

**REMEDIAL EXCAVATION REPORT AND
NO FURTHER ACTION REQUEST**

FURROW USX AB15-99HZ

COGCC SPILL TRACKING # 470543
COGCC REMEDIATION # Not Assigned

Prepared for:



2115 117th Avenue
Greeley, CO 80631

Prepared by:



6855 W 119th Ave.
Broomfield, CO 80020

January 29, 2019

Mr. Howard Aamold
Noble Energy Inc.
2115 117th Avenue
Greeley, CO 80631

Subject: **Remedial Excavation Report and No Further Action Request**
Furrow USX AB15-99HZ
Spill/Release Point ID #: 470543
Remediation Project #: Not Assigned
SESE S15 T7N R64W
Weld County, Colorado

Dear Mr. Aamold:

Below please find a copy of the above referenced Remedial Excavation Report and No Further Action Request (Report) for the Furrow USX AB15-99HZ site (Site) in Weld County, Colorado. The text below describes the remedial excavation and associated soil sampling activities (Excavation) guided by Tasman Geosciences, Inc. (Tasman), on behalf of Noble Energy, Inc. (Noble), between January 6, 2020 and January 10, 2020.

Introduction

The purpose of this document is to describe the results of excavation and soil sampling activities at the Site between January 6 and January 10, 2020. The activities described below were performed in response to the discovery of a release at the Furrow USX AB15-99HZ tank battery on January 5, 2020.

Facility Background

The Site is located approximately 4.4 miles northeast of the town of Galeton in Weld County, Colorado, as shown on Figure 1. The Site is surrounded by non-crop land, and the legal description is the southeast $\frac{1}{4}$ of the southeast $\frac{1}{4}$ of Section 15, Township 7 North, Range 64 West, of the 6th Principal Meridian. The Site is approximately 70 feet west of Weld County Road 57 and has coordinates of 40.566355°, -104.526389°.

Remedial Excavation

On January 5, 2020, the release of oil occurred during fluid transfer operations at the Furrow USX AB1-99HZ tank battery. Noble and Iowa Tanklines (ITL) conducted an initial excavation to address visibly impacted soil in the area of the release. Noble and ITL removed approximately three inches of saturated soil from ground surface.

On January 6, 2020, an initial Form 19 was submitted to the Colorado Oil and Gas Conservation Commission (COGCC). The COGCC subsequently issued Spill/Release Point ID Number 470543 for

this event. Tasman was retained by Noble to collect confirmation samples in the excavated area of the release. Groundwater was not observed infiltrating the excavation. A total of 21 soil samples were collected from the base of the excavation. Soil samples were field screened for volatile organic compounds (VOCs) using a photoionization-detector (PID) and standard headspace sampling techniques. All 21 soil samples collected were submitted to Summit Scientific Laboratory (Summit) in Golden, Colorado for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene and Total Petroleum Hydrocarbons – Gasoline Range Organics (TPH-GRO) using United States Environmental Protection Agency (USEPA) Method 8260B, as well as Total Petroleum Hydrocarbons – Diesel Range Organics (TPH-DRO) using USEPA Method 8015. Additionally, all 21 soil samples were analyzed for Sodium Adsorption Ratio (SAR) using USEPA Method 6020 / United States Department of Agriculture (USDA) Method 606(2,3A) and Specific Conductance (EC) and pH via American Public Health Association (APHA)/American Society for Testing Materials (ASTM)/USEPA methods. Soil sample analytical results are summarized in Table 1. Sample locations, analytical results, and the remedial excavation extent are illustrated on Figure 2. The laboratory analytical report is included in Attachment A.

On January 7, 2020, vadose zone soil impacts in exceedance of applicable COGCC Table 910-1 standards were confirmed adjacent to the Furrow USX AB15-99HZ tank battery containment. On January 8, 2020 a supplemental Form 19 was submitted to the COGCC and approximate release location is illustrated on Figure 2. Tasman guided ITL in continued excavation activities on January 9 and January 10, 2020 to remove the remaining impacted soil.

On January 9, 2020 a total of 17 soil samples were collected from the base of the excavation at a depth of one foot below ground surface (ft. bgs). Soil samples were field screened for VOCs using a PID and standard headspace sampling techniques. All 17 soil samples collected were submitted to Summit for laboratory analysis of BTEX, naphthalene, and TPH-GRO using USEPA Method 8260B; TPH-DRO using USEPA Method 8015; and SAR, pH, and EC via APHA/ASTM/USEPA methods. Soil sample analytical results are summarized in Table 1. Sample locations, analytical results, and the remedial excavation extent are illustrated on Figure 3. The laboratory analytical report is included in Attachment A.

On January 10, 2020 a total of 27 soil samples were collected from excavation. Eight soil samples were collected from the base at a depth of one ft. bgs and 19 soil samples were collected from the sidewalls of the excavation at a depth of six inches bgs. Soil samples were field screened for VOCs using a PID and standard headspace sampling techniques. All 27 soil samples collected were submitted to Summit for laboratory analysis of BTEX, naphthalene, and TPH-GRO using USEPA Method 8260B; TPH-DRO using USEPA Method 8015; and SAR, pH, and EC via APHA/ASTM/USEPA methods. Soil sample analytical results are summarized in Table 1. Sample locations, analytical results, and the final remedial excavation extent are illustrated on Figure 4. The laboratory analytical report is included in Attachment A.

Approximately 230 cubic yards of material were removed from the Site between January 5 and January 10, 2020 and disposed of at the Pawnee Waste facility in Grover, Colorado. The final remedial excavation extent measured approximately 50 ft. by 120 ft. by 1 ft. bgs. The Excavation was backfilled with clean imported fill material and the Site was brought back to its original grade.

Results

Laboratory analytical results for the soil samples collected from the sidewalls and base of the final remedial excavation extent indicate petroleum hydrocarbon impacts have been successfully removed from the area.

No Further Action Request

Based on field and laboratory data collected during remedial activities presented herein, a No Further Action (NFA) designation is being requested from the COGCC for this project.

Remarks

The discussion and conclusions contained in this report represent the professional opinions of Tasman Geosciences, Inc. These opinions are based on currently available information and are arrived at in accordance with currently accepted geologic and engineering practices.

Please contact me at (720) 431-1190 or bbruns@tasman-geo.com if you require additional information.

Sincerely,
Tasman Geosciences, Inc.

A handwritten signature in blue ink that reads 'Brandon Bruns'.

Brandon Bruns, PE
Project Manager

Attached:

Table 1 – Soil Analytical Data

Figure 1 – Site Location Map

Figure 2 – Remedial Excavation Soil Analytical Results Map (01/06/20)

Figure 3 – Remedial Excavation Soil Analytical Results Map (01/09/20)

Figure 4 – Remedial Excavation Soil Analytical Results Map (01/10/20)

Attachment A –Laboratory Analytical Data Reports

TABLE

TABLE 1
SOIL ANALYTICAL DATA
NOBLE ENERGY, INC. - FURROW USX AB15-99HZ

| Soil Sample ID | Date | Benzene (mg/kg) | Toluene (mg/kg) | Ethylbenzene (mg/kg) | Total Xylenes (mg/kg) | Naphthalene (mg/kg) | TPH-GRO (mg/kg) | TPH-DRO (mg/kg) |
|-----------------------|----------|-------------------|-------------------|----------------------|-----------------------|---------------------|---------------------|--------------------|
| COGCC Standard | | 0.17 | 85 | 100 | 175 | 23 | 500 | |
| SS01 | 01/06/20 | 2.9 | 19 | 8.8 | 31 | 4.7 | 1,800 | 280 ⁽⁴⁾ |
| SS02 | 01/06/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS03 | 01/06/20 | 2.8 | 22 | 11 | 41 | 5.7 | 1,900 | 280 |
| SS04 | 01/06/20 | 0.0054 | 0.056 | 0.044 | 0.25 | 0.25 | <50 | 700 |
| SS05 | 01/06/20 | 0.0036 | 0.099 | 0.082 | 0.35 | 0.14 | <50 | 710 |
| SS06 | 01/06/20 | 0.12 | 2.8 | 2.4 | 10 | 2.5 | 1,700 | 820 |
| SS07 | 01/06/20 | <0.0020 | 0.0070 | <0.0050 | 0.015 | 0.023 | <50 | 220 |
| SS08 | 01/06/20 | <0.0020 | 0.015 | 0.013 | 0.064 | 0.074 | <50 | 260 |
| SS09 | 01/06/20 | 0.013 | 0.10 | 0.11 | 0.67 | 0.78 | 170 | 550 |
| SS10 | 01/06/20 | 0.0080 | 0.047 | 0.028 | 0.14 | 0.11 | <50 | <50 |
| SS11 ⁽²⁾ | 01/06/20 | 0.016 | 0.35 | 3.2 | 16 | 4.4 | 1500 ⁽¹⁾ | 340 |
| SS12 | 01/06/20 | 0.0056 | 0.020 | 0.015 | 0.074 | 0.062 | <50 | 130 |
| SS13 | 01/06/20 | 4.2 | 47 | 23 | 92 | 10 | 4,500 | 2,100 |
| SS14 | 01/06/20 | 0.015 | 0.26 | 0.21 | 0.85 | 0.25 | <50 | 1,200 |
| SS15 | 01/06/20 | 0.0046 | 0.0097 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS16 | 01/06/20 | 0.0086 | 0.21 | 0.25 | 1.1 | 0.25 | <50 | 850 |
| SS17 ^(2,3) | 01/06/20 | 14 ⁽¹⁾ | 23 ⁽¹⁾ | 14 ⁽¹⁾ | 54 ⁽¹⁾ | 2.4 | 910 ⁽¹⁾ | 21,000 |
| SS18 | 01/06/20 | 0.015 | 0.052 | 0.014 | 0.051 | 0.022 | <50 | 720 |
| SS19 | 01/06/20 | 0.0038 | 0.016 | 0.0052 | 0.019 | <0.010 | <50 | 240 |
| SS20 | 01/06/20 | 0.010 | 0.046 | 0.022 | 0.090 | 0.087 | <50 | 200 |
| SS21 | 01/06/20 | 0.015 | 0.14 | 0.11 | 0.42 | 0.10 | <50 | 800 |
| SS22@1' | 01/09/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS23@1' | 01/09/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS24@1' | 01/09/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS25@1' | 01/09/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS26@1' | 01/09/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS27@1' | 01/09/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | 0.014 | <50 | <50 |
| SS28@1' | 01/09/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS29@1' | 01/09/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS30@1' | 01/09/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | 110 |
| SS31@1' | 01/09/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS32@1' | 01/09/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS33@1' | 01/09/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS34@1' | 01/09/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS35@1' | 01/09/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS36@1' | 01/09/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS37@1' | 01/09/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS38@1' | 01/09/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS39@1' | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS40@1' | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS41@1' | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS42@1' | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |

TABLE 1
SOIL ANALYTICAL DATA
NOBLE ENERGY, INC. - FURROW USX AB15-99HZ

| Soil Sample ID | Date | Benzene (mg/kg) | Toluene (mg/kg) | Ethylbenzene (mg/kg) | Total Xylenes (mg/kg) | Naphthalene (mg/kg) | TPH-GRO (mg/kg) | TPH-DRO (mg/kg) |
|-----------------------|----------|-----------------|-----------------|----------------------|-----------------------|---------------------|-----------------|-----------------|
| COGCC Standard | | 0.17 | 85 | 100 | 175 | 23 | 500 | |
| SS43@6" | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS44@6" | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS45@6" | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS46@1' | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | 0.020 | <50 | 92 |
| SS47@1' | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | 0.020 | 0.014 | <50 | 66 |
| SS48@1' | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | 0.013 | <50 | 230 |
| SS49@1' | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS50@6" | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS51@6" | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS52@6" | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | 0.011 | <50 | <50 |
| SS53@6" | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS54@6" | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS55@6" | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS56@6" | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | 63 |
| SS57@6" | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS58@6" | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS59@6" | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS60@6" | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS61@6" | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS62@6" | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS63@6" | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | 61 |
| SS64@6" | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.010 | <50 | <50 |
| SS65@6" | 01/10/20 | <0.0020 | <0.0050 | <0.0050 | <0.010 | 0.014 | <50 | 170 |

| Soil Sample ID | Date | SAR | pH | EC (mmhos/cm) |
|-----------------------|----------|---------------|------------|----------------------|
| COGCC Standard | | <12 | 6-9 | <4mmhos/cm |
| SS01 | 01/06/20 | 1.11 | 8.72 | 0.349 |
| SS02 | 01/06/20 | 0.641 | 7.88 | 0.480 |
| SS03 | 01/06/20 | 0.933 | 8.68 | 0.292 |
| SS04 | 01/06/20 | 0.449 | 7.88 | 0.760 |
| SS05 | 01/06/20 | 0.341 | 8.12 | 1.12 |
| SS06 | 01/06/20 | 0.821 | 8.82 | 0.214 |
| SS07 | 01/06/20 | 0.499 | 7.27 | 0.539 |
| SS08 | 01/06/20 | 2.06 | 7.87 | 2.85 |
| SS09 | 01/06/20 | 0.363 | 8.62 | 0.303 |
| SS10 | 01/06/20 | 0.245 | 8.38 | 0.386 |
| SS11 | 01/06/20 | 0.412 | 8.71 | 0.235 |
| SS12 | 01/06/20 | 0.466 | 8.48 | 0.254 |
| SS13 | 01/06/20 | 0.695 | 8.73 | 0.247 |
| SS14 | 01/06/20 | 0.285 | 8.26 | 0.522 |
| SS15 | 01/06/20 | 0.269 | 8.32 | 0.320 |

TABLE 1
SOIL ANALYTICAL DATA
NOBLE ENERGY, INC. - FURROW USX AB15-99HZ

| Soil Sample ID | Date | SAR | pH | EC (mmhos/cm) |
|----------------|----------|--------|------|----------------------|
| COGCC Standard | | <12 | 6-9 | <4mmhos/cm |
| SS16 | 01/06/20 | 0.367 | 8.44 | 0.334 |
| SS17 | 01/06/20 | 0.453 | 8.30 | 0.526 |
| SS18 | 01/06/20 | 0.397 | 7.74 | 0.356 |
| SS19 | 01/06/20 | 0.205 | 8.38 | 1.17 |
| SS20 | 01/06/20 | 0.299 | 8.49 | 0.643 |
| SS21 | 01/06/20 | 0.242 | 8.24 | 0.425 |
| SS22@1' | 01/09/20 | 0.304 | 8.20 | 0.492 ⁽⁵⁾ |
| SS23@1' | 01/09/20 | 0.903 | 8.13 | 0.420 |
| SS24@1' | 01/09/20 | 0.352 | 8.22 | 0.357 |
| SS25@1' | 01/09/20 | 0.278 | 7.46 | 1.22 |
| SS26@1' | 01/09/20 | 0.795 | 7.94 | 2.00 |
| SS27@1' | 01/09/20 | <0.100 | 8.18 | 1.83 |
| SS28@1' | 01/09/20 | 0.257 | 8.64 | 2.21 |
| SS29@1' | 01/09/20 | 0.113 | 8.55 | 0.670 |
| SS30@1' | 01/09/20 | 0.351 | 8.48 | 0.623 |
| SS31@1' | 01/09/20 | 2.54 | 8.18 | 2.83 |
| SS32@1' | 01/09/20 | 0.217 | 8.21 | 1.16 |
| SS33@1' | 01/09/20 | 0.299 | 8.32 | 0.580 |
| SS34@1' | 01/09/20 | 0.372 | 8.11 | 1.25 |
| SS35@1' | 01/09/20 | 0.172 | 8.65 | 1.31 |
| SS36@1' | 01/09/20 | 0.786 | 8.09 | 1.91 |
| SS37@1' | 01/09/20 | 0.352 | 8.17 | 0.937 |
| SS38@1' | 01/09/20 | 0.223 | 8.12 | 1.51 |
| SS39@1' | 01/10/20 | 0.152 | 8.02 | 0.291 ⁽⁵⁾ |
| SS40@1' | 01/10/20 | 0.270 | 7.80 | 0.265 |
| SS41@1' | 01/10/20 | <0.100 | 7.66 | 0.441 |
| SS42@1' | 01/10/20 | 0.211 | 8.13 | 0.675 |
| SS43@6" | 01/10/20 | 0.190 | 7.59 | 0.380 |
| SS44@6" | 01/10/20 | 0.137 | 7.61 | 0.126 |
| SS45@6" | 01/10/20 | 0.362 | 7.87 | 0.120 |
| SS46@1' | 01/10/20 | 1.98 | 8.03 | 2.95 |
| SS47@1' | 01/10/20 | 0.119 | 8.26 | 0.868 |
| SS48@1' | 01/10/20 | 0.191 | 8.10 | 0.734 |
| SS49@1' | 01/10/20 | 0.122 | 8.44 | 0.421 |
| SS50@6" | 01/10/20 | 0.134 | 8.00 | 0.495 |
| SS51@6" | 01/10/20 | 0.199 | 7.96 | 1.56 |
| SS52@6" | 01/10/20 | 1.82 | 8.83 | 0.298 |
| SS53@6" | 01/10/20 | 0.130 | 8.65 | 0.259 |
| SS54@6" | 01/10/20 | <0.100 | 8.22 | 0.608 |
| SS55@6" | 01/10/20 | 0.198 | 8.45 | 0.388 |
| SS56@6" | 01/10/20 | 0.460 | 7.90 | 0.907 |
| SS57@6" | 01/10/20 | 0.414 | 8.00 | 0.882 |

TABLE 1
SOIL ANALYTICAL DATA
NOBLE ENERGY, INC. - FURROW USX AB15-99HZ

| Soil Sample ID | Date | SAR | pH | EC (mmhos/cm) |
|----------------|----------|-------|------|---------------|
| COGCC Standard | | <12 | 6-9 | <4mmhos/cm |
| SS58@6" | 01/10/20 | 0.180 | 8.15 | 1.31 |
| SS59@6" | 01/10/20 | 0.372 | 7.91 | 1.00 |
| SS60@6" | 01/10/20 | 0.398 | 7.75 | 0.821 |
| SS61@6" | 01/10/20 | 0.406 | 8.49 | 0.313 |
| SS62@6" | 01/10/20 | 0.245 | 8.10 | 0.351 |
| SS63@6" | 01/10/20 | 0.244 | 8.37 | 0.361 |
| SS64@6" | 01/10/20 | 0.484 | 8.60 | 0.327 |
| SS65@6" | 01/10/20 | 0.392 | 8.08 | 0.848 |

Notes:

COGCC = Colorado Oil and Gas Conservation Commission

TPH-GRO = Total petroleum hydrocarbons - gasoline range organics

TPH-DRO = Total petroleum hydrocarbons - diesel range organics

mg/kg = Milligrams per kilogram

mmhos/cm = Millimhos per centimeter

SAR = Sodium Adsorption Ration

EC = Electrical Conductivity

< = Analytical result is less than the indicated laboratory reporting limit

Soil standards referenced from COGCC Table 910-1

Highlighted results are equal to or exceed the COGCC Table 910-1 standard

1. The concentration indicated for this analyte is an estimated vaule above the calibration range of the instrument.
2. The laboratory has applied an S-02 flag to the 4-bromofluorobenzene surrogate for this sample, indicating that the surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
3. The laboratory has applied an S-02 flag to the Toluene-d8 surrogate for this sample, meaning that 'the surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.'
4. Sample SS01 was the parent sample for the MS/MSD samples, both of which had very low DRO recovery. The laboratory has applied a QM-07 flag to both the MS and MSD DRO spike results, meaning " The spike recovery was outside acceptance limits for theMS and / or MSD. The bath was accepted based on acceptable LCS / LCSD revovery." The DRO result for the SS01 sample is likely biased very low, due to the amatrix interference identified by the MS /MSD samples.
5. Samples SS22@1' and SS39@1' were the parent samples for two of the DUP samples analyzed for specific conductivity (EC). The laboratory applied a QR-04 flag to both DUP sample's relative percent difference (RPD) value, meaning that "the RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values." The high RPD value suggests a high degree of heterogeneity in the matrix of the SS22@1' and SS39@1' samples.

