

SS05@3'  
 B - <0.0020 mg/kg  
 T - <0.0050 mg/kg  
 E - <0.0050 mg/kg  
 X - <0.010 mg/kg  
 TPH - <50 mg/kg  
 N - <0.010 mg/kg  
 SAR - 0.0394  
 EC - 0.0801 mmhos/cm  
 pH - 7.70

SS01@5'  
 B - <0.0020 mg/kg  
 T - <0.0050 mg/kg  
 E - <0.0050 mg/kg  
 X - <0.010 mg/kg  
 TPH - <50 mg/kg  
 N - <0.010 mg/kg



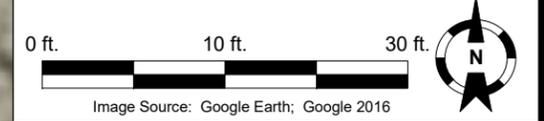
**Legend**

- Excavation Sample Location
- Excavation Sample Location (Not Submitted for Laboratory Analysis)
- Excavation Extent

**Notes**

- 1) Site Coordinates: 40.416876, -104.498297
  - 2) All locations are approximate unless otherwise noted
  - 3) **RED** value indicates concentration greater than COGCC table 910-1 soil standard (see table below).
- GPS – Global Positioning System  
 mg/kg – Milligrams Per Kilogram  
 mmhos/cm – Millimhos Per Centimeter

| Contaminant of Concern            | COGCC Concentration Standard |
|-----------------------------------|------------------------------|
| B - Benzene                       | 0.17 mg/kg                   |
| T - Toluene                       | 85 mg/kg                     |
| E - Ethylbenzene                  | 100 mg/kg                    |
| X – Total Xylenes                 | 175 mg/kg                    |
| TPH- Total Petroleum Hydrocarbons | 500 mg/kg                    |
| N - Naphthalene                   | 23 mg/kg                     |
| SAR – Sodium Absorption Ratio     | <12 <sup>5</sup>             |
| EC – Electrical Conductivity      | <4mmhos/cm or 2x background  |
| pH                                | 6-9                          |



DATE: 07/27/2018  
 DESIGNED BY: TL  
 DRAWN BY: TL

**TASMAN**  
 GEOSCIENCES  
 Tasman Geosciences, Inc.  
 6899 Pecos Street – Unit C  
 Denver, CO 80221

**Noble Energy, Inc. – DJ Basin**  
**Trebor B 12-2, 7 Vault Removal – Location ID: 323772**  
 NWNE, Section 12, Township 5 North, Range 64 West  
 Weld County, Colorado

Excavation Soil Analytical  
 Results Map  
 (07/24/2018)

# Summit Scientific

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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

August 06, 2018

Brandon Bruns

Tasman Geosciences

6899 Pecos St, Unit C

Denver, CO 80221

RE: Noble - Trebor B 12-2,7

Enclosed are the results of analyses for samples received by Summit Scientific on 07/24/18 19:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury For Ben Shrewsbury

Laboratory Manager



Tasman Geosciences  
6899 Pecos St, Unit C  
Denver CO, 80221

Project: Noble - Trebor B 12-2,7

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
08/06/18 16:18

**ANALYTICAL REPORT FOR SAMPLES**

| Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|-----------|---------------|--------|----------------|----------------|
| SS01@5'   | 1807307-01    | Soil   | 07/24/18 12:45 | 07/24/18 19:30 |
| SS05@3'   | 1807307-05    | Soil   | 07/24/18 12:53 | 07/24/18 19:30 |

Summit Scientific

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



### Sample Receipt Checklist

S2 Work Order 1807307

Client: Noble/Tsoman Client Project ID: Trebor B 12-2, 7

Shipped Via: Pickup Airbill #: \_\_\_\_\_  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Matrix (check all that apply):  Air  Soil/Solid  Water  Other: \_\_\_\_\_  
(Describe)

