO:

|             |           |             |               |
|-------------|-----------|-------------|---------------|
| RELEASED BY | DATE/TIME | RECEIVED BY | DATE/TIME     |
| Quana Altma |           | K. Ch       | 10/6/20 3:30p |
|             |           |             |               |
|             |           |             |               |

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

|   |                             |  |
|---|-----------------------------|--|
| X | pH                          |  |
| X | specific gravity            |  |
| X | resistivity                 |  |
| X | chloride                    |  |
| X | total dissolved solids      |  |
| X | dis. Ba, Ca, Mg, Na         |  |
| X | total - Fe                  |  |
| X | carbonate/bicarb alkalinity |  |
| X | sulfate, sulfide            |  |
|   |                             |  |

PARAMETERS # 2

|  |                             |  |
|--|-----------------------------|--|
|  | pH                          |  |
|  | specific gravity            |  |
|  | chloride                    |  |
|  | total dissolved solids      |  |
|  | dis. Ca, Mg, Na             |  |
|  | carbonate/bicarb alkalinity |  |
|  | sulfate                     |  |
|  |                             |  |
|  |                             |  |
|  |                             |  |

PARAMETERS # 1