FIGURES

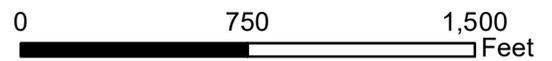
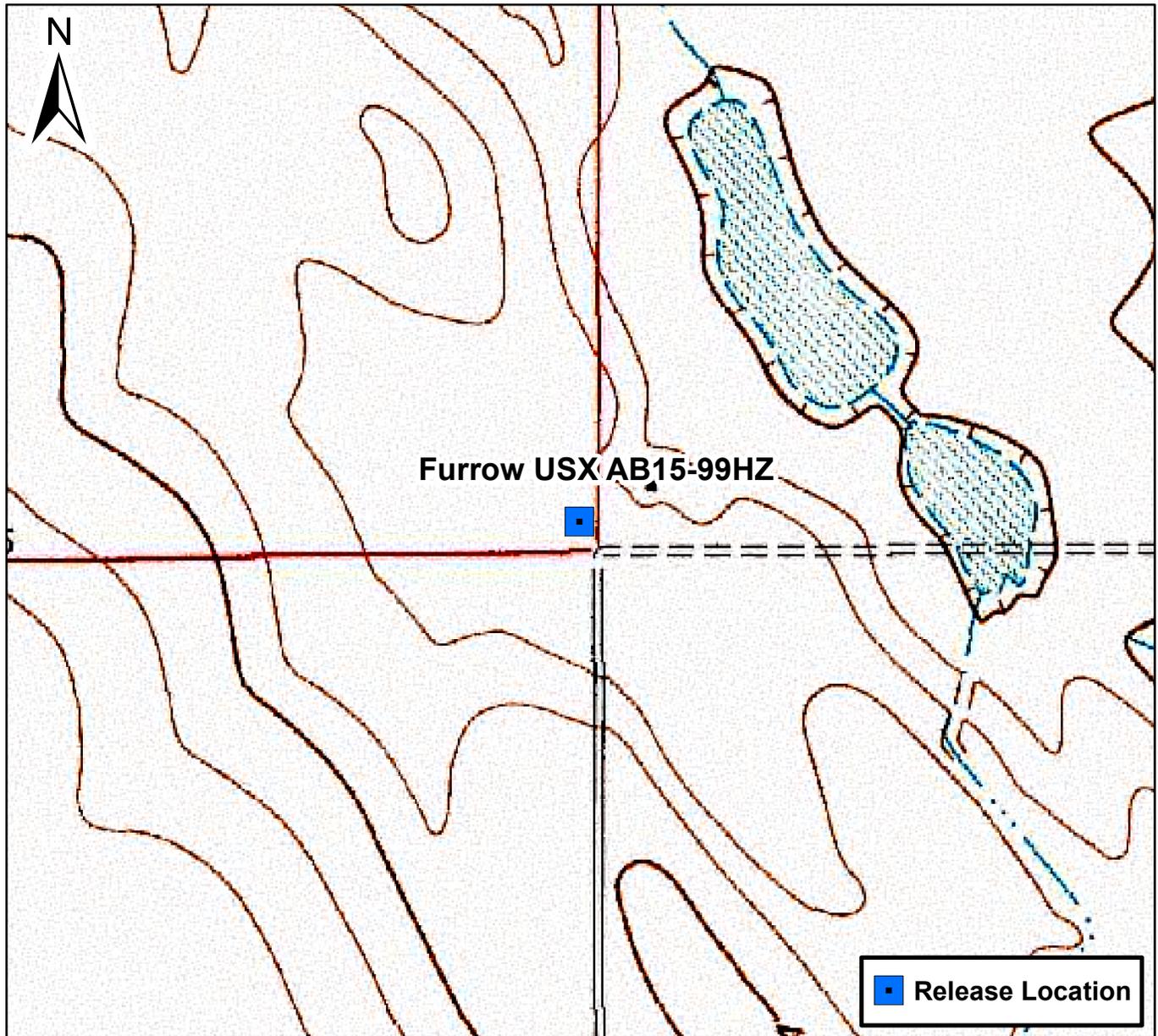
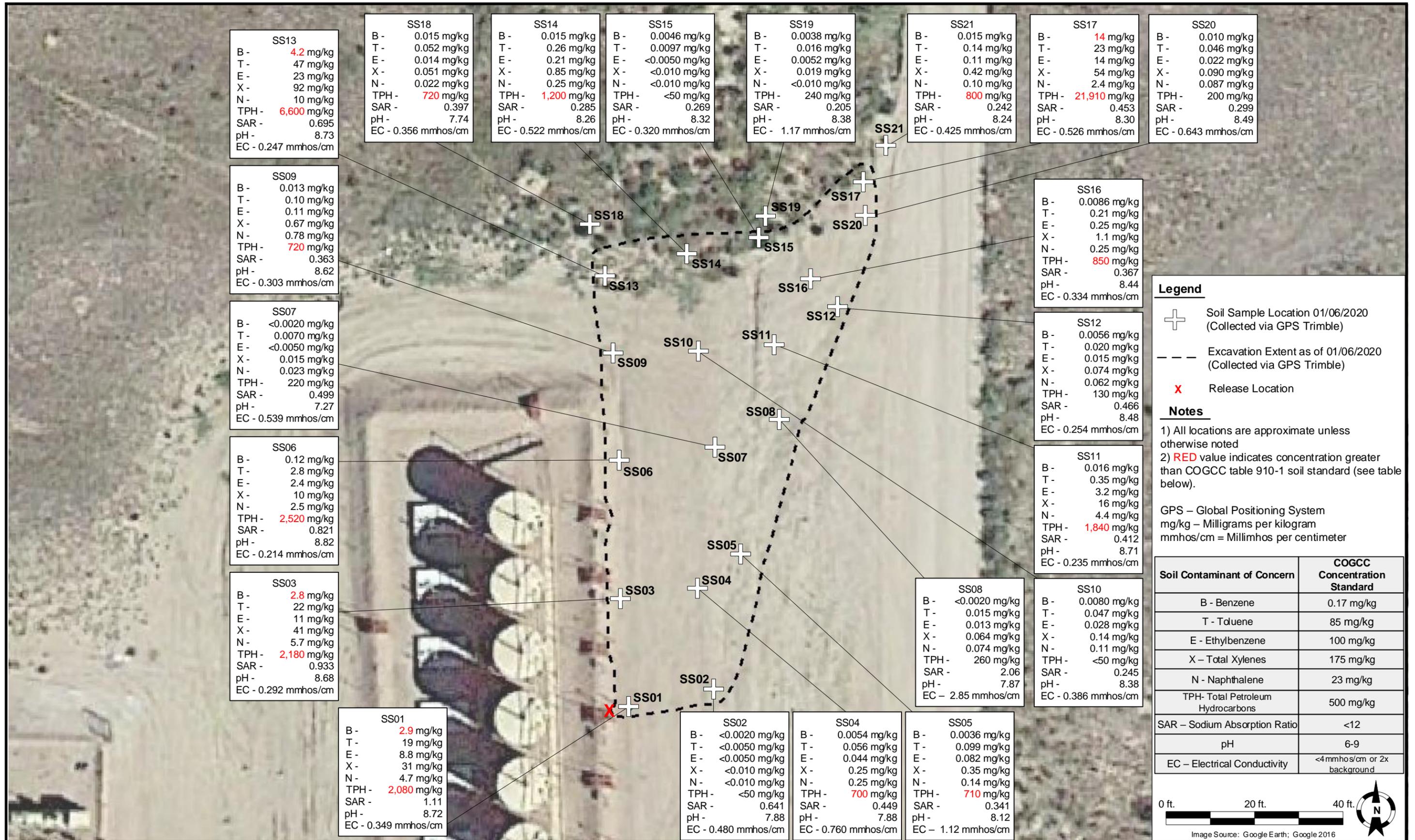


Figure 1

Site Location Map
 Furrow USX AB15-99HZ
 SESE S15 T7N R64W
 Weld County, Colorado





DATE: 02/06/2020

DESIGNED BY: JW

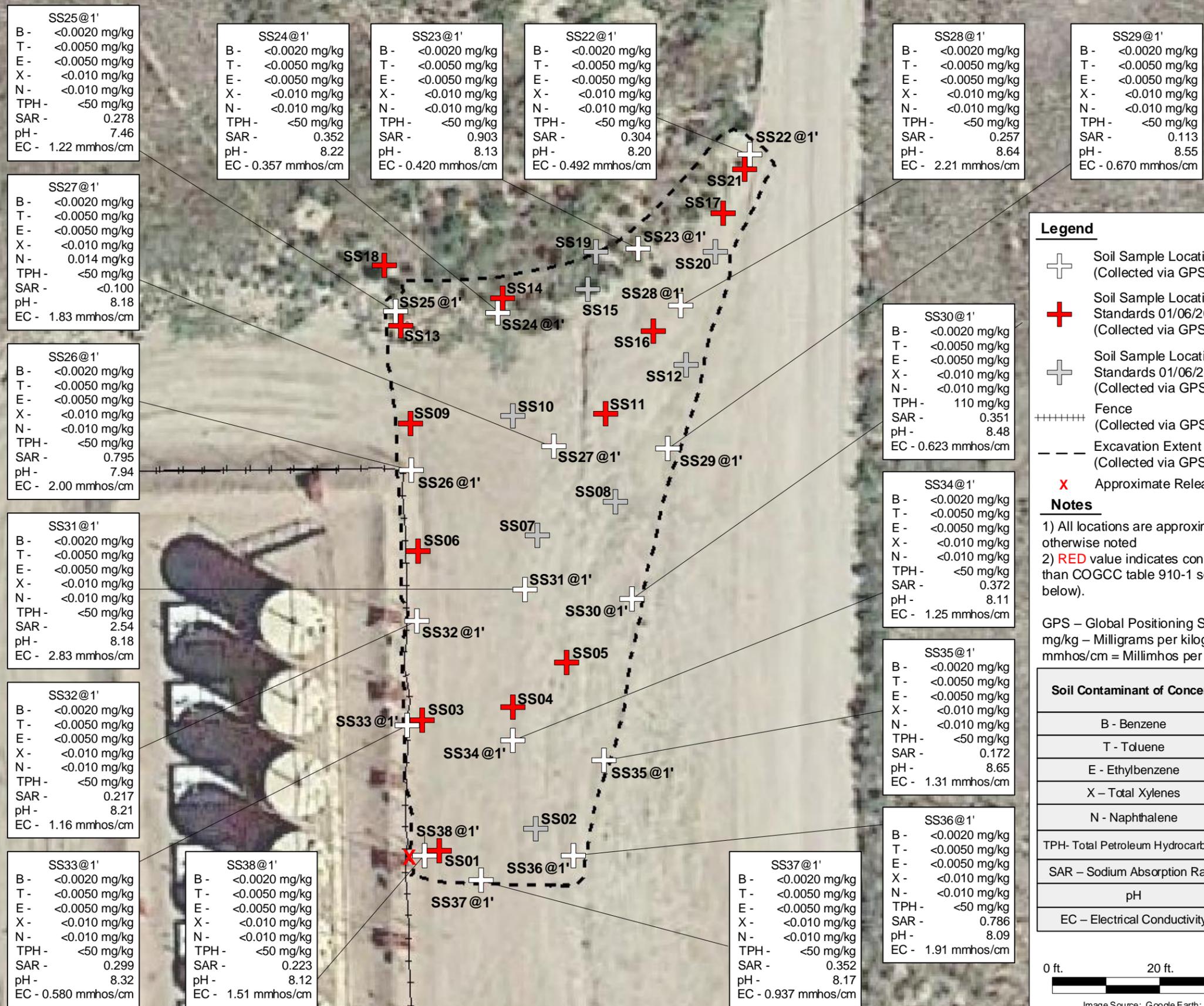
DRAWN BY: KC



Noble Energy, Inc. – DJ Basin
Furrow USX AB15-99HZ – Location ID: 416044
 SESE, Section 15, Township 7 North, Range 64 West
 Weld County, Colorado

Soil Analytical Results Map
 (01/06/2020)

FIGURE
 2



Legend

- Soil Sample Location 01/09/2020 (Collected via GPS Trimble)
- Soil Sample Location – Above COGCC Standards 01/06/2020 (Collected via GPS Trimble)
- Soil Sample Location – Below COGCC Standards 01/06/2020 (Collected via GPS Trimble)
- Fence (Collected via GPS Trimble)
- Excavation Extent as of 01/09/2020 (Collected via GPS Trimble)
- Approximate Release Location

Notes

- 1) All locations are approximate unless otherwise noted
- 2) **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

| Soil 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 |
| N - Naphthalene | 23 mg/kg |
| TPH- Total Petroleum Hydrocarbons | 500 mg/kg |
| SAR – Sodium Absorption Ratio | <12 |
| pH | 6-9 |
| EC – Electrical Conductivity | <4mmhos/cm or 2x background |



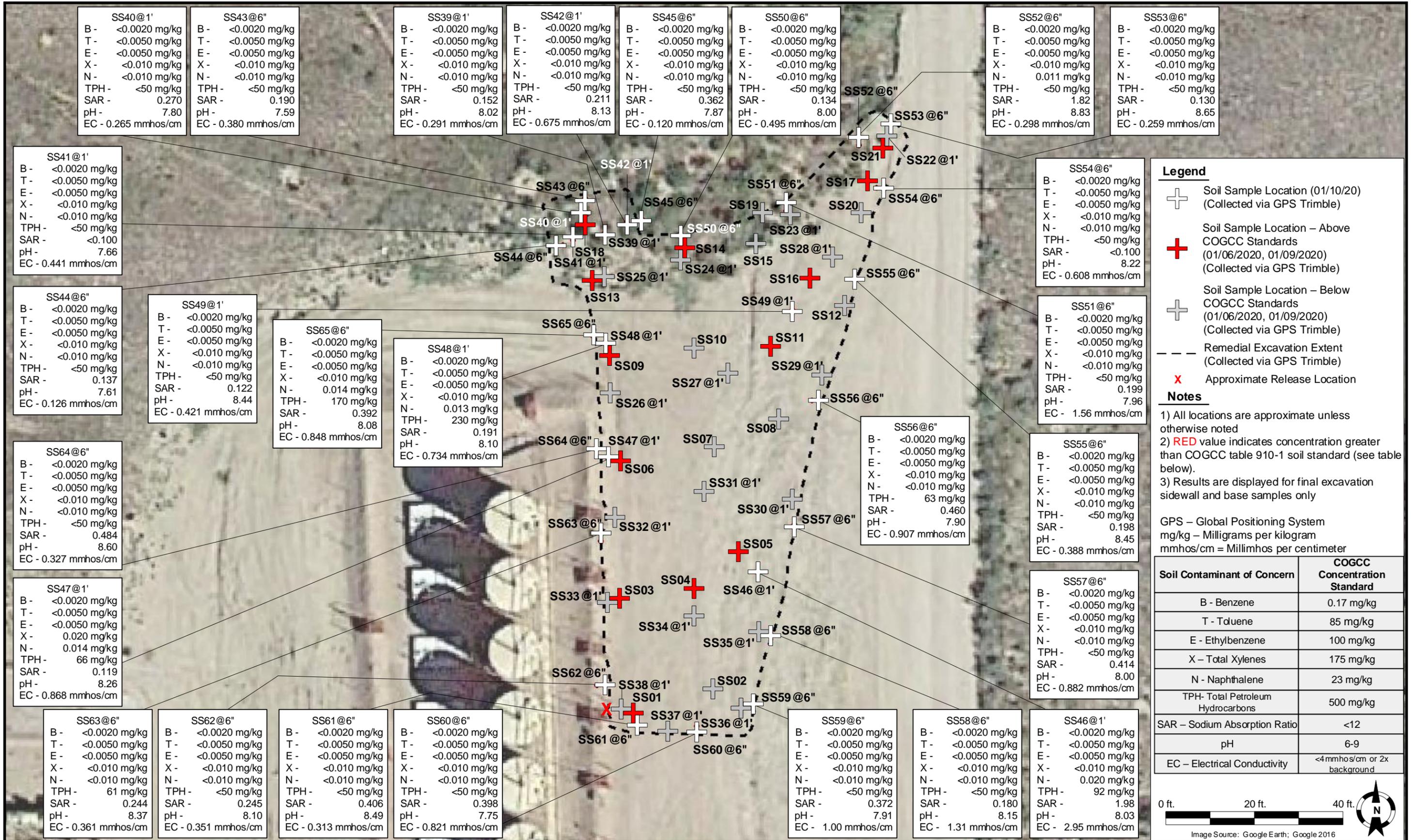
DATE: 02/06/2020
 DESIGNED BY: JW
 DRAWN BY: KC

TASMAN GEOSCIENCES
 Tasman Geosciences, Inc.
 6855 W 119th Avenue
 Broomfield, CO 80020

Noble Energy, Inc. – DJ Basin
Furrow USX AB15-99HZ – Location ID: 416044
 SESE, Section 15, Township 7 North, Range 64 West
 Weld County, Colorado

Soil Analytical Results Map
 (01/09/2020)

FIGURE
 3



DATE: 02/06/2020
 DESIGNED BY: JW
 DRAWN BY: KC



Noble Energy, Inc. – DJ Basin
Furrow USX AB15-99HZ – Location ID: 416044
 SESE, Section 15, Township 7 North, Range 64 West
 Weld County, Colorado

Soil Analytical Results Map
 (01/10/2020)

FIGURE
 4

ATTACHMENT A

Laboratory Analytical Data Reports

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 07, 2020

Brandon Bruns

Tasman Geosciences

6855 W. 119th Ave.

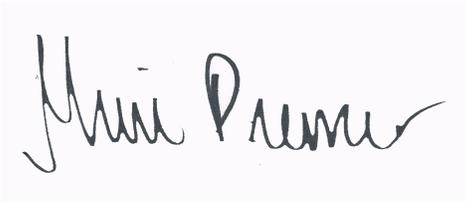
Broomfield, CO 80020

RE: Noble - Furrow USX AB15-99HZ

Work Order #2001026

Enclosed are the results of analyses for samples received by Summit Scientific on 01/06/20 17:53. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Muri Premer". The signature is written in a cursive style with a large initial "M" and a long, sweeping underline.

Muri Premer For Paul Shrewsbury
President



Tasman Geosciences
 6855 W. 119th Ave.
 Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
 Project Manager: Brandon Bruns

Reported:
 01/07/20 16:43

ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|-----------|---------------|--------|----------------|----------------|
| SS01 | 2001026-01 | Soil | 01/06/20 11:50 | 01/06/20 17:53 |
| SS02 | 2001026-02 | Soil | 01/06/20 11:55 | 01/06/20 17:53 |
| SS03 | 2001026-03 | Soil | 01/06/20 12:00 | 01/06/20 17:53 |
| SS04 | 2001026-04 | Soil | 01/06/20 12:05 | 01/06/20 17:53 |
| SS05 | 2001026-05 | Soil | 01/06/20 12:10 | 01/06/20 17:53 |
| SS06 | 2001026-06 | Soil | 01/06/20 12:15 | 01/06/20 17:53 |
| SS07 | 2001026-07 | Soil | 01/06/20 12:20 | 01/06/20 17:53 |
| SS08 | 2001026-08 | Soil | 01/06/20 12:25 | 01/06/20 17:53 |
| SS09 | 2001026-09 | Soil | 01/06/20 12:30 | 01/06/20 17:53 |
| SS10 | 2001026-10 | Soil | 01/06/20 12:35 | 01/06/20 17:53 |
| SS11 | 2001026-11 | Soil | 01/06/20 12:40 | 01/06/20 17:53 |
| SS12 | 2001026-12 | Soil | 01/06/20 12:45 | 01/06/20 17:53 |
| SS13 | 2001026-13 | Soil | 01/06/20 12:50 | 01/06/20 17:53 |
| SS14 | 2001026-14 | Soil | 01/06/20 12:55 | 01/06/20 17:53 |
| SS15 | 2001026-15 | Soil | 01/06/20 13:00 | 01/06/20 17:53 |
| SS16 | 2001026-16 | Soil | 01/06/20 13:05 | 01/06/20 17:53 |
| SS17 | 2001026-17 | Soil | 01/06/20 13:10 | 01/06/20 17:53 |
| SS18 | 2001026-18 | Soil | 01/06/20 13:15 | 01/06/20 17:53 |
| SS19 | 2001026-19 | Soil | 01/06/20 13:20 | 01/06/20 17:53 |
| SS20 | 2001026-20 | Soil | 01/06/20 13:25 | 01/06/20 17:53 |
| SS21 | 2001026-21 | Soil | 01/06/20 13:30 | 01/06/20 17:53 |

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.