|           |     |
|-----------|-----|
| Temp (°C) | 6.9 |
|-----------|-----|

Thermometer ID: 61857155-K

|   | Yes | No | N/A | Comments (if any) |
|---|-----|----|-----|-------------------|
| If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ?   | ✓   |    |     |                   |
| <small>NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.</small> |     |    |     |                   |
| Were all samples received intact <sup>(1)</sup> ?   | ✓   |    |     |                   |
| Was adequate sample volume provided <sup>(1)</sup> ?  | ✓   |    |     |                   |
| If custody seals are present, are they intact <sup>(1)</sup> ?  |     |    |     |                   |
| Are samples with holding times due within 48 hours sample due within 48 hours present?  |     |    | ✓   |                   |
| Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?   |     |    | ✓   |                   |
| Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?   | ✓   |    |     |                   |
| Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?   | ✓   |    |     |                   |
| Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?   | ✓   |    |     |                   |
| For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>   |     |    |     |                   |
| Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ?  |     |    | ✓   |                   |
| Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect  |     |    | ✓   |                   |
| If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ? Record the pH in Comments.   |     |    | ✓   |                   |
| If dissolved metals are requested, were samples field filtered?   |     |    | ✓   |                   |
| Additional Comments (if any):   |     |    |     |                   |
|   |     |    |     |                   |

<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.

W  
Custodian Printed Name or Initials

[Signature]  
Signature of Custodian

7.24.18 1930  
Date/Time



Tasman Geosciences  
6899 Pecos St, Unit C  
Denver CO, 80221

Project: Noble - Trebor B 12-2,7

Project Number: [none]  
Project Manager: Brandon Brun

Reported:  
08/06/18 16:18

**SS01@5'**  
**1807307-01 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **07/24/18 12:45**

| Analyte                     | Result | Reporting |       | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
|                             |        | Limit     | Units |          |         |          |          |           |       |
| Benzene                     | ND     | 0.0020    | mg/kg | 1        | 1807296 | 07/25/18 | 07/25/18 | EPA 8260B |       |
| Toluene                     | ND     | 0.0050    | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND     | 0.0050    | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND     | 0.010     | "     | "        | "       | "        | "        | "         |       |
| Naphthalene                 | ND     | 0.010     | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND     | 50        | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **07/24/18 12:45**

| Analyte                          | Result | Reporting |        | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
|                                  |        | Limit     | Units  |          |       |          |          |        |       |
| Surrogate: 1,2-Dichloroethane-d4 |        | 107 %     | 23-173 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 100 %     | 20-170 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 101 %     | 21-167 |          | "     | "        | "        | "      |       |

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/24/18 12:45**

| Analyte              | Result    | Reporting |       | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|----------------------|-----------|-----------|-------|----------|---------|----------|----------|-----------|-------|
|                      |           | Limit     | Units |          |         |          |          |           |       |
| <b>C10-C28 (DRO)</b> | <b>86</b> | 50        | mg/kg | 1        | 1807297 | 07/25/18 | 07/26/18 | EPA 8015M |       |

Date Sampled: **07/24/18 12:45**

| Analyte                | Result | Reporting |        | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
|                        |        | Limit     | Units  |          |       |          |          |        |       |
| Surrogate: o-Terphenyl |        | 107 %     | 30-150 |          | "     | "        | "        | "      |       |

Summit Scientific

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Tasman Geosciences  
6899 Pecos St, Unit C  
Denver CO, 80221

Project: Noble - Trebor B 12-2,7

Project Number: [none]  
Project Manager: Brandon Brun

**Reported:**  
08/06/18 16:18

**SS05@3'**  
**1807307-05 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **07/24/18 12:53**

| Analyte                     | Result | Reporting |  | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------|--|-------|----------|---------|----------|----------|-----------|-------|
|                             |        | Limit     |  |       |          |         |          |          |           |       |
| Benzene                     | ND     | 0.0020    |  | mg/kg | 1        | 1807296 | 07/25/18 | 07/25/18 | EPA 8260B |       |
| Toluene                     | ND     | 0.0050    |  | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND     | 0.0050    |  | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND     | 0.010     |  | "     | "        | "       | "        | "        | "         |       |
| Naphthalene                 | ND     | 0.010     |  | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND     | 50        |  | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **07/24/18 12:53**

| Analyte                          | Result | Reporting |  | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--|--------|----------|-------|----------|----------|--------|-------|
|                                  |        | Limit     |  |        |          |       |          |          |        |       |
| Surrogate: 1,2-Dichloroethane-d4 |        | 104 %     |  | 23-173 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 101 %     |  | 20-170 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 99.5 %    |  | 21-167 |          | "     | "        | "        | "      |       |

