

**REMEDIAL EXCAVATION REPORT**  
**LOLOFF 2, 3, B35-19 FACILITY**  
**ECMC SPILL TRACKING # 481084**  
**ECMC REMEDIATION # 20046**



2115 117th Avenue  
Greeley, CO 80631

Prepared by:



6855 W. 119<sup>th</sup> Ave  
Broomfield, CO 80020

October 19, 2023

Mr. Dan Peterson  
Environmental Specialist  
Chevron Rockies Business Unit  
2115 117th Avenue  
Greeley, CO 80631

Subject:       **Remedial Excavation Report**  
                  ***Loloff 2, 3, B35-19 Facility***  
                  Spill/Release Point ID #: 481084  
                  Remediation Project #: 20046  
                  NWNW S35 T5N R64W  
                  Weld County, Colorado

Dear Mr. Peterson:

Below please find a copy of the above referenced Remedial Excavation Report (Report) for the Loloff 2, 3, B35-19 Tank Facility (Site) in Weld County, Colorado. The text below describes the remedial excavation and associated soil sampling conducted at the Site between October 29, 2021 (Decommissioning) and May 18, 2023 (Excavation) by Tasman, Inc. (Tasman), on behalf of Noble Energy, Inc. (Noble).

## **Introduction**

The purpose of this document is to describe the remedial excavation, and associated sampling activities. The activities described below were performed in response to the discovery of suspected impacted material below the separator flowline during decommissioning on October 29, 2021, and confirmed on November 9, 2021.

## **Facility Background**

The Site is located approximately 2.7 miles southwest of the town of Kersey in Weld County, Colorado, as shown on Figure 1. The Site is surrounded by pastureland, and the legal description is the northwest quarter of the northwest quarter of Section 35, Township 5 North, Range 64 West, 6<sup>th</sup> Principal Meridian. The Site is on terrain that slopes gradually to the south, at latitude 40.363328° and longitude -104.521721° [North American Datum of 1983(NAD83)]. The site is approximately 0.25 miles east of the intersection of Weld County Road 57 and Weld County Road 52. The Site location map is included as Figure 1.

Tasman was retained by Noble on October 29, 2021, to complete soil sampling and documentation during decommissioning and abandonment activities at the former Loloff 2, 3, B35-19 Facility. During decommissioning and abandonment activities at the Site historic impacts were discovered below the separator flowline and confirmed on November 9, 2021. A Form 19 was submitted to the Energy and Carbon Management Commission (ECMC) on November 10, 2021. The ECMC subsequently issued Spill/Release Point ID Number 481084 for this event and the Site was

decommissioned. The ECMC issued Remediation Number 20046 for this project. The Initial Site investigation was reported in the *Supplemental Form 27* (ECMC Document # 403084253) that was submitted to the ECMC on 06/20/2022. A Site Assessment Report was reported in the Supplemental Form 27 (ECMC Document # 403179459) that was submitted to the ECMC on 09/26/2022.

## **Field Activities- Background Soil Sampling**

On October 4, 2022, Tasman used a hand auger to advance and collect ten background samples from five borehole locations north of the Site to assess background native soil conditions. During soil boring operations, soil samples were collected and field screened for volatile organic compounds (VOCs) using a photoionization detector (PID) and standard headspace sampling techniques. All background soil samples were submitted to Summit Scientific (Summit) in Golden, Colorado for laboratory analysis arsenic, barium and selenium using United States Environmental Protection Agency (USEPA) Method 6020B as well as analysis of pH using USEPA saturated paste extraction method. Soil analytical data from the background sampling are summarized in Table 1 and illustrated on Figure 2. The laboratory analytical reports are included as Attachment A.

## **Field Activities- Remedial Excavation**

Remedial excavation activities were conducted on April 27, 2023 and May 18, 2023, to remove impacted soil in the area of decommissioning soil sample SEP01-FL@3'. The excavation was guided in the field using a PID and standard headspace sampling techniques. A total of four excavation sidewall soil samples (SS01@4' through SS04@4') were collected from the final perimeter of the excavation along with one excavation floor sample (FS01@5') on April 27, 2023, and an additional excavation sidewall soil sample (SS05@4') was collected when the eastern sidewall was expanded during additional excavation on May 18, 2023. All soil samples were submitted to Summit in Golden, Colorado for laboratory analysis of the ECMC Table 915-1 list of organic compounds in soil using USEPA Methods 8260B and 8270D, and total petroleum hydrocarbons (TPH) using USEPA Methods 8260B and 8015D. Additionally, the soil samples were submitted for analysis of ECMC Table 915-1 metals in soil using USEPA Method 6020B as well as analysis of pH, electrical conductivity (EC), and sodium adsorption ratio (SAR) using USEPA saturated paste extraction method, and boron using the hot water-soluble soil extract method. Groundwater was not encountered during the excavation. Soil analytical data from the initial facility decommissioning, site assessment activities and the remedial excavation are summarized in Table 1. The remedial excavation extents, sample locations, and analytical results are illustrated on Figure 2, and the laboratory analytical reports are included as Attachment A.

A total of approximately 35 cubic yards of impacted material were removed for off-Site disposal at the Buffalo Ridge Waste Management Landfill in Keenesburg, Colorado under signed Noble waste manifests. A total of approximately 35 cubic yards of imported clean fill was used to backfill the excavation. The final remedial excavation extent measured approximately 19 feet (ft) by 14-ft by 5-ft below ground surface (bgs).

## Results

Laboratory analytical results for the initial remedial excavation soil samples collected on April 27, 2023 indicate all samples, besides sidewall soil sample SS02@4', were compliant with ECMC Table 915-1 Protection of Groundwater Screening Levels (GSSL) for organic compounds in soil. Laboratory analytical results for soil sample SS02@4' indicated an exceedance of ECMC Table 915-1 GSSL for benz(a)anthracene. On May 18, 2023, the excavation was expanded to the east to remove compounds in exceedance of ECMC Table 915-1 GSSLs identified at sample location SS02@4'. The analytical results for the new eastern sidewall sample, SS05@4', were below all applicable ECMC Table 915-1 standards for organic compounds in soil. Laboratory analytical results for all remedial excavation soil samples indicate arsenic is in exceedance of ECMC Table 915-1 Residential Soil Screening Levels (RSSL).

A total of ten background samples were collected from five discrete locations by Tasman on October 4, 2022 from depths of 3-ft bgs and 8-ft bgs. The average background concentrations of arsenic, barium and selenium from 3-ft bgs with a 1.25 multiplier applied were calculated to be 1.66 mg/kg, 65.2 mg/kg, and 0.528 mg/kg, respectively. The average concentrations of arsenic, barium and selenium from the decommissioning, site assessment and remedial excavation soil samples collected from 3-4-ft bgs were calculated to be 1.62 mg/kg, 57.7 mg/kg, and 0.359 mg/kg, respectively. The average background concentrations for arsenic, barium and selenium were calculated to be higher than the average concentrations in the site decommissioning, site assessment and remedial excavation soil samples at the 3-4-ft bgs depth interval.

The average background concentrations of arsenic, barium and selenium from 8-ft bgs with a 1.25 multiplier applied were calculated to be 3.99 mg/kg, 104 mg/kg, and 0.715 mg/kg, respectively. The average concentrations of arsenic, barium and selenium from the decommissioning, site assessment, and remedial excavation soil samples collected from 5-10-ft bgs were calculated to be 2.82 mg/kg, 73.1 mg/kg, and 0.432 mg/kg, respectively. The average background concentrations for arsenic, barium and selenium were calculated to be higher than the average concentrations in the site decommissioning, site assessment and remedial excavation soil samples at the 5-10-ft bgs depth interval.

Laboratory analytical results for soil samples collected during the decommissioning, site assessment, background assessment, and excavation indicate an increase in metals concentrations with sample depth, as shown in Table 1 and illustrated on Figure 2. While background samples were not collected at depths correlating to the 12-15-ft site assessment soil boring samples, average background concentrations for metals collected from the 3-ft bgs and 8-ft bgs depth interval were calculated to be greater than the site assessment boring and excavation confirmatory samples collected from the similar depth intervals. Additionally, there is a significant increase in metals concentrations across the ECMC Table 915-1 list from the 3-4-ft bgs soil boring samples to the 12-15-ft bgs soil boring samples, which is also observed in the background sampling area between 3-ft bgs and 8-ft bgs. After reviewing the soil boring logs included as an attachment to the Site Assessment Report (refer to ECMC Document # 403179459), the lithology transitions from coarse grain deposits (poorly graded fine sands) at shallower intervals of 0-10-ft bgs to fine grain deposits (low-plasticity sandy clays) at deeper intervals

of 10-15-ft bgs. The elevated metals at the 12-15-ft bgs depth interval are naturally concentrating in the clay deposits, rather than being artificially increased by oil and gas activity. Additionally, there are no other indications of hydrocarbon or inorganic (EC/SAR/boron) alterations to the subsurface soil chemistry, further supporting that the metals concentrations increasing with depth are naturally occurring. As such, metals should not be considered contaminants of concern at the Site.

## Conclusions

Based upon field and laboratory data collected during remedial excavation activities, impacted soil in the area of the release has been successfully removed. The average background concentrations for arsenic, barium and selenium collected from the 3-ft bgs and 8-ft bgs depth intervals were calculated to be greater than the site assessment boring and excavation confirmatory samples collected from similar depth intervals. As such, metals exceedances in the remedial excavation soil samples are attributed to elevated levels in the native soil and are not associated with a hydrocarbon release at the Site. Due to metals concentrations increasing with depth in the background soil samples as well as the release area, the trend of increasing fine grained deposits with depth, and the absence of any indication of hydrocarbon or inorganic alterations to the subsurface soil chemistry, the elevated metals at the 12-15-ft bgs depth interval are naturally concentrating in the clay deposits, rather than being artificially increased by oil and gas activity. A No Further Action (NFA) designation is being requested from the ECMC for the 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) 616-8383 or at [jwhritenour@tasman-geo.com](mailto:jwhritenour@tasman-geo.com) if you require additional information.

Sincerely,  
Tasman Geosciences, Inc.



Jake Whritenour, Program Manager

### Attachments:

Table 1 – Soil Analytical Data

Figure 1 – Site Location Map

Figure 2 – Excavation Analytical Results Map (10/29/2021, 06/17/2022, 10/04/2022, 04/27/2023 & 05/18/2023)

Attachment A – Laboratory Analytical Data Reports

# **TABLES**

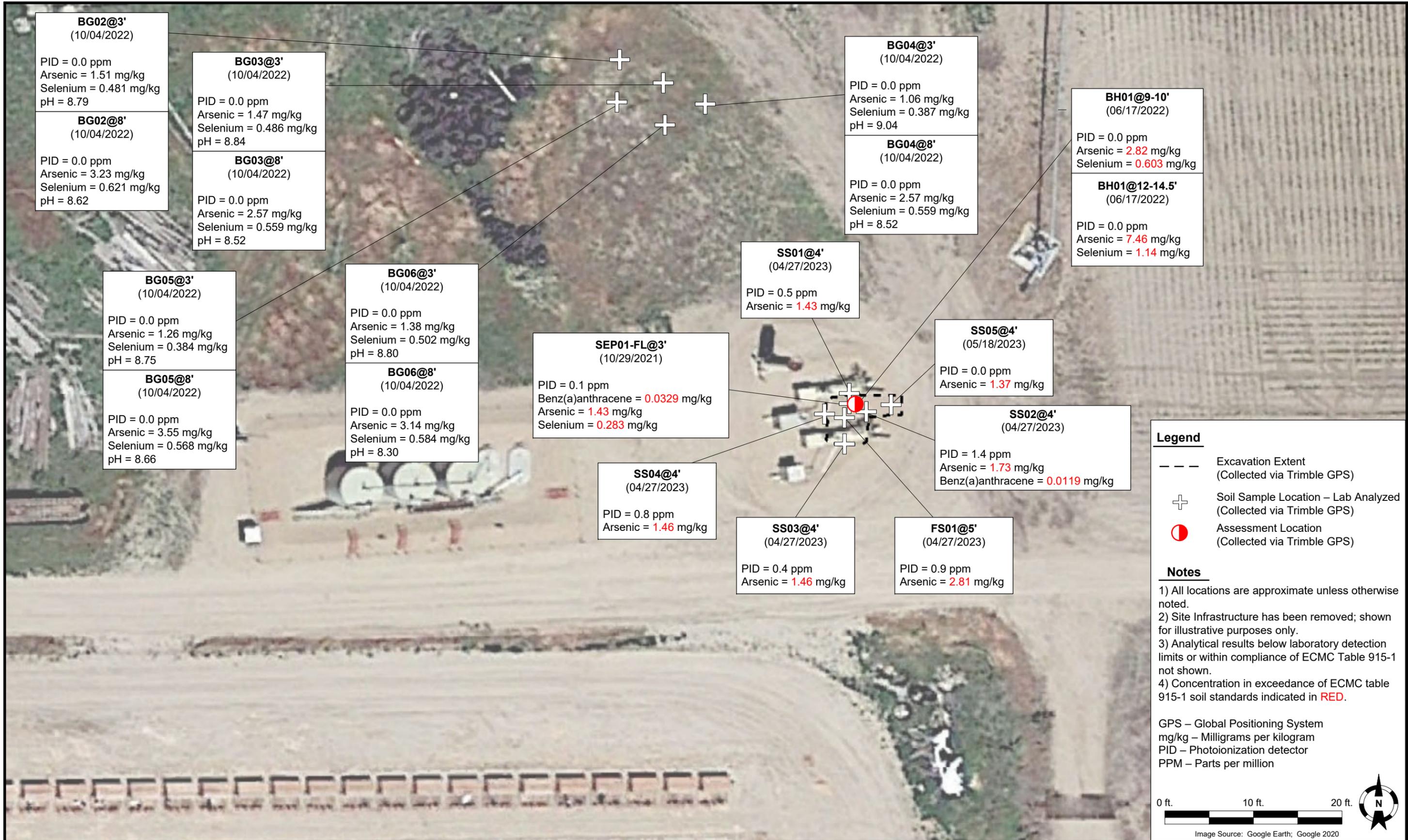
TABLE 1  
SOIL ANALYTICAL DATA  
NOBLE ENERGY, INC. - LOLOFF 2, 3, B35-19 FACILITY