Summit Scientific

2001076.1

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

~~Printed~~
TC
1/6/20

Tasman
Jacob Evans

Page 1 of 3

Client: Noble / Tasman Geosciences Project Manager: Brandon Bruns, Invoice: ~~Jacob Evans~~
Address: 6855 119th St. E-Mail: Bbruns@tasman-geo.com
City/State/Zip: Broomfield / CO/ 80020
Phone: 303-487-1228 Project Name: Furrow USX AB15-99HZ
Sampler Name: Tanner Cook Project Number: _____

| ID | Sample Description | Date Sampled | Time Sampled | # of containers | Preservative | | | | Matrix | | | Analysis Requested | | | | Special Instructions | |
|----|--------------------|--------------|--------------|-----------------|--------------|------|------|-------|--------|------|----------------|--------------------|-----------|--------------|----------|----------------------|-------------|
| | | | | | HCl | HNO3 | None | Other | Water | Soil | Air-Canister # | Other | 8260 BTEX | 8260B GBTEXN | 8015 DRO | | pH, EC, SAR |
| 1 | SS01 | 1/6/20 | 1850 | 1 | | | X | | | X | | | X | X | X | | |
| 2 | SS02 | | 1155 | | | | | | | | | | | | | | |
| 3 | SS03 | | 1200 | | | | | | | | | | | | | | |
| 4 | SS04 | | 1205 | | | | | | | | | | | | | | |
| 5 | SS05 | | 1210 | | | | | | | | | | | | | | |
| 6 | SS06 | | 1215 | | | | | | | | | | | | | | |
| 7 | SS07 | | 1220 | | | | | | | | | | | | | | |
| 8 | SS08 | | 1225 | | | | | | | | | | | | | | |
| 9 | SS09 | | 1230 | | | | | | | | | | | | | | |
| 10 | SS10 | | 1235 | | | | | | | | | | | | | | |

| | | | |
|---|--|---|---------------|
| Relinquished by: <i>Tanner Cook</i> Date/Time: 1/6/20 1630 | Received by: Tasman's Lock Box Date/Time: 1/6/20 1630 | Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours ___ 24 hours ___ Standard ___ 48 hours ___ Sample Integrity: Temperature Upon Receipt: 3.2 Samples Intact: <input checked="" type="radio"/> Yes No | Notes: |
| Relinquished by: Tasman's Lock Box Date/Time: 01/06/2020 1730 | Received by: <i>[Signature]</i> Date/Time: 01/06/2020 1730 | | |
| Relinquished by: _____ Date/Time: _____ | Received by: _____ Date/Time: _____ | | |

Summit Scientific

2001026.2

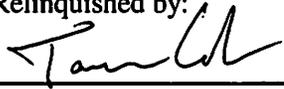
S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Edited
TC
1/6/20
Tasman
Page 2 of 3

Client: Noble / Tasman Geosciences Project Manager: Brandon Bruns, Invoice: ~~Jacob Evans~~
Address: 6855 119th St. E-Mail: Bbruns@tasman-geo.com
City/State/Zip: Broomfield / CO/ 80020
Phone: 303-487-1228 Project Name: Furrow USX AB15-99HZ
Sampler Name: Tanner Cook Project Number: _____

| ID | Sample Description | Date Sampled | Time Sampled | # of containers | Preservative | | | | Matrix | | | | Analysis Requested | | | | Special Instructions | |
|----|--------------------|--------------|--------------|-----------------|--------------|------|------|-------|--------|------|----------------|-------|--------------------|--------------|----------|-------------|----------------------|--|
| | | | | | HCl | HNO3 | None | Other | Water | Soil | Air-Canister # | Other | 8260 BTEX | 8260B GBTEXN | 8015 DRO | pH, EC, SAR | | |
| 1 | SS11 | 1/6/20 | 1240 | 1 | | | X | | | X | | | | X | X | X | | |
| 2 | SS12 | | 1245 | | | | | | | | | | | | | | | |
| 3 | SS13 | | 1250 | | | | | | | | | | | | | | | |
| 4 | SS14 | | 1255 | | | | | | | | | | | | | | | |
| 5 | SS15 | | 1300 | | | | | | | | | | | | | | | |
| 6 | SS16 | | 1305 | | | | | | | | | | | | | | | |
| 7 | SS17 | | 1310 | | | | | | | | | | | | | | | |
| 8 | SS18 | | 1315 | | | | | | | | | | | | | | | |
| 9 | SS19 | | 1320 | | | | | | | | | | | | | | | |
| 10 | SS20 | | 1325 | | | | | | | | | | | | | | | |

| | | | |
|---|--|--|--------|
| Relinquished by:  Date/Time: 1/6/20 1630 | Received by: Tasman's Lock Box Date/Time: 1/6/20 1630 | Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours ___ 24 hours ___ Standard ___ 48 hours ___ | Notes: |
| Relinquished by: Tasman's Lock Box Date/Time: 01/06/2020 1730 | Received by:  Date/Time: 01/06/2020 1730 | Sample Integrity: Temperature Upon Receipt: 3.2 | |
| Relinquished by: | Received by: | Samples Intact: <input checked="" type="checkbox"/> Yes No | |

Summit Scientific

2001026.3

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Edited
TC
1/6/20

Page 3 of 3

Client: Noble / Tasman Project Manager: Brandon Bruns, Invoice: ~~Heob Evans~~ **Tasman**
Address: 6855 119th St E-Mail: Bbruns@tasman-geo.com
City/State/Zip: Broomfield / CO/ 80020
Phone: 303-487-1228 Project Name: Furrow USX AB15-99HZ
Sampler Name: Tanner Cook Project Number: _____

| ID | Sample Description | Date Sampled | Time Sampled | # of containers | Preservative | | | | Matrix | | | | Analysis Requested | | | | Special Instructions |
|----|--------------------|--------------|--------------|-----------------|--------------|------------------|------|-------|--------|------|----------------|-------|--------------------|--------------|----------|-------------|----------------------|
| | | | | | HCl | HNO ₃ | None | Other | Water | Soil | Air-Canister # | Other | 8260 BTEX | 8260B GBTEXN | 8015 DRO | pH, EC, SAR | |
| 1 | SS Z1 | 1/6/20 | 1330 | 1 | | | X | | | X | | | | X | X | X | |
| 2 | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |

| | | | |
|---|---|--|---------------|
| Relinquished by: <u>Tanner Cook</u> Date/Time: <u>1/6/20 1630</u> | Received by: <u>Tasman's Lock Box</u> Date/Time: <u>1/6/20 1630</u> | Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours ___ 24 hours ___ Standard ___ 48 hours ___ Sample Integrity: Temperature Upon Receipt: <u>3.2</u> Samples Intact: <input checked="" type="radio"/> Yes No | Notes: |
| Relinquished by: <u>Tasman's Lock Box</u> Date/Time: <u>01/06/2020 1730</u> | Received by: <u>[Signature]</u> Date/Time: <u>01/06/2020 1730</u> | | |
| Relinquished by: _____ Date/Time: _____ | Received by: _____ Date/Time: _____ | | |

Sample Receipt Checklist

S2 Work Order 2001026

Client: NOBLE / TASMAN Client Project ID: FURROW USX AB15-99HZ

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other _____ Airbill #: _____

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

| | |
|-----------|-----|
| Temp (°C) | 3.2 |
|-----------|-----|

Thermometer ID: 61857155-K

| | Yes | No | N/A | Comments (if any) |
|---|-----|----|-----|-------------------|
| If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun. | ✓ | | | |
| Were all samples received intact ⁽¹⁾ ? | ✓ | | | |
| Was adequate sample volume provided ⁽¹⁾ ? | ✓ | | | |
| If custody seals are present, are they intact ⁽¹⁾ ? | | | ✓ | |
| 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 ⁽¹⁾ ? | ✓ | | | |
| Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ? | ✓ | | | |
| Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ? | ✓ | | | |
| Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ? | ✓ | | | |
| For volatiles in water – is there headspace present? If yes, contact client and note in narrative. | | | ✓ | |
| Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? 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 ⁽¹⁾ ? Record the pH in Comments. | | | ✓ | |
| If dissolved metals are requested, were samples field filtered? | | | ✓ | |
| Additional Comments (if any): | | | | |
| ⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative. | | | | |

RZ
Custodian Printed Name or Initials


Signature of Custodian

1/6/20
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS01
2001026-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/06/20 11:50**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------------------|-------------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| Benzene | 2.9 | 0.20 | mg/kg | 100 | 2001060 | 01/06/20 | 01/07/20 | EPA 8260B | |
| Toluene | 19 | 0.50 | " | " | " | " | " | " | |
| Ethylbenzene | 8.8 | 0.50 | " | " | " | " | " | " | |
| Xylenes (total) | 31 | 1.0 | " | " | " | " | " | " | |
| Naphthalene | 4.7 | 1.0 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | 1800 | 50 | " | " | " | " | " | " | |

Date Sampled: **01/06/20 11:50**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | Units | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 106 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 104 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 126 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/06/20 11:50**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|------------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| C10-C28 (DRO) | 280 | 50 | mg/kg | 1 | 2001061 | 01/06/20 | 01/06/20 | EPA 8015M | |

Date Sampled: **01/06/20 11:50**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | Units | | | | | | |
| Surrogate: o-Terphenyl | | 102 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/06/20 11:50**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|------------|-----------|-----------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| Calcium | 653 | 11.7 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/06/20 | EPA 6020B | |
| Magnesium | 313 | 5.86 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS01
2001026-01 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 138 | 5.86 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/06/20 | EPA 6020B |
|---------------|------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/06/20 11:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|-------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 1.11 | 0.100 | units | 1 | 2001069 | 01/07/20 | 01/07/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/06/20 11:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 85.4 | | % | 1 | 2001058 | 01/06/20 | 01/07/20 | Calculation | |
| pH | 8.72 | | pH Units | " | 2001057 | 01/06/20 | 01/06/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/06/20 11:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.349 | 0.0100 | mmhos/cm | 1 | 2001056 | " | 01/06/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS02
2001026-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/06/20 11:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001060 | 01/06/20 | 01/06/20 | 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: **01/06/20 11:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 130 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 117 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 114 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/06/20 11:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001061 | 01/06/20 | 01/06/20 | EPA 8015M | |

Date Sampled: **01/06/20 11:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 110 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/06/20 11:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 1120 | 11.1 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/06/20 | EPA 6020B | |
| Magnesium | 335 | 5.54 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS02
2001026-02 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 95.2 | 5.54 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/06/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/06/20 11:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.641 | 0.100 | units | 1 | 2001069 | 01/07/20 | 01/07/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/06/20 11:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 90.3 | | % | 1 | 2001058 | 01/06/20 | 01/07/20 | Calculation | |
| pH | 7.88 | | pH Units | " | 2001057 | 01/06/20 | 01/06/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/06/20 11:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.480 | 0.0100 | mmhos/cm | 1 | 2001056 | " | 01/06/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS03
2001026-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/06/20 12:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------------------|-------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | 2.8 | 0.20 | mg/kg | 100 | 2001060 | 01/06/20 | 01/07/20 | EPA 8260B | |
| Toluene | 22 | 0.50 | " | " | " | " | " | " | |
| Ethylbenzene | 11 | 0.50 | " | " | " | " | " | " | |
| Xylenes (total) | 41 | 1.0 | " | " | " | " | " | " | |
| Naphthalene | 5.7 | 1.0 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | 1900 | 50 | " | " | " | " | " | " | |

Date Sampled: **01/06/20 12:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 116 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 104 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 132 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/06/20 12:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | 280 | 50 | mg/kg | 1 | 2001061 | 01/06/20 | 01/06/20 | EPA 8015M | |

Date Sampled: **01/06/20 12:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 98.4 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/06/20 12:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 1010 | 11.4 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/06/20 | EPA 6020B | |
| Magnesium | 380 | 5.68 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS03
2001026-03 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 137 | 5.68 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/06/20 | EPA 6020B |
|---------------|------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/06/20 12:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.933 | 0.100 | units | 1 | 2001069 | 01/07/20 | 01/07/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/06/20 12:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 88.0 | | % | 1 | 2001058 | 01/06/20 | 01/07/20 | Calculation | |
| pH | 8.68 | | pH Units | " | 2001057 | 01/06/20 | 01/06/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/06/20 12:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.292 | 0.0100 | mmhos/cm | 1 | 2001056 | " | 01/06/20 | EPA 120.1 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS04
2001026-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/06/20 12:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|---------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | 0.0054 | 0.0020 | mg/kg | 1 | 2001060 | 01/06/20 | 01/07/20 | EPA 8260B | |
| Toluene | 0.056 | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | 0.044 | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | 0.25 | 0.010 | " | " | " | " | " | " | |
| Naphthalene | 0.25 | 0.010 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **01/06/20 12:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 115 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 122 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 130 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/06/20 12:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | 700 | 50 | mg/kg | 1 | 2001061 | 01/06/20 | 01/06/20 | EPA 8015M | |

Date Sampled: **01/06/20 12:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 134 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/06/20 12:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 1060 | 11.0 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/06/20 | EPA 6020B | |
| Magnesium | 344 | 5.50 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS04
2001026-04 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 65.7 | 5.50 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/06/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/06/20 12:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.449 | 0.100 | units | 1 | 2001069 | 01/07/20 | 01/07/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/06/20 12:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 91.0 | | % | 1 | 2001058 | 01/06/20 | 01/07/20 | Calculation | |
| pH | 7.88 | | pH Units | " | 2001057 | 01/06/20 | 01/06/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/06/20 12:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.760 | 0.0100 | mmhos/cm | 1 | 2001056 | " | 01/06/20 | EPA 120.1 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS05
2001026-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/06/20 12:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|---------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | 0.0036 | 0.0020 | mg/kg | 1 | 2001060 | 01/06/20 | 01/06/20 | EPA 8260B | |
| Toluene | 0.099 | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | 0.082 | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | 0.35 | 0.010 | " | " | " | " | " | " | |
| Naphthalene | 0.14 | 0.010 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **01/06/20 12:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 116 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 118 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 125 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/06/20 12:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | 710 | 50 | mg/kg | 1 | 2001061 | 01/06/20 | 01/06/20 | EPA 8015M | |

Date Sampled: **01/06/20 12:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 125 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/06/20 12:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 2860 | 11.1 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/06/20 | EPA 6020B | |
| Magnesium | 478 | 5.54 | " | " | " | " | " | " | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS05
2001026-05 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 74.9 | 5.54 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/06/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/06/20 12:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.341 | 0.100 | units | 1 | 2001069 | 01/07/20 | 01/07/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/06/20 12:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 90.3 | | % | 1 | 2001058 | 01/06/20 | 01/07/20 | Calculation | |
| pH | 8.12 | | pH Units | " | 2001057 | 01/06/20 | 01/06/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/06/20 12:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|-------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 1.12 | 0.0100 | mmhos/cm | 1 | 2001056 | " | 01/06/20 | EPA 120.1 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS06
2001026-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/06/20 12:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------------------|-------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | 0.12 | 0.0020 | mg/kg | 1 | 2001060 | 01/06/20 | 01/07/20 | EPA 8260B | |
| Toluene | 2.8 | 0.50 | " | 100 | " | " | " | " | |
| Ethylbenzene | 2.4 | 0.50 | " | " | " | " | " | " | |
| Xylenes (total) | 10 | 1.0 | " | " | " | " | " | " | |
| Naphthalene | 2.5 | 1.0 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | 1700 | 50 | " | " | " | " | " | " | |

Date Sampled: **01/06/20 12:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 113 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 110 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 129 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/06/20 12:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | 820 | 50 | mg/kg | 1 | 2001061 | 01/06/20 | 01/06/20 | EPA 8015M | |

Date Sampled: **01/06/20 12:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 135 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/06/20 12:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 470 | 11.4 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/06/20 | EPA 6020B | |
| Magnesium | 233 | 5.70 | " | " | " | " | " | " | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS06
2001026-06 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 87.1 | 5.70 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/06/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/06/20 12:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.821 | 0.100 | units | 1 | 2001069 | 01/07/20 | 01/07/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/06/20 12:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 87.7 | | % | 1 | 2001058 | 01/06/20 | 01/07/20 | Calculation | |
| pH | 8.82 | | pH Units | " | 2001057 | 01/06/20 | 01/06/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/06/20 12:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.214 | 0.0100 | mmhos/cm | 1 | 2001056 | " | 01/06/20 | EPA 120.1 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS07
2001026-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/06/20 12:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|---------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001060 | 01/06/20 | 01/07/20 | EPA 8260B | |
| Toluene | 0.0070 | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | 0.015 | 0.010 | " | " | " | " | " | " | |
| Naphthalene | 0.023 | 0.010 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **01/06/20 12:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 130 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 119 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 111 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/06/20 12:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | 220 | 50 | mg/kg | 1 | 2001061 | 01/06/20 | 01/06/20 | EPA 8015M | |

Date Sampled: **01/06/20 12:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 109 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/06/20 12:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 775 | 11.0 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/06/20 | EPA 6020B | |
| Magnesium | 241 | 5.50 | " | " | " | " | " | " | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/07/20 16:43

SS07
2001026-07 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 62.0 | 5.50 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/06/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/06/20 12:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.499 | 0.100 | units | 1 | 2001069 | 01/07/20 | 01/07/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/06/20 12:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 90.9 | | % | 1 | 2001058 | 01/06/20 | 01/07/20 | Calculation | |
| pH | 7.27 | | pH Units | " | 2001057 | 01/06/20 | 01/06/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/06/20 12:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.539 | 0.0100 | mmhos/cm | 1 | 2001056 | " | 01/06/20 | EPA 120.1 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS08
2001026-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/06/20 12:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001060 | 01/06/20 | 01/07/20 | EPA 8260B | |
| Toluene | 0.015 | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | 0.013 | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | 0.064 | 0.010 | " | " | " | " | " | " | |
| Naphthalene | 0.074 | 0.010 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **01/06/20 12:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 124 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 120 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 105 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/06/20 12:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | 260 | 50 | mg/kg | 1 | 2001061 | 01/06/20 | 01/06/20 | EPA 8015M | |

Date Sampled: **01/06/20 12:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 110 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/06/20 12:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 2070 | 11.2 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/06/20 | EPA 6020B | |
| Magnesium | 429 | 5.58 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS08
2001026-08 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 395 | 5.58 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/06/20 | EPA 6020B |
|---------------|------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/06/20 12:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|-------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 2.06 | 0.100 | units | 1 | 2001069 | 01/07/20 | 01/07/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/06/20 12:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 89.6 | | % | 1 | 2001058 | 01/06/20 | 01/07/20 | Calculation | |
| pH | 7.87 | | pH Units | " | 2001057 | 01/06/20 | 01/06/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/06/20 12:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|-------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 2.85 | 0.0100 | mmhos/cm | 1 | 2001056 | " | 01/06/20 | EPA 120.1 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS09
2001026-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/06/20 12:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | 0.013 | 0.0020 | mg/kg | 1 | 2001060 | 01/06/20 | 01/06/20 | EPA 8260B | |
| Toluene | 0.10 | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | 0.11 | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | 0.67 | 0.010 | " | " | " | " | " | " | |
| Naphthalene | 0.78 | 0.010 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | 170 | 50 | " | 10 | " | " | " | " | |

Date Sampled: **01/06/20 12:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 92.7 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 104 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 149 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/06/20 12:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | 550 | 50 | mg/kg | 1 | 2001061 | 01/06/20 | 01/06/20 | EPA 8015M | |

Date Sampled: **01/06/20 12:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 131 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/06/20 12:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 1430 | 11.5 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B | |
| Magnesium | 416 | 5.73 | " | " | " | " | " | " | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS09
2001026-09 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 60.7 | 5.73 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/06/20 12:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.363 | 0.100 | units | 1 | 2001069 | 01/07/20 | 01/07/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/06/20 12:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 87.3 | | % | 1 | 2001058 | 01/06/20 | 01/07/20 | Calculation | |
| pH | 8.62 | | pH Units | " | 2001057 | 01/06/20 | 01/06/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/06/20 12:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.303 | 0.0100 | mmhos/cm | 1 | 2001056 | " | 01/06/20 | EPA 120.1 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS10
2001026-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/06/20 12:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|---------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | 0.0080 | 0.0020 | mg/kg | 1 | 2001060 | 01/06/20 | 01/06/20 | EPA 8260B | |
| Toluene | 0.047 | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | 0.028 | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | 0.14 | 0.010 | " | " | " | " | " | " | |
| Naphthalene | 0.11 | 0.010 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **01/06/20 12:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 91.4 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 103 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 100 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/06/20 12:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001061 | 01/06/20 | 01/07/20 | EPA 8015M | |

Date Sampled: **01/06/20 12:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 106 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/06/20 12:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 1280 | 11.0 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B | |
| Magnesium | 327 | 5.52 | " | " | " | " | " | " | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS10
2001026-10 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 38.0 | 5.52 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/06/20 12:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.245 | 0.100 | units | 1 | 2001069 | 01/07/20 | 01/07/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/06/20 12:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 90.6 | | % | 1 | 2001058 | 01/06/20 | 01/07/20 | Calculation | |
| pH | 8.38 | | pH Units | " | 2001057 | 01/06/20 | 01/06/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/06/20 12:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.386 | 0.0100 | mmhos/cm | 1 | 2001056 | " | 01/06/20 | EPA 120.1 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS11
2001026-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/06/20 12:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | 0.016 | 0.0020 | mg/kg | 1 | 2001060 | 01/06/20 | 01/07/20 | EPA 8260B | |
| Toluene | 0.35 | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | 3.2 | 0.050 | " | 10 | " | " | " | " | |
| Xylenes (total) | 16 | 0.10 | " | " | " | " | " | " | |
| Naphthalene | 4.4 | 0.10 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | 1500 | 50 | " | " | " | " | " | " | E |

Date Sampled: **01/06/20 12:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 91.2 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 106 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 172 % | 21-167 | | " | " | " | " | S-02 |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/06/20 12:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | 340 | 50 | mg/kg | 1 | 2001061 | 01/06/20 | 01/07/20 | EPA 8015M | |

Date Sampled: **01/06/20 12:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 122 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/06/20 12:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 984 | 11.0 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B | |
| Magnesium | 288 | 5.52 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS11
2001026-11 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 57.2 | 5.52 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/06/20 12:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.412 | 0.100 | units | 1 | 2001069 | 01/07/20 | 01/07/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/06/20 12:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 90.6 | | % | 1 | 2001058 | 01/06/20 | 01/07/20 | Calculation | |
| pH | 8.71 | | pH Units | " | 2001057 | 01/06/20 | 01/06/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/06/20 12:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.235 | 0.0100 | mmhos/cm | 1 | 2001056 | " | 01/06/20 | EPA 120.1 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS12
2001026-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/06/20 12:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|---------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | 0.0056 | 0.0020 | mg/kg | 1 | 2001060 | 01/06/20 | 01/07/20 | EPA 8260B | |
| Toluene | 0.020 | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | 0.015 | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | 0.074 | 0.010 | " | " | " | " | " | " | |
| Naphthalene | 0.062 | 0.010 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **01/06/20 12:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 90.2 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 106 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 96.5 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/06/20 12:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | 130 | 50 | mg/kg | 1 | 2001061 | 01/06/20 | 01/07/20 | EPA 8015M | |

Date Sampled: **01/06/20 12:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 105 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/06/20 12:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 828 | 11.0 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B | |
| Magnesium | 254 | 5.50 | " | " | " | " | " | " | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS12
2001026-12 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 59.8 | 5.50 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/06/20 12:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.466 | 0.100 | units | 1 | 2001069 | 01/07/20 | 01/07/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/06/20 12:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 90.9 | | % | 1 | 2001058 | 01/06/20 | 01/07/20 | Calculation | |
| pH | 8.48 | | pH Units | " | 2001057 | 01/06/20 | 01/06/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/06/20 12:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.254 | 0.0100 | mmhos/cm | 1 | 2001056 | " | 01/06/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/07/20 16:43

SS13
2001026-13 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/06/20 12:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------------------|-------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | 4.2 | 0.20 | mg/kg | 100 | 2001060 | 01/06/20 | 01/07/20 | EPA 8260B | |
| Toluene | 47 | 0.50 | " | " | " | " | " | " | |
| Ethylbenzene | 23 | 0.50 | " | " | " | " | " | " | |
| Xylenes (total) | 92 | 1.0 | " | " | " | " | " | " | |
| Naphthalene | 10 | 1.0 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | 4500 | 50 | " | " | " | " | " | " | |