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/24/18 12:53**

| Analyte       | Result | Reporting |  | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------------|--------|-----------|--|-------|----------|---------|----------|----------|-----------|-------|
|               |        | Limit     |  |       |          |         |          |          |           |       |
| C10-C28 (DRO) | ND     | 50        |  | mg/kg | 1        | 1807297 | 07/25/18 | 07/26/18 | EPA 8015M |       |

Date Sampled: **07/24/18 12:53**

| Analyte                | Result | Reporting |  | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--|--------|----------|-------|----------|----------|--------|-------|
|                        |        | Limit     |  |        |          |       |          |          |        |       |
| Surrogate: o-Terphenyl |        | 100 %     |  | 30-150 |          | "     | "        | "        | "      |       |

**Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis**

Date Sampled: **07/24/18 12:53**

| Analyte   | Result      | Reporting |  | Units     | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------|-------------|-----------|--|-----------|----------|---------|----------|----------|-----------|-------|
|           |             | Limit     |  |           |          |         |          |          |           |       |
| Calcium   | <b>842</b>  | 10.6      |  | mg/kg dry | 1        | 1807303 | 07/25/18 | 07/28/18 | EPA 6020B |       |
| Magnesium | <b>66.8</b> | 5.28      |  | "         | "        | "       | "        | "        | "         |       |

Summit Scientific

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Tasman Geosciences  
6899 Pecos St, Unit C  
Denver CO, 80221

Project: Noble - Trebor B 12-2,7

Project Number: [none]  
Project Manager: Brandon Brunns

**Reported:**  
08/06/18 16:18

**SS05@3'**  
**1807307-05 (Soil)**

**Summit Scientific**

**Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis**

|               |            |      |           |   |         |          |          |           |
|---------------|------------|------|-----------|---|---------|----------|----------|-----------|
| <b>Sodium</b> | <b>431</b> | 5.28 | mg/kg dry | 1 | 1807303 | 07/25/18 | 07/28/18 | EPA 6020B |
|---------------|------------|------|-----------|---|---------|----------|----------|-----------|

**Calculated Analysis**

Date Sampled: **07/24/18 12:53**

| Analyte                        | Result      | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|--------------------------------|-------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| <b>Sodium Adsorption Ratio</b> | <b>3.85</b> | 0.100           | units | 1        | 1807342 | 07/30/18 | 07/30/18 | Calculation |       |

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **07/24/18 12:53**

| Analyte         | Result      | Reporting Limit | Units    | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| <b>% Solids</b> | <b>94.8</b> |                 | %        | 1        | 1807302 | 07/25/18 | 07/26/18 | Calculation |       |
| <b>pH</b>       | <b>8.58</b> |                 | pH Units | "        | 1807331 | 07/27/18 | 07/30/18 | EPA 9045D   |       |

**Specific Conductance by EPA Method 120.1**

Date Sampled: **07/24/18 12:53**

| Analyte                          | Result       | Reporting Limit | Units    | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| <b>Specific Conductance (EC)</b> | <b>0.343</b> | 0.0100          | mmhos/cm | 1        | 1807332 | 07/27/18 | 07/30/18 | EPA 120.1 |       |

Summit Scientific

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Tasman Geosciences  
6899 Pecos St, Unit C  
Denver CO, 80221

Project: Noble - Trebor B 12-2,7

Project Number: [none]  
Project Manager: Brandon Brun

**Reported:**  
08/06/18 16:18

### Volatile Organic Compounds by EPA Method 8260B - Quality Control

#### Summit Scientific

| Analyte | Reporting |       |       | Spike | Source | %REC |        | RPD |       | Notes |
|---------|-----------|-------|-------|-------|--------|------|--------|-----|-------|-------|
|         | Result    | Limit | Units | Level | Result | %REC | Limits | RPD | Limit |       |

#### Batch 1807296 - EPA 5030 Soil MS

##### Blank (1807296-BLK1)

Prepared: 07/25/18 Analyzed: 07/26/18

|                                  |        |        |       |        |  |      |        |  |  |  |
|----------------------------------|--------|--------|-------|--------|--|------|--------|--|--|--|
| Benzene                          | ND     | 0.0020 | mg/kg |        |  |      |        |  |  |  |
| Toluene                          | ND     | 0.0050 | "     |        |  |      |        |  |  |  |
| Ethylbenzene                     | ND     | 0.0050 | "     |        |  |      |        |  |  |  |
| Xylenes (total)                  | ND     | 0.010  | "     |        |  |      |        |  |  |  |
| Naphthalene                      | ND     | 0.010  | "     |        |  |      |        |  |  |  |
| Gasoline Range Hydrocarbons      | ND     | 50     | "     |        |  |      |        |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0368 |        | "     | 0.0396 |  | 93.0 | 23-173 |  |  |  |
| Surrogate: Toluene-d8            | 0.0385 |        | "     | 0.0400 |  | 96.3 | 20-170 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 0.0402 |        | "     | 0.0400 |  | 100  | 21-167 |  |  |  |