| Soil Sample ID                               | Date     | <sup>1</sup> Benzene (mg/kg) | Toluene (mg/kg) | Ethylbenzene (mg/kg) | Total Xylenes (mg/kg) | 1,2,4 - TMB (mg/kg) | 1,3,5 - TMB (mg/kg) | Naphthalene (mg/kg) | TPH-GRO (mg/kg) | TPH-DRO (mg/kg) | TPH-ORO (mg/kg) | Acenaphthene (mg/kg) | Anthracene (mg/kg) | Benz(a) (mg/kg) | Benzo(a) (mg/kg) | Benzo(b) (mg/kg) | Benzo(k) (mg/kg) | Chrysene (mg/kg) | A,H (mg/kg) | Fluoranthene (mg/kg) | Fluorene (mg/kg) | 1,2,3-CD (mg/kg) | Pyrene (mg/kg) | 1-M (mg/kg) | 2-M (mg/kg) |
|----------------------------------------------|----------|------------------------------|-----------------|----------------------|-----------------------|---------------------|---------------------|---------------------|-----------------|-----------------|-----------------|----------------------|--------------------|-----------------|------------------|------------------|------------------|------------------|-------------|----------------------|------------------|------------------|----------------|-------------|-------------|
| Residential SSL <sup>2</sup>                 |          | 1.2                          | 490             | 5.8                  | 58                    | 30                  | 27                  | 2                   | 500             |                 |                 | 360                  | 1,800              | 1.1             | 0.11             | 1.1              | 11               | 110              | 0.11        | 240                  | 240              | 1.1              | 180            | 18          | 24          |
| Protection of Groundwater SSL <sup>2,3</sup> |          | 0.0026                       | 0.69            | 0.78                 | 9.9                   | 0.0081              | 0.0087              | 0.0038              | 500             |                 |                 | 0.55                 | 6                  | 0.011           | 0.24             | 0.3              | 2.9              | 9                | 0.096       | 8.9                  | 0.54             | 0.98             | 1.3            | 0.006       | 0.019       |
| SS02@2.5'                                    | 10/29/21 | <0.00200                     | <0.00200        | <0.00200             | <0.00200              | <0.00200            | <0.00200            | <0.00067            | <0.200          | <25.0           | <100            | <0.00067             | <0.00067           | <0.00067        | <0.00067         | <0.00067         | <0.00067         | <0.00067         | <0.00067    | <0.00067             | <0.00067         | <0.00067         | <0.00067       | 0.000346    | 0.000547    |
| SS04@2.5'                                    | 10/29/21 | <0.00200                     | <0.00200        | <0.00200             | <0.00200              | <0.00200            | <0.00200            | <0.00067            | <0.200          | 25.6            | <100            | <0.00067             | <0.00067           | <0.00067        | 0.000207         | 0.00307          | <0.00067         | <0.00067         | <0.00067    | <0.00067             | <0.00067         | <0.00067         | 0.00031        | <0.00067    | <0.00067    |
| FS01@5'                                      | 10/29/21 | <0.00200                     | <0.00200        | <0.00200             | <0.00200              | 0.00256             | <0.00200            | <0.00067            | <0.200          | <25.0           | <100            | <0.00067             | 0.00129            | 0.00425         | 0.00453          | 0.0123           | 0.00549          | 0.0115           | 0.00147     | 0.0124               | 0.000364         | 0.00426          | 0.0109         | 0.000832    | 0.00141     |
| FS02@5'                                      | 10/29/21 | <0.00200                     | <0.00200        | <0.00200             | <0.00200              | <0.00200            | <0.00200            | <0.00067            | <0.200          | <25.0           | <100            | <0.00067             | <0.00067           | <0.00067        | <0.00067         | <0.00067         | <0.00067         | <0.00067         | <0.00067    | <0.00067             | <0.00067         | <0.00067         | <0.00067       | <0.00067    | <0.00067    |
| AST01@0.5'                                   | 10/29/21 | <0.00200                     | <0.00200        | <0.00200             | <0.00200              | <0.00200            | <0.00200            | <0.00067            | <0.200          | <25.0           | <100            | <0.00067             | <0.00067           | <0.00067        | 0.000424         | <0.00067         | <0.00067         | <0.00067         | <0.00067    | <0.00067             | <0.00067         | <0.00067         | <0.00067       | <0.00067    | 0.000618    |
| SEP01-FL@3'                                  | 10/29/21 | <0.00200                     | <0.00200        | <0.00200             | <0.00200              | <0.00200            | <0.00200            | <0.00067            | <0.200          | <25.0           | <100            | 0.00718              | 0.0183             | 0.0329          | 0.0205           | 0.0253           | 0.00737          | 0.0278           | 0.00221     | 0.0874               | 0.00951          | 0.00955          | 0.0669         | <0.00067    | 0.00064     |
| SEP01-DL@3'                                  | 10/29/21 | <0.00200                     | <0.00200        | <0.00200             | <0.00200              | <0.00200            | <0.00200            | <0.00067            | <0.200          | <25.0           | <100            | <0.00067             | <0.00067           | <0.00067        | 0.000389         | <0.00067         | <0.00067         | <0.00067         | <0.00067    | <0.00067             | <0.00067         | <0.00067         | <0.00067       | <0.00067    | <0.00067    |
| BH01@9-10'                                   | 06/17/22 | <0.0020                      | <0.0050         | <0.0050              | <0.010                | <0.0050             | <0.0050             | <0.0038             | <0.50           | <50             | <50             | <0.00500             | <0.00500           | <0.00500        | <0.00500         | <0.00500         | <0.00500         | <0.00500         | <0.00500    | <0.00500             | <0.00500         | <0.00500         | <0.00500       | <0.00500    | <0.00500    |
| BH01@12-14.5'                                | 06/17/22 | <0.0020                      | <0.0050         | <0.0050              | <0.010                | <0.0050             | <0.0050             | <0.0038             | <0.50           | <50             | <50             | <0.00500             | <0.00500           | <0.00500        | <0.00500         | <0.00500         | <0.00500         | <0.00500         | <0.00500    | <0.00500             | <0.00500         | <0.00500         | <0.00500       | <0.00500    | <0.00500    |
| BH02@3-4'                                    | 06/17/22 | <0.0020                      | <0.0050         | <0.0050              | <0.010                | <0.0050             | <0.0050             | <0.0038             | <0.50           | <50             | <50             | <0.00500             | <0.00500           | <0.00500        | <0.00500         | <0.00500         | <0.00500         | <0.00500         | <0.00500    | <0.00500             | <0.00500         | <0.00500         | <0.00500       | <0.00500    | <0.00500    |
| BH02@13-14'                                  | 06/17/22 | <0.0020                      | <0.0050         | <0.0050              | <0.010                | <0.0050             | <0.0050             | <0.0038             | <0.50           | <50             | <50             | <0.00500             | <0.00500           | <0.00500        | <0.00500         | <0.00500         | <0.00500         | <0.00500         | <0.00500    | <0.00500             | <0.00500         | <0.00500         | <0.00500       | <0.00500    | <0.00500    |
| BH03@3-4'                                    | 06/17/22 | <0.0020                      | <0.0050         | <0.0050              | <0.010                | <0.0050             | <0.0050             | <0.0038             | <0.50           | <50             | <50             | <0.00500             | <0.00500           | <0.00500        | <0.00500         | <0.00500         | <0.00500         | <0.00500         | <0.00500    | <0.00500             | <0.00500         | <0.00500         | <0.00500       | <0.00500    | <0.00500    |
| BH03@12-13.5'                                | 06/17/22 | <0.0020                      | <0.0050         | <0.0050              | <0.010                | <0.0050             | <0.0050             | <0.0038             | <0.50           | <50             | <50             | <0.00500             | <0.00500           | <0.00500        | <0.00500         | <0.00500         | <0.00500         | <0.00500         | <0.00500    | <0.00500             | <0.00500         | <0.00500         | <0.00500       | <0.00500    | <0.00500    |
| BH04@3-4'                                    | 06/17/22 | <0.0020                      | <0.0050         | <0.0050              | <0.010                | <0.0050             | <0.0050             | <0.0038             | <0.50           | <50             | <50             | <0.00500             | <0.00500           | <0.00500        | <0.00500         | <0.00500         | <0.00500         | <0.00500         | <0.00500    | <0.00500             | <0.00500         | <0.00500         | <0.00500       | <0.00500    | <0.00500    |
| BH04@13-14'                                  | 06/17/22 | <0.0020                      | <0.0050         | <0.0050              | <0.010                | <0.0050             | <0.0050             | <0.0038             | <0.50           | <50             | <50             | <0.00500             | <0.00500           | <0.00500        | <0.00500         | <0.00500         | <0.00500         | <0.00500         | <0.00500    | <0.00500             | <0.00500         | <0.00500         | <0.00500       | <0.00500    | <0.00500    |
| BH05@3-4'                                    | 06/17/22 | <0.0020                      | <0.0050         | <0.0050              | <0.010                | <0.0050             | <0.0050             | <0.0038             | <0.50           | <50             | <50             | <0.00500             | <0.00500           | <0.00500        | <0.00500         | <0.00500         | <0.00500         | <0.00500         | <0.00500    | <0.00500             | <0.00500         | <0.00500         | <0.00500       | <0.00500    | <0.00500    |
| BH05@13-15'                                  | 06/17/22 | <0.0020                      | <0.0050         | <0.0050              | <0.010                | <0.0050             | <0.0050             | <0.0038             | <0.50           | <50             | <50             | <0.00500             | <0.00500           | <0.00500        | <0.00500         | <0.00500         | <0.00500         | <0.00500         | <0.00500    | <0.00500             | <0.00500         | <0.00500         | <0.00500       | <0.00500    | <0.00500    |
| SS01@4'                                      | 04/27/23 | <0.0020                      | <0.0050         | <0.0050              | <0.010                | <0.0050             | <0.0050             | <0.0038             | <0.50           | <50             | <50             | <0.00500             | <0.00500           | <0.00500        | <0.00500         | <0.00500         | <0.00500         | <0.00500         | <0.00500    | <0.00500             | <0.00500         | <0.00500         | <0.00500       | <0.00500    | <0.00500    |
| SS02@4'                                      | 04/27/23 | <0.0020                      | <0.0050         | <0.0050              | <0.010                | <0.0050             | <0.0050             | <0.0038             | <0.50           | <50             | <50             | <0.00500             | <0.00500           | 0.0119          | <0.00500         | 0.00905          | <0.00500         | 0.00677          | <0.00500    | 0.0147               | <0.00500         | <0.00500         | 0.0201         | <0.00500    | <0.00500    |
| SS03@4'                                      | 04/27/23 | <0.0020                      | <0.0050         | <0.0050              | <0.010                | <0.0050             | <0.0050             | <0.0038             | <0.50           | <50             | <50             | <0.00500             | <0.00500           | <0.00500        | <0.00500         | <0.00500         | <0.00500         | <0.00500         | <0.00500    | <0.00500             | <0.00500         | <0.00500         | <0.00500       | <0.00500    | <0.00500    |
| SS04@4'                                      | 04/27/23 | <0.0020                      | <0.0050         | <0.0050              | <0.010                | <0.0050             | <0.0050             | <0.0038             | <0.50           | <50             | <50             | <0.00500             | <0.00500           | <0.00500        | <0.00500         | <0.00500         | <0.00500         | <0.00500         | <0.00500    | <0.00500             | <0.00500         | <0.00500         | <0.00500       | <0.00500    | <0.00500    |
| FS01@5'                                      | 04/27/23 | <0.0020                      | <0.0050         | <0.0050              | <0.010                | <0.0050             | <0.0050             | <0.0038             | <0.50           | <50             | <50             | <0.00500             | <0.00500           | <0.00500        | <0.00500         | <0.00500         | <0.00500         | <0.00500         | <0.00500    | <0.00500             | <0.00500         | <0.00500         | <0.00500       | <0.00500    | <0.00500    |
| SS05@4'                                      | 05/18/23 | <0.0020                      | <0.0050         | <0.0050              | <0.010                | <0.0050             | <0.0050             | <0.0038             | <0.50           | <50             | <50             | <0.00500             | <0.00500           | <0.00500        | <0.00500         | <0.00500         | <0.00500         | <0.00500         | <0.00500    | <0.00500             | <0.00500         | <0.00500         | <0.00500       | <0.00500    | <0.00500    |

| Soil Sample ID               | Date     | pH      | SAR    | EC (mmhos/cm) | Boron (mg/L) |
|------------------------------|----------|---------|--------|---------------|--------------|
| Residential SSL <sup>2</sup> |          | 6 - 8.3 | <6     | <4mmhos/cm    | 2            |
| SS02@2.5'                    | 10/29/21 | 8.14    | 0.618  | 0.524         | 0.199        |
| SS04@2.5'                    | 10/29/21 | 7.91    | 0.334  | 0.659         | <0.198       |
| FS01@5'                      | 10/29/21 | 8.39    | 1.05   | 0.471         | <0.199       |
| FS02@5'                      | 10/29/21 | 8.52    | 3.43   | 0.559         | 0.318        |
| AST01@0.5'                   | 10/29/21 | 7.63    | 0.676  | 0.433         | <0.198       |
| SEP01-FL@3'                  | 10/29/21 | 7.94    | 0.253  | 0.368         | <0.200       |
| SEP01-DL@3'                  | 10/29/21 | 7.97    | 0.404  | 0.398         | <0.199       |
| BG01@3'                      | 02/28/22 | 7.78    | NA     | NA            | NA           |
| BG01@5'                      | 02/28/22 | 7.67    | NA     | NA            | NA           |
| BH01@9-10'                   | 06/17/22 | 8.04    | 0.563  | 0.773         | 0.0645       |
| BH01@12-14.5'                | 06/17/22 | 8.05    | 1.05   | 0.962         | 0.211        |
| BH02@3-4'                    | 06/17/22 | 8.45    | 0.0755 | 0.152         | 0.0487       |
| BH02@13-14'                  | 06/17/22 | 7.95    | 1.66   | 1.19          | 0.226        |
| BH03@3-4'                    | 06/17/22 | 8.18    | 0.152  | 0.362         | 0.0641       |
| BH03@12-13.5'                | 06/17/22 | 7.98    | 1.28   | 0.886         | 0.152        |
| BH04@3-4'                    | 06/17/22 | 8.25    | 0.0998 | 0.170         | 0.0722       |
| BH04@13-14'                  | 06/17/22 | 8.16    | 1.66   | 0.850         | 0.203        |
| BH05@3-4'                    | 06/17/22 | 8.51    | 0.448  | 0.286         | 0.326        |
| BH05@13-15'                  | 06/17/22 | 8.17    | 1.39   | 0.586         | 0.186        |
| BG02@3'                      | 10/04/22 | 8.79    | NA     | NA            | NA           |
| BG02@8'                      | 10/04/22 | 8.62    | NA     | NA            | NA           |
| BG03@3'                      | 10/04/22 | 8.84    | NA     | NA            | NA           |
| BG03@8'                      | 10/04/22 | 8.52    | NA     | NA            | NA           |
| BG04@3'                      | 10/04/22 | 9.04    | NA     | NA            | NA           |
| BG04@8'                      | 10/04/22 | 8.52    | NA     | NA            | NA           |
| BG05@3'                      | 10/04/22 | 8.75    | NA     | NA            | NA           |
| BG05@8'                      | 10/04/22 | 8.66    | NA     | NA            | NA           |
| BG06@3'                      | 10/04/22 | 8.80    | NA     | NA            | NA           |
| BG06@8'                      | 10/04/22 | 8.30    | NA     | NA            | NA           |
| SS01@4'                      | 04/27/23 | 7.88    | 0.196  | 0.190         | 0.120        |
| SS02@4'                      | 04/27/23 | 7.75    | 0.343  | 0.252         | 0.0485       |
| SS03@4'                      | 04/27/23 | 6.71    | 0.0782 | 0.135         | 0.0554       |
| SS04@4'                      | 04/27/23 | 7.66    | 0.0727 | 0.186         | 0.113        |
| FS01@5'                      | 04/27/23 | 7.85    | 0.0643 | 0.199         | 0.0234       |
| SS05@4'                      | 05/18/23 | 7.36    | 0.129  | 0.253         | 0.227        |

| Soil Sample ID | Date | Arsenic (mg/kg) | Barium (mg/kg) | Cadmium (mg/kg) | Chromium (VI) (mg/kg) | Copper (mg/kg) | Lead (mg/kg) | Nickel (mg/kg) | Selenium (mg/kg) | S |
|----------------|------|-----------------|----------------|-----------------|-----------------------|----------------|--------------|----------------|------------------|---|
|----------------|------|-----------------|----------------|-----------------|-----------------------|----------------|--------------|----------------|------------------|---|

## **FIGURES**



**Legend**

- Excavation Extent (Collected via Trimble GPS)
- ⊕ Soil Sample Location – Lab Analyzed (Collected via Trimble GPS)
- Assessment Location (Collected via Trimble GPS)

**Notes**

- 1) All locations are approximate unless otherwise noted.
- 2) Site Infrastructure has been removed; shown for illustrative purposes only.
- 3) Analytical results below laboratory detection limits or within compliance of ECMC Table 915-1 not shown.
- 4) Concentration in exceedance of ECMC table 915-1 soil standards indicated in RED.