Date Sampled: **01/06/20 12:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 88.8 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 104 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 136 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/06/20 12:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|-------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | 2100 | 50 | mg/kg | 1 | 2001061 | 01/06/20 | 01/07/20 | EPA 8015M | |

Date Sampled: **01/06/20 12:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 140 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/06/20 12:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 1130 | 10.9 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B | |
| Magnesium | 343 | 5.45 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS13
2001026-13 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 104 | 5.45 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B |
|---------------|------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/06/20 12:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.695 | 0.100 | units | 1 | 2001069 | 01/07/20 | 01/07/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/06/20 12:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 91.7 | | % | 1 | 2001058 | 01/06/20 | 01/07/20 | Calculation | |
| pH | 8.73 | | pH Units | " | 2001057 | 01/06/20 | 01/06/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/06/20 12:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.247 | 0.0100 | mmhos/cm | 1 | 2001056 | " | 01/06/20 | EPA 120.1 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS14
2001026-14 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/06/20 12:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | 0.015 | 0.0020 | mg/kg | 1 | 2001060 | 01/06/20 | 01/06/20 | EPA 8260B | |
| Toluene | 0.26 | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | 0.21 | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | 0.85 | 0.010 | " | " | " | " | " | " | |
| Naphthalene | 0.25 | 0.010 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **01/06/20 12:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 97.4 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 106 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 135 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/06/20 12:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|-------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | 1200 | 50 | mg/kg | 1 | 2001061 | 01/06/20 | 01/07/20 | EPA 8015M | |

Date Sampled: **01/06/20 12:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 142 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/06/20 12:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 2340 | 11.0 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B | |
| Magnesium | 420 | 5.48 | " | " | " | " | " | " | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
01/07/20 16:43

SS14
2001026-14 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 56.9 | 5.48 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/06/20 12:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.285 | 0.100 | units | 1 | 2001069 | 01/07/20 | 01/07/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/06/20 12:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 91.3 | | % | 1 | 2001058 | 01/06/20 | 01/07/20 | Calculation | |
| pH | 8.26 | | pH Units | " | 2001057 | 01/06/20 | 01/06/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/06/20 12:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.522 | 0.0100 | mmhos/cm | 1 | 2001056 | " | 01/06/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS15
2001026-15 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/06/20 13:00**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|---------------|-----------|--|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| Benzene | 0.0046 | 0.0020 | | mg/kg | 1 | 2001060 | 01/06/20 | 01/06/20 | EPA 8260B | |
| Toluene | 0.0097 | 0.0050 | | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.010 | | " | " | " | " | " | " | |
| Naphthalene | ND | 0.010 | | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 50 | | " | " | " | " | " | " | |

Date Sampled: **01/06/20 13:00**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 119 % | | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 106 % | | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 128 % | | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/06/20 13:00**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|--|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| C10-C28 (DRO) | ND | 50 | | mg/kg | 1 | 2001061 | 01/06/20 | 01/07/20 | EPA 8015M | |

Date Sampled: **01/06/20 13:00**

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

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

Date Sampled: **01/06/20 13:00**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|-------------|-----------|--|-----------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| Calcium | 1890 | 11.2 | | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B | |
| Magnesium | 317 | 5.59 | | " | " | " | " | " | " | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
01/07/20 16:43

SS15
2001026-15 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 48.0 | 5.59 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/06/20 13:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.269 | 0.100 | units | 1 | 2001069 | 01/07/20 | 01/07/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/06/20 13:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 89.5 | | % | 1 | 2001058 | 01/06/20 | 01/07/20 | Calculation | |
| pH | 8.32 | | pH Units | " | 2001057 | 01/06/20 | 01/06/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/06/20 13:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.320 | 0.0100 | mmhos/cm | 1 | 2001056 | " | 01/06/20 | EPA 120.1 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS16
2001026-16 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/06/20 13:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|---------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | 0.0086 | 0.0020 | mg/kg | 1 | 2001060 | 01/06/20 | 01/07/20 | EPA 8260B | |
| Toluene | 0.21 | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | 0.25 | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | 1.1 | 0.010 | " | " | " | " | " | " | |
| Naphthalene | 0.25 | 0.010 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **01/06/20 13:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 101 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 103 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 158 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/06/20 13:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | 850 | 50 | mg/kg | 1 | 2001061 | 01/06/20 | 01/07/20 | EPA 8015M | |

Date Sampled: **01/06/20 13:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 113 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/06/20 13:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 1120 | 10.7 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B | |
| Magnesium | 286 | 5.37 | " | " | " | " | " | " | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS16
2001026-16 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 53.1 | 5.37 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/06/20 13:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.367 | 0.100 | units | 1 | 2001069 | 01/07/20 | 01/07/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/06/20 13:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 93.1 | | % | 1 | 2001058 | 01/06/20 | 01/07/20 | Calculation | |
| pH | 8.44 | | pH Units | " | 2001057 | 01/06/20 | 01/06/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/06/20 13:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.334 | 0.0100 | mmhos/cm | 1 | 2001056 | " | 01/06/20 | EPA 120.1 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS17
2001026-17 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/06/20 13:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------------------|------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | 14 | 0.020 | mg/kg | 10 | 2001060 | 01/06/20 | 01/07/20 | EPA 8260B | E |
| Toluene | 23 | 0.050 | " | " | " | " | " | " | E |
| Ethylbenzene | 14 | 0.050 | " | " | " | " | " | " | E |
| Xylenes (total) | 54 | 0.10 | " | " | " | " | " | " | E |
| Naphthalene | 2.4 | 0.10 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | 910 | 50 | " | " | " | " | " | " | E |

Date Sampled: **01/06/20 13:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 148 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 221 % | 20-170 | | " | " | " | " | S-02 |
| Surrogate: 4-Bromofluorobenzene | | 648 % | 21-167 | | " | " | " | " | S-02 |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/06/20 13:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|--------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | 21000 | 50 | mg/kg | 1 | 2001061 | 01/06/20 | 01/07/20 | EPA 8015M | |

Date Sampled: **01/06/20 13:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 90.3 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/06/20 13:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 1520 | 11.4 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B | |
| Magnesium | 331 | 5.68 | " | " | " | " | " | " | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS17
2001026-17 (Soil)

Summit Scientific

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

| | | | | | | | | |
|--------|------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 74.7 | 5.68 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B |
|--------|------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/06/20 13:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.453 | 0.100 | units | 1 | 2001069 | 01/07/20 | 01/07/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/06/20 13:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 88.1 | | % | 1 | 2001058 | 01/06/20 | 01/07/20 | Calculation | |
| pH | 8.30 | | pH Units | " | 2001057 | 01/06/20 | 01/06/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/06/20 13:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.526 | 0.0100 | mmhos/cm | 1 | 2001056 | " | 01/06/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS18
2001026-18 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/06/20 13:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | 0.015 | 0.0020 | mg/kg | 1 | 2001060 | 01/06/20 | 01/06/20 | EPA 8260B | |
| Toluene | 0.052 | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | 0.014 | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | 0.051 | 0.010 | " | " | " | " | " | " | |
| Naphthalene | 0.022 | 0.010 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **01/06/20 13:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 111 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 108 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 104 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/06/20 13:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | 720 | 50 | mg/kg | 1 | 2001061 | 01/06/20 | 01/07/20 | EPA 8015M | |

Date Sampled: **01/06/20 13:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 104 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/06/20 13:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 827 | 11.8 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B | |
| Magnesium | 286 | 5.92 | " | " | " | " | " | " | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS18
2001026-18 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 51.9 | 5.92 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/06/20 13:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.397 | 0.100 | units | 1 | 2001069 | 01/07/20 | 01/07/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/06/20 13:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 84.5 | | % | 1 | 2001058 | 01/06/20 | 01/07/20 | Calculation | |
| pH | 7.74 | | pH Units | " | 2001057 | 01/06/20 | 01/06/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/06/20 13:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.356 | 0.0100 | mmhos/cm | 1 | 2001056 | " | 01/06/20 | EPA 120.1 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS19
2001026-19 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/06/20 13:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|---------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | 0.0038 | 0.0020 | mg/kg | 1 | 2001060 | 01/06/20 | 01/06/20 | EPA 8260B | |
| Toluene | 0.016 | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | 0.0052 | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | 0.019 | 0.010 | " | " | " | " | " | " | |
| Naphthalene | ND | 0.010 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **01/06/20 13:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 121 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 112 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 106 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/06/20 13:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | 240 | 50 | mg/kg | 1 | 2001061 | 01/06/20 | 01/07/20 | EPA 8015M | |

Date Sampled: **01/06/20 13:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 112 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/06/20 13:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 1280 | 11.0 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B | |
| Magnesium | 261 | 5.51 | " | " | " | " | " | " | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS19
2001026-19 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 30.8 | 5.51 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/06/20 13:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.205 | 0.100 | units | 1 | 2001069 | 01/07/20 | 01/07/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/06/20 13:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 90.7 | | % | 1 | 2001058 | 01/06/20 | 01/07/20 | Calculation | |
| pH | 8.38 | | pH Units | " | 2001057 | 01/06/20 | 01/06/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/06/20 13:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|-------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 1.17 | 0.0100 | mmhos/cm | 1 | 2001056 | " | 01/06/20 | EPA 120.1 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS20
2001026-20 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/06/20 13:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | 0.010 | 0.0020 | mg/kg | 1 | 2001060 | 01/06/20 | 01/06/20 | EPA 8260B | |
| Toluene | 0.046 | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | 0.022 | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | 0.090 | 0.010 | " | " | " | " | " | " | |
| Naphthalene | 0.087 | 0.010 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **01/06/20 13:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 118 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 112 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 114 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/06/20 13:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | 200 | 50 | mg/kg | 1 | 2001061 | 01/06/20 | 01/07/20 | EPA 8015M | |

Date Sampled: **01/06/20 13:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 113 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/06/20 13:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 2810 | 11.0 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B | |
| Magnesium | 322 | 5.52 | " | " | " | " | " | " | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS20
2001026-20 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 62.8 | 5.52 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/06/20 13:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.299 | 0.100 | units | 1 | 2001069 | 01/07/20 | 01/07/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/06/20 13:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 90.6 | | % | 1 | 2001058 | 01/06/20 | 01/07/20 | Calculation | |
| pH | 8.49 | | pH Units | " | 2001057 | 01/06/20 | 01/06/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/06/20 13:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.643 | 0.0100 | mmhos/cm | 1 | 2001056 | " | 01/06/20 | EPA 120.1 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS21
2001026-21 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/06/20 13:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | 0.015 | 0.0020 | mg/kg | 1 | 2001060 | 01/06/20 | 01/07/20 | EPA 8260B | |
| Toluene | 0.14 | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | 0.11 | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | 0.42 | 0.010 | " | " | " | " | " | " | |
| Naphthalene | 0.10 | 0.010 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **01/06/20 13:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 94.6 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 103 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 129 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/06/20 13:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | 800 | 50 | mg/kg | 1 | 2001061 | 01/06/20 | 01/07/20 | EPA 8015M | |

Date Sampled: **01/06/20 13:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 122 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/06/20 13:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 1120 | 10.7 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B | |
| Magnesium | 251 | 5.34 | " | " | " | " | " | " | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

SS21
2001026-21 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 34.4 | 5.34 | mg/kg dry | 1 | 2001059 | 01/06/20 | 01/07/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/06/20 13:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.242 | 0.100 | units | 1 | 2001069 | 01/07/20 | 01/07/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/06/20 13:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 93.6 | | % | 1 | 2001058 | 01/06/20 | 01/07/20 | Calculation | |
| pH | 8.24 | | pH Units | " | 2001057 | 01/06/20 | 01/06/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/06/20 13:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.425 | 0.0100 | mmhos/cm | 1 | 2001056 | " | 01/06/20 | EPA 120.1 | |

Summit Scientific

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
01/07/20 16:43

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 2001060 - EPA 5030 Soil MS

Blank (2001060-BLK1)

Prepared: 01/06/20 Analyzed: 01/07/20

| | | | | | | | | | | |
|----------------------------------|--------|--------|-------|--------|--|------|--------|--|--|--|
| 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 | 0.0351 | | " | 0.0400 | | 87.8 | 23-173 | | | |
| Surrogate: Toluene-d8 | 0.0411 | | " | 0.0400 | | 103 | 20-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0417 | | " | 0.0400 | | 104 | 21-167 | | | |

LCS (2001060-BS1)

Prepared: 01/06/20 Analyzed: 01/07/20

| | | | | | | | | | | |
|----------------------------------|--------|--------|-------|--------|--|------|--------|--|--|--|
| Benzene | 0.0957 | 0.0020 | mg/kg | 0.100 | | 95.7 | 70-130 | | | |
| Toluene | 0.108 | 0.0050 | " | 0.100 | | 108 | 70-130 | | | |
| Ethylbenzene | 0.102 | 0.0050 | " | 0.100 | | 102 | 70-130 | | | |
| m,p-Xylene | 0.214 | 0.010 | " | 0.200 | | 107 | 70-130 | | | |
| o-Xylene | 0.0944 | 0.0050 | " | 0.100 | | 94.4 | 70-130 | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0328 | | " | 0.0400 | | 82.0 | 23-173 | | | |
| Surrogate: Toluene-d8 | 0.0413 | | " | 0.0400 | | 103 | 20-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0409 | | " | 0.0400 | | 102 | 21-167 | | | |

Matrix Spike (2001060-MS1)

Source: 2001026-02

Prepared: 01/06/20 Analyzed: 01/07/20

| | | | | | | | | | | |
|----------------------------------|--------|--------|-------|--------|----|------|--------|--|--|--|
| Benzene | 0.0992 | 0.0020 | mg/kg | 0.100 | ND | 99.2 | 70-130 | | | |
| Toluene | 0.112 | 0.0050 | " | 0.100 | ND | 112 | 70-130 | | | |
| Ethylbenzene | 0.105 | 0.0050 | " | 0.100 | ND | 105 | 70-130 | | | |
| m,p-Xylene | 0.220 | 0.010 | " | 0.200 | ND | 110 | 70-130 | | | |
| o-Xylene | 0.0969 | 0.0050 | " | 0.100 | ND | 96.9 | 70-130 | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0359 | | " | 0.0400 | | 89.8 | 23-173 | | | |
| Surrogate: Toluene-d8 | 0.0410 | | " | 0.0400 | | 103 | 20-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0408 | | " | 0.0400 | | 102 | 21-167 | | | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
01/07/20 16:43

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 2001060 - EPA 5030 Soil MS

| Matrix Spike Dup (2001060-MSD1) | Source: 2001026-02 | | | Prepared: 01/06/20 Analyzed: 01/07/20 | | | | | | |
|----------------------------------|--------------------|--------|-------|---------------------------------------|----|------|--------|-------|----|--|
| Benzene | 0.0982 | 0.0020 | mg/kg | 0.100 | ND | 98.2 | 70-130 | 1.00 | 30 | |
| Toluene | 0.111 | 0.0050 | " | 0.100 | ND | 111 | 70-130 | 0.942 | 30 | |
| Ethylbenzene | 0.102 | 0.0050 | " | 0.100 | ND | 102 | 70-130 | 3.25 | 30 | |
| m,p-Xylene | 0.214 | 0.010 | " | 0.200 | ND | 107 | 70-130 | 2.81 | 30 | |
| o-Xylene | 0.0946 | 0.0050 | " | 0.100 | ND | 94.6 | 70-130 | 2.44 | 30 | |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0352 | | " | 0.0400 | | 88.1 | 23-173 | | | |
| Surrogate: Toluene-d8 | 0.0415 | | " | 0.0400 | | 104 | 20-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0406 | | " | 0.0400 | | 102 | 21-167 | | | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

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 2001061 - EPA 3550A

Blank (2001061-BLK1)

Prepared: 01/06/20 Analyzed: 01/07/20

C10-C28 (DRO) ND 50 mg/kg

LCS (2001061-BS1)

Prepared: 01/06/20 Analyzed: 01/07/20

C10-C28 (DRO) 525 50 mg/kg 500 105 70-130

Matrix Spike (2001061-MS1)

Source: 2001026-01

Prepared: 01/06/20 Analyzed: 01/07/20

C10-C28 (DRO) 552 50 mg/kg 500 284 53.6 70-130 QM-07

Matrix Spike Dup (2001061-MSD1)

Source: 2001026-01

Prepared: 01/06/20 Analyzed: 01/07/20

C10-C28 (DRO) 503 50 mg/kg 500 284 43.8 70-130 9.34 20 QM-07

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

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

Summit Scientific

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

Batch 2001059 - General Preparation

Blank (2001059-BLK1)

Prepared & Analyzed: 01/06/20

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

LCS (2001059-BS1)

Prepared & Analyzed: 01/06/20

| | | | | | | | | | | |
|-----------|-----|------|-----------|-----|--|-----|--------|--|--|--|
| Calcium | 548 | 10.0 | mg/kg wet | 500 | | 110 | 70-130 | | | |
| Magnesium | 591 | 5.00 | " | 500 | | 118 | 70-130 | | | |
| Sodium | 550 | 5.00 | " | 500 | | 110 | 70-130 | | | |

Duplicate (2001059-DUP1)

Source: 2001023-01

Prepared & Analyzed: 01/06/20

| | | | | | | | | | | |
|-----------|------|------|-----------|--|------|--|--|------|----|--|
| Calcium | 1200 | 11.9 | mg/kg dry | | 1240 | | | 2.77 | 20 | |
| Magnesium | 388 | 5.94 | " | | 392 | | | 1.02 | 20 | |
| Sodium | 751 | 5.94 | " | | 815 | | | 8.20 | 20 | |

Matrix Spike (2001059-MS1)

Source: 2001023-01

Prepared & Analyzed: 01/06/20

| | | | | | | | | | | |
|-----------|------|------|-----------|-----|------|------|--------|--|--|--|
| Calcium | 1730 | 11.9 | mg/kg dry | 594 | 1240 | 83.5 | 70-130 | | | |
| Magnesium | 938 | 5.94 | " | 594 | 392 | 91.9 | 70-130 | | | |
| Sodium | 1320 | 5.94 | " | 594 | 815 | 85.4 | 70-130 | | | |

Matrix Spike Dup (2001059-MSD1)

Source: 2001023-01

Prepared & Analyzed: 01/06/20

| | | | | | | | | | | |
|-----------|------|------|-----------|-----|------|------|--------|-------|----|--|
| Calcium | 1790 | 11.9 | mg/kg dry | 594 | 1240 | 93.1 | 70-130 | 3.23 | 25 | |
| Magnesium | 919 | 5.94 | " | 594 | 392 | 88.8 | 70-130 | 1.97 | 25 | |
| Sodium | 1340 | 5.94 | " | 594 | 815 | 87.6 | 70-130 | 0.984 | 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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

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

Batch 2001057 - General Preparation

LCS (2001057-BS1)

Prepared & Analyzed: 01/06/20

| | | | | | | | | | | |
|----|------|--|----------|------|--|-----|--------|--|--|--|
| pH | 9.20 | | pH Units | 9.18 | | 100 | 95-105 | | | |
|----|------|--|----------|------|--|-----|--------|--|--|--|

Duplicate (2001057-DUP1)

Source: 2001023-01

Prepared & Analyzed: 01/06/20

| | | | | | | | | | | |
|----|------|--|----------|--|--|------|--|------|----|--|
| pH | 8.61 | | pH Units | | | 8.49 | | 1.40 | 20 | |
|----|------|--|----------|--|--|------|--|------|----|--|

Batch 2001058 - General Preparation

Duplicate (2001058-DUP1)

Source: 2001023-01

Prepared: 01/06/20 Analyzed: 01/07/20

| | | | | | | | | | | |
|----------|------|--|---|--|--|------|--|-------|----|--|
| % Solids | 84.4 | | % | | | 84.2 | | 0.206 | 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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

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 2001056 - General Preparation

Blank (2001056-BLK1)

Prepared & Analyzed: 01/06/20

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (2001056-BS1)

Prepared & Analyzed: 01/06/20

Specific Conductance (EC) 0.677 0.0100 mmhos/cm 0.750 90.3 90-110

Duplicate (2001056-DUP1)

Source: 2001023-01

Prepared & Analyzed: 01/06/20

Specific Conductance (EC) 1.45 0.0100 mmhos/cm 1.96 29.7 20 QR-03

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/07/20 16:43

Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
- 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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 13, 2020

Brandon Bruns

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Furrow USX AB15-99HZ

Work Order #2001100

Enclosed are the results of analyses for samples received by Summit Scientific on 01/09/20 18:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|-----------|---------------|--------|----------------|----------------|
| SS22@1' | 2001100-01 | Soil | 01/09/20 14:00 | 01/09/20 18:00 |
| SS23@1' | 2001100-02 | Soil | 01/09/20 13:45 | 01/09/20 18:00 |
| SS24@1' | 2001100-03 | Soil | 01/09/20 13:40 | 01/09/20 18:00 |
| SS25@1' | 2001100-04 | Soil | 01/09/20 13:35 | 01/09/20 18:00 |
| SS26@1' | 2001100-05 | Soil | 01/09/20 14:35 | 01/09/20 18:00 |
| SS27@1' | 2001100-06 | Soil | 01/09/20 13:20 | 01/09/20 18:00 |
| SS28@1' | 2001100-07 | Soil | 01/09/20 14:50 | 01/09/20 18:00 |
| SS29@1' | 2001100-08 | Soil | 01/09/20 13:25 | 01/09/20 18:00 |
| SS30@1' | 2001100-09 | Soil | 01/09/20 13:30 | 01/09/20 18:00 |
| SS31@1' | 2001100-10 | Soil | 01/09/20 14:10 | 01/09/20 18:00 |
| SS32@1' | 2001100-11 | Soil | 01/09/20 14:40 | 01/09/20 18:00 |
| SS33@1' | 2001100-12 | Soil | 01/09/20 13:55 | 01/09/20 18:00 |
| SS34@1' | 2001100-13 | Soil | 01/09/20 13:50 | 01/09/20 18:00 |
| SS35@1' | 2001100-14 | Soil | 01/09/20 14:15 | 01/09/20 18:00 |
| SS36@1' | 2001100-15 | Soil | 01/09/20 14:20 | 01/09/20 18:00 |
| SS37@1' | 2001100-16 | Soil | 01/09/20 14:25 | 01/09/20 18:00 |
| SS38@1' | 2001100-17 | Soil | 01/09/20 14:30 | 01/09/20 18:00 |

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.

Summit Scientific

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310 ♦ 303-374-5933 (f)

Client: Noble / Tasman Geosciences

Project Manager: Brandon Bruns, Invoice: Tasman Geosciences

Address: 6855 W 119th Ave

E-Mail: bbruns@tasman-geo.com

City/State/Zip: Broomfield CO 80020

Phone: 303-487-1228

Project Name: Furrow USX AB 15-99HZ

Sampler Name: Tanner Cook

Project Number:

| ID | Sample Description | Date Sampled | Time Sampled | # of containers | Preservative | | | | Matrix | | | | Analysis Requested | | | | Special Instructions | | |
|----|--------------------|--------------|--------------|-----------------|--------------|------|------|-------|--------|------|----------------|-------|--------------------|---------|-------------|---|----------------------|--|--|
| | | | | | HCl | HNO3 | None | Other | Water | Soil | Air-Canister # | Other | GRTEXN | TPH-DRO | PH, EC, SAR | | | | |
| 1 | SS22@1' | 1/9/2020 | 14:00 | 1 | | | X | | | X | | | | X | X | X | | | |
| 2 | SS23@1' | 1/9/2020 | 13:45 | 1 | | | X | | | X | | | | X | X | X | | | |
| 3 | SS24@1' | 1/9/2020 | 13:40 | 1 | | | X | | | X | | | | X | X | X | | | |
| 4 | SS25@1' | 1/9/2020 | 13:35 | 1 | | | X | | | X | | | | X | X | X | | | |
| 5 | SS26@1' | 1/9/2020 | 14:35 | 1 | | | X | | | X | | | | X | X | X | | | |
| 6 | SS27@1' | 1/9/2020 | 13:20 | 1 | | | X | | | X | | | | X | X | X | | | |
| 7 | SS28@1' | 1/9/2020 | 14:50 | 1 | | | X | | | X | | | | X | X | X | | | |
| 8 | SS29@1' | 1/9/2020 | 13:25 | 1 | | | X | | | X | | | | X | X | X | | | |
| 9 | SS30@1' | 1/9/2020 | 13:30 | 1 | | | X | | | X | | | | X | X | X | | | |
| 10 | SS31@1' | 1/9/2020 | 14:10 | 1 | | | X | | | X | | | | X | X | X | | | |

| | | | | | |
|-------------------------------------|---------------------------------|---------------------------------|-----------------------------------|--|---------------|
| Relinquished by: <u>Tanner Cook</u> | Date/Time: <u>1/9/2020 1645</u> | Received by: <u>Tasman Box</u> | Date/Time: <u>1/9/2020 1645</u> | Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: <u>4.1</u> Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Notes: |
| Relinquished by: <u>Tasman Box</u> | Date/Time: <u>1/9/2020 1730</u> | Received by: <u>[Signature]</u> | Date/Time: <u>01/09/2020 1730</u> | | |
| Relinquished by: | Date/Time: | Received by: | Date/Time: | | |

Summit Scientific

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310 ♦ 303-374-5933 (f)

Client: Noble Tasman Geosciences Project Manager: Brandon Bruns, Invoice: Tasman Geosciences
 Address: 6855 W 119th Ave E-Mail: bbruns@tasman-geo.com
 City/State/Zip: Broomfield, CO, 80020
 Phone: 303-487-1228 Project Name: Furrow USX AB 15-99HZ
 Sampler Name: Tanner Cook Project Number: _____

| ID | Sample Description | Date Sampled | Time Sampled | # of containers | Preservative | | | | Matrix | | | | Analysis Requested | | | | Special Instructions |
|----|--------------------|--------------|--------------|-----------------|--------------|------|------|-------|--------|------|----------------|-------|--------------------|---------|-------------|--|----------------------|
| | | | | | HCl | HNO3 | None | Other | Water | Soil | Air-Canister # | Other | GC/MS | TPH-ORO | PH, EC, SAR | | |
| 1 | SS32@1' | 1/9/2020 | 14:40 | 1 | | | X | | | X | | | X | X | X | | |
| 2 | SS33@1' | 1/9/2020 | 13:55 | 1 | | | X | | | X | | | X | X | X | | |
| 3 | SS34@1' | 1/9/2020 | 13:50 | 1 | | | X | | | X | | | X | X | X | | |
| 4 | SS35@1' | 1/9/2020 | 14:15 | 1 | | | X | | | X | | | X | X | X | | |
| 5 | SS36@1' | 1/9/2020 | 14:20 | 1 | | | X | | | X | | | X | X | X | | |
| 6 | SS37@1' | 1/9/2020 | 14:25 | 1 | | | X | | | X | | | X | X | X | | |
| 7 | SS38@1' | 1/9/2020 | 14:30 | 1 | | | X | | | X | | | X | X | X | | |
| 8 | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |

| | | | |
|--|--|--|--------|
| Relinquished by: <u>Tanner Cook</u> Date/Time: <u>1/9/2020 1645</u> | Received by: <u>Tasman Box</u> Date/Time: <u>1/9/2020 1645</u> | Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours 24 hours <input type="checkbox"/> Standard 48 hours <input type="checkbox"/> | Notes: |
| Relinquished by: <u>Tasman Box</u> Date/Time: <u>1/9/2020 1730</u> | Received by: <u>[Signature]</u> Date/Time: <u>01/09/2020 1730</u> | Sample Integrity: Temperature Upon Receipt: <u>4.1</u> | |
| Relinquished by: _____ Date/Time: _____ | Received by: <u>[Signature]</u> Date/Time: _____ | Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No | |

Sample Receipt Checklist

S2 Work Order 2001100

Client: Noble / TASMAN GEO Client Project ID: Furrow USX AB 15-99 HZ

Shipped Via: H.D./P.D./FedEx/UPS/USPS/Other _____ Airbill #: _____

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

| | |
|-----------|------------|
| Temp (°C) | <u>4.1</u> |
|-----------|------------|

Thermometer ID: 61857155-K

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

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

KE
Custodian Printed Name or Initials

[Signature]
Signature of Custodian

01/09/2020
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
01/13/20 12:20

SS22@1'
2001100-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/20 14:00**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|--|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| Benzene | ND | 0.0020 | | mg/kg | 1 | 2001112 | 01/09/20 | 01/10/20 | 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: **01/09/20 14:00**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 90.2 % | | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 109 % | | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 106 % | | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/20 14:00**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|--|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| C10-C28 (DRO) | ND | 50 | | mg/kg | 1 | 2001113 | 01/09/20 | 01/09/20 | EPA 8015M | |

Date Sampled: **01/09/20 14:00**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | | |
| Surrogate: o-Terphenyl | | 71.8 % | | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/09/20 14:00**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|-------------|-----------|--|-----------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| Calcium | 1030 | 11.3 | | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/13/20 12:20

SS22@1'
2001100-01 (Soil)

Summit Scientific

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

| Analyte | Result | Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|--------|-------|-----------|----------|---------|----------|----------|-----------|-------|
| Magnesium | 328 | 5.64 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B | |
| Sodium | 43.8 | 5.64 | " | " | " | " | " | " | |

Calculated Analysis

Date Sampled: **01/09/20 14:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-------------------------|--------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.304 | 0.100 | units | 1 | 2001130 | 01/10/20 | 01/10/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/09/20 14:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------|--------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 88.6 | | % | 1 | 2001119 | 01/09/20 | 01/10/20 | Calculation | |
| pH | 8.20 | | pH Units | " | 2001118 | " | 01/09/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/09/20 14:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------------------|--------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.492 | 0.0100 | mmhos/cm | 1 | 2001117 | 01/09/20 | 01/09/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS23@1'
2001100-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/20 13:45**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|--|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| Benzene | ND | 0.0020 | | mg/kg | 1 | 2001112 | 01/09/20 | 01/10/20 | 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: **01/09/20 13:45**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 89.9 % | | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 108 % | | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 106 % | | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/20 13:45**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|--|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| C10-C28 (DRO) | ND | 50 | | mg/kg | 1 | 2001113 | 01/09/20 | 01/09/20 | EPA 8015M | |

Date Sampled: **01/09/20 13:45**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | | |
| Surrogate: o-Terphenyl | | 73.8 % | | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/09/20 13:45**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|------------|-----------|--|-----------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| Calcium | 301 | 11.1 | | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B | |
| Magnesium | 219 | 5.56 | | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS23@1'
2001100-02 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 84.4 | 5.56 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/09/20 13:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.903 | 0.100 | units | 1 | 2001130 | 01/10/20 | 01/10/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/09/20 13:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 89.9 | | % | 1 | 2001119 | 01/09/20 | 01/10/20 | Calculation | |
| pH | 8.13 | | pH Units | " | 2001118 | " | 01/09/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/09/20 13:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.420 | 0.0100 | mmhos/cm | 1 | 2001117 | 01/09/20 | 01/09/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS24@1'
2001100-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/20 13:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001112 | 01/09/20 | 01/10/20 | 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: **01/09/20 13:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 86.7 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 107 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 104 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/20 13:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001113 | 01/09/20 | 01/09/20 | EPA 8015M | |

Date Sampled: **01/09/20 13:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 76.6 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/09/20 13:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 944 | 11.0 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B | |
| Magnesium | 417 | 5.52 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS24@1'
2001100-03 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 51.6 | 5.52 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/09/20 13:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.352 | 0.100 | units | 1 | 2001130 | 01/10/20 | 01/10/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/09/20 13:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 90.6 | | % | 1 | 2001119 | 01/09/20 | 01/10/20 | Calculation | |
| pH | 8.22 | | pH Units | " | 2001118 | " | 01/09/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/09/20 13:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.357 | 0.0100 | mmhos/cm | 1 | 2001117 | 01/09/20 | 01/09/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS25@1'
2001100-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/20 13:35**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|--|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| Benzene | ND | 0.0020 | | mg/kg | 1 | 2001112 | 01/09/20 | 01/10/20 | 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: **01/09/20 13:35**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 88.0 % | | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 107 % | | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 105 % | | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/20 13:35**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|--|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| C10-C28 (DRO) | ND | 50 | | mg/kg | 1 | 2001113 | 01/09/20 | 01/09/20 | EPA 8015M | |

Date Sampled: **01/09/20 13:35**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | | |
| Surrogate: o-Terphenyl | | 77.3 % | | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/09/20 13:35**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|------------|-----------|--|-----------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| Calcium | 611 | 11.1 | | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B | |
| Magnesium | 311 | 5.53 | | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS25@1'
2001100-04 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 33.8 | 5.53 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/09/20 13:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.278 | 0.100 | units | 1 | 2001130 | 01/10/20 | 01/10/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/09/20 13:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 90.4 | | % | 1 | 2001119 | 01/09/20 | 01/10/20 | Calculation | |
| pH | 7.46 | | pH Units | " | 2001118 | " | 01/09/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/09/20 13:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|-------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 1.22 | 0.0100 | mmhos/cm | 1 | 2001117 | 01/09/20 | 01/09/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS26@1'
2001100-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/20 14:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001112 | 01/09/20 | 01/10/20 | 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: **01/09/20 14:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 115 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 110 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 108 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/20 14:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001113 | 01/09/20 | 01/09/20 | EPA 8015M | |

Date Sampled: **01/09/20 14:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 69.7 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/09/20 14:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 5870 | 12.1 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B | |
| Magnesium | 946 | 6.05 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS26@1'
2001100-05 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 249 | 6.05 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B |
|---------------|------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/09/20 14:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.795 | 0.100 | units | 1 | 2001130 | 01/10/20 | 01/10/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/09/20 14:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 82.7 | | % | 1 | 2001119 | 01/09/20 | 01/10/20 | Calculation | |
| pH | 7.94 | | pH Units | " | 2001118 | " | 01/09/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/09/20 14:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|-------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 2.00 | 0.0100 | mmhos/cm | 1 | 2001117 | 01/09/20 | 01/09/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS27@1'
2001100-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/20 13:20**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------------|-----------|--|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| Benzene | ND | 0.0020 | | mg/kg | 1 | 2001112 | 01/09/20 | 01/10/20 | EPA 8260B | |
| Toluene | ND | 0.0050 | | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.010 | | " | " | " | " | " | " | |
| Naphthalene | 0.014 | 0.010 | | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 50 | | " | " | " | " | " | " | |

Date Sampled: **01/09/20 13:20**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 110 % | | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 112 % | | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 101 % | | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/20 13:20**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|--|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| C10-C28 (DRO) | ND | 50 | | mg/kg | 1 | 2001113 | 01/09/20 | 01/09/20 | EPA 8015M | |

Date Sampled: **01/09/20 13:20**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | | |
| Surrogate: o-Terphenyl | | 81.9 % | | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/09/20 13:20**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|-------------|-----------|--|-----------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| Calcium | 5350 | 11.1 | | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B | |
| Magnesium | 375 | 5.54 | | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS27@1'
2001100-06 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 21.0 | 5.54 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/09/20 13:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-------------------------|--------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | ND | 0.100 | units | 1 | 2001130 | 01/10/20 | 01/10/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/09/20 13:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 90.3 | | % | 1 | 2001119 | 01/09/20 | 01/10/20 | Calculation | |
| pH | 8.18 | | pH Units | " | 2001118 | " | 01/09/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/09/20 13:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|-------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 1.83 | 0.0100 | mmhos/cm | 1 | 2001117 | 01/09/20 | 01/09/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS28@1'
2001100-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/20 14:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001112 | 01/09/20 | 01/10/20 | 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: **01/09/20 14:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 122 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 112 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 102 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/20 14:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001113 | 01/09/20 | 01/09/20 | EPA 8015M | |

Date Sampled: **01/09/20 14:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 86.3 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/09/20 14:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 2210 | 10.8 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B | |
| Magnesium | 263 | 5.39 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS28@1'
2001100-07 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 47.9 | 5.39 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/09/20 14:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.257 | 0.100 | units | 1 | 2001130 | 01/10/20 | 01/10/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/09/20 14:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 92.7 | | % | 1 | 2001119 | 01/09/20 | 01/10/20 | Calculation | |
| pH | 8.64 | | pH Units | " | 2001118 | " | 01/09/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/09/20 14:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|-------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 2.21 | 0.0100 | mmhos/cm | 1 | 2001117 | 01/09/20 | 01/09/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS29@1'
2001100-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/20 13:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001112 | 01/09/20 | 01/10/20 | 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: **01/09/20 13:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 112 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 106 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 103 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/20 13:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001113 | 01/09/20 | 01/09/20 | EPA 8015M | |

Date Sampled: **01/09/20 13:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 85.1 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/09/20 13:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|--------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 4880 | 11.0 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B | |
| Magnesium | 339 | 5.52 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/13/20 12:20

SS29@1'
2001100-08 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 30.2 | 5.52 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/09/20 13:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.113 | 0.100 | units | 1 | 2001130 | 01/10/20 | 01/10/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/09/20 13:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 90.6 | | % | 1 | 2001119 | 01/09/20 | 01/10/20 | Calculation | |
| pH | 8.55 | | pH Units | " | 2001118 | " | 01/09/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/09/20 13:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.670 | 0.0100 | mmhos/cm | 1 | 2001117 | 01/09/20 | 01/09/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS30@1'
2001100-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/20 13:30**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001112 | 01/09/20 | 01/10/20 | 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: **01/09/20 13:30**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | Units | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 112 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 110 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 106 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/20 13:30**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|------------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| C10-C28 (DRO) | 110 | 50 | mg/kg | 1 | 2001113 | 01/09/20 | 01/10/20 | EPA 8015M | |

Date Sampled: **01/09/20 13:30**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | Units | | | | | | |
| Surrogate: o-Terphenyl | | 91.3 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/09/20 13:30**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|-------------|-----------|-----------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| Calcium | 1680 | 10.5 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B | |
| Magnesium | 313 | 5.27 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS30@1'
2001100-09 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 59.7 | 5.27 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/09/20 13:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.351 | 0.100 | units | 1 | 2001130 | 01/10/20 | 01/10/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/09/20 13:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 94.8 | | % | 1 | 2001119 | 01/09/20 | 01/10/20 | Calculation | |
| pH | 8.48 | | pH Units | " | 2001118 | " | 01/09/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/09/20 13:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.623 | 0.0100 | mmhos/cm | 1 | 2001117 | 01/09/20 | 01/09/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS31@1'
2001100-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/20 14:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001112 | 01/09/20 | 01/10/20 | 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: **01/09/20 14:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 112 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 104 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 103 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/20 14:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001113 | 01/09/20 | 01/10/20 | EPA 8015M | |

Date Sampled: **01/09/20 14:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 90.8 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/09/20 14:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 1480 | 11.9 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B | |
| Magnesium | 694 | 5.95 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS31@1'
2001100-10 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 473 | 5.95 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B |
|---------------|------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/09/20 14:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|-------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 2.54 | 0.100 | units | 1 | 2001130 | 01/10/20 | 01/10/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/09/20 14:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 84.1 | | % | 1 | 2001119 | 01/09/20 | 01/10/20 | Calculation | |
| pH | 8.18 | | pH Units | " | 2001118 | " | 01/09/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/09/20 14:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|-------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 2.83 | 0.0100 | mmhos/cm | 1 | 2001117 | 01/09/20 | 01/09/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS32@1'
2001100-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/20 14:40**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|--|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| Benzene | ND | 0.0020 | | mg/kg | 1 | 2001112 | 01/09/20 | 01/10/20 | 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: **01/09/20 14:40**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 140 % | | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 110 % | | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 113 % | | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/20 14:40**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|--|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| C10-C28 (DRO) | ND | 50 | | mg/kg | 1 | 2001113 | 01/09/20 | 01/10/20 | EPA 8015M | |

Date Sampled: **01/09/20 14:40**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | | |
| Surrogate: o-Terphenyl | | 93.2 % | | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/09/20 14:40**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|--------|-----------|--|-----------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| Calcium | 4390 | 11.3 | | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B | |
| Magnesium | 436 | 5.64 | | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS32@1'
2001100-11 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 56.4 | 5.64 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/09/20 14:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.217 | 0.100 | units | 1 | 2001130 | 01/10/20 | 01/10/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/09/20 14:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 88.6 | | % | 1 | 2001119 | 01/09/20 | 01/10/20 | Calculation | |
| pH | 8.21 | | pH Units | " | 2001118 | " | 01/09/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/09/20 14:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|-------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 1.16 | 0.0100 | mmhos/cm | 1 | 2001117 | 01/09/20 | 01/09/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS33@1'
2001100-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/20 13:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001112 | 01/09/20 | 01/10/20 | 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: **01/09/20 13:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 113 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 111 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 105 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/20 13:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001113 | 01/09/20 | 01/10/20 | EPA 8015M | |

Date Sampled: **01/09/20 13:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 93.4 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/09/20 13:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 2130 | 11.1 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B | |
| Magnesium | 264 | 5.55 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS33@1'
2001100-12 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 55.0 | 5.55 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/09/20 13:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.299 | 0.100 | units | 1 | 2001130 | 01/10/20 | 01/10/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/09/20 13:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 90.1 | | % | 1 | 2001119 | 01/09/20 | 01/10/20 | Calculation | |
| pH | 8.32 | | pH Units | " | 2001118 | " | 01/09/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/09/20 13:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.580 | 0.0100 | mmhos/cm | 1 | 2001117 | 01/09/20 | 01/09/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS34@1'
2001100-13 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/20 13:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001112 | 01/09/20 | 01/10/20 | 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: **01/09/20 13:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 124 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 112 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 107 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/20 13:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001113 | 01/09/20 | 01/10/20 | EPA 8015M | |

Date Sampled: **01/09/20 13:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 96.7 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/09/20 13:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 4510 | 11.3 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B | |
| Magnesium | 494 | 5.65 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS34@1'
2001100-13 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 98.7 | 5.65 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/09/20 13:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.372 | 0.100 | units | 1 | 2001130 | 01/10/20 | 01/10/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/09/20 13:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 88.5 | | % | 1 | 2001119 | 01/09/20 | 01/10/20 | Calculation | |
| pH | 8.11 | | pH Units | " | 2001118 | " | 01/09/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/09/20 13:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|-------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 1.25 | 0.0100 | mmhos/cm | 1 | 2001117 | 01/09/20 | 01/09/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS35@1'
2001100-14 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/20 14:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001112 | 01/09/20 | 01/10/20 | 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: **01/09/20 14:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 120 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 113 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 105 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/20 14:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001113 | 01/09/20 | 01/10/20 | EPA 8015M | |

Date Sampled: **01/09/20 14:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 96.7 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/09/20 14:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 2900 | 10.8 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B | |
| Magnesium | 345 | 5.39 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS35@1'
2001100-14 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 36.7 | 5.39 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/09/20 14:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.172 | 0.100 | units | 1 | 2001130 | 01/10/20 | 01/10/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/09/20 14:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 92.8 | | % | 1 | 2001119 | 01/09/20 | 01/10/20 | Calculation | |
| pH | 8.65 | | pH Units | " | 2001118 | " | 01/09/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/09/20 14:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|-------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 1.31 | 0.0100 | mmhos/cm | 1 | 2001117 | 01/09/20 | 01/09/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS36@1'
2001100-15 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/20 14:20**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|--|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| Benzene | ND | 0.0020 | | mg/kg | 1 | 2001112 | 01/09/20 | 01/10/20 | 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: **01/09/20 14:20**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 124 % | | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 109 % | | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 106 % | | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/20 14:20**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|--|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| C10-C28 (DRO) | ND | 50 | | mg/kg | 1 | 2001113 | 01/09/20 | 01/10/20 | EPA 8015M | |

Date Sampled: **01/09/20 14:20**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | | |
| Surrogate: o-Terphenyl | | 97.0 % | | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/09/20 14:20**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|-------------|-----------|--|-----------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| Calcium | 2030 | 12.8 | | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B | |
| Magnesium | 465 | 6.41 | | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS36@1'
2001100-15 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 151 | 6.41 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/09/20 | EPA 6020B |
|---------------|------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/09/20 14:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.786 | 0.100 | units | 1 | 2001130 | 01/10/20 | 01/10/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/09/20 14:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 78.0 | | % | 1 | 2001119 | 01/09/20 | 01/10/20 | Calculation | |
| pH | 8.09 | | pH Units | " | 2001118 | " | 01/09/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/09/20 14:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|-------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 1.91 | 0.0100 | mmhos/cm | 1 | 2001117 | 01/09/20 | 01/09/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS37@1'
2001100-16 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/20 14:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001112 | 01/09/20 | 01/10/20 | 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: **01/09/20 14:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 112 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 106 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 103 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/20 14:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001113 | 01/09/20 | 01/10/20 | EPA 8015M | |

Date Sampled: **01/09/20 14:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 92.1 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/09/20 14:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 1870 | 11.1 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/10/20 | EPA 6020B | |
| Magnesium | 346 | 5.56 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS37@1'
2001100-16 (Soil)

Summit Scientific

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

| | | | | | | | | |
|--------|------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 63.1 | 5.56 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/10/20 | EPA 6020B |
|--------|------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/09/20 14:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-------------------------|--------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.352 | 0.100 | units | 1 | 2001130 | 01/10/20 | 01/10/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/09/20 14:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------|--------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 90.0 | | % | 1 | 2001119 | 01/09/20 | 01/10/20 | Calculation | |
| pH | 8.17 | | pH Units | " | 2001118 | " | 01/09/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/09/20 14:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------------------|--------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.937 | 0.0100 | mmhos/cm | 1 | 2001117 | 01/09/20 | 01/09/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS38@1'
2001100-17 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/20 14:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001112 | 01/09/20 | 01/10/20 | 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: **01/09/20 14:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 118 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 104 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 105 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/20 14:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001113 | 01/09/20 | 01/10/20 | EPA 8015M | |

Date Sampled: **01/09/20 14:30**

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

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

Date Sampled: **01/09/20 14:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 2110 | 11.1 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/10/20 | EPA 6020B | |
| Magnesium | 354 | 5.54 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

SS38@1'
2001100-17 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 42.0 | 5.54 | mg/kg dry | 1 | 2001116 | 01/09/20 | 01/10/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/09/20 14:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.223 | 0.100 | units | 1 | 2001130 | 01/10/20 | 01/10/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/09/20 14:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 90.2 | | % | 1 | 2001119 | 01/09/20 | 01/10/20 | Calculation | |
| pH | 8.12 | | pH Units | " | 2001118 | " | 01/09/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/09/20 14:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|-------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 1.51 | 0.0100 | mmhos/cm | 1 | 2001117 | 01/09/20 | 01/09/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
01/13/20 12:20

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 2001112 - EPA 5030 Soil MS

Blank (2001112-BLK1)

Prepared: 01/09/20 Analyzed: 01/10/20

| | | | | | | | | | | | |
|----------------------------------|--------|--------|-------|--------|--|------|--------|--|--|--|--|
| 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 | 0.0350 | | " | 0.0400 | | 87.4 | 23-173 | | | | |
| Surrogate: Toluene-d8 | 0.0430 | | " | 0.0400 | | 108 | 20-170 | | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0407 | | " | 0.0400 | | 102 | 21-167 | | | | |

LCS (2001112-BS1)

Prepared: 01/09/20 Analyzed: 01/10/20

| | | | | | | | | | | | |
|----------------------------------|--------|--------|-------|--------|--|------|--------|--|--|--|--|
| Benzene | 0.111 | 0.0020 | mg/kg | 0.100 | | 111 | 70-130 | | | | |
| Toluene | 0.127 | 0.0050 | " | 0.100 | | 127 | 70-130 | | | | |
| Ethylbenzene | 0.104 | 0.0050 | " | 0.100 | | 104 | 70-130 | | | | |
| m,p-Xylene | 0.216 | 0.010 | " | 0.200 | | 108 | 70-130 | | | | |
| o-Xylene | 0.0947 | 0.0050 | " | 0.100 | | 94.7 | 70-130 | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0351 | | " | 0.0400 | | 87.8 | 23-173 | | | | |
| Surrogate: Toluene-d8 | 0.0427 | | " | 0.0400 | | 107 | 20-170 | | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0413 | | " | 0.0400 | | 103 | 21-167 | | | | |

Matrix Spike (2001112-MS1)

Source: 2001098-01

Prepared: 01/09/20 Analyzed: 01/10/20

| | | | | | | | | | | | |
|----------------------------------|--------|--------|-------|--------|----|------|--------|--|--|--|-------|
| Benzene | 0.118 | 0.0020 | mg/kg | 0.100 | ND | 118 | 70-130 | | | | |
| Toluene | 0.131 | 0.0050 | " | 0.100 | ND | 131 | 70-130 | | | | QM-07 |
| Ethylbenzene | 0.108 | 0.0050 | " | 0.100 | ND | 108 | 70-130 | | | | |
| m,p-Xylene | 0.224 | 0.010 | " | 0.200 | ND | 112 | 70-130 | | | | |
| o-Xylene | 0.0977 | 0.0050 | " | 0.100 | ND | 97.7 | 70-130 | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0362 | | " | 0.0400 | | 90.4 | 23-173 | | | | |
| Surrogate: Toluene-d8 | 0.0438 | | " | 0.0400 | | 109 | 20-170 | | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0420 | | " | 0.0400 | | 105 | 21-167 | | | | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/13/20 12:20

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 | | |

Batch 2001112 - EPA 5030 Soil MS

Matrix Spike Dup (2001112-MSD1)

Source: 2001098-01

Prepared: 01/09/20 Analyzed: 01/10/20

| | | | | | | | | | |
|----------------------------------|--------|--------|-------|--------|----|------|--------|------|----|
| Benzene | 0.112 | 0.0020 | mg/kg | 0.100 | ND | 112 | 70-130 | 4.88 | 30 |
| Toluene | 0.127 | 0.0050 | " | 0.100 | ND | 127 | 70-130 | 2.95 | 30 |
| Ethylbenzene | 0.105 | 0.0050 | " | 0.100 | ND | 105 | 70-130 | 2.82 | 30 |
| m,p-Xylene | 0.217 | 0.010 | " | 0.200 | ND | 108 | 70-130 | 3.48 | 30 |
| o-Xylene | 0.0965 | 0.0050 | " | 0.100 | ND | 96.5 | 70-130 | 1.20 | 30 |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0361 | | " | 0.0400 | | 90.2 | 23-173 | | |
| Surrogate: Toluene-d8 | 0.0434 | | " | 0.0400 | | 109 | 20-170 | | |
| Surrogate: 4-Bromofluorobenzene | 0.0412 | | " | 0.0400 | | 103 | 21-167 | | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/13/20 12:20

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 2001113 - EPA 3550A

Blank (2001113-BLK1)

Prepared: 01/09/20 Analyzed: 01/10/20

C10-C28 (DRO) ND 50 mg/kg

LCS (2001113-BS1)

Prepared: 01/09/20 Analyzed: 01/10/20

C10-C28 (DRO) 524 50 mg/kg 500 105 70-130

Matrix Spike (2001113-MS1)

Source: 2001098-01

Prepared: 01/09/20 Analyzed: 01/10/20

C10-C28 (DRO) 504 50 mg/kg 500 15.5 97.8 70-130

Matrix Spike Dup (2001113-MSD1)

Source: 2001098-01

Prepared: 01/09/20 Analyzed: 01/10/20

C10-C28 (DRO) 504 50 mg/kg 500 15.5 97.8 70-130 0.0397 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/13/20 12:20

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

Summit Scientific

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

Batch 2001116 - General Preparation

Blank (2001116-BLK1)

Prepared & Analyzed: 01/09/20

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

LCS (2001116-BS1)

Prepared & Analyzed: 01/09/20

| | | | | | | | | | | |
|-----------|-----|------|-----------|-----|--|-----|--------|--|--|--|
| Calcium | 627 | 10.0 | mg/kg wet | 500 | | 125 | 70-130 | | | |
| Magnesium | 591 | 5.00 | " | 500 | | 118 | 70-130 | | | |
| Sodium | 549 | 5.00 | " | 500 | | 110 | 70-130 | | | |

Duplicate (2001116-DUP1)

Source: 2001100-01

Prepared & Analyzed: 01/09/20

| | | | | | | | | | | |
|-----------|------|------|-----------|--|------|--|--|-------|----|--|
| Calcium | 1020 | 11.3 | mg/kg dry | | 1030 | | | 0.419 | 20 | |
| Magnesium | 329 | 5.64 | " | | 328 | | | 0.132 | 20 | |
| Sodium | 48.8 | 5.64 | " | | 43.8 | | | 10.6 | 20 | |

Matrix Spike (2001116-MS1)

Source: 2001100-01

Prepared & Analyzed: 01/09/20

| | | | | | | | | | | |
|-----------|------|------|-----------|-----|------|------|--------|--|--|--|
| Calcium | 1460 | 11.3 | mg/kg dry | 564 | 1030 | 77.4 | 70-130 | | | |
| Magnesium | 959 | 5.64 | " | 564 | 328 | 112 | 70-130 | | | |
| Sodium | 661 | 5.64 | " | 564 | 43.8 | 109 | 70-130 | | | |

Matrix Spike Dup (2001116-MSD1)

Source: 2001100-01

Prepared & Analyzed: 01/09/20

| | | | | | | | | | | |
|-----------|------|------|-----------|-----|------|------|--------|-------|----|--|
| Calcium | 1470 | 11.3 | mg/kg dry | 564 | 1030 | 78.5 | 70-130 | 0.420 | 25 | |
| Magnesium | 939 | 5.64 | " | 564 | 328 | 108 | 70-130 | 2.12 | 25 | |
| Sodium | 668 | 5.64 | " | 564 | 43.8 | 111 | 70-130 | 1.03 | 25 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

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

Batch 2001118 - General Preparation

LCS (2001118-BS1)

Prepared & Analyzed: 01/09/20

pH 9.20 pH Units 9.18 100 95-105

Duplicate (2001118-DUP1)

Source: 2001100-01

Prepared & Analyzed: 01/09/20

pH 8.47 pH Units 8.20 3.24 20

Batch 2001119 - General Preparation

Duplicate (2001119-DUP1)

Source: 2001100-01

Prepared: 01/09/20 Analyzed: 01/10/20

% Solids 88.4 % 88.6 0.226 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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/13/20 12:20

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 2001117 - General Preparation

Blank (2001117-BLK1)

Prepared & Analyzed: 01/09/20

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (2001117-BS1)

Prepared & Analyzed: 01/09/20

Specific Conductance (EC) 0.784 0.0100 mmhos/cm 0.750 105 90-110

Duplicate (2001117-DUP1)

Source: 2001100-01

Prepared & Analyzed: 01/09/20

Specific Conductance (EC) 0.342 0.0100 mmhos/cm 0.492 36.1 20 QR-04

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 12:20

Notes and Definitions

- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- 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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 13, 2020

Brandon Bruns

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Furrow USX AB15-99HZ

Work Order #2001118

Enclosed are the results of analyses for samples received by Summit Scientific on 01/10/20 17:42. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury

President



Tasman Geosciences
 6855 W. 119th Ave.
 Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
 Project Manager: Brandon Bruns

Reported:
 01/13/20 09:43

ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|-----------|---------------|--------|----------------|----------------|
| SS39@1' | 2001118-01 | Soil | 01/10/20 12:15 | 01/10/20 17:42 |
| SS40@1' | 2001118-02 | Soil | 01/10/20 12:20 | 01/10/20 17:42 |
| SS41@1' | 2001118-03 | Soil | 01/10/20 12:25 | 01/10/20 17:42 |
| SS42@1' | 2001118-04 | Soil | 01/10/20 12:30 | 01/10/20 17:42 |
| SS43@6" | 2001118-05 | Soil | 01/10/20 12:35 | 01/10/20 17:42 |
| SS44@6" | 2001118-06 | Soil | 01/10/20 12:40 | 01/10/20 17:42 |
| SS45@6" | 2001118-07 | Soil | 01/10/20 12:45 | 01/10/20 17:42 |
| SS46@1' | 2001118-08 | Soil | 01/10/20 12:50 | 01/10/20 17:42 |
| SS47@1' | 2001118-09 | Soil | 01/10/20 12:55 | 01/10/20 17:42 |
| SS48@1' | 2001118-10 | Soil | 01/10/20 13:00 | 01/10/20 17:42 |
| SS49@1' | 2001118-11 | Soil | 01/10/20 13:05 | 01/10/20 17:42 |
| SS50@6" | 2001118-12 | Soil | 01/10/20 13:10 | 01/10/20 17:42 |
| SS51@6" | 2001118-13 | Soil | 01/10/20 13:15 | 01/10/20 17:42 |
| SS52@6" | 2001118-14 | Soil | 01/10/20 13:20 | 01/10/20 17:42 |
| SS53@6" | 2001118-15 | Soil | 01/10/20 13:25 | 01/10/20 17:42 |
| SS54@6" | 2001118-16 | Soil | 01/10/20 13:30 | 01/10/20 17:42 |
| SS55@6" | 2001118-17 | Soil | 01/10/20 13:35 | 01/10/20 17:42 |
| SS56@6" | 2001118-18 | Soil | 01/10/20 13:40 | 01/10/20 17:42 |
| SS57@6" | 2001118-19 | Soil | 01/10/20 13:45 | 01/10/20 17:42 |
| SS58@6" | 2001118-20 | Soil | 01/10/20 13:50 | 01/10/20 17:42 |
| SS59@6" | 2001118-21 | Soil | 01/10/20 13:55 | 01/10/20 17:42 |
| SS60@6" | 2001118-22 | Soil | 01/10/20 14:00 | 01/10/20 17:42 |
| SS61@6" | 2001118-23 | Soil | 01/10/20 14:05 | 01/10/20 17:42 |
| SS62@6" | 2001118-24 | Soil | 01/10/20 14:10 | 01/10/20 17:42 |
| SS63@6" | 2001118-25 | Soil | 01/10/20 14:15 | 01/10/20 17:42 |
| SS64@6" | 2001118-26 | Soil | 01/10/20 14:20 | 01/10/20 17:42 |
| SS65@6" | 2001118-27 | Soil | 01/10/20 14:25 | 01/10/20 17:42 |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

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.

200118.1

Summit Scientific

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Client: Noble / Tasman Project Manager: Brandon Bruns, Invoice: Tasman
 Address: 6855 W 119th Ave E-Mail: Bbruns@tasman-geo.com
 City/State/Zip: Broomfield / CO / 80020
 Phone: 303-487-1228 Project Name: Furrow USX AB15-99HZ
 Sampler Name: Tanner Cook Project Number: _____

| ID | Sample Description | Date Sampled | Time Sampled | # of containers | Preservative | | | | Matrix | | | Analysis Requested | | | | Special Instructions | | | |
|-------------------------------------|--------------------|----------------------------|-------------------------|---------------------------------|--------------------------------|----------------------------|-------------------------|-------------------|--------------------------|------------------------------|--|---|---|--------------|-----------------------------------|----------------------|----------------------------------|--|--|
| | | | | | HCl | HNO3 | None | Other | Water | Soil | Air-Canister # | Other | 8260 BTEX | 8260B GBTEXN | 8015 DRO | | pH, EC, SAR | | |
| 1 | SS39@1' | 1/10/20 | 1215 | 1 | | | X | | | X | | | X | X | X | | | | |
| 2 | SS40@1' | ↓ | 1220 | ↓ | | | | | | | | | | | | | | | |
| 3 | SS41@1' | | 1225 | | | | | | | | | | | | | | | | |
| 4 | SS42@1' | | 1230 | | | | | | | | | | | | | | | | |
| 5 | SS43@6" | | 1235 | | | | | | | | | | | | | | | | |
| 6 | SS44@6" | | 1240 | | | | | | | | | | | | | | | | |
| 7 | SS45@6" | | 1245 | | | | | | | | | | | | | | | | |
| 8 | SS46@1' | | 1250 | | | | | | | | | | | | | | | | |
| 9 | SS47@1' | | 1255 | | | | | | | | | | | | | | | | |
| 10 | SS48@1' | | 1300 | | | | | | | | | | | | | | | | |
| Relinquished by: <i>Tanner Cook</i> | | | Date/Time: 1/10/20 1730 | | Received by: Tasman's Lock Box | | Date/Time: 1/10/20 1730 | | Turn Around Time (Check) | | Same Day <input checked="" type="checkbox"/> 72 hours <input type="checkbox"/> | | 24 hours <input type="checkbox"/> Standard <input type="checkbox"/> | | 48 hours <input type="checkbox"/> | | Notes: Results by Monday Morning | | |
| Relinquished by: Tasman's Lock Box | | Date/Time: 01/10/2020 1730 | | Received by: <i>[Signature]</i> | | Date/Time: 01/10/2020 1730 | | Sample Integrity: | | Temperature Upon Receipt: 28 | | Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | |
| Relinquished by: | | Date/Time: | | Received by: | | Date/Time: | | | | | | | | | | | | | |

200118.2

Summit Scientific

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Client: Noble / Tasman Project Manager: Brandon Bruns, Invoice: Tasman
 Address: 6855 W 119th Ave E-Mail: Bbruns@tasman-geo.com
 City/State/Zip: Broomfield / CO / 80020
 Phone: 303-487-1228 Project Name: Furrow USX AB15-99HZ
 Sampler Name: Tanner Cook Project Number: _____

| ID | Sample Description | Date Sampled | Time Sampled | # of containers | Preservative | | | | Matrix | | | | Analysis Requested | | | | Special Instructions |
|----|--------------------|--------------|--------------|-----------------|--------------|------|------|-------|--------|------|----------------|-------|--------------------|--------------|----------|-------------|----------------------|
| | | | | | HCl | HNO3 | None | Other | Water | Soil | Air-Canister # | Other | 8260 BTEX | 8260B GBTEXN | 8015 DRO | pH, EC, SAR | |
| 1 | SS49 @ 1' | 1/10/20 | 1305 | 1 | | | X | | | X | | | | X | X | X | |
| 2 | SS50 @ 6" | | 1310 | | | | | | | | | | | | | | |
| 3 | SS51 @ 6" | | 1315 | | | | | | | | | | | | | | |
| 4 | SS52 @ 6" | | 1320 | | | | | | | | | | | | | | |
| 5 | SS53 @ 6" | | 1325 | | | | | | | | | | | | | | |
| 6 | SS54 @ 6" | | 1330 | | | | | | | | | | | | | | |
| 7 | SS55 @ 6" | | 1335 | | | | | | | | | | | | | | |
| 8 | SS56 @ 6" | | 1340 | | | | | | | | | | | | | | |
| 9 | SS57 @ 6" | | 1345 | | | | | | | | | | | | | | |
| 10 | SS58 @ 6" | | 1350 | | | | | | | | | | | | | | |

| | | | |
|--|---|---|---|
| Relinquished by: <i>Tanner Cook</i> Date/Time: 1/10/20 1730 | Received by: Tasman's Lock Box Date/Time: 1/10/20 1730 | Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours — 24 hours — Standard — 48 hours — Sample Integrity: Temperature Upon Receipt: <u>2.5</u> Samples Intact: <input checked="" type="checkbox"/> Yes No | Notes: Results by Monday morning |
| Relinquished by: Tasman's Lock Box Date/Time: 01/16/2020 1730 | Received by: <i>[Signature]</i> Date/Time: 01/16/2020 1730 | | |
| Relinquished by: | Received by: | | |

200118.3

Summit Scientific

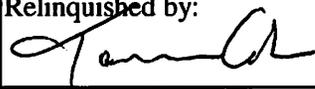
S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Page 3 of 3

Client: Noble / Tasman Project Manager: Brandon Bruns, Invoice: Tasman
 Address: 6855 W 119th Ave E-Mail: Bbruns@tasman-geo.com
 City/State/Zip: Broomfield / CO/ 80020
 Phone: 303-487-1228 Project Name: Furrow USX AB15-99HZ
 Sampler Name: Tanner Cook Project Number: _____

| ID | Sample Description | Date Sampled | Time Sampled | # of containers | Preservative | | | | Matrix | | | Analysis Requested | | | | Special Instructions |
|----|--------------------|--------------|--------------|-----------------|--------------|------|------|-------|--------|------|----------------|--------------------|-----------|--------------|----------|----------------------|
| | | | | | HCl | HNO3 | None | Other | Water | Soil | Air-Canister # | Other | 8260 BTEX | 8260B GBTEXN | 8015 DRO | |
| 1 | SS59 @ 6" | 1/10/20 | 1355 | 1 | | | X | | | X | | | X | X | X | |
| 2 | SS60 @ 6" | | 1400 | | | | | | | | | | | | | |
| 3 | SS61 @ 6" | | 1405 | | | | | | | | | | | | | |
| 4 | SS62 @ 6" | | 1410 | | | | | | | | | | | | | |
| 5 | SS63 @ 6" | | 1415 | | | | | | | | | | | | | |
| 6 | SS64 @ 6" | | 1420 | | | | | | | | | | | | | |
| 7 | SS65 @ 6" | | 1425 | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | |

| | | | | | |
|---|-------------------------------|--|-------------------------------|--|--|
| Relinquished by:  | Date/Time: 1/10/20 1730 | Received by: Tasman's Lock Box | Date/Time: 1/10/20 1730 | Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours — 24 hours — Standard — 48 hours — Sample Integrity: Temperature Upon Receipt: <u>25</u> Samples Intact: <input checked="" type="checkbox"/> Yes No | Notes: Results by Monday morning |
| Relinquished by: Tasman's Lock Box | Date/Time: 01/10/2020 1730 | Received by:  | Date/Time: 01/10/2020 1730 | | |
| Relinquished by: | Date/Time: | Received by: | Date/Time: | | |

Sample Receipt Checklist

S2 Work Order 200118

Client: NOBLE / TASMAN Client Project ID: FURROW USX AB15-99HZ

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other _____ Airbill #: _____

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

| | |
|-----------|-----|
| Temp (°C) | 2.5 |
|-----------|-----|

Thermometer ID: 61857155-K

| | Yes | No | N/A | Comments (if any) |
|---|-----|----|-----|-------------------|
| If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun. | ✓ | | | |
| Were all samples received intact ⁽¹⁾ ? | ✓ | | | |
| Was adequate sample volume provided ⁽¹⁾ ? | ✓ | | | |
| If custody seals are present, are they intact ⁽¹⁾ ? | | | ✓ | |
| 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 ⁽¹⁾ ? | ✓ | | | |
| Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ? | ✓ | | | |
| Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ? | ✓ | | | |
| Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ? | ✓ | | | |
| For volatiles in water – is there headspace present? If yes, contact client and note in narrative. | | | ✓ | |
| Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? 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 ⁽¹⁾ ? Record the pH in Comments. | | | ✓ | |
| If dissolved metals are requested, were samples field filtered? | | | ✓ | |

Additional Comments (if any):

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

RZ

 Custodian Printed Name or Initials

RZ

 Signature of Custodian

 Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS39@1'
2001118-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 12:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001153 | 01/10/20 | 01/10/20 | 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: **01/10/20 12:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 115 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 109 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 106 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 12:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001155 | 01/10/20 | 01/10/20 | EPA 8015M | |

Date Sampled: **01/10/20 12:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 92.7 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 12:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 552 | 10.9 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/10/20 | EPA 6020B | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/13/20 09:43

SS39@1'
2001118-01 (Soil)

Summit Scientific

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

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|--------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Magnesium | 218 | 5.47 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/10/20 | EPA 6020B | |
| Sodium | 16.7 | 5.47 | " | " | " | " | " | " | |

Calculated Analysis

Date Sampled: **01/10/20 12:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-------------------------|--------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.152 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 12:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------|--------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 91.4 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 8.02 | | pH Units | " | 2001150 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 12:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------------------|--------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.291 | 0.0100 | mmhos/cm | 1 | 2001148 | 01/10/20 | 01/10/20 | EPA 120.1 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS40@1'
2001118-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 12:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001153 | 01/10/20 | 01/10/20 | 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: **01/10/20 12:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 119 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 111 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 106 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 12:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001155 | 01/10/20 | 01/10/20 | EPA 8015M | |

Date Sampled: **01/10/20 12:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 91.9 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 12:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|--------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 578 | 10.9 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/10/20 | EPA 6020B | |
| Magnesium | 236 | 5.46 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS40@1'
2001118-02 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 30.5 | 5.46 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/10/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 12:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.270 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 12:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 91.5 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 7.80 | | pH Units | " | 2001150 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 12:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.265 | 0.0100 | mmhos/cm | 1 | 2001148 | 01/10/20 | 01/10/20 | EPA 120.1 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS41@1'
2001118-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 12:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001153 | 01/10/20 | 01/10/20 | 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: **01/10/20 12:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 105 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 109 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 103 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 12:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001155 | 01/10/20 | 01/10/20 | EPA 8015M | |

Date Sampled: **01/10/20 12:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 94.4 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 12:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 606 | 11.1 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B | |
| Magnesium | 219 | 5.53 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS41@1'
2001118-03 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 7.18 | 5.53 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 12:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-------------------------|--------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | ND | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 12:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 90.4 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 7.66 | | pH Units | " | 2001150 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 12:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.441 | 0.0100 | mmhos/cm | 1 | 2001148 | 01/10/20 | 01/10/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS42@1'
2001118-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 12:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001153 | 01/10/20 | 01/10/20 | 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: **01/10/20 12:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 113 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 110 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 107 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 12:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001155 | 01/10/20 | 01/10/20 | EPA 8015M | |

Date Sampled: **01/10/20 12:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 93.5 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 12:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 344 | 10.7 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B | |
| Magnesium | 152 | 5.35 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS42@1'
2001118-04 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 18.7 | 5.35 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 12:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.211 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 12:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 93.5 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 8.13 | | pH Units | " | 2001150 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 12:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.675 | 0.0100 | mmhos/cm | 1 | 2001148 | 01/10/20 | 01/10/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS43@6"
2001118-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 12:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001153 | 01/10/20 | 01/10/20 | 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: **01/10/20 12:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 116 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 110 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 109 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 12:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001155 | 01/10/20 | 01/10/20 | EPA 8015M | |

Date Sampled: **01/10/20 12:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 95.0 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 12:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 420 | 11.2 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B | |
| Magnesium | 181 | 5.58 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS43@6"
2001118-05 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 18.5 | 5.58 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 12:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.190 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 12:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 89.6 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 7.59 | | pH Units | " | 2001150 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 12:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.380 | 0.0100 | mmhos/cm | 1 | 2001148 | 01/10/20 | 01/10/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS44@6"
2001118-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 12:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001153 | 01/10/20 | 01/10/20 | 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: **01/10/20 12:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 121 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 110 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 108 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 12:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001155 | 01/10/20 | 01/10/20 | EPA 8015M | |

Date Sampled: **01/10/20 12:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 94.3 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 12:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|--------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 582 | 10.9 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B | |
| Magnesium | 221 | 5.43 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS44@6"
2001118-06 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 15.3 | 5.43 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 12:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.137 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 12:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 92.0 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 7.61 | | pH Units | " | 2001150 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 12:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.126 | 0.0100 | mmhos/cm | 1 | 2001148 | 01/10/20 | 01/10/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS45@6"
2001118-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 12:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001153 | 01/10/20 | 01/10/20 | 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: **01/10/20 12:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 128 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 108 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 106 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 12:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001155 | 01/10/20 | 01/10/20 | EPA 8015M | |

Date Sampled: **01/10/20 12:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 94.0 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 12:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 550 | 11.0 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B | |
| Magnesium | 227 | 5.52 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/13/20 09:43

SS45@6"
2001118-07 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 40.0 | 5.52 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 12:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.362 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 12:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 90.5 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 7.87 | | pH Units | " | 2001150 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 12:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.120 | 0.0100 | mmhos/cm | 1 | 2001148 | 01/10/20 | 01/10/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS46@1'
2001118-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 12:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001153 | 01/10/20 | 01/10/20 | EPA 8260B | |
| Toluene | ND | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.010 | " | " | " | " | " | " | |
| Naphthalene | 0.020 | 0.010 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **01/10/20 12:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 109 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 114 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 103 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 12:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|-----------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | 92 | 50 | mg/kg | 1 | 2001155 | 01/10/20 | 01/11/20 | EPA 8015M | |

Date Sampled: **01/10/20 12:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 93.5 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 12:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 1760 | 11.0 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B | |
| Magnesium | 468 | 5.51 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/13/20 09:43

SS46@1'
2001118-08 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 362 | 5.51 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B |
|---------------|------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 12:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|-------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 1.98 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 12:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 90.7 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 8.03 | | pH Units | " | 2001150 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 12:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|-------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 2.95 | 0.0100 | mmhos/cm | 1 | 2001148 | 01/10/20 | 01/10/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS47@1'
2001118-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 12:55**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------------|-----------|--|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| Benzene | ND | 0.0020 | | mg/kg | 1 | 2001153 | 01/10/20 | 01/10/20 | EPA 8260B | |
| Toluene | ND | 0.0050 | | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | | " | " | " | " | " | " | |
| Xylenes (total) | 0.020 | 0.010 | | " | " | " | " | " | " | |
| Naphthalene | 0.014 | 0.010 | | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 50 | | " | " | " | " | " | " | |

Date Sampled: **01/10/20 12:55**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 119 % | | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 113 % | | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 107 % | | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 12:55**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|-----------|-----------|--|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| C10-C28 (DRO) | 66 | 50 | | mg/kg | 1 | 2001155 | 01/10/20 | 01/11/20 | EPA 8015M | |

Date Sampled: **01/10/20 12:55**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | | |
| Surrogate: o-Terphenyl | | 95.5 % | | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 12:55**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|-------------|-----------|--|-----------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| Calcium | 2270 | 11.2 | | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B | |
| Magnesium | 303 | 5.59 | | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS47@1'
2001118-09 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 22.8 | 5.59 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 12:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.119 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 12:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 89.4 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 8.26 | | pH Units | " | 2001150 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 12:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.868 | 0.0100 | mmhos/cm | 1 | 2001148 | 01/10/20 | 01/10/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS48@1'
2001118-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 13:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001153 | 01/10/20 | 01/11/20 | EPA 8260B | |
| Toluene | ND | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.010 | " | " | " | " | " | " | |
| Naphthalene | 0.013 | 0.010 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **01/10/20 13:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 103 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 112 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 102 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 13:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | 230 | 50 | mg/kg | 1 | 2001155 | 01/10/20 | 01/11/20 | EPA 8015M | |

Date Sampled: **01/10/20 13:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 102 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 13:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 938 | 10.8 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B | |
| Magnesium | 194 | 5.38 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/13/20 09:43

SS48@1'
2001118-10 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 24.6 | 5.38 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 13:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.191 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 13:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 93.0 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 8.10 | | pH Units | " | 2001150 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 13:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.734 | 0.0100 | mmhos/cm | 1 | 2001148 | 01/10/20 | 01/10/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS49@1'
2001118-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 13:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001153 | 01/10/20 | 01/11/20 | 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: **01/10/20 13:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 126 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 111 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 107 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 13:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001155 | 01/10/20 | 01/11/20 | EPA 8015M | |

Date Sampled: **01/10/20 13:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 94.5 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 13:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 1790 | 10.6 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B | |
| Magnesium | 154 | 5.29 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS49@1'
2001118-11 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 20.0 | 5.29 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 13:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.122 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 13:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 94.5 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 8.44 | | pH Units | " | 2001150 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 13:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.421 | 0.0100 | mmhos/cm | 1 | 2001148 | 01/10/20 | 01/10/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS50@6"
2001118-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 13:10**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001153 | 01/10/20 | 01/11/20 | 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: **01/10/20 13:10**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | Units | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 103 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 101 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 105 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 13:10**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001155 | 01/10/20 | 01/11/20 | EPA 8015M | |

Date Sampled: **01/10/20 13:10**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | Units | | | | | | |
| Surrogate: o-Terphenyl | | 93.4 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 13:10**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|------------|-----------|-----------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| Calcium | 851 | 10.9 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B | |
| Magnesium | 319 | 5.45 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS50@6"
2001118-12 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 18.0 | 5.45 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 13:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.134 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 13:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 91.7 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 8.00 | | pH Units | " | 2001150 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 13:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.495 | 0.0100 | mmhos/cm | 1 | 2001148 | 01/10/20 | 01/10/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/13/20 09:43

SS51@6"
2001118-13 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 13:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001153 | 01/10/20 | 01/11/20 | 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: **01/10/20 13:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 123 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 112 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 110 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 13:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001155 | 01/10/20 | 01/11/20 | EPA 8015M | |

Date Sampled: **01/10/20 13:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 94.0 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 13:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 679 | 10.9 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B | |
| Magnesium | 206 | 5.46 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/13/20 09:43

SS51@6"
2001118-13 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 23.1 | 5.46 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 13:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.199 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 13:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 91.5 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 7.96 | | pH Units | " | 2001150 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 13:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|-------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 1.56 | 0.0100 | mmhos/cm | 1 | 2001148 | 01/10/20 | 01/10/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS52@6"
2001118-14 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 13:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001153 | 01/10/20 | 01/11/20 | EPA 8260B | |
| Toluene | ND | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.010 | " | " | " | " | " | " | |
| Naphthalene | 0.011 | 0.010 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **01/10/20 13:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 115 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 111 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 104 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 13:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001155 | 01/10/20 | 01/11/20 | EPA 8015M | |

Date Sampled: **01/10/20 13:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 91.1 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 13:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 529 | 10.3 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B | |
| Magnesium | 149 | 5.15 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS52@6"
2001118-14 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 184 | 5.15 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B |
|---------------|------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 13:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|-------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 1.82 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 13:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 97.0 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 8.83 | | pH Units | " | 2001150 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 13:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.298 | 0.0100 | mmhos/cm | 1 | 2001148 | 01/10/20 | 01/10/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS53@6"
2001118-15 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 13:25**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001153 | 01/10/20 | 01/11/20 | 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: **01/10/20 13:25**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | Units | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 108 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 109 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 103 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 13:25**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001155 | 01/10/20 | 01/11/20 | EPA 8015M | |

Date Sampled: **01/10/20 13:25**

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

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

Date Sampled: **01/10/20 13:25**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|-------------|-----------|-----------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| Calcium | 1200 | 10.9 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B | |
| Magnesium | 222 | 5.43 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS53@6"
2001118-15 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 18.7 | 5.43 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 13:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.130 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 13:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 92.0 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 8.65 | | pH Units | " | 2001150 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 13:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.259 | 0.0100 | mmhos/cm | 1 | 2001148 | 01/10/20 | 01/10/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS54@6"
2001118-16 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 13:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001153 | 01/10/20 | 01/11/20 | 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: **01/10/20 13:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 105 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 107 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 106 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 13:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001155 | 01/10/20 | 01/11/20 | EPA 8015M | |

Date Sampled: **01/10/20 13:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 102 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 13:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 398 | 10.4 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B | |
| Magnesium | 131 | 5.21 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS54@6"
2001118-16 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 5.58 | 5.21 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 13:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-------------------------|--------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | ND | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 13:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 95.9 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 8.22 | | pH Units | " | 2001150 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 13:30**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.608 | 0.0100 | mmhos/cm | 1 | 2001148 | 01/10/20 | 01/10/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS55@6"
2001118-17 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 13:35**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001153 | 01/10/20 | 01/11/20 | 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: **01/10/20 13:35**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | Units | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 118 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 105 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 104 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 13:35**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001155 | 01/10/20 | 01/11/20 | EPA 8015M | |

Date Sampled: **01/10/20 13:35**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | Units | | | | | | |
| Surrogate: o-Terphenyl | | 99.0 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 13:35**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|-------------|-----------|-----------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| Calcium | 2180 | 10.9 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B | |
| Magnesium | 173 | 5.43 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/13/20 09:43

SS55@6"
2001118-17 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 35.7 | 5.43 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 13:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.198 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 13:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 92.1 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 8.45 | | pH Units | " | 2001150 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 13:35**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.388 | 0.0100 | mmhos/cm | 1 | 2001148 | 01/10/20 | 01/10/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS56@6"
2001118-18 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 13:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001153 | 01/10/20 | 01/11/20 | 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: **01/10/20 13:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 109 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 104 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 103 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 13:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|-----------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | 63 | 50 | mg/kg | 1 | 2001155 | 01/10/20 | 01/11/20 | EPA 8015M | |

Date Sampled: **01/10/20 13:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 94.3 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 13:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 560 | 10.4 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B | |
| Magnesium | 132 | 5.20 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/13/20 09:43

SS56@6"
2001118-18 (Soil)

Summit Scientific

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

| | | | | | | | | |
|--------|------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 46.6 | 5.20 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B |
|--------|------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 13:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-------------------------|--------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.460 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 13:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------|--------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 96.2 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 7.90 | | pH Units | " | 2001150 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 13:40**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------------------|--------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.907 | 0.0100 | mmhos/cm | 1 | 2001148 | 01/10/20 | 01/10/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS57@6"
2001118-19 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 13:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001153 | 01/10/20 | 01/11/20 | 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: **01/10/20 13:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 111 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 103 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 101 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 13:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001155 | 01/10/20 | 01/11/20 | EPA 8015M | |

Date Sampled: **01/10/20 13:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 96.2 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 13:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 1600 | 10.7 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B | |
| Magnesium | 194 | 5.35 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS57@6"
2001118-19 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 65.9 | 5.35 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 13:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.414 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 13:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 93.4 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 8.00 | | pH Units | " | 2001150 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 13:45**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.882 | 0.0100 | mmhos/cm | 1 | 2001148 | 01/10/20 | 01/10/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS58@6"
2001118-20 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 13:50**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001153 | 01/10/20 | 01/11/20 | 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: **01/10/20 13:50**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | Units | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 124 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 109 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 106 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 13:50**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001155 | 01/10/20 | 01/11/20 | EPA 8015M | |

Date Sampled: **01/10/20 13:50**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | Units | | | | | | |
| Surrogate: o-Terphenyl | | 104 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 13:50**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|-------------|-----------|-----------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| Calcium | ND | 11.1 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B | |
| Magnesium | 18.6 | 5.55 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS58@6"
2001118-20 (Soil)

Summit Scientific

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

| | | | | | | | | |
|--------|----|------|-----------|---|---------|----------|----------|-----------|
| Sodium | ND | 5.55 | mg/kg dry | 1 | 2001146 | 01/10/20 | 01/11/20 | EPA 6020B |
|--------|----|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 13:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.180 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 13:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 90.1 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 8.15 | | pH Units | " | 2001150 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 13:50**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------------------|-------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 1.31 | 0.0100 | mmhos/cm | 1 | 2001148 | 01/10/20 | 01/10/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS59@6"
2001118-21 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 13:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001154 | 01/10/20 | 01/11/20 | 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: **01/10/20 13:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 128 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 115 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 106 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 13:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001156 | 01/10/20 | 01/11/20 | EPA 8015M | |

Date Sampled: **01/10/20 13:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 92.5 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 13:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 2060 | 10.9 | mg/kg dry | 1 | 2001147 | 01/10/20 | 01/10/20 | EPA 6020B | |
| Magnesium | 402 | 5.46 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS59@6"
2001118-21 (Soil)

Summit Scientific

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

| | | | | | | | | |
|--------|------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 70.5 | 5.46 | mg/kg dry | 1 | 2001147 | 01/10/20 | 01/10/20 | EPA 6020B |
|--------|------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 13:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-------------------------|--------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.372 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 13:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------|--------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 91.5 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 7.91 | | pH Units | " | 2001151 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 13:55**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------------------|--------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 1.00 | 0.0100 | mmhos/cm | 1 | 2001149 | 01/10/20 | 01/10/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS60@6"
2001118-22 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 14:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001154 | 01/10/20 | 01/11/20 | 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: **01/10/20 14:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 105 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 102 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 99.8 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 14:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001156 | 01/10/20 | 01/11/20 | EPA 8015M | |

Date Sampled: **01/10/20 14:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 96.3 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 14:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 2090 | 11.1 | mg/kg dry | 1 | 2001147 | 01/10/20 | 01/10/20 | EPA 6020B | |
| Magnesium | 462 | 5.56 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS60@6"
2001118-22 (Soil)

Summit Scientific

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

| | | | | | | | | |
|--------|------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 77.1 | 5.56 | mg/kg dry | 1 | 2001147 | 01/10/20 | 01/10/20 | EPA 6020B |
|--------|------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 14:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.398 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 14:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 89.9 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 7.75 | | pH Units | " | 2001151 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 14:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.821 | 0.0100 | mmhos/cm | 1 | 2001149 | 01/10/20 | 01/10/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS61@6"
2001118-23 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 14:05**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001154 | 01/10/20 | 01/11/20 | 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: **01/10/20 14:05**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | Units | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 102 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 102 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 99.0 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 14:05**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001156 | 01/10/20 | 01/11/20 | EPA 8015M | |

Date Sampled: **01/10/20 14:05**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | Units | | | | | | |
| Surrogate: o-Terphenyl | | 94.5 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 14:05**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|-------------|-----------|-----------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| Calcium | 1160 | 10.5 | mg/kg dry | 1 | 2001147 | 01/10/20 | 01/10/20 | EPA 6020B | |
| Magnesium | 416 | 5.24 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS61@6"
2001118-23 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 63.3 | 5.24 | mg/kg dry | 1 | 2001147 | 01/10/20 | 01/10/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 14:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.406 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 14:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 95.4 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 8.49 | | pH Units | " | 2001151 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 14:05**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.313 | 0.0100 | mmhos/cm | 1 | 2001149 | 01/10/20 | 01/10/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS62@6"
2001118-24 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 14:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001154 | 01/10/20 | 01/11/20 | 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: **01/10/20 14:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 111 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 108 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 105 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 14:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001156 | 01/10/20 | 01/11/20 | EPA 8015M | |

Date Sampled: **01/10/20 14:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 91.2 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 14:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 939 | 11.1 | mg/kg dry | 1 | 2001147 | 01/10/20 | 01/10/20 | EPA 6020B | |
| Magnesium | 376 | 5.54 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS62@6"
2001118-24 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 35.2 | 5.54 | mg/kg dry | 1 | 2001147 | 01/10/20 | 01/10/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 14:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.245 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 14:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 90.3 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 8.10 | | pH Units | " | 2001151 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 14:10**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.351 | 0.0100 | mmhos/cm | 1 | 2001149 | 01/10/20 | 01/10/20 | EPA 120.1 | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS63@6"
2001118-25 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 14:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001154 | 01/10/20 | 01/11/20 | 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: **01/10/20 14:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 113 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 110 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 106 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 14:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|-----------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | 61 | 50 | mg/kg | 1 | 2001156 | 01/10/20 | 01/11/20 | EPA 8015M | |

Date Sampled: **01/10/20 14:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 97.4 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 14:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 832 | 10.9 | mg/kg dry | 1 | 2001147 | 01/10/20 | 01/10/20 | EPA 6020B | |
| Magnesium | 329 | 5.43 | " | " | " | " | " | " | |

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS63@6"
2001118-25 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 32.8 | 5.43 | mg/kg dry | 1 | 2001147 | 01/10/20 | 01/10/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 14:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.244 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 14:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 92.1 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 8.37 | | pH Units | " | 2001151 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 14:15**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.361 | 0.0100 | mmhos/cm | 1 | 2001149 | 01/10/20 | 01/10/20 | EPA 120.1 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS64@6"
2001118-26 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 14:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001154 | 01/10/20 | 01/11/20 | 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: **01/10/20 14:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 130 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 116 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 105 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 14:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | 2001156 | 01/10/20 | 01/11/20 | EPA 8015M | |

Date Sampled: **01/10/20 14:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 92.0 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 14:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 600 | 10.5 | mg/kg dry | 1 | 2001147 | 01/10/20 | 01/10/20 | EPA 6020B | |
| Magnesium | 214 | 5.23 | " | " | " | " | " | " | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS64@6"
2001118-26 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 54.2 | 5.23 | mg/kg dry | 1 | 2001147 | 01/10/20 | 01/10/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 14:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.484 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 14:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 95.6 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 8.60 | | pH Units | " | 2001151 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 14:20**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.327 | 0.0100 | mmhos/cm | 1 | 2001149 | 01/10/20 | 01/10/20 | EPA 120.1 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS65@6"
2001118-27 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/20 14:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | 2001154 | 01/10/20 | 01/11/20 | EPA 8260B | |
| Toluene | ND | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.010 | " | " | " | " | " | " | |
| Naphthalene | 0.014 | 0.010 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **01/10/20 14:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 119 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 119 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 103 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/20 14:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------|------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | 170 | 50 | mg/kg | 1 | 2001156 | 01/10/20 | 01/11/20 | EPA 8015M | |

Date Sampled: **01/10/20 14:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 94.5 % | 30-150 | | " | " | " | " | |

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

Date Sampled: **01/10/20 14:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------|-------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 1450 | 10.9 | mg/kg dry | 1 | 2001147 | 01/10/20 | 01/10/20 | EPA 6020B | |
| Magnesium | 317 | 5.46 | " | " | " | " | " | " | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

SS65@6"
2001118-27 (Soil)

Summit Scientific

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

| | | | | | | | | |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|
| Sodium | 63.2 | 5.46 | mg/kg dry | 1 | 2001147 | 01/10/20 | 01/10/20 | EPA 6020B |
|---------------|-------------|------|-----------|---|---------|----------|----------|-----------|

Calculated Analysis

Date Sampled: **01/10/20 14:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.392 | 0.100 | units | 1 | 2001165 | 01/13/20 | 01/13/20 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/20 14:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------|-------------|-----------------|----------|----------|---------|----------|----------|-------------|-------|
| % Solids | 91.6 | | % | 1 | 2001152 | 01/10/20 | 01/13/20 | Calculation | |
| pH | 8.08 | | pH Units | " | 2001151 | 01/10/20 | 01/10/20 | EPA 9045D | |

Specific Conductance by EPA Method 120.1

Date Sampled: **01/10/20 14:25**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.848 | 0.0100 | mmhos/cm | 1 | 2001149 | 01/10/20 | 01/10/20 | EPA 120.1 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
01/13/20 09:43

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 2001153 - EPA 5030 Soil MS

Blank (2001153-BLK1)

Prepared: 01/10/20 Analyzed: 01/11/20

| | | | | | | | | | | |
|----------------------------------|--------|--------|-------|--------|--|-----|--------|--|--|--|
| 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 | 0.0489 | | " | 0.0400 | | 122 | 23-173 | | | |
| Surrogate: Toluene-d8 | 0.0455 | | " | 0.0400 | | 114 | 20-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0440 | | " | 0.0400 | | 110 | 21-167 | | | |

LCS (2001153-BS1)

Prepared: 01/10/20 Analyzed: 01/11/20

| | | | | | | | | | | |
|----------------------------------|--------|--------|-------|--------|--|------|--------|--|--|--|
| Benzene | 0.0928 | 0.0020 | mg/kg | 0.100 | | 92.8 | 70-130 | | | |
| Toluene | 0.0728 | 0.0050 | " | 0.100 | | 72.8 | 70-130 | | | |
| Ethylbenzene | 0.0812 | 0.0050 | " | 0.100 | | 81.2 | 70-130 | | | |
| m,p-Xylene | 0.152 | 0.010 | " | 0.200 | | 76.0 | 70-130 | | | |
| o-Xylene | 0.0795 | 0.0050 | " | 0.100 | | 79.5 | 70-130 | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0352 | | " | 0.0400 | | 87.9 | 23-173 | | | |
| Surrogate: Toluene-d8 | 0.0417 | | " | 0.0400 | | 104 | 20-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0401 | | " | 0.0400 | | 100 | 21-167 | | | |

Matrix Spike (2001153-MS1)

Source: 2001118-01

Prepared: 01/10/20 Analyzed: 01/11/20

| | | | | | | | | | | |
|----------------------------------|--------|--------|-------|--------|----|------|--------|--|--|--|
| Benzene | 0.0892 | 0.0020 | mg/kg | 0.100 | ND | 89.2 | 70-130 | | | |
| Toluene | 0.0789 | 0.0050 | " | 0.100 | ND | 78.9 | 70-130 | | | |
| Ethylbenzene | 0.0763 | 0.0050 | " | 0.100 | ND | 76.3 | 70-130 | | | |
| m,p-Xylene | 0.144 | 0.010 | " | 0.200 | ND | 72.1 | 70-130 | | | |
| o-Xylene | 0.0753 | 0.0050 | " | 0.100 | ND | 75.3 | 70-130 | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0347 | | " | 0.0400 | | 86.7 | 23-173 | | | |
| Surrogate: Toluene-d8 | 0.0417 | | " | 0.0400 | | 104 | 20-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0386 | | " | 0.0400 | | 96.5 | 21-167 | | | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
01/13/20 09:43

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 | | |

Batch 2001153 - EPA 5030 Soil MS

Matrix Spike Dup (2001153-MSD1)

Source: 2001118-01

Prepared: 01/10/20 Analyzed: 01/11/20

| | | | | | | | | | | |
|----------------------------------|--------|--------|-------|--------|----|------|--------|--------|----|--|
| Benzene | 0.0891 | 0.0020 | mg/kg | 0.100 | ND | 89.1 | 70-130 | 0.0337 | 30 | |
| Toluene | 0.0780 | 0.0050 | " | 0.100 | ND | 78.0 | 70-130 | 1.15 | 30 | |
| Ethylbenzene | 0.0764 | 0.0050 | " | 0.100 | ND | 76.4 | 70-130 | 0.118 | 30 | |
| m,p-Xylene | 0.145 | 0.010 | " | 0.200 | ND | 72.4 | 70-130 | 0.436 | 30 | |
| o-Xylene | 0.0768 | 0.0050 | " | 0.100 | ND | 76.8 | 70-130 | 1.97 | 30 | |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0372 | | " | 0.0400 | | 92.9 | 23-173 | | | |
| Surrogate: Toluene-d8 | 0.0418 | | " | 0.0400 | | 105 | 20-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0391 | | " | 0.0400 | | 97.7 | 21-167 | | | |

Batch 2001154 - EPA 5030 Soil MS

Blank (2001154-BLK1)

Prepared: 01/10/20 Analyzed: 01/11/20

| | | | | | | | | | | |
|----------------------------------|--------|--------|-------|--------|--|-----|--------|--|--|--|
| 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 | 0.0484 | | " | 0.0400 | | 121 | 23-173 | | | |
| Surrogate: Toluene-d8 | 0.0448 | | " | 0.0400 | | 112 | 20-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0427 | | " | 0.0400 | | 107 | 21-167 | | | |

LCS (2001154-BS1)

Prepared: 01/10/20 Analyzed: 01/11/20

| | | | | | | | | | | |
|----------------------------------|--------|--------|-------|--------|--|------|--------|--|--|--|
| Benzene | 0.0832 | 0.0020 | mg/kg | 0.100 | | 83.2 | 70-130 | | | |
| Toluene | 0.0785 | 0.0050 | " | 0.100 | | 78.5 | 70-130 | | | |
| Ethylbenzene | 0.0851 | 0.0050 | " | 0.100 | | 85.1 | 70-130 | | | |
| m,p-Xylene | 0.160 | 0.010 | " | 0.200 | | 80.0 | 70-130 | | | |
| o-Xylene | 0.0824 | 0.0050 | " | 0.100 | | 82.4 | 70-130 | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0360 | | " | 0.0400 | | 90.0 | 23-173 | | | |
| Surrogate: Toluene-d8 | 0.0418 | | " | 0.0400 | | 104 | 20-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0400 | | " | 0.0400 | | 100 | 21-167 | | | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
01/13/20 09:43

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 2001154 - EPA 5030 Soil MS

| Matrix Spike (2001154-MS1) | Source: 2001118-21 | | | Prepared: 01/10/20 | | Analyzed: 01/11/20 | |
|-----------------------------------|---------------------------|--------|-------|--------------------|----|--------------------|--------|
| Benzene | 0.0742 | 0.0020 | mg/kg | 0.100 | ND | 74.2 | 70-130 |
| Toluene | 0.0751 | 0.0050 | " | 0.100 | ND | 75.1 | 70-130 |
| Ethylbenzene | 0.0811 | 0.0050 | " | 0.100 | ND | 81.1 | 70-130 |
| m,p-Xylene | 0.152 | 0.010 | " | 0.200 | ND | 75.8 | 70-130 |
| o-Xylene | 0.0813 | 0.0050 | " | 0.100 | ND | 81.3 | 70-130 |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0385 | | " | 0.0400 | | 96.3 | 23-173 |
| Surrogate: Toluene-d8 | 0.0429 | | " | 0.0400 | | 107 | 20-170 |
| Surrogate: 4-Bromofluorobenzene | 0.0396 | | " | 0.0400 | | 98.9 | 21-167 |

| Matrix Spike Dup (2001154-MSD1) | Source: 2001118-21 | | | Prepared: 01/10/20 | | Analyzed: 01/11/20 | | | |
|--|---------------------------|--------|-------|--------------------|----|--------------------|--------|------|----|
| Benzene | 0.0784 | 0.0020 | mg/kg | 0.100 | ND | 78.4 | 70-130 | 5.42 | 30 |
| Toluene | 0.0820 | 0.0050 | " | 0.100 | ND | 82.0 | 70-130 | 8.71 | 30 |
| Ethylbenzene | 0.0866 | 0.0050 | " | 0.100 | ND | 86.6 | 70-130 | 6.59 | 30 |
| m,p-Xylene | 0.162 | 0.010 | " | 0.200 | ND | 80.8 | 70-130 | 6.38 | 30 |
| o-Xylene | 0.0847 | 0.0050 | " | 0.100 | ND | 84.7 | 70-130 | 4.01 | 30 |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0398 | | " | 0.0400 | | 99.5 | 23-173 | | |
| Surrogate: Toluene-d8 | 0.0413 | | " | 0.0400 | | 103 | 20-170 | | |
| Surrogate: 4-Bromofluorobenzene | 0.0404 | | " | 0.0400 | | 101 | 21-167 | | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

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 2001155 - EPA 3550A

Blank (2001155-BLK1)

Prepared: 01/10/20 Analyzed: 01/11/20

C10-C28 (DRO) ND 50 mg/kg

LCS (2001155-BS1)

Prepared: 01/10/20 Analyzed: 01/11/20

C10-C28 (DRO) 539 50 mg/kg 500 108 70-130

Matrix Spike (2001155-MS1)

Source: 2001118-01

Prepared: 01/10/20 Analyzed: 01/11/20

C10-C28 (DRO) 458 50 mg/kg 500 17.9 88.1 70-130

Matrix Spike Dup (2001155-MSD1)

Source: 2001118-01

Prepared: 01/10/20 Analyzed: 01/11/20

C10-C28 (DRO) 480 50 mg/kg 500 17.9 92.4 70-130 4.59 20

Batch 2001156 - EPA 3550A

Blank (2001156-BLK1)

Prepared: 01/10/20 Analyzed: 01/11/20

C10-C28 (DRO) ND 50 mg/kg

LCS (2001156-BS1)

Prepared: 01/10/20 Analyzed: 01/11/20

C10-C28 (DRO) 496 50 mg/kg 500 99.2 70-130

Matrix Spike (2001156-MS1)

Source: 2001120-01

Prepared: 01/10/20 Analyzed: 01/11/20

C10-C28 (DRO) 504 50 mg/kg 500 10.6 98.6 70-130

Matrix Spike Dup (2001156-MSD1)

Source: 2001120-01

Prepared: 01/10/20 Analyzed: 01/11/20

C10-C28 (DRO) 489 50 mg/kg 500 10.6 95.7 70-130 2.95 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

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 2001146 - General Preparation

Blank (2001146-BLK1)

Prepared & Analyzed: 01/10/20

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

LCS (2001146-BS1)

Prepared & Analyzed: 01/10/20

| | | | | | | | | | |
|-----------|-----|------|-----------|-----|--|------|--------|--|--|
| Calcium | 580 | 10.0 | mg/kg wet | 500 | | 116 | 70-130 | | |
| Magnesium | 536 | 5.00 | " | 500 | | 107 | 70-130 | | |
| Sodium | 488 | 5.00 | " | 500 | | 97.5 | 70-130 | | |

Duplicate (2001146-DUP1)

Source: 2001118-01

Prepared & Analyzed: 01/10/20

| | | | | | | | | | |
|-----------|------|------|-----------|------|--|--|--|------|----|
| Calcium | 585 | 10.9 | mg/kg dry | 552 | | | | 5.81 | 20 |
| Magnesium | 211 | 5.47 | " | 218 | | | | 3.23 | 20 |
| Sodium | 18.5 | 5.47 | " | 16.7 | | | | 10.1 | 20 |

Matrix Spike (2001146-MS1)

Source: 2001118-01

Prepared & Analyzed: 01/10/20

| | | | | | | | | | |
|-----------|------|------|-----------|-----|------|------|--------|--|--|
| Calcium | 1060 | 10.9 | mg/kg dry | 547 | 552 | 92.3 | 70-130 | | |
| Magnesium | 769 | 5.47 | " | 547 | 218 | 101 | 70-130 | | |
| Sodium | 543 | 5.47 | " | 547 | 16.7 | 96.3 | 70-130 | | |

Matrix Spike Dup (2001146-MSD1)

Source: 2001118-01

Prepared & Analyzed: 01/10/20

| | | | | | | | | | |
|-----------|------|------|-----------|-----|------|------|--------|------|----|
| Calcium | 1030 | 10.9 | mg/kg dry | 547 | 552 | 87.9 | 70-130 | 2.29 | 25 |
| Magnesium | 761 | 5.47 | " | 547 | 218 | 99.3 | 70-130 | 1.02 | 25 |
| Sodium | 550 | 5.47 | " | 547 | 16.7 | 97.5 | 70-130 | 1.18 | 25 |

Batch 2001147 - General Preparation

Blank (2001147-BLK1)

Prepared & Analyzed: 01/10/20

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

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
01/13/20 09:43

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

Summit Scientific

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

Batch 2001147 - General Preparation

LCS (2001147-BS1)

Prepared & Analyzed: 01/10/20

| | | | | | | | | | | |
|-----------|-----|------|-----------|-----|--|------|--------|--|--|--|
| Calcium | 509 | 10.0 | mg/kg wet | 500 | | 102 | 70-130 | | | |
| Magnesium | 540 | 5.00 | " | 500 | | 108 | 70-130 | | | |
| Sodium | 495 | 5.00 | " | 500 | | 99.0 | 70-130 | | | |

Duplicate (2001147-DUP1)

Source: 2001118-21

Prepared & Analyzed: 01/10/20

| | | | | | | | | | | |
|-----------|------|------|-----------|-----|------|--|--|------|----|--|
| Calcium | 1840 | 10.9 | mg/kg dry | 546 | 2060 | | | 11.4 | 20 | |
| Magnesium | 379 | 5.46 | " | 546 | 402 | | | 5.91 | 20 | |
| Sodium | 64.0 | 5.46 | " | 546 | 70.5 | | | 9.56 | 20 | |

Matrix Spike (2001147-MS1)

Source: 2001118-21

Prepared & Analyzed: 01/10/20

| | | | | | | | | | | |
|-----------|------|------|-----------|-----|------|------|--------|--|--|--|
| Calcium | 2500 | 10.9 | mg/kg dry | 546 | 2060 | 80.2 | 70-130 | | | |
| Magnesium | 870 | 5.46 | " | 546 | 402 | 85.6 | 70-130 | | | |
| Sodium | 604 | 5.46 | " | 546 | 70.5 | 97.7 | 70-130 | | | |

Matrix Spike Dup (2001147-MSD1)

Source: 2001118-21

Prepared & Analyzed: 01/10/20

| | | | | | | | | | | |
|-----------|------|------|-----------|-----|------|------|--------|-------|----|--|
| Calcium | 2500 | 10.9 | mg/kg dry | 546 | 2060 | 79.6 | 70-130 | 0.121 | 25 | |
| Magnesium | 963 | 5.46 | " | 546 | 402 | 103 | 70-130 | 10.2 | 25 | |
| Sodium | 631 | 5.46 | " | 546 | 70.5 | 103 | 70-130 | 4.29 | 25 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

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

Batch 2001150 - General Preparation

| LCS (2001150-BS1) | | | | | | | | | | | |
|--------------------------|------|--|----------|------|------|------|--------|--|-------|----|-------------------------------|
| | | | | | | | | | | | Prepared & Analyzed: 01/10/20 |
| pH | 9.12 | | pH Units | 9.18 | | 99.3 | 95-105 | | | | |
| Duplicate (2001150-DUP1) | | | | | | | | | | | |
| | | | | | | | | | | | Prepared & Analyzed: 01/10/20 |
| pH | 8.03 | | pH Units | | 8.02 | | | | 0.125 | 20 | |

Batch 2001151 - General Preparation

| LCS (2001151-BS1) | | | | | | | | | | | |
|--------------------------|------|--|----------|------|------|------|--------|--|-------|----|-------------------------------|
| | | | | | | | | | | | Prepared & Analyzed: 01/10/20 |
| pH | 9.12 | | pH Units | 9.18 | | 99.3 | 95-105 | | | | |
| Duplicate (2001151-DUP1) | | | | | | | | | | | |
| | | | | | | | | | | | Prepared & Analyzed: 01/10/20 |
| pH | 7.87 | | pH Units | | 7.91 | | | | 0.507 | 20 | |

Batch 2001152 - General Preparation

| Duplicate (2001152-DUP1) | | | | | | | | | | | |
|--------------------------|------|--|---|--|------|--|--|--|-------|----|---------------------------------------|
| | | | | | | | | | | | Prepared: 01/10/20 Analyzed: 01/13/20 |
| % Solids | 91.6 | | % | | 91.4 | | | | 0.219 | 20 | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
01/13/20 09:43

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 2001148 - General Preparation

| | | | | | | | | | | | |
|---------------------------------|-------|-------------------------------|----------|-------------------------------|-------|--------|--|------|----|--|-------|
| Blank (2001148-BLK1) | | Prepared & Analyzed: 01/10/20 | | | | | | | | | |
| Specific Conductance (EC) | ND | 0.0100 | mmhos/cm | | | | | | | | |
| LCS (2001148-BS1) | | Prepared & Analyzed: 01/10/20 | | | | | | | | | |
| Specific Conductance (EC) | 0.700 | 0.0100 | mmhos/cm | 0.750 | 93.3 | 90-110 | | | | | |
| Duplicate (2001148-DUP1) | | Source: 2001118-01 | | Prepared & Analyzed: 01/10/20 | | | | | | | |
| Specific Conductance (EC) | 0.381 | 0.0100 | mmhos/cm | | 0.291 | | | 26.7 | 20 | | QR-04 |

Batch 2001149 - General Preparation

| | | | | | | | | | | | |
|---------------------------------|-------|-------------------------------|----------|-------------------------------|------|--------|--|------|----|--|--|
| Blank (2001149-BLK1) | | Prepared & Analyzed: 01/10/20 | | | | | | | | | |
| Specific Conductance (EC) | ND | 0.0100 | mmhos/cm | | | | | | | | |
| LCS (2001149-BS1) | | Prepared & Analyzed: 01/10/20 | | | | | | | | | |
| Specific Conductance (EC) | 0.700 | 0.0100 | mmhos/cm | 0.750 | 93.3 | 90-110 | | | | | |
| Duplicate (2001149-DUP1) | | Source: 2001118-21 | | Prepared & Analyzed: 01/10/20 | | | | | | | |
| Specific Conductance (EC) | 1.05 | 0.0100 | mmhos/cm | | 1.00 | | | 4.58 | 20 | | |

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Furrow USX AB15-99HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/13/20 09:43

Notes and Definitions

- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- 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