##### LCS (1807296-BS1)

Prepared: 07/25/18 Analyzed: 07/26/18

|                                  |        |        |       |        |  |      |        |  |  |  |
|----------------------------------|--------|--------|-------|--------|--|------|--------|--|--|--|
| Benzene                          | 0.0801 | 0.0020 | mg/kg | 0.100  |  | 80.1 | 70-130 |  |  |  |
| Toluene                          | 0.0910 | 0.0050 | "     | 0.100  |  | 91.0 | 70-130 |  |  |  |
| Ethylbenzene                     | 0.0987 | 0.0050 | "     | 0.100  |  | 98.7 | 70-130 |  |  |  |
| m,p-Xylene                       | 0.196  | 0.010  | "     | 0.200  |  | 98.2 | 70-130 |  |  |  |
| o-Xylene                         | 0.0923 | 0.0050 | "     | 0.100  |  | 92.3 | 70-130 |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0356 |        | "     | 0.0396 |  | 89.8 | 23-173 |  |  |  |
| Surrogate: Toluene-d8            | 0.0389 |        | "     | 0.0400 |  | 97.3 | 20-170 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 0.0389 |        | "     | 0.0400 |  | 97.2 | 21-167 |  |  |  |

##### Matrix Spike (1807296-MS1)

Source: 1807306-01

Prepared: 07/25/18 Analyzed: 07/26/18

|                                  |        |        |       |        |    |      |        |  |  |  |
|----------------------------------|--------|--------|-------|--------|----|------|--------|--|--|--|
| Benzene                          | 0.0934 | 0.0020 | mg/kg | 0.100  | ND | 93.4 | 70-130 |  |  |  |
| Toluene                          | 0.105  | 0.0050 | "     | 0.100  | ND | 105  | 70-130 |  |  |  |
| Ethylbenzene                     | 0.117  | 0.0050 | "     | 0.100  | ND | 117  | 70-130 |  |  |  |
| m,p-Xylene                       | 0.229  | 0.010  | "     | 0.200  | ND | 115  | 70-130 |  |  |  |
| o-Xylene                         | 0.108  | 0.0050 | "     | 0.100  | ND | 108  | 70-130 |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0380 |        | "     | 0.0396 |    | 95.9 | 23-173 |  |  |  |
| Surrogate: Toluene-d8            | 0.0392 |        | "     | 0.0400 |    | 98.0 | 20-170 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 0.0407 |        | "     | 0.0400 |    | 102  | 21-167 |  |  |  |

Summit Scientific

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Tasman Geosciences  
6899 Pecos St, Unit C  
Denver CO, 80221

Project: Noble - Trebor B 12-2,7

Project Number: [none]  
Project Manager: Brandon Brun

**Reported:**  
08/06/18 16:18

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

| Analyte | Result | Reporting |       | Spike Level | Source Result | %REC |        | RPD |       | Notes |
|---------|--------|-----------|-------|-------------|---------------|------|--------|-----|-------|-------|
|         |        | Limit     | Units |             |               | %REC | Limits | RPD | Limit |       |