GPS – Global Positioning System  
 mg/kg – Milligrams per kilogram  
 PID – Photoionization detector  
 PPM – Parts per million

0 ft. 10 ft. 20 ft.

Image Source: Google Earth; Google 2020

DATE: 05/17/2023  
 DESIGNED BY: JW  
 DRAWN BY: HM

**TASMAN** Tasman, Inc.  
 6855 W 119<sup>th</sup> Avenue  
 Broomfield, CO 80020

**Noble Energy, Inc. – DJ Basin**  
**Loloff 2, 3, B35-19 Facility**  
 SWSW, Section 26, Township 5 North, Range 64 West  
 Weld County, Colorado

Excavation Analytical  
 Results Map  
 ( 10/29/2021, 06/17/2022,  
 10/04/2022, 04/27/2023 &  
 05/18/2023 )

Figure 2

# **ATTACHMENT A**

## **LABORATORY ANALYTICAL DATA REPORT**

# Summit Scientific

---

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

October 12, 2022

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Loloff 2,3,B35-19

Work Order #2210046

Enclosed are the results of analyses for samples received by Summit Scientific on 10/04/22 17:18. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mikayla Axtell For Paul Shrewsbury

President



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

Project: Noble - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
10/12/22 10:10

**ANALYTICAL REPORT FOR SAMPLES**

| Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|-----------|---------------|--------|----------------|----------------|
| BG02@3'   | 2210046-01    | Soil   | 10/04/22 10:30 | 10/04/22 17:18 |
| BG02@8'   | 2210046-02    | Soil   | 10/04/22 10:35 | 10/04/22 17:18 |
| BG03@3'   | 2210046-03    | Soil   | 10/04/22 10:40 | 10/04/22 17:18 |
| BG03@8'   | 2210046-04    | Soil   | 10/04/22 10:45 | 10/04/22 17:18 |
| BG04@3'   | 2210046-05    | Soil   | 10/04/22 10:50 | 10/04/22 17:18 |
| BG04@8'   | 2210046-06    | Soil   | 10/04/22 10:55 | 10/04/22 17:18 |
| BG05@3'   | 2210046-07    | Soil   | 10/04/22 11:00 | 10/04/22 17:18 |
| BG05@8'   | 2210046-08    | Soil   | 10/04/22 11:05 | 10/04/22 17:18 |
| BG06@3'   | 2210046-09    | Soil   | 10/04/22 11:10 | 10/04/22 17:18 |
| BG06@8'   | 2210046-10    | Soil   | 10/04/22 11:15 | 10/04/22 17:18 |

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.*



S<sub>2</sub>

Sample Receipt Checklist

S2 Work Order# 2210046

Client: Noble Trusman Client Project ID: Loloff 2,3, B35-19

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

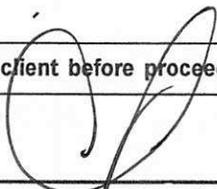
Matrix (Check all that apply) Air  Soil/Solid  Water  Other

Temp (°C) 8.2 Thermometer # 1

|                                                                                                                                                                                                                                                                                                       | Yes                                 | No                       | N/A                                 | Comments (if any) |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------|
| If samples require cooling, is the temperature < 6°C? <sup>(1)</sup><br><b>NOTE:</b> If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.                                                                                          | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | on ICE            |
| If custody seals are present, are they intact? <sup>(1)</sup>                                                                                                                                                                                                                                         | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |                   |
| Are samples due within 48 hours present?                                                                                                                                                                                                                                                              | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 48 hrs            |
| Are water samples with short hold times present?<br>Note the short hold analysis in the comments column<br>- pH, Nitrate/Nitrite, Ferrous Iron (Fe <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |                   |
| Is a chain-of-custody (COC) form present and filled out Completely? <sup>(1)</sup>                                                                                                                                                                                                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |                   |
| Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>                                                                                                                                                                                                              | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |                   |
| Were all samples received intact? <sup>(1)</sup>                                                                                                                                                                                                                                                      | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |                   |
| Was adequate sample volume provided? <sup>(1)</sup>                                                                                                                                                                                                                                                   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |                   |
| Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>                                                                                                                                                                                                                | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |                   |
| Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>                                                                                                                                                                                                                                  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |                   |
| For volatiles in water – is there headspace present? If yes, contact client and note in narrative.                                                                                                                                                                                                    | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |                   |
| Are samples preserved that require preservation (excluding cooling)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.                                                                                        | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |                   |
| If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> Record the pH in Comments.                                                                                                                                                                                                    | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |                   |
| If dissolved metals are requested, were samples field filtered?                                                                                                                                                                                                                                       | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |                   |

Additional Comments (if any):

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

  
Custodian Printed Name

10.4.22 21:30  
Date/Time



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

Project: Noble - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
10/12/22 10:10

**BG02@3'**  
**2210046-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **10/04/22 10:30**

| Analyte  | Result       | Reporting Limit | Units     | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|----------|--------------|-----------------|-----------|----------|---------|----------|----------|-----------|-------|
| Arsenic  | <b>1.51</b>  | 0.200           | mg/kg dry | 1        | BFJ0190 | 10/08/22 | 10/09/22 | EPA 6020B |       |
| Selenium | <b>0.481</b> | 0.260           | "         | "        | "       | "        | "        | "         |       |

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

Date Sampled: **10/04/22 10:30**

| Analyte  | Result      | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|----------|-------------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| % Solids | <b>97.8</b> |                 | %     | 1        | BFJ0200 | 10/10/22 | 10/12/22 | Calculation |       |

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **10/04/22 10:30**

| Analyte | Result      | Reporting Limit | Units    | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------|-------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| pH      | <b>8.79</b> |                 | pH Units | 1        | BFJ0158 | 10/07/22 | 10/09/22 | EPA 9045D |       |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
10/12/22 10:10

**BG02@8'**  
**2210046-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **10/04/22 10:35**

| Analyte  | Result | Reporting |           | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|----------|--------|-----------|-----------|----------|---------|----------|----------|-----------|-------|
|          |        | Limit     | Units     |          |         |          |          |           |       |
| Arsenic  | 3.23   | 0.200     | mg/kg dry | 1        | BFJ0190 | 10/08/22 | 10/09/22 | EPA 6020B |       |
| Selenium | 0.612  | 0.260     | "         | "        | "       | "        | "        | "         |       |

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

Date Sampled: **10/04/22 10:35**

| Analyte  | Result | Reporting |       | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|----------|--------|-----------|-------|----------|---------|----------|----------|-------------|-------|
|          |        | Limit     | Units |          |         |          |          |             |       |
| % Solids | 93.6   |           | %     | 1        | BFJ0200 | 10/10/22 | 10/12/22 | Calculation |       |

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **10/04/22 10:35**

| Analyte | Result | Reporting |          | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------|--------|-----------|----------|----------|---------|----------|----------|-----------|-------|
|         |        | Limit     | Units    |          |         |          |          |           |       |
| pH      | 8.62   |           | pH Units | 1        | BFJ0158 | 10/07/22 | 10/09/22 | EPA 9045D |       |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
10/12/22 10:10

**BG03@3'**  
**2210046-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **10/04/22 10:40**

| Analyte  | Result | Reporting |           | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|----------|--------|-----------|-----------|----------|---------|----------|----------|-----------|-------|
|          |        | Limit     | Units     |          |         |          |          |           |       |
| Arsenic  | 1.47   | 0.200     | mg/kg dry | 1        | BFJ0190 | 10/08/22 | 10/10/22 | EPA 6020B |       |
| Selenium | 0.486  | 0.260     | "         | "        | "       | "        | "        | "         |       |

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

Date Sampled: **10/04/22 10:40**

| Analyte  | Result | Reporting |       | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|----------|--------|-----------|-------|----------|---------|----------|----------|-------------|-------|
|          |        | Limit     | Units |          |         |          |          |             |       |
| % Solids | 97.7   |           | %     | 1        | BFJ0200 | 10/10/22 | 10/12/22 | Calculation |       |

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **10/04/22 10:40**

| Analyte | Result | Reporting |          | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------|--------|-----------|----------|----------|---------|----------|----------|-----------|-------|
|         |        | Limit     | Units    |          |         |          |          |           |       |
| pH      | 8.84   |           | pH Units | 1        | BFJ0158 | 10/07/22 | 10/09/22 | EPA 9045D |       |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
10/12/22 10:10

**BG03@8'**  
**2210046-04 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **10/04/22 10:45**

| Analyte  | Result       | Reporting |           | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|----------|--------------|-----------|-----------|----------|---------|----------|----------|-----------|-------|
|          |              | Limit     | Units     |          |         |          |          |           |       |
| Arsenic  | <b>3.48</b>  | 0.200     | mg/kg dry | 1        | BFJ0190 | 10/08/22 | 10/10/22 | EPA 6020B |       |
| Selenium | <b>0.535</b> | 0.260     | "         | "        | "       | "        | "        | "         |       |

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

Date Sampled: **10/04/22 10:45**

| Analyte  | Result      | Reporting |       | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|----------|-------------|-----------|-------|----------|---------|----------|----------|-------------|-------|
|          |             | Limit     | Units |          |         |          |          |             |       |
| % Solids | <b>91.7</b> |           | %     | 1        | BFJ0200 | 10/10/22 | 10/12/22 | Calculation |       |

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **10/04/22 10:45**

| Analyte | Result      | Reporting |          | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------|-------------|-----------|----------|----------|---------|----------|----------|-----------|-------|
|         |             | Limit     | Units    |          |         |          |          |           |       |
| pH      | <b>8.52</b> |           | pH Units | 1        | BFJ0158 | 10/07/22 | 10/09/22 | EPA 9045D |       |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
10/12/22 10:10

**BG04@3'**  
**2210046-05 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **10/04/22 10:50**

| Analyte  | Result       | Reporting |           | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|----------|--------------|-----------|-----------|----------|---------|----------|----------|-----------|-------|
|          |              | Limit     | Units     |          |         |          |          |           |       |
| Arsenic  | <b>1.06</b>  | 0.200     | mg/kg dry | 1        | BFJ0190 | 10/08/22 | 10/10/22 | EPA 6020B |       |
| Selenium | <b>0.387</b> | 0.260     | "         | "        | "       | "        | "        | "         |       |

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

Date Sampled: **10/04/22 10:50**

| Analyte  | Result      | Reporting |       | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|----------|-------------|-----------|-------|----------|---------|----------|----------|-------------|-------|
|          |             | Limit     | Units |          |         |          |          |             |       |
| % Solids | <b>98.3</b> |           | %     | 1        | BFJ0200 | 10/10/22 | 10/12/22 | Calculation |       |

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **10/04/22 10:50**

| Analyte | Result      | Reporting |          | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------|-------------|-----------|----------|----------|---------|----------|----------|-----------|-------|
|         |             | Limit     | Units    |          |         |          |          |           |       |
| pH      | <b>9.04</b> |           | pH Units | 1        | BFJ0158 | 10/07/22 | 10/09/22 | EPA 9045D |       |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
10/12/22 10:10

**BG04@8'**  
**2210046-06 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **10/04/22 10:55**

| Analyte  | Result | Reporting |           | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|----------|--------|-----------|-----------|----------|---------|----------|----------|-----------|-------|
|          |        | Limit     | Units     |          |         |          |          |           |       |
| Arsenic  | 2.57   | 0.200     | mg/kg dry | 1        | BFJ0190 | 10/08/22 | 10/10/22 | EPA 6020B |       |
| Selenium | 0.559  | 0.260     | "         | "        | "       | "        | "        | "         |       |

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

Date Sampled: **10/04/22 10:55**

| Analyte  | Result | Reporting |       | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|----------|--------|-----------|-------|----------|---------|----------|----------|-------------|-------|
|          |        | Limit     | Units |          |         |          |          |             |       |
| % Solids | 93.0   |           | %     | 1        | BFJ0200 | 10/10/22 | 10/12/22 | Calculation |       |

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **10/04/22 10:55**

| Analyte | Result | Reporting |          | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------|--------|-----------|----------|----------|---------|----------|----------|-----------|-------|
|         |        | Limit     | Units    |          |         |          |          |           |       |
| pH      | 8.52   |           | pH Units | 1        | BFJ0158 | 10/07/22 | 10/09/22 | EPA 9045D |       |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
10/12/22 10:10

**BG05@3'**  
**2210046-07 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **10/04/22 11:00**

| Analyte  | Result       | Reporting |           | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|----------|--------------|-----------|-----------|----------|---------|----------|----------|-----------|-------|
|          |              | Limit     | Units     |          |         |          |          |           |       |
| Arsenic  | <b>1.26</b>  | 0.200     | mg/kg dry | 1        | BFJ0190 | 10/08/22 | 10/10/22 | EPA 6020B |       |
| Selenium | <b>0.384</b> | 0.260     | "         | "        | "       | "        | "        | "         |       |

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

Date Sampled: **10/04/22 11:00**

| Analyte  | Result      | Reporting |       | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|----------|-------------|-----------|-------|----------|---------|----------|----------|-------------|-------|
|          |             | Limit     | Units |          |         |          |          |             |       |
| % Solids | <b>98.0</b> |           | %     | 1        | BFJ0200 | 10/10/22 | 10/12/22 | Calculation |       |

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **10/04/22 11:00**

| Analyte | Result      | Reporting |          | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------|-------------|-----------|----------|----------|---------|----------|----------|-----------|-------|
|         |             | Limit     | Units    |          |         |          |          |           |       |
| pH      | <b>8.75</b> |           | pH Units | 1        | BFJ0158 | 10/07/22 | 10/09/22 | EPA 9045D |       |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
10/12/22 10:10

**BG05@8'**  
**2210046-08 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **10/04/22 11:05**

| Analyte  | Result | Reporting |           | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|----------|--------|-----------|-----------|----------|---------|----------|----------|-----------|-------|
|          |        | Limit     | Units     |          |         |          |          |           |       |
| Arsenic  | 3.55   | 0.200     | mg/kg dry | 1        | BFJ0190 | 10/08/22 | 10/10/22 | EPA 6020B |       |
| Selenium | 0.568  | 0.260     | "         | "        | "       | "        | "        | "         |       |

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

Date Sampled: **10/04/22 11:05**

| Analyte  | Result | Reporting |       | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|----------|--------|-----------|-------|----------|---------|----------|----------|-------------|-------|
|          |        | Limit     | Units |          |         |          |          |             |       |
| % Solids | 95.7   |           | %     | 1        | BFJ0200 | 10/10/22 | 10/12/22 | Calculation |       |

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **10/04/22 11:05**

| Analyte | Result | Reporting |          | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------|--------|-----------|----------|----------|---------|----------|----------|-----------|-------|
|         |        | Limit     | Units    |          |         |          |          |           |       |
| pH      | 8.66   |           | pH Units | 1        | BFJ0158 | 10/07/22 | 10/09/22 | EPA 9045D |       |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
10/12/22 10:10

**BG06@3'**  
**2210046-09 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **10/04/22 11:10**

| Analyte  | Result       | Reporting |           | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|----------|--------------|-----------|-----------|----------|---------|----------|----------|-----------|-------|
|          |              | Limit     | Units     |          |         |          |          |           |       |
| Arsenic  | <b>1.38</b>  | 0.200     | mg/kg dry | 1        | BFJ0190 | 10/08/22 | 10/10/22 | EPA 6020B |       |
| Selenium | <b>0.502</b> | 0.260     | "         | "        | "       | "        | "        | "         |       |

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

Date Sampled: **10/04/22 11:10**

| Analyte  | Result      | Reporting |       | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|----------|-------------|-----------|-------|----------|---------|----------|----------|-------------|-------|
|          |             | Limit     | Units |          |         |          |          |             |       |
| % Solids | <b>97.7</b> |           | %     | 1        | BFJ0200 | 10/10/22 | 10/12/22 | Calculation |       |

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **10/04/22 11:10**

| Analyte | Result      | Reporting |          | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------|-------------|-----------|----------|----------|---------|----------|----------|-----------|-------|
|         |             | Limit     | Units    |          |         |          |          |           |       |
| pH      | <b>8.80</b> |           | pH Units | 1        | BFJ0158 | 10/07/22 | 10/09/22 | EPA 9045D |       |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
10/12/22 10:10

**BG06@8'**  
**2210046-10 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **10/04/22 11:15**

| Analyte  | Result       | Reporting |           | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|----------|--------------|-----------|-----------|----------|---------|----------|----------|-----------|-------|
|          |              | Limit     | Units     |          |         |          |          |           |       |
| Arsenic  | <b>3.14</b>  | 0.200     | mg/kg dry | 1        | BFJ0190 | 10/08/22 | 10/10/22 | EPA 6020B |       |
| Selenium | <b>0.584</b> | 0.260     | "         | "        | "       | "        | "        | "         |       |

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

Date Sampled: **10/04/22 11:15**

| Analyte  | Result      | Reporting |       | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|----------|-------------|-----------|-------|----------|---------|----------|----------|-------------|-------|
|          |             | Limit     | Units |          |         |          |          |             |       |
| % Solids | <b>92.4</b> |           | %     | 1        | BFJ0200 | 10/10/22 | 10/12/22 | Calculation |       |

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **10/04/22 11:15**

| Analyte | Result      | Reporting |          | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------|-------------|-----------|----------|----------|---------|----------|----------|-----------|-------|
|         |             | Limit     | Units    |          |         |          |          |           |       |
| pH      | <b>8.30</b> |           | pH Units | 1        | BFJ0158 | 10/07/22 | 10/09/22 | EPA 9045D |       |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
10/12/22 10:10

**Total Metals by EPA 6020B - Quality Control**

**Summit Scientific**

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

**Batch BFJ0190 - EPA 3050B**

**Blank (BFJ0190-BLK1)**

Prepared: 10/08/22 Analyzed: 10/09/22

|          |    |       |           |  |  |  |  |  |  |  |
|----------|----|-------|-----------|--|--|--|--|--|--|--|
| Arsenic  | ND | 0.200 | mg/kg wet |  |  |  |  |  |  |  |
| Selenium | ND | 0.260 | "         |  |  |  |  |  |  |  |

**LCS (BFJ0190-BS1)**

Prepared: 10/08/22 Analyzed: 10/09/22

|          |      |       |           |      |     |        |  |  |  |  |
|----------|------|-------|-----------|------|-----|--------|--|--|--|--|
| Arsenic  | 41.3 | 0.200 | mg/kg wet | 40.0 | 103 | 80-120 |  |  |  |  |
| Selenium | 4.07 | 0.260 | "         | 4.00 | 102 | 80-120 |  |  |  |  |

**Duplicate (BFJ0190-DUP1)**

Source: 2210046-01

Prepared: 10/08/22 Analyzed: 10/09/22

|          |       |       |           |  |       |  |  |      |    |  |
|----------|-------|-------|-----------|--|-------|--|--|------|----|--|
| Arsenic  | 1.57  | 0.200 | mg/kg dry |  | 1.51  |  |  | 3.62 | 20 |  |
| Selenium | 0.443 | 0.260 | "         |  | 0.481 |  |  | 8.18 | 20 |  |

**Matrix Spike (BFJ0190-MS1)**

Source: 2210046-01

Prepared: 10/08/22 Analyzed: 10/09/22

|          |      |       |           |      |       |      |        |  |  |  |
|----------|------|-------|-----------|------|-------|------|--------|--|--|--|
| Arsenic  | 41.2 | 0.200 | mg/kg dry | 40.9 | 1.51  | 97.2 | 75-125 |  |  |  |
| Selenium | 4.23 | 0.260 | "         | 4.09 | 0.481 | 91.6 | 75-125 |  |  |  |

**Matrix Spike Dup (BFJ0190-MSD1)**

Source: 2210046-01

Prepared: 10/08/22 Analyzed: 10/09/22

|          |      |       |           |      |       |      |        |       |    |  |
|----------|------|-------|-----------|------|-------|------|--------|-------|----|--|
| Arsenic  | 41.9 | 0.200 | mg/kg dry | 40.9 | 1.51  | 98.7 | 75-125 | 1.50  | 25 |  |
| Selenium | 4.22 | 0.260 | "         | 4.09 | 0.481 | 91.4 | 75-125 | 0.211 | 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 - Loloff 2,3,B35-19

Project Number: [none]  
 Project Manager: Jacob Whritenour

**Reported:**  
 10/12/22 10:10

**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 BFJ0200 - General Preparation**

**Duplicate (BFJ0200-DUP1)**

**Source: 2210045-03**

Prepared: 10/10/22 Analyzed: 10/12/22

|          |      |  |   |  |      |  |  |      |    |  |
|----------|------|--|---|--|------|--|--|------|----|--|
| % Solids | 81.9 |  | % |  | 84.9 |  |  | 3.67 | 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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
10/12/22 10:10

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control**

**Summit Scientific**

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

**Batch BFJ0158 - General Preparation**

**LCS (BFJ0158-BS1)**

Prepared: 10/07/22 Analyzed: 10/09/22

|    |      |          |      |      |        |
|----|------|----------|------|------|--------|
| pH | 9.04 | pH Units | 9.18 | 98.5 | 95-105 |
|----|------|----------|------|------|--------|

**Duplicate (BFJ0158-DUP1)**

Source: 2210016-01

Prepared: 10/07/22 Analyzed: 10/09/22

|    |      |          |      |       |    |
|----|------|----------|------|-------|----|
| pH | 7.19 | pH Units | 7.15 | 0.558 | 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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
10/12/22 10:10

### Notes and Definitions

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

# Summit Scientific

---

4653 Table Mountain Drive, Golden, Colorado 80401

303.277.9310

May 04, 2023

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Lolofifi 2,3,B35-19

Work Order # 2304605

Enclosed are the results of analyses for samples received by Summit Scientific on 04/27/23 17:42. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Scott Sheely For Paul Shrewsbury

President



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

Project: Noble - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**ANALYTICAL REPORT FOR SAMPLES**

| Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|-----------|---------------|--------|----------------|----------------|
| SS01@4'   | 2304605-01    | Soil   | 04/27/23 10:40 | 04/27/23 17:42 |
| SS02@4'   | 2304605-02    | Soil   | 04/27/23 10:42 | 04/27/23 17:42 |
| SS03@4'   | 2304605-03    | Soil   | 04/27/23 10:44 | 04/27/23 17:42 |
| SS04@4'   | 2304605-04    | Soil   | 04/27/23 10:48 | 04/27/23 17:42 |
| FS01@5'   | 2304605-05    | Soil   | 04/27/23 10:50 | 04/27/23 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.*

# SUMMIT SCIENTIFIC

4653 Table Mountain Drive  
Golden, CO 80403  
303-277-9310

|         |             |
|---------|-------------|
| Lab ID  | Page 1 of 1 |
| 2304605 |             |

|                                      |  |                                             |                                                      |
|--------------------------------------|--|---------------------------------------------|------------------------------------------------------|
|                                      |  | <b>Send Data To:</b>                        | <b>Send Invoice To:</b>                              |
| Client: Noble/Tasman                 |  | Project Manager: Jake Whritenour            | Company: <i>Chevron</i>                              |
| Address: 6855 W. 119th Ave.          |  | E-Mail: Jwhritenour@tasman-geo.com          | Project Name/Location: <i>Loloff 2,3, B35-19 FAC</i> |
| City/State/Zip: Broomfield/CO/ 80020 |  |                                             | AFE#:                                                |
| Phone: 602-881-5716                  |  | Project Name: <i>Loloff 2,3, B35-19 FAC</i> | PO/Billing Codes:                                    |
| Sampler Name: Dennis Gray            |  | Project Number:                             | Contact: <i>Jacob Rulle</i>                          |

| ID | Sample Description | Date Sampled | Time Sampled | # of containers | Preservative |      |      |       | Matrix |      |                | Analysis Requested |              |           |           |           |             |             | Special Instructions |                                |  |
|----|--------------------|--------------|--------------|-----------------|--------------|------|------|-------|--------|------|----------------|--------------------|--------------|-----------|-----------|-----------|-------------|-------------|----------------------|--------------------------------|--|
|    |                    |              |              |                 | HCl          | HNO3 | None | Other | Water  | Soil | Air-Canister # | Other              | Metals - 915 | VOC - 915 | TPH - 915 | PAH - 915 | SAR, EC, pH | Boron - HWS |                      | HOLD                           |  |
| 1  | SS01@4'            | 4-27-23      | 1040         | 2               |              |      | X    |       |        | X    |                |                    | X            | X         | X         | X         | X           | X           |                      | SAR, EC, pH by saturated paste |  |
| 2  | SS02@4'            |              | 1042         |                 |              |      |      |       |        |      |                |                    |              |           |           |           |             |             |                      |                                |  |
| 3  | SS03@4'            |              | 1044         |                 |              |      |      |       |        |      |                |                    |              |           |           |           |             |             |                      |                                |  |
| 4  | SS04@4'            |              | 1048         |                 |              |      |      |       |        |      |                |                    |              |           |           |           |             |             |                      |                                |  |
| 5  | Fs01@5'            |              | 1050         |                 |              |      |      |       |        |      |                |                    |              |           |           |           |             |             |                      |                                |  |
| 6  |                    |              |              |                 |              |      |      |       |        |      |                |                    |              |           |           |           |             |             |                      |                                |  |
| 7  |                    |              |              |                 |              |      |      |       |        |      |                |                    |              |           |           |           |             |             |                      |                                |  |
| 8  |                    |              |              |                 |              |      |      |       |        |      |                |                    |              |           |           |           |             |             |                      |                                |  |
| 9  |                    |              |              |                 |              |      |      |       |        |      |                |                    |              |           |           |           |             |             |                      |                                |  |
| 10 |                    |              |              |                 |              |      |      |       |        |      |                |                    |              |           |           |           |             |             |                      |                                |  |
| 11 |                    |              |              |                 |              |      |      |       |        |      |                |                    |              |           |           |           |             |             |                      |                                |  |
| 12 |                    |              |              |                 |              |      |      |       |        |      |                |                    |              |           |           |           |             |             |                      |                                |  |
| 13 |                    |              |              |                 |              |      |      |       |        |      |                |                    |              |           |           |           |             |             |                      |                                |  |
| 14 |                    |              |              |                 |              |      |      |       |        |      |                |                    |              |           |           |           |             |             |                      |                                |  |
| 15 |                    |              |              |                 |              |      |      |       |        |      |                |                    |              |           |           |           |             |             |                      |                                |  |

|                                            |                               |                                     |                               |                    |             |             |        |
|--------------------------------------------|-------------------------------|-------------------------------------|-------------------------------|--------------------|-------------|-------------|--------|
| Relinquished by:<br><i>Dennis Gray</i>     | Date/Time:<br>4-27-23<br>1515 | Received by: <b>Tasman Lock Box</b> | Date/Time:<br>4-27-23<br>1515 | TAT Business Days  |             | Field DO    | Notes: |
|                                            |                               |                                     |                               | Same Day           | X           | Field EC    |        |
| Relinquished by:<br><i>Tasman Lock Box</i> | Date/Time:<br>4-27-23<br>1742 | Received by:<br><i>[Signature]</i>  | Date/Time:<br>4-27-23<br>1742 | 1 Day              |             | Field ORP   |        |
|                                            |                               |                                     |                               | 2 Days             |             | Field pH    |        |
| Relinquished by:                           | Date/Time:                    | Received by:                        | Date/Time:                    | 3 Days             |             | Field Temp. |        |
|                                            |                               |                                     |                               | Standard           |             | Field Turb. |        |
| Temperature Upon Receipt: <u>9.8</u>       |                               | Corrected Temperature: <u>9</u>     |                               | IR gun #: <u>1</u> | HNO3 lot #: |             |        |

S<sub>2</sub>

Sample Receipt Checklist

S2 Work Order# 2304605

Client: Abdelrasman Client Project ID: Loloff 2,3, B35-19 FAC

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

Matrix (Check all that apply) Air  Soil/Solid  Water  Other

Temp (°C)  Thermometer #

|                                                                                                                                                                                                                                                                                                       | Yes                                 | No                                  | N/A                                 | Comments (if any) |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------|
| If samples require cooling, is the temperature < 6°C? <sup>(1)</sup><br><b>NOTE:</b> If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.                                                                                          | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <u>on ice</u>     |
| If custody seals are present, are they intact? <sup>(1)</sup>                                                                                                                                                                                                                                         | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |                   |
| Are samples due within 48 hours present?                                                                                                                                                                                                                                                              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <u>Sameday</u>    |
| Are water samples with short hold times present?<br>Note the short hold analysis in the comments column<br>- pH, Nitrate/Nitrite, Ferrous Iron (Fe <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                   |
| Is a chain-of-custody (COC) form present and filled out Completely? <sup>(1)</sup>                                                                                                                                                                                                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |                   |
| Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>                                                                                                                                                                                                              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |                   |
| Were all samples received intact? <sup>(1)</sup>                                                                                                                                                                                                                                                      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |                   |
| Was adequate sample volume provided? <sup>(1)</sup>                                                                                                                                                                                                                                                   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |                   |
| Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>                                                                                                                                                                                                                | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |                   |
| Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>                                                                                                                                                                                                                                  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |                   |
| For volatiles in water – is there headspace present? If yes, contact client and note in narrative.                                                                                                                                                                                                    | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                   |
| Are samples preserved that require preservation (excluding cooling)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.                                                                                        | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                   |
| If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> Record the pH in Comments.                                                                                                                                                                                                    | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                   |
| If dissolved metals are requested, were samples field filtered?                                                                                                                                                                                                                                       | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                   |
| Additional Comments (if any):                                                                                                                                                                                                                                                                         |                                     |                                     |                                     |                   |
|                                                                                                                                                                                                                                                                                                       |                                     |                                     |                                     |                   |

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

  
Custodian Printed Name

4:27:23  
Date/Time



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

Project: Noble - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**SS01@4'**  
**2304605-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/27/23 10:40**

| Analyte                     | Result | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------|-----|-------|----------|---------|----------|----------|-----------|-------|
|                             |        | Limit     | MDL |       |          |         |          |          |           |       |
| Benzene                     | ND     | 0.0020    |     | mg/kg | 1        | BGD0948 | 04/27/23 | 04/27/23 | EPA 8260B |       |
| Toluene                     | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND     | 0.010     |     | "     | "        | "       | "        | "        | "         |       |
| 1,2,4-Trimethylbenzene      | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| 1,3,5-Trimethylbenzene      | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| Naphthalene                 | ND     | 0.0038    |     | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND     | 0.50      |     | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/27/23 10:40**

| Analyte                          | Result | Reporting |     | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|-----|--------|----------|-------|----------|----------|--------|-------|
|                                  |        | Limit     | MDL |        |          |       |          |          |        |       |
| Surrogate: 1,2-Dichloroethane-d4 |        | 108 %     |     | 50-150 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 97.9 %    |     | 50-150 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 103 %     |     | 50-150 |          | "     | "        | "        | "      |       |

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/27/23 10:40**

| Analyte       | Result | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------------|--------|-----------|-----|-------|----------|---------|----------|----------|-----------|-------|
|               |        | Limit     | MDL |       |          |         |          |          |           |       |
| C10-C28 (DRO) | ND     | 50        |     | mg/kg | 1        | BGD0949 | 04/27/23 | 04/27/23 | EPA 8015M |       |
| C28-C36 (ORO) | ND     | 50        |     | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/27/23 10:40**

| Analyte                | Result | Reporting |     | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|-----|--------|----------|-------|----------|----------|--------|-------|
|                        |        | Limit     | MDL |        |          |       |          |          |        |       |
| Surrogate: o-Terphenyl |        | 130 %     |     | 30-150 |          | "     | "        | "        | "      |       |

**PAH by EPA Method 8270D SIM**

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**SS01@4'**  
**2304605-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/27/23 10:40**

| Analyte                  | Result | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method        | Notes |
|--------------------------|--------|-----------|-----|-------|----------|---------|----------|----------|---------------|-------|
|                          |        | Limit     | MDL |       |          |         |          |          |               |       |
| Acenaphthene             | ND     | 0.00500   |     | mg/kg | 1        | BGD0950 | 04/28/23 | 05/01/23 | EPA 8270D SIM |       |
| Anthracene               | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| Benzo (a) anthracene     | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| Benzo (a) pyrene         | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| Benzo (b) fluoranthene   | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| Benzo (k) fluoranthene   | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| Chrysene                 | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| Dibenz (a,h) anthracene  | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| Fluoranthene             | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| Fluorene                 | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| Indeno (1,2,3-cd) pyrene | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| Pyrene                   | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| 1-Methylnaphthalene      | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| 2-Methylnaphthalene      | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |

Date Sampled: **04/27/23 10:40**

| Analyte                            | Result | Reporting |     | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------------------|--------|-----------|-----|--------|----------|-------|----------|----------|--------|-------|
|                                    |        | Limit     | MDL |        |          |       |          |          |        |       |
| Surrogate: 2-Methylnaphthalene-d10 |        | 43.9 %    |     | 40-150 |          | "     | "        | "        | "      | "     |
| Surrogate: Fluoranthene-d10        |        | 42.9 %    |     | 40-150 |          | "     | "        | "        | "      | "     |

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/27/23 10:40**

| Analyte      | Result       | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|--------------|--------------|-----------|-----|-------|----------|---------|----------|----------|-----------|-------|
|              |              | Limit     | MDL |       |          |         |          |          |           |       |
| <b>Boron</b> | <b>0.120</b> | 0.0100    |     | mg/L  | 1        | BGD0988 | 04/29/23 | 04/30/23 | EPA 6020B |       |

**Total Metals by EPA 6020B**

Date Sampled: **04/27/23 10:40**

| Analyte | Result | Reporting |     | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|-----------|-----|-------|----------|-------|----------|----------|--------|-------|
|         |        | Limit     | MDL |       |          |       |          |          |        |       |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**SS01@4'**  
**2304605-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

| Analyte  | Result | MDL    | Units     | Dilution | Batch   | Prepared | Analyzed | Method    |
|----------|--------|--------|-----------|----------|---------|----------|----------|-----------|
| Arsenic  | 1.43   | 0.213  | mg/kg dry | 1        | BGD0940 | 04/27/23 | 04/29/23 | EPA 6020B |
| Barium   | 48.8   | 0.425  | "         | "        | "       | "        | "        | "         |
| Cadmium  | ND     | 0.213  | "         | "        | "       | "        | "        | "         |
| Copper   | 2.90   | 0.425  | "         | "        | "       | "        | "        | "         |
| Lead     | 4.24   | 0.213  | "         | "        | "       | "        | "        | "         |
| Nickel   | 3.16   | 0.425  | "         | "        | "       | "        | "        | "         |
| Selenium | ND     | 0.260  | 0.175     | "        | "       | "        | "        | "         |
| Silver   | ND     | 0.0213 | "         | "        | "       | "        | "        | "         |
| Zinc     | 11.5   | 0.425  | "         | "        | "       | "        | "        | "         |

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/27/23 10:40**

| Analyte              | Result | Reporting Limit | MDL | Units     | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|----------------------|--------|-----------------|-----|-----------|----------|---------|----------|----------|-----------|-------|
| Chromium, Hexavalent | ND     | 0.30            |     | mg/kg dry | 1        | BGD0969 | 04/28/23 | 04/28/23 | EPA 7196A |       |

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **04/27/23 10:40**

| Analyte   | Result | Reporting Limit | MDL | Units    | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------|--------|-----------------|-----|----------|----------|---------|----------|----------|-----------|-------|
| Calcium   | 36.7   | 0.0532          |     | mg/L dry | 1        | BGD0944 | 04/27/23 | 05/02/23 | EPA 6020B |       |
| Magnesium | 5.29   | 0.0532          |     | "        | "        | "       | "        | "        | "         |       |
| Sodium    | 4.80   | 0.0532          |     | "        | "        | "       | "        | "        | "         |       |

**Calculated Analysis**

Date Sampled: **04/27/23 10:40**

| Analyte                 | Result | Reporting Limit | MDL | Units | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|-------------------------|--------|-----------------|-----|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.196  | 0.00100         |     | units | 1        | BGE0062 | 05/02/23 | 05/02/23 | Calculation |       |

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

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**SS01@4'**  
**2304605-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/27/23 10:40**

| Analyte  | Result | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|----------|--------|-----------|-----|-------|----------|---------|----------|----------|-------------|-------|
|          |        | Limit     | MDL |       |          |         |          |          |             |       |
| % Solids | 94.1   |           |     | %     | 1        | BGD1018 | 04/30/23 | 05/01/23 | Calculation |       |

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/27/23 10:40**

| Analyte                   | Result | Reporting |     | Units    | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------------------------|--------|-----------|-----|----------|----------|---------|----------|----------|-----------|-------|
|                           |        | Limit     | MDL |          |          |         |          |          |           |       |
| Specific Conductance (EC) | 0.190  | 0.0100    |     | mmhos/cm | 1        | BGD1005 | 04/30/23 | 04/30/23 | EPA 120.1 |       |

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **04/27/23 10:40**

| Analyte | Result | Reporting |     | Units    | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------|--------|-----------|-----|----------|----------|---------|----------|----------|-----------|-------|
|         |        | Limit     | MDL |          |          |         |          |          |           |       |
| pH      | 7.88   |           |     | pH Units | 1        | BGD1006 | 04/30/23 | 04/30/23 | EPA 9045D |       |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**SS02@4'**  
**2304605-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/27/23 10:42**

| Analyte                     | Result | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------|-----|-------|----------|---------|----------|----------|-----------|-------|
|                             |        | Limit     | MDL |       |          |         |          |          |           |       |
| Benzene                     | ND     | 0.0020    |     | mg/kg | 1        | BGD0948 | 04/27/23 | 04/27/23 | EPA 8260B |       |
| Toluene                     | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND     | 0.010     |     | "     | "        | "       | "        | "        | "         |       |
| 1,2,4-Trimethylbenzene      | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| 1,3,5-Trimethylbenzene      | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| Naphthalene                 | ND     | 0.0038    |     | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND     | 0.50      |     | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/27/23 10:42**

| Analyte                          | Result | Reporting |     | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|-----|--------|----------|-------|----------|----------|--------|-------|
|                                  |        | Limit     | MDL |        |          |       |          |          |        |       |
| Surrogate: 1,2-Dichloroethane-d4 |        | 113 %     |     | 50-150 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 100 %     |     | 50-150 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 104 %     |     | 50-150 |          | "     | "        | "        | "      |       |

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/27/23 10:42**

| Analyte       | Result | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------------|--------|-----------|-----|-------|----------|---------|----------|----------|-----------|-------|
|               |        | Limit     | MDL |       |          |         |          |          |           |       |
| C10-C28 (DRO) | ND     | 50        |     | mg/kg | 1        | BGD0949 | 04/27/23 | 04/27/23 | EPA 8015M |       |
| C28-C36 (ORO) | ND     | 50        |     | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/27/23 10:42**

| Analyte                | Result | Reporting |     | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|-----|--------|----------|-------|----------|----------|--------|-------|
|                        |        | Limit     | MDL |        |          |       |          |          |        |       |
| Surrogate: o-Terphenyl |        | 139 %     |     | 30-150 |          | "     | "        | "        | "      |       |

**PAH by EPA Method 8270D SIM**

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**SS02@4'**  
**2304605-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/27/23 10:42**

| Analyte                       | Result         | Reporting Limit | MDL | Units | Dilution | Batch   | Prepared | Analyzed | Method        | Notes |
|-------------------------------|----------------|-----------------|-----|-------|----------|---------|----------|----------|---------------|-------|
| Acenaphthene                  | ND             | 0.00500         |     | mg/kg | 1        | BGD0950 | 04/28/23 | 05/01/23 | EPA 8270D SIM |       |
| Anthracene                    | ND             | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| <b>Benzo (a) anthracene</b>   | <b>0.0119</b>  | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Benzo (a) pyrene              | ND             | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| <b>Benzo (b) fluoranthene</b> | <b>0.00905</b> | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Benzo (k) fluoranthene        | ND             | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| <b>Chrysene</b>               | <b>0.00677</b> | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Dibenz (a,h) anthracene       | ND             | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| <b>Fluoranthene</b>           | <b>0.0147</b>  | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Fluorene                      | ND             | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Indeno (1,2,3-cd) pyrene      | ND             | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| <b>Pyrene</b>                 | <b>0.0201</b>  | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| 1-Methylnaphthalene           | ND             | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| 2-Methylnaphthalene           | ND             | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |

Date Sampled: **04/27/23 10:42**

| Analyte                            | Result | Reporting Limit | MDL | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------------------|--------|-----------------|-----|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 2-Methylnaphthalene-d10 |        | 73.7 %          |     | 40-150 |          | "     | "        | "        | "      | "     |
| Surrogate: Fluoranthene-d10        |        | 66.0 %          |     | 40-150 |          | "     | "        | "        | "      | "     |

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/27/23 10:42**

| Analyte      | Result        | Reporting Limit | MDL | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|--------------|---------------|-----------------|-----|-------|----------|---------|----------|----------|-----------|-------|
| <b>Boron</b> | <b>0.0485</b> | 0.0100          |     | mg/L  | 1        | BGD0988 | 04/29/23 | 04/30/23 | EPA 6020B |       |

**Total Metals by EPA 6020B**

Date Sampled: **04/27/23 10:42**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|-----------------|-----|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|-----------------|-----|-------|----------|-------|----------|----------|--------|-------|

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**SS02@4'**  
**2304605-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

| Analyte  | Result | MDL    | Units     | Dilution | Batch   | Prepared | Analyzed | Method    |
|----------|--------|--------|-----------|----------|---------|----------|----------|-----------|
| Arsenic  | 1.73   | 0.222  | mg/kg dry | 1        | BGD0940 | 04/27/23 | 04/29/23 | EPA 6020B |
| Barium   | 54.2   | 0.443  | "         | "        | "       | "        | "        | "         |
| Cadmium  | ND     | 0.222  | "         | "        | "       | "        | "        | "         |
| Copper   | 3.47   | 0.443  | "         | "        | "       | "        | "        | "         |
| Lead     | ND     | 0.222  | "         | "        | "       | "        | "        | "         |
| Nickel   | 3.82   | 0.443  | "         | "        | "       | "        | "        | "         |
| Selenium | ND     | 0.260  | 0.175     | "        | "       | "        | "        | "         |
| Silver   | ND     | 0.0222 | "         | "        | "       | "        | "        | "         |
| Zinc     | 13.8   | 0.443  | "         | "        | "       | "        | "        | "         |

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/27/23 10:42**

| Analyte              | Result | Reporting Limit | MDL | Units     | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|----------------------|--------|-----------------|-----|-----------|----------|---------|----------|----------|-----------|-------|
| Chromium, Hexavalent | ND     | 0.30            |     | mg/kg dry | 1        | BGD0969 | 04/28/23 | 04/28/23 | EPA 7196A |       |

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **04/27/23 10:42**

| Analyte   | Result | Reporting Limit | MDL | Units    | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------|--------|-----------------|-----|----------|----------|---------|----------|----------|-----------|-------|
| Calcium   | 28.6   | 0.0554          |     | mg/L dry | 1        | BGD0944 | 04/27/23 | 05/02/23 | EPA 6020B |       |
| Magnesium | 7.37   | 0.0554          |     | "        | "        | "       | "        | "        | "         |       |
| Sodium    | 7.96   | 0.0554          |     | "        | "        | "       | "        | "        | "         |       |

**Calculated Analysis**

Date Sampled: **04/27/23 10:42**

| Analyte                 | Result | Reporting Limit | MDL | Units | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|-------------------------|--------|-----------------|-----|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.343  | 0.00100         |     | units | 1        | BGE0062 | 05/02/23 | 05/02/23 | Calculation |       |

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

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**SS02@4'**  
**2304605-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/27/23 10:42**

| Analyte  | Result      | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|----------|-------------|-----------|-----|-------|----------|---------|----------|----------|-------------|-------|
|          |             | Limit     | MDL |       |          |         |          |          |             |       |
| % Solids | <b>90.2</b> |           |     | %     | 1        | BGD1018 | 04/30/23 | 05/01/23 | Calculation |       |

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/27/23 10:42**

| Analyte                   | Result       | Reporting |     | Units    | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------------------------|--------------|-----------|-----|----------|----------|---------|----------|----------|-----------|-------|
|                           |              | Limit     | MDL |          |          |         |          |          |           |       |
| Specific Conductance (EC) | <b>0.252</b> | 0.0100    |     | mmhos/cm | 1        | BGD1005 | 04/30/23 | 04/30/23 | EPA 120.1 |       |

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **04/27/23 10:42**

| Analyte | Result      | Reporting |     | Units    | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------|-------------|-----------|-----|----------|----------|---------|----------|----------|-----------|-------|
|         |             | Limit     | MDL |          |          |         |          |          |           |       |
| pH      | <b>7.75</b> |           |     | pH Units | 1        | BGD1006 | 04/30/23 | 04/30/23 | EPA 9045D |       |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**SS03@4'**  
**2304605-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/27/23 10:44**

| Analyte                     | Result | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------|-----|-------|----------|---------|----------|----------|-----------|-------|
|                             |        | Limit     | MDL |       |          |         |          |          |           |       |
| Benzene                     | ND     | 0.0020    |     | mg/kg | 1        | BGD0948 | 04/27/23 | 04/27/23 | EPA 8260B |       |
| Toluene                     | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND     | 0.010     |     | "     | "        | "       | "        | "        | "         |       |
| 1,2,4-Trimethylbenzene      | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| 1,3,5-Trimethylbenzene      | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| Naphthalene                 | ND     | 0.0038    |     | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND     | 0.50      |     | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/27/23 10:44**

| Analyte                          | Result | Reporting |     | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|-----|--------|----------|-------|----------|----------|--------|-------|
|                                  |        | Limit     | MDL |        |          |       |          |          |        |       |
| Surrogate: 1,2-Dichloroethane-d4 |        | 117 %     |     | 50-150 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 100 %     |     | 50-150 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 101 %     |     | 50-150 |          | "     | "        | "        | "      |       |

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/27/23 10:44**

| Analyte       | Result | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------------|--------|-----------|-----|-------|----------|---------|----------|----------|-----------|-------|
|               |        | Limit     | MDL |       |          |         |          |          |           |       |
| C10-C28 (DRO) | ND     | 50        |     | mg/kg | 1        | BGD0949 | 04/27/23 | 04/27/23 | EPA 8015M |       |
| C28-C36 (ORO) | ND     | 50        |     | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/27/23 10:44**

| Analyte                | Result | Reporting |     | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|-----|--------|----------|-------|----------|----------|--------|-------|
|                        |        | Limit     | MDL |        |          |       |          |          |        |       |
| Surrogate: o-Terphenyl |        | 94.4 %    |     | 30-150 |          | "     | "        | "        | "      |       |

**PAH by EPA Method 8270D SIM**

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**SS03@4'**  
**2304605-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/27/23 10:44**

| Analyte                  | Result | Reporting Limit | MDL | Units | Dilution | Batch   | Prepared | Analyzed | Method        | Notes |
|--------------------------|--------|-----------------|-----|-------|----------|---------|----------|----------|---------------|-------|
| Acenaphthene             | ND     | 0.00500         |     | mg/kg | 1        | BGD0950 | 04/28/23 | 05/01/23 | EPA 8270D SIM |       |
| Anthracene               | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Benzo (a) anthracene     | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Benzo (a) pyrene         | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Benzo (b) fluoranthene   | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Benzo (k) fluoranthene   | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Chrysene                 | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Dibenz (a,h) anthracene  | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Fluoranthene             | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Fluorene                 | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Indeno (1,2,3-cd) pyrene | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Pyrene                   | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| 1-Methylnaphthalene      | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| 2-Methylnaphthalene      | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |

Date Sampled: **04/27/23 10:44**

| Analyte                            | Result | Reporting Limit | MDL | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------------------|--------|-----------------|-----|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 2-Methylnaphthalene-d10 |        | 74.1 %          |     | 40-150 |          | "     | "        | "        | "      | "     |
| Surrogate: Fluoranthene-d10        |        | 73.5 %          |     | 40-150 |          | "     | "        | "        | "      | "     |

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/27/23 10:44**

| Analyte      | Result        | Reporting Limit | MDL | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|--------------|---------------|-----------------|-----|-------|----------|---------|----------|----------|-----------|-------|
| <b>Boron</b> | <b>0.0554</b> | 0.0100          |     | mg/L  | 1        | BGD0988 | 04/29/23 | 04/30/23 | EPA 6020B |       |

**Total Metals by EPA 6020B**

Date Sampled: **04/27/23 10:44**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|-----------------|-----|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|-----------------|-----|-------|----------|-------|----------|----------|--------|-------|

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**SS03@4'**  
**2304605-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

| Analyte  | Result | MDL    | Units     | Dilution | Batch   | Prepared | Analyzed | Method    |
|----------|--------|--------|-----------|----------|---------|----------|----------|-----------|
| Arsenic  | 1.46   | 0.211  | mg/kg dry | 1        | BGD0940 | 04/27/23 | 04/29/23 | EPA 6020B |
| Barium   | 34.0   | 0.422  | "         | "        | "       | "        | "        | "         |
| Cadmium  | ND     | 0.211  | "         | "        | "       | "        | "        | "         |
| Copper   | 2.47   | 0.422  | "         | "        | "       | "        | "        | "         |
| Lead     | 3.49   | 0.211  | "         | "        | "       | "        | "        | "         |
| Nickel   | 2.81   | 0.422  | "         | "        | "       | "        | "        | "         |
| Selenium | ND     | 0.260  | 0.175     | "        | "       | "        | "        | "         |
| Silver   | ND     | 0.0211 | "         | "        | "       | "        | "        | "         |
| Zinc     | 9.47   | 0.422  | "         | "        | "       | "        | "        | "         |

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/27/23 10:44**

| Analyte              | Result | Reporting Limit | MDL | Units     | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|----------------------|--------|-----------------|-----|-----------|----------|---------|----------|----------|-----------|-------|
| Chromium, Hexavalent | ND     | 0.30            |     | mg/kg dry | 1        | BGD0969 | 04/28/23 | 04/28/23 | EPA 7196A |       |

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **04/27/23 10:44**

| Analyte   | Result | Reporting Limit | MDL | Units    | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------|--------|-----------------|-----|----------|----------|---------|----------|----------|-----------|-------|
| Calcium   | 268    | 0.0528          |     | mg/L dry | 1        | BGD0944 | 04/27/23 | 05/02/23 | EPA 6020B |       |
| Magnesium | 52.7   | 0.0528          |     | "        | "        | "       | "        | "        | "         |       |
| Sodium    | 5.35   | 0.0528          |     | "        | "        | "       | "        | "        | "         |       |

**Calculated Analysis**

Date Sampled: **04/27/23 10:44**

| Analyte                 | Result | Reporting Limit | MDL | Units | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|-------------------------|--------|-----------------|-----|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.0782 | 0.00100         |     | units | 1        | BGE0062 | 05/02/23 | 05/02/23 | Calculation |       |

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

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**SS03@4'**  
**2304605-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/27/23 10:44**

| Analyte  | Result | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|----------|--------|-----------|-----|-------|----------|---------|----------|----------|-------------|-------|
|          |        | Limit     | MDL |       |          |         |          |          |             |       |
| % Solids | 94.7   |           |     | %     | 1        | BGD1018 | 04/30/23 | 05/01/23 | Calculation |       |

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/27/23 10:44**

| Analyte                   | Result | Reporting |     | Units    | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------------------------|--------|-----------|-----|----------|----------|---------|----------|----------|-----------|-------|
|                           |        | Limit     | MDL |          |          |         |          |          |           |       |
| Specific Conductance (EC) | 0.135  | 0.0100    |     | mmhos/cm | 1        | BGD1005 | 04/30/23 | 04/30/23 | EPA 120.1 |       |

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **04/27/23 10:44**

| Analyte | Result | Reporting |     | Units    | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------|--------|-----------|-----|----------|----------|---------|----------|----------|-----------|-------|
|         |        | Limit     | MDL |          |          |         |          |          |           |       |
| pH      | 6.71   |           |     | pH Units | 1        | BGD1006 | 04/30/23 | 04/30/23 | EPA 9045D |       |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**SS04@4'**  
**2304605-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/27/23 10:48**

| Analyte                     | Result | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------|-----|-------|----------|---------|----------|----------|-----------|-------|
|                             |        | Limit     | MDL |       |          |         |          |          |           |       |
| Benzene                     | ND     | 0.0020    |     | mg/kg | 1        | BGD0948 | 04/27/23 | 04/27/23 | EPA 8260B |       |
| Toluene                     | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND     | 0.010     |     | "     | "        | "       | "        | "        | "         |       |
| 1,2,4-Trimethylbenzene      | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| 1,3,5-Trimethylbenzene      | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| Naphthalene                 | ND     | 0.0038    |     | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND     | 0.50      |     | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/27/23 10:48**

| Analyte                          | Result | Reporting |     | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|-----|--------|----------|-------|----------|----------|--------|-------|
|                                  |        | Limit     | MDL |        |          |       |          |          |        |       |
| Surrogate: 1,2-Dichloroethane-d4 |        | 110 %     |     | 50-150 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 97.8 %    |     | 50-150 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 104 %     |     | 50-150 |          | "     | "        | "        | "      |       |

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/27/23 10:48**

| Analyte       | Result | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------------|--------|-----------|-----|-------|----------|---------|----------|----------|-----------|-------|
|               |        | Limit     | MDL |       |          |         |          |          |           |       |
| C10-C28 (DRO) | ND     | 50        |     | mg/kg | 1        | BGD0949 | 04/27/23 | 04/27/23 | EPA 8015M |       |
| C28-C36 (ORO) | ND     | 50        |     | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/27/23 10:48**

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

**PAH by EPA Method 8270D SIM**

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**SS04@4'**  
**2304605-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/27/23 10:48**

| Analyte                  | Result | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method        | Notes |
|--------------------------|--------|-----------|-----|-------|----------|---------|----------|----------|---------------|-------|
|                          |        | Limit     | MDL |       |          |         |          |          |               |       |
| Acenaphthene             | ND     | 0.00500   |     | mg/kg | 1        | BGD0950 | 04/28/23 | 05/01/23 | EPA 8270D SIM |       |
| Anthracene               | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| Benzo (a) anthracene     | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| Benzo (a) pyrene         | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| Benzo (b) fluoranthene   | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| Benzo (k) fluoranthene   | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| Chrysene                 | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| Dibenz (a,h) anthracene  | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| Fluoranthene             | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| Fluorene                 | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| Indeno (1,2,3-cd) pyrene | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| Pyrene                   | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| 1-Methylnaphthalene      | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |
| 2-Methylnaphthalene      | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             | "     |

Date Sampled: **04/27/23 10:48**

| Analyte                            | Result | Reporting |     | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------------------|--------|-----------|-----|--------|----------|-------|----------|----------|--------|-------|
|                                    |        | Limit     | MDL |        |          |       |          |          |        |       |
| Surrogate: 2-Methylnaphthalene-d10 |        | 84.5 %    |     | 40-150 |          | "     | "        | "        | "      | "     |
| Surrogate: Fluoranthene-d10        |        | 72.1 %    |     | 40-150 |          | "     | "        | "        | "      | "     |

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/27/23 10:48**

| Analyte      | Result       | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|--------------|--------------|-----------|-----|-------|----------|---------|----------|----------|-----------|-------|
|              |              | Limit     | MDL |       |          |         |          |          |           |       |
| <b>Boron</b> | <b>0.113</b> | 0.0100    |     | mg/L  | 1        | BGD0988 | 04/29/23 | 04/30/23 | EPA 6020B |       |

**Total Metals by EPA 6020B**

Date Sampled: **04/27/23 10:48**

| Analyte | Result | Reporting |     | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|-----------|-----|-------|----------|-------|----------|----------|--------|-------|
|         |        | Limit     | MDL |       |          |       |          |          |        |       |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**SS04@4'**  
**2304605-04 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

| Analyte  | Result | Limit  | MDL   | Units     | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|----------|--------|--------|-------|-----------|----------|---------|----------|----------|-----------|-------|
| Arsenic  | 1.46   | 0.216  |       | mg/kg dry | 1        | BGD0940 | 04/27/23 | 04/29/23 | EPA 6020B |       |
| Barium   | 51.5   | 0.433  |       | "         | "        | "       | "        | "        | "         |       |
| Cadmium  | ND     | 0.216  |       | "         | "        | "       | "        | "        | "         |       |
| Copper   | 3.12   | 0.433  |       | "         | "        | "       | "        | "        | "         |       |
| Lead     | 4.74   | 0.216  |       | "         | "        | "       | "        | "        | "         |       |
| Nickel   | 3.45   | 0.433  |       | "         | "        | "       | "        | "        | "         |       |
| Selenium | ND     | 0.260  | 0.175 | "         | "        | "       | "        | "        | "         |       |
| Silver   | 0.0242 | 0.0216 |       | "         | "        | "       | "        | "        | "         |       |
| Zinc     | 12.4   | 0.433  |       | "         | "        | "       | "        | "        | "         |       |

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/27/23 10:48**

| Analyte              | Result | Reporting Limit | MDL | Units     | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|----------------------|--------|-----------------|-----|-----------|----------|---------|----------|----------|-----------|-------|
| Chromium, Hexavalent | ND     | 0.30            |     | mg/kg dry | 1        | BGD0969 | 04/28/23 | 04/28/23 | EPA 7196A |       |

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **04/27/23 10:48**

| Analyte   | Result | Reporting Limit | MDL | Units    | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------|--------|-----------------|-----|----------|----------|---------|----------|----------|-----------|-------|
| Calcium   | 39.1   | 0.0541          |     | mg/L dry | 1        | BGD0944 | 04/27/23 | 05/02/23 | EPA 6020B |       |
| Magnesium | 8.05   | 0.0541          |     | "        | "        | "       | "        | "        | "         |       |
| Sodium    | 1.91   | 0.0541          |     | "        | "        | "       | "        | "        | "         |       |

**Calculated Analysis**

Date Sampled: **04/27/23 10:48**

| Analyte                 | Result | Reporting Limit | MDL | Units | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|-------------------------|--------|-----------------|-----|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.0727 | 0.00100         |     | units | 1        | BGE0062 | 05/02/23 | 05/02/23 | Calculation |       |

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

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**SS04@4'**  
**2304605-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/27/23 10:48**

| Analyte  | Result | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|----------|--------|-----------|-----|-------|----------|---------|----------|----------|-------------|-------|
|          |        | Limit     | MDL |       |          |         |          |          |             |       |
| % Solids | 92.5   |           |     | %     | 1        | BGD1018 | 04/30/23 | 05/01/23 | Calculation |       |

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/27/23 10:48**

| Analyte                   | Result | Reporting |     | Units    | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------------------------|--------|-----------|-----|----------|----------|---------|----------|----------|-----------|-------|
|                           |        | Limit     | MDL |          |          |         |          |          |           |       |
| Specific Conductance (EC) | 0.186  | 0.0100    |     | mmhos/cm | 1        | BGD1005 | 04/30/23 | 04/30/23 | EPA 120.1 |       |

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **04/27/23 10:48**

| Analyte | Result | Reporting |     | Units    | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------|--------|-----------|-----|----------|----------|---------|----------|----------|-----------|-------|
|         |        | Limit     | MDL |          |          |         |          |          |           |       |
| pH      | 7.66   |           |     | pH Units | 1        | BGD1006 | 04/30/23 | 04/30/23 | EPA 9045D |       |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**FS01@5'**  
**2304605-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/27/23 10:50**

| Analyte                     | Result | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------|-----|-------|----------|---------|----------|----------|-----------|-------|
|                             |        | Limit     | MDL |       |          |         |          |          |           |       |
| Benzene                     | ND     | 0.0020    |     | mg/kg | 1        | BGD0948 | 04/27/23 | 04/27/23 | EPA 8260B |       |
| Toluene                     | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND     | 0.010     |     | "     | "        | "       | "        | "        | "         |       |
| 1,2,4-Trimethylbenzene      | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| 1,3,5-Trimethylbenzene      | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| Naphthalene                 | ND     | 0.0038    |     | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND     | 0.50      |     | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/27/23 10:50**

| Analyte                          | Result | Reporting |     | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|-----|--------|----------|-------|----------|----------|--------|-------|
|                                  |        | Limit     | MDL |        |          |       |          |          |        |       |
| Surrogate: 1,2-Dichloroethane-d4 |        | 113 %     |     | 50-150 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 98.9 %    |     | 50-150 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 105 %     |     | 50-150 |          | "     | "        | "        | "      |       |

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/27/23 10:50**

| Analyte       | Result | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------------|--------|-----------|-----|-------|----------|---------|----------|----------|-----------|-------|
|               |        | Limit     | MDL |       |          |         |          |          |           |       |
| C10-C28 (DRO) | ND     | 50        |     | mg/kg | 1        | BGD0949 | 04/27/23 | 04/27/23 | EPA 8015M |       |
| C28-C36 (ORO) | ND     | 50        |     | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/27/23 10:50**

| Analyte                | Result | Reporting |     | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|-----|--------|----------|-------|----------|----------|--------|-------|
|                        |        | Limit     | MDL |        |          |       |          |          |        |       |
| Surrogate: o-Terphenyl |        | 130 %     |     | 30-150 |          | "     | "        | "        | "      |       |

**PAH by EPA Method 8270D SIM**

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**FS01@5'**  
**2304605-05 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/27/23 10:50**

| Analyte                  | Result | Reporting Limit | MDL | Units | Dilution | Batch   | Prepared | Analyzed | Method        | Notes |
|--------------------------|--------|-----------------|-----|-------|----------|---------|----------|----------|---------------|-------|
| Acenaphthene             | ND     | 0.00500         |     | mg/kg | 1        | BGD0950 | 04/28/23 | 05/01/23 | EPA 8270D SIM |       |
| Anthracene               | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Benzo (a) anthracene     | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Benzo (a) pyrene         | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Benzo (b) fluoranthene   | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Benzo (k) fluoranthene   | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Chrysene                 | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Dibenz (a,h) anthracene  | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Fluoranthene             | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Fluorene                 | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Indeno (1,2,3-cd) pyrene | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| Pyrene                   | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| 1-Methylnaphthalene      | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |
| 2-Methylnaphthalene      | ND     | 0.00500         |     | "     | "        | "       | "        | "        | "             | "     |

Date Sampled: **04/27/23 10:50**

| Analyte                            | Result | Reporting Limit | MDL | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------------------|--------|-----------------|-----|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 2-Methylnaphthalene-d10 |        | 72.0 %          |     | 40-150 |          | "     | "        | "        | "      | "     |
| Surrogate: Fluoranthene-d10        |        | 68.7 %          |     | 40-150 |          | "     | "        | "        | "      | "     |

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/27/23 10:50**

| Analyte      | Result        | Reporting Limit | MDL | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|--------------|---------------|-----------------|-----|-------|----------|---------|----------|----------|-----------|-------|
| <b>Boron</b> | <b>0.0234</b> | 0.0100          |     | mg/L  | 1        | BGD0988 | 04/29/23 | 04/30/23 | EPA 6020B |       |

**Total Metals by EPA 6020B**

Date Sampled: **04/27/23 10:50**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|-----------------|-----|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|-----------------|-----|-------|----------|-------|----------|----------|--------|-------|

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**FS01@5'**  
**2304605-05 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

| Analyte  | Result | MDL    | Units     | Dilution | Batch   | Prepared | Analyzed | Method    |
|----------|--------|--------|-----------|----------|---------|----------|----------|-----------|
| Arsenic  | 2.81   | 0.224  | mg/kg dry | 1        | BGD0940 | 04/27/23 | 04/29/23 | EPA 6020B |
| Barium   | 72.5   | 0.447  | "         | "        | "       | "        | "        | "         |
| Cadmium  | ND     | 0.224  | "         | "        | "       | "        | "        | "         |
| Copper   | 4.31   | 0.447  | "         | "        | "       | "        | "        | "         |
| Lead     | 6.50   | 0.224  | "         | "        | "       | "        | "        | "         |
| Nickel   | 5.26   | 0.447  | "         | "        | "       | "        | "        | "         |
| Selenium | ND     | 0.260  | 0.175     | "        | "       | "        | "        | "         |
| Silver   | ND     | 0.0224 | "         | "        | "       | "        | "        | "         |
| Zinc     | 18.5   | 0.447  | "         | "        | "       | "        | "        | "         |

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/27/23 10:50**

| Analyte              | Result | Reporting Limit | MDL | Units     | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|----------------------|--------|-----------------|-----|-----------|----------|---------|----------|----------|-----------|-------|
| Chromium, Hexavalent | ND     | 0.30            |     | mg/kg dry | 1        | BGD0969 | 04/28/23 | 04/28/23 | EPA 7196A |       |

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **04/27/23 10:50**

| Analyte   | Result | Reporting Limit | MDL | Units    | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------|--------|-----------------|-----|----------|----------|---------|----------|----------|-----------|-------|
| Calcium   | 310    | 0.0559          |     | mg/L dry | 1        | BGD0944 | 04/27/23 | 05/02/23 | EPA 6020B |       |
| Magnesium | 42.6   | 0.0559          |     | "        | "        | "       | "        | "        | "         |       |
| Sodium    | 4.55   | 0.0559          |     | "        | "        | "       | "        | "        | "         |       |

**Calculated Analysis**

Date Sampled: **04/27/23 10:50**

| Analyte                 | Result | Reporting Limit | MDL | Units | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|-------------------------|--------|-----------------|-----|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.0643 | 0.00100         |     | units | 1        | BGE0062 | 05/02/23 | 05/02/23 | Calculation |       |

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

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**FS01@5'**  
**2304605-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/27/23 10:50**

| Analyte  | Result | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|----------|--------|-----------|-----|-------|----------|---------|----------|----------|-------------|-------|
|          |        | Limit     | MDL |       |          |         |          |          |             |       |
| % Solids | 89.4   |           |     | %     | 1        | BGD1018 | 04/30/23 | 05/01/23 | Calculation |       |

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/27/23 10:50**

| Analyte                   | Result | Reporting |     | Units    | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------------------------|--------|-----------|-----|----------|----------|---------|----------|----------|-----------|-------|
|                           |        | Limit     | MDL |          |          |         |          |          |           |       |
| Specific Conductance (EC) | 0.199  | 0.0100    |     | mmhos/cm | 1        | BGD1005 | 04/30/23 | 04/30/23 | EPA 120.1 |       |

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **04/27/23 10:50**

| Analyte | Result | Reporting |     | Units    | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------|--------|-----------|-----|----------|----------|---------|----------|----------|-----------|-------|
|         |        | Limit     | MDL |          |          |         |          |          |           |       |
| pH      | 7.85   |           |     | pH Units | 1        | BGD1006 | 04/30/23 | 04/30/23 | EPA 9045D |       |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

### 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 BGD0948 - EPA 5030 Soil MS

##### Blank (BGD0948-BLK1)

Prepared & Analyzed: 04/27/23

|                                         |        |        |       |        |  |      |        |  |  |  |
|-----------------------------------------|--------|--------|-------|--------|--|------|--------|--|--|--|
| Benzene                                 | ND     | 0.0020 | mg/kg |        |  |      |        |  |  |  |
| Toluene                                 | ND     | 0.0050 | "     |        |  |      |        |  |  |  |
| Ethylbenzene                            | ND     | 0.0050 | "     |        |  |      |        |  |  |  |
| Xylenes (total)                         | ND     | 0.010  | "     |        |  |      |        |  |  |  |
| 1,2,4-Trimethylbenzene                  | ND     | 0.0050 | "     |        |  |      |        |  |  |  |
| 1,3,5-Trimethylbenzene                  | ND     | 0.0050 | "     |        |  |      |        |  |  |  |
| Naphthalene                             | ND     | 0.0038 | "     |        |  |      |        |  |  |  |
| Gasoline Range Hydrocarbons             | ND     | 0.50   | "     |        |  |      |        |  |  |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | 0.0426 |        | "     | 0.0400 |  | 107  | 50-150 |  |  |  |
| <i>Surrogate: Toluene-d8</i>            | 0.0393 |        | "     | 0.0400 |  | 98.2 | 50-150 |  |  |  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | 0.0512 |        | "     | 0.0400 |  | 128  | 50-150 |  |  |  |

##### LCS (BGD0948-BS1)

Prepared & Analyzed: 04/27/23

|                                         |        |        |       |        |  |      |        |  |  |  |
|-----------------------------------------|--------|--------|-------|--------|--|------|--------|--|--|--|
| Benzene                                 | 0.110  | 0.0020 | mg/kg | 0.100  |  | 110  | 70-130 |  |  |  |
| Toluene                                 | 0.105  | 0.0050 | "     | 0.100  |  | 105  | 70-130 |  |  |  |
| Ethylbenzene                            | 0.0964 | 0.0050 | "     | 0.100  |  | 96.4 | 70-130 |  |  |  |
| m,p-Xylene                              | 0.231  | 0.010  | "     | 0.200  |  | 115  | 70-130 |  |  |  |
| o-Xylene                                | 0.110  | 0.0050 | "     | 0.100  |  | 110  | 70-130 |  |  |  |
| 1,2,4-Trimethylbenzene                  | 0.111  | 0.0050 | "     | 0.100  |  | 111  | 70-130 |  |  |  |
| 1,3,5-Trimethylbenzene                  | 0.0951 | 0.0050 | "     | 0.100  |  | 95.1 | 70-130 |  |  |  |
| Naphthalene                             | 0.106  | 0.0038 | "     | 0.100  |  | 106  | 70-130 |  |  |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | 0.0425 |        | "     | 0.0400 |  | 106  | 50-150 |  |  |  |
| <i>Surrogate: Toluene-d8</i>            | 0.0395 |        | "     | 0.0400 |  | 98.8 | 50-150 |  |  |  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | 0.0401 |        | "     | 0.0400 |  | 100  | 50-150 |  |  |  |

##### Matrix Spike (BGD0948-MS1)

Source: 2304603-03

Prepared & Analyzed: 04/27/23

|                                         |        |        |       |        |    |      |        |  |  |  |
|-----------------------------------------|--------|--------|-------|--------|----|------|--------|--|--|--|
| Benzene                                 | 0.110  | 0.0020 | mg/kg | 0.100  | ND | 110  | 70-130 |  |  |  |
| Toluene                                 | 0.104  | 0.0050 | "     | 0.100  | ND | 104  | 70-130 |  |  |  |
| Ethylbenzene                            | 0.0943 | 0.0050 | "     | 0.100  | ND | 94.3 | 70-130 |  |  |  |
| m,p-Xylene                              | 0.225  | 0.010  | "     | 0.200  | ND | 112  | 70-130 |  |  |  |
| o-Xylene                                | 0.104  | 0.0050 | "     | 0.100  | ND | 104  | 70-130 |  |  |  |
| 1,2,4-Trimethylbenzene                  | 0.106  | 0.0050 | "     | 0.100  | ND | 106  | 70-130 |  |  |  |
| 1,3,5-Trimethylbenzene                  | 0.103  | 0.0050 | "     | 0.100  | ND | 103  | 70-130 |  |  |  |
| Naphthalene                             | 0.109  | 0.0038 | "     | 0.100  | ND | 109  | 70-130 |  |  |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | 0.0419 |        | "     | 0.0400 |    | 105  | 50-150 |  |  |  |
| <i>Surrogate: Toluene-d8</i>            | 0.0394 |        | "     | 0.0400 |    | 98.6 | 50-150 |  |  |  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | 0.0391 |        | "     | 0.0400 |    | 97.6 | 50-150 |  |  |  |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**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 BGD0948 - EPA 5030 Soil MS**

| Matrix Spike Dup (BGD0948-MSD1)  | Source: 2304603-03 |        |       | Prepared: 04/27/23 Analyzed: 04/28/23 |    |      |        |       |    |  |
|----------------------------------|--------------------|--------|-------|---------------------------------------|----|------|--------|-------|----|--|
| Benzene                          | 0.108              | 0.0020 | mg/kg | 0.100                                 | ND | 108  | 70-130 | 1.07  | 30 |  |
| Toluene                          | 0.102              | 0.0050 | "     | 0.100                                 | ND | 102  | 70-130 | 2.30  | 30 |  |
| Ethylbenzene                     | 0.0927             | 0.0050 | "     | 0.100                                 | ND | 92.7 | 70-130 | 1.70  | 30 |  |
| m,p-Xylene                       | 0.226              | 0.010  | "     | 0.200                                 | ND | 113  | 70-130 | 0.838 | 30 |  |
| o-Xylene                         | 0.109              | 0.0050 | "     | 0.100                                 | ND | 109  | 70-130 | 4.22  | 30 |  |
| 1,2,4-Trimethylbenzene           | 0.103              | 0.0050 | "     | 0.100                                 | ND | 103  | 70-130 | 3.00  | 30 |  |
| 1,3,5-Trimethylbenzene           | 0.0966             | 0.0050 | "     | 0.100                                 | ND | 96.6 | 70-130 | 6.11  | 30 |  |
| Naphthalene                      | 0.114              | 0.0038 | "     | 0.100                                 | ND | 114  | 70-130 | 4.25  | 30 |  |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0427             |        | "     | 0.0400                                |    | 107  | 50-150 |       |    |  |
| Surrogate: Toluene-d8            | 0.0380             |        | "     | 0.0400                                |    | 95.0 | 50-150 |       |    |  |
| Surrogate: 4-Bromofluorobenzene  | 0.0389             |        | "     | 0.0400                                |    | 97.3 | 50-150 |       |    |  |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**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 BGD0949 - EPA 3550A**

**Blank (BGD0949-BLK1)**

Prepared: 04/27/23 Analyzed: 04/28/23

|                                |      |    |       |      |  |     |  |        |  |  |  |
|--------------------------------|------|----|-------|------|--|-----|--|--------|--|--|--|
| C10-C28 (DRO)                  | ND   | 50 | mg/kg |      |  |     |  |        |  |  |  |
| C28-C36 (ORO)                  | ND   | 50 | "     |      |  |     |  |        |  |  |  |
| Surrogate: <i>o</i> -Terphenyl | 16.2 |    | "     | 12.5 |  | 130 |  | 30-150 |  |  |  |

**LCS (BGD0949-BS1)**

Prepared: 04/27/23 Analyzed: 04/28/23

|                                |      |    |       |      |  |      |  |        |  |  |  |
|--------------------------------|------|----|-------|------|--|------|--|--------|--|--|--|
| C10-C28 (DRO)                  | 509  | 50 | mg/kg | 500  |  | 102  |  | 70-130 |  |  |  |
| Surrogate: <i>o</i> -Terphenyl | 11.5 |    | "     | 12.5 |  | 91.8 |  | 30-150 |  |  |  |

**Matrix Spike (BGD0949-MS1)**

Source: 2304603-02

Prepared: 04/27/23 Analyzed: 04/28/23

|                                |      |    |       |      |      |     |  |        |  |  |  |
|--------------------------------|------|----|-------|------|------|-----|--|--------|--|--|--|
| C10-C28 (DRO)                  | 582  | 50 | mg/kg | 500  | 25.5 | 111 |  | 70-130 |  |  |  |
| Surrogate: <i>o</i> -Terphenyl | 14.1 |    | "     | 12.5 |      | 112 |  | 30-150 |  |  |  |

**Matrix Spike Dup (BGD0949-MSD1)**

Source: 2304603-02

Prepared: 04/27/23 Analyzed: 04/28/23

|                                |      |    |       |      |      |     |  |        |      |    |  |
|--------------------------------|------|----|-------|------|------|-----|--|--------|------|----|--|
| C10-C28 (DRO)                  | 553  | 50 | mg/kg | 500  | 25.5 | 106 |  | 70-130 | 5.12 | 20 |  |
| Surrogate: <i>o</i> -Terphenyl | 13.7 |    | "     | 12.5 |      | 110 |  | 30-150 |      |    |  |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**PAH by EPA Method 8270D SIM - Quality Control**

**Summit Scientific**

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

**Batch BGD0950 - EPA 5030 Soil MS**

**Blank (BGD0950-BLK1)**

Prepared: 04/28/23 Analyzed: 05/01/23

|                                           |               |         |       |               |  |            |  |               |  |  |
|-------------------------------------------|---------------|---------|-------|---------------|--|------------|--|---------------|--|--|
| Acenaphthene                              | ND            | 0.00500 | mg/kg |               |  |            |  |               |  |  |
| Anthracene                                | ND            | 0.00500 | "     |               |  |            |  |               |  |  |
| Benzo (a) anthracene                      | ND            | 0.00500 | "     |               |  |            |  |               |  |  |
| Benzo (a) pyrene                          | ND            | 0.00500 | "     |               |  |            |  |               |  |  |
| Benzo (b) fluoranthene                    | ND            | 0.00500 | "     |               |  |            |  |               |  |  |
| Benzo (k) fluoranthene                    | ND            | 0.00500 | "     |               |  |            |  |               |  |  |
| Chrysene                                  | ND            | 0.00500 | "     |               |  |            |  |               |  |  |
| Dibenz (a,h) anthracene                   | ND            | 0.00500 | "     |               |  |            |  |               |  |  |
| Fluoranthene                              | ND            | 0.00500 | "     |               |  |            |  |               |  |  |
| Fluorene                                  | ND            | 0.00500 | "     |               |  |            |  |               |  |  |
| Indeno (1,2,3-cd) pyrene                  | ND            | 0.00500 | "     |               |  |            |  |               |  |  |
| Pyrene                                    | ND            | 0.00500 | "     |               |  |            |  |               |  |  |
| 1-Methylnaphthalene                       | ND            | 0.00500 | "     |               |  |            |  |               |  |  |
| 2-Methylnaphthalene                       | ND            | 0.00500 | "     |               |  |            |  |               |  |  |
| <i>Surrogate: 2-Methylnaphthalene-d10</i> | <i>0.0336</i> |         | "     | <i>0.0333</i> |  | <i>101</i> |  | <i>40-150</i> |  |  |
| <i>Surrogate: Fluoranthene-d10</i>        | <i>0.0369</i> |         | "     | <i>0.0333</i> |  | <i>111</i> |  | <i>40-150</i> |  |  |

**LCS (BGD0950-BS1)**

Prepared: 04/28/23 Analyzed: 05/01/23

|                                           |               |         |       |               |             |               |
|-------------------------------------------|---------------|---------|-------|---------------|-------------|---------------|
| Acenaphthene                              | 0.0267        | 0.00500 | mg/kg | 0.0333        | 80.0        | 31-137        |
| Anthracene                                | 0.0275        | 0.00500 | "     | 0.0333        | 82.6        | 30-120        |
| Benzo (a) anthracene                      | 0.0391        | 0.00500 | "     | 0.0333        | 117         | 30-120        |
| Benzo (a) pyrene                          | 0.0284        | 0.00500 | "     | 0.0333        | 85.1        | 30-120        |
| Benzo (b) fluoranthene                    | 0.0337        | 0.00500 | "     | 0.0333        | 101         | 30-120        |
| Benzo (k) fluoranthene                    | 0.0301        | 0.00500 | "     | 0.0333        | 90.2        | 30-120        |
| Chrysene                                  | 0.0251        | 0.00500 | "     | 0.0333        | 75.3        | 30-120        |
| Dibenz (a,h) anthracene                   | 0.0245        | 0.00500 | "     | 0.0333        | 73.4        | 30-120        |
| Fluoranthene                              | 0.0282        | 0.00500 | "     | 0.0333        | 84.5        | 30-120        |
| Fluorene                                  | 0.0269        | 0.00500 | "     | 0.0333        | 80.7        | 30-120        |
| Indeno (1,2,3-cd) pyrene                  | 0.0225        | 0.00500 | "     | 0.0333        | 67.6        | 30-120        |
| Pyrene                                    | 0.0246        | 0.00500 | "     | 0.0333        | 73.8        | 35-142        |
| 1-Methylnaphthalene                       | 0.0233        | 0.00500 | "     | 0.0333        | 69.9        | 35-142        |
| 2-Methylnaphthalene                       | 0.0293        | 0.00500 | "     | 0.0333        | 88.0        | 35-142        |
| <i>Surrogate: 2-Methylnaphthalene-d10</i> | <i>0.0315</i> |         | "     | <i>0.0333</i> | <i>94.6</i> | <i>40-150</i> |
| <i>Surrogate: Fluoranthene-d10</i>        | <i>0.0324</i> |         | "     | <i>0.0333</i> | <i>97.2</i> | <i>40-150</i> |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

Reported:  
05/04/23 11:43

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGD0950 - EPA 5030 Soil MS

| Matrix Spike (BGD0950-MS1)         | Source: 2304549-01 |         |       | Prepared: 04/28/23 Analyzed: 05/01/23 |    |      |        |  |  |  |
|------------------------------------|--------------------|---------|-------|---------------------------------------|----|------|--------|--|--|--|
| Acenaphthene                       | 0.0189             | 0.00500 | mg/kg | 0.0333                                | ND | 56.7 | 31-137 |  |  |  |
| Anthracene                         | 0.0189             | 0.00500 | "     | 0.0333                                | ND | 56.7 | 30-120 |  |  |  |
| Benzo (a) anthracene               | 0.0341             | 0.00500 | "     | 0.0333                                | ND | 102  | 30-120 |  |  |  |
| Benzo (a) pyrene                   | 0.0188             | 0.00500 | "     | 0.0333                                | ND | 56.5 | 30-120 |  |  |  |
| Benzo (b) fluoranthene             | 0.0172             | 0.00500 | "     | 0.0333                                | ND | 51.5 | 30-120 |  |  |  |
| Benzo (k) fluoranthene             | 0.0170             | 0.00500 | "     | 0.0333                                | ND | 51.0 | 30-120 |  |  |  |
| Chrysene                           | 0.0173             | 0.00500 | "     | 0.0333                                | ND | 52.0 | 30-120 |  |  |  |
| Dibenz (a,h) anthracene            | 0.0141             | 0.00500 | "     | 0.0333                                | ND | 42.3 | 30-120 |  |  |  |
| Fluoranthene                       | 0.0195             | 0.00500 | "     | 0.0333                                | ND | 58.4 | 30-120 |  |  |  |
| Fluorene                           | 0.0192             | 0.00500 | "     | 0.0333                                | ND | 57.6 | 30-120 |  |  |  |
| Indeno (1,2,3-cd) pyrene           | 0.0157             | 0.00500 | "     | 0.0333                                | ND | 47.0 | 30-120 |  |  |  |
| Pyrene                             | 0.0170             | 0.00500 | "     | 0.0333                                | ND | 51.1 | 35-142 |  |  |  |
| 1-Methylnaphthalene                | 0.0187             | 0.00500 | "     | 0.0333                                | ND | 56.0 | 15-130 |  |  |  |
| 2-Methylnaphthalene                | 0.0216             | 0.00500 | "     | 0.0333                                | ND | 64.7 | 15-130 |  |  |  |
| Surrogate: 2-Methylnaphthalene-d10 | 0.0235             |         | "     | 0.0333                                |    | 70.5 | 40-150 |  |  |  |
| Surrogate: Fluoranthene-d10        | 0.0237             |         | "     | 0.0333                                |    | 71.1 | 40-150 |  |  |  |

| Matrix Spike Dup (BGD0950-MSD1)    | Source: 2304549-01 |         |       | Prepared: 04/28/23 Analyzed: 05/01/23 |    |      |        |       |    |  |
|------------------------------------|--------------------|---------|-------|---------------------------------------|----|------|--------|-------|----|--|
| Acenaphthene                       | 0.0212             | 0.00500 | mg/kg | 0.0333                                | ND | 63.5 | 31-137 | 11.4  | 30 |  |
| Anthracene                         | 0.0210             | 0.00500 | "     | 0.0333                                | ND | 63.0 | 30-120 | 10.5  | 30 |  |
| Benzo (a) anthracene               | 0.0400             | 0.00500 | "     | 0.0333                                | ND | 120  | 30-120 | 15.9  | 30 |  |
| Benzo (a) pyrene                   | 0.0147             | 0.00500 | "     | 0.0333                                | ND | 44.2 | 30-120 | 24.5  | 30 |  |
| Benzo (b) fluoranthene             | 0.0200             | 0.00500 | "     | 0.0333                                | ND | 59.9 | 30-120 | 15.2  | 30 |  |
| Benzo (k) fluoranthene             | 0.0193             | 0.00500 | "     | 0.0333                                | ND | 58.0 | 30-120 | 12.8  | 30 |  |
| Chrysene                           | 0.0200             | 0.00500 | "     | 0.0333                                | ND | 60.0 | 30-120 | 14.3  | 30 |  |
| Dibenz (a,h) anthracene            | 0.0150             | 0.00500 | "     | 0.0333                                | ND | 45.0 | 30-120 | 6.36  | 30 |  |
| Fluoranthene                       | 0.0221             | 0.00500 | "     | 0.0333                                | ND | 66.3 | 30-120 | 12.6  | 30 |  |
| Fluorene                           | 0.0217             | 0.00500 | "     | 0.0333                                | ND | 65.1 | 30-120 | 12.2  | 30 |  |
| Indeno (1,2,3-cd) pyrene           | 0.0160             | 0.00500 | "     | 0.0333                                | ND | 48.1 | 30-120 | 2.35  | 30 |  |
| Pyrene                             | 0.0183             | 0.00500 | "     | 0.0333                                | ND | 55.0 | 35-142 | 7.34  | 30 |  |
| 1-Methylnaphthalene                | 0.0194             | 0.00500 | "     | 0.0333                                | ND | 58.3 | 15-130 | 4.03  | 50 |  |
| 2-Methylnaphthalene                | 0.0215             | 0.00500 | "     | 0.0333                                | ND | 64.4 | 15-130 | 0.471 | 50 |  |
| Surrogate: 2-Methylnaphthalene-d10 | 0.0244             |         | "     | 0.0333                                |    | 73.3 | 40-150 |       |    |  |
| Surrogate: Fluoranthene-d10        | 0.0269             |         | "     | 0.0333                                |    | 80.8 | 40-150 |       |    |  |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control**  
**Summit Scientific**

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

**Batch BGD0988 - EPA 3050B**

**Blank (BGD0988-BLK1)**

Prepared: 04/29/23 Analyzed: 04/30/23

Boron ND 0.0100 mg/L

**LCS (BGD0988-BS1)**

Prepared: 04/29/23 Analyzed: 04/30/23

Boron 4.83 0.0100 mg/L 5.00 96.5 80-120

**Duplicate (BGD0988-DUP1)**

**Source: 2304569-01**

Prepared: 04/29/23 Analyzed: 04/30/23

Boron 0.104 0.0100 mg/L 0.111 6.12 20

**Matrix Spike (BGD0988-MS1)**

**Source: 2304569-01**

Prepared: 04/29/23 Analyzed: 04/30/23

Boron 4.91 0.0100 mg/L 5.00 0.111 96.0 75-125

**Matrix Spike Dup (BGD0988-MSD1)**

**Source: 2304569-01**

Prepared: 04/29/23 Analyzed: 04/30/23

Boron 5.09 0.0100 mg/L 5.00 0.111 99.5 75-125 3.46 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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BGD0940 - EPA 3050B**

**Blank (BGD0940-BLK1)**

Prepared: 04/27/23 Analyzed: 04/28/23

|          |    |        |           |  |  |  |  |  |  |  |
|----------|----|--------|-----------|--|--|--|--|--|--|--|
| Arsenic  | ND | 0.200  | mg/kg wet |  |  |  |  |  |  |  |
| Barium   | ND | 0.400  | "         |  |  |  |  |  |  |  |
| Cadmium  | ND | 0.200  | "         |  |  |  |  |  |  |  |
| Copper   | ND | 0.400  | "         |  |  |  |  |  |  |  |
| Lead     | ND | 0.200  | "         |  |  |  |  |  |  |  |
| Nickel   | ND | 0.400  | "         |  |  |  |  |  |  |  |
| Selenium | ND | 0.260  | "         |  |  |  |  |  |  |  |
| Silver   | ND