**Batch 1807296 - EPA 5030 Soil MS**

| <b>Matrix Spike Dup (1807296-MSD1)</b> | <b>Source: 1807306-01</b> |        |       | Prepared: 07/25/18 Analyzed: 07/26/18 |    |      |        |       |    |
|--|---------------------------|--------|-------|---------------------------------------|----|------|--------|-------|----|
| Benzene                                | 0.0916                    | 0.0020 | mg/kg | 0.100                                 | ND | 91.6 | 70-130 | 2.01  | 30 |
| Toluene                                | 0.102                     | 0.0050 | "     | 0.100                                 | ND | 102  | 70-130 | 2.89  | 30 |
| Ethylbenzene                           | 0.117                     | 0.0050 | "     | 0.100                                 | ND | 117  | 70-130 | 0.230 | 30 |
| m,p-Xylene                             | 0.228                     | 0.010  | "     | 0.200                                 | ND | 114  | 70-130 | 0.617 | 30 |
| o-Xylene                               | 0.109                     | 0.0050 | "     | 0.100                                 | ND | 109  | 70-130 | 0.856 | 30 |
| Surrogate: 1,2-Dichloroethane-d4       | 0.0372                    |        | "     | 0.0396                                |    | 94.0 | 23-173 |       |    |
| Surrogate: Toluene-d8                  | 0.0375                    |        | "     | 0.0400                                |    | 93.8 | 20-170 |       |    |
| Surrogate: 4-Bromofluorobenzene        | 0.0408                    |        | "     | 0.0400                                |    | 102  | 21-167 |       |    |

Summit Scientific

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Tasman Geosciences  
6899 Pecos St, Unit C  
Denver CO, 80221

Project: Noble - Trebor B 12-2,7

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
08/06/18 16:18

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

| Analyte | Result | Reporting |       | Spike Level | Source |      | %REC   |     | RPD   |  | Notes |
|---------|--------|-----------|-------|-------------|--------|------|--------|-----|-------|--|-------|
|         |        | Limit     | Units |             | Result | %REC | Limits | RPD | Limit |  |       |

**Batch 1807297 - EPA 3550A**

**Blank (1807297-BLK1)**

Prepared: 07/25/18 Analyzed: 07/26/18

C10-C28 (DRO) ND 50 mg/kg

**LCS (1807297-BS1)**

Prepared: 07/25/18 Analyzed: 07/26/18

C10-C28 (DRO) 489 50 mg/kg 500 97.8 70-130

**Matrix Spike (1807297-MS1)**

**Source: 1807306-01**

Prepared: 07/25/18 Analyzed: 07/26/18

C10-C28 (DRO) 483 50 mg/kg 500 28.6 90.8 70-130

**Matrix Spike Dup (1807297-MSD1)**

**Source: 1807306-01**

Prepared: 07/25/18 Analyzed: 07/26/18

C10-C28 (DRO) 519 50 mg/kg 500 28.6 98.0 70-130 7.15 20

Summit Scientific

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Tasman Geosciences  
6899 Pecos St, Unit C  
Denver CO, 80221

Project: Noble - Trebor B 12-2,7

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
08/06/18 16:18

**Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis - Quality Control**

**Summit Scientific**

| Analyte | Result | Reporting |       | Spike Level | Source Result | %REC   |     | RPD   |  | Notes |
|---------|--------|-----------|-------|-------------|---------------|--------|-----|-------|--|-------|
|         |        | Limit     | Units |             |               | Limits | RPD | Limit |  |       |

**Batch 1807303 - General Preparation**

**Blank (1807303-BLK1)**

Prepared: 07/25/18 Analyzed: 07/28/18

|           |    |      |           |  |  |  |  |  |  |
|-----------|----|------|-----------|--|--|--|--|--|--|
| Calcium   | ND | 10.0 | mg/kg wet |  |  |  |  |  |  |
| Magnesium | ND | 5.00 | "         |  |  |  |  |  |  |
| Sodium    | ND | 5.00 | "         |  |  |  |  |  |  |

**LCS (1807303-BS1)**

Prepared: 07/25/18 Analyzed: 07/28/18

|           |     |      |           |     |  |     |        |  |  |
|-----------|-----|------|-----------|-----|--|-----|--------|--|--|
| Calcium   | 527 | 10.0 | mg/kg wet | 500 |  | 105 | 70-130 |  |  |
| Magnesium | 540 | 5.00 | "         | 500 |  | 108 | 70-130 |  |  |
| Sodium    | 545 | 5.00 | "         | 500 |  | 109 | 70-130 |  |  |

**Duplicate (1807303-DUP1)**

Source: 1807291-01

Prepared: 07/25/18 Analyzed: 07/28/18

|           |      |      |           |  |      |  |  |      |    |
|-----------|------|------|-----------|--|------|--|--|------|----|
| Calcium   | 528  | 10.8 | mg/kg dry |  | 517  |  |  | 2.00 | 20 |
| Magnesium | 80.9 | 5.39 | "         |  | 83.1 |  |  | 2.72 | 20 |
| Sodium    | 382  | 5.39 | "         |  | 362  |  |  | 5.40 | 20 |

**Matrix Spike (1807303-MS1)**

Source: 1807291-01

Prepared: 07/25/18 Analyzed: 07/28/18

|           |      |      |           |     |      |     |        |  |  |
|-----------|------|------|-----------|-----|------|-----|--------|--|--|
| Calcium   | 1120 | 10.8 | mg/kg dry | 539 | 517  | 112 | 70-130 |  |  |
| Magnesium | 690  | 5.39 | "         | 539 | 83.1 | 113 | 70-130 |  |  |
| Sodium    | 998  | 5.39 | "         | 539 | 362  | 118 | 70-130 |  |  |

**Matrix Spike Dup (1807303-MSD1)**

Source: 1807291-01

Prepared: 07/25/18 Analyzed: 07/28/18

|           |      |      |           |     |      |     |        |       |    |
|-----------|------|------|-----------|-----|------|-----|--------|-------|----|
| Calcium   | 1160 | 10.8 | mg/kg dry | 539 | 517  | 119 | 70-130 | 3.32  | 25 |
| Magnesium | 732  | 5.39 | "         | 539 | 83.1 | 120 | 70-130 | 5.93  | 25 |
| Sodium    | 988  | 5.39 | "         | 539 | 362  | 116 | 70-130 | 0.987 | 25 |

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences  
 6899 Pecos St, Unit C  
 Denver CO, 80221

Project: Noble - Trebor B 12-2,7

Project Number: [none]  
 Project Manager: Brandon Bruns

**Reported:**  
 08/06/18 16:18

**Physical Parameters by APHA/ASTM/EPA Methods - Quality Control**  
**Summit Scientific**

| Analyte | Result | Reporting |       | Spike Level | Source Result | %REC |        | RPD | Limit | Notes |
|---------|--------|-----------|-------|-------------|---------------|------|--------|-----|-------|-------|
|         |        | Limit     | Units |             |               | %REC | Limits |     |       |       |

**Batch 1807302 - General Preparation**

| <b>Duplicate (1807302-DUP1)</b> |      | <b>Source: 1807291-01</b> |   | Prepared: 07/25/18 Analyzed: 07/26/18 |          |
|---------------------------------|------|---------------------------|---|---------------------------------------|----------|
| % Solids                        | 92.5 |                           | % | 92.8                                  | 0.291 20 |

**Batch 1807331 - General Preparation**

| <b>LCS (1807331-BS1)</b>        |     |                           |          | Prepared: 07/27/18 Analyzed: 07/30/18 |            |
|---------------------------------|-----|---------------------------|----------|---------------------------------------|------------|
| pH                              | 9.2 |                           | pH Units | 9.18                                  | 100 95-105 |
| <b>Duplicate (1807331-DUP1)</b> |     | <b>Source: 1807306-01</b> |          | Prepared: 07/27/18 Analyzed: 07/30/18 |            |
| pH                              | 8.1 |                           | pH Units | 8.0                                   | 0.872 20   |

Summit Scientific

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Tasman Geosciences  
6899 Pecos St, Unit C  
Denver CO, 80221

Project: Noble - Trebor B 12-2,7

Project Number: [none]  
Project Manager: Brandon Brun

**Reported:**  
08/06/18 16:18

**Specific Conductance by EPA Method 120.1 - Quality Control**  
**Summit Scientific**

| Analyte | Result | Reporting |       | Spike Level | Source |      | %REC   |     | RPD   |  | Notes |
|---------|--------|-----------|-------|-------------|--------|------|--------|-----|-------|--|-------|
|         |        | Limit     | Units |             | Result | %REC | Limits | RPD | Limit |  |       |

**Batch 1807332 - General Preparation**

**Blank (1807332-BLK1)**

Prepared: 07/27/18 Analyzed: 07/30/18

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (1807332-BS1)**

Prepared: 07/27/18 Analyzed: 07/30/18

Specific Conductance (EC) 0.753 0.0100 mmhos/cm 0.750 100 90-110

**Duplicate (1807332-DUP1)**

**Source: 1807306-01**

Prepared: 07/27/18 Analyzed: 07/30/18

Specific Conductance (EC) 1.15 0.0100 mmhos/cm 1.12 2.65 20

Summit Scientific

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Tasman Geosciences  
6899 Pecos St, Unit C  
Denver CO, 80221

Project: Noble - Trebor B 12-2,7

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
08/06/18 16:18

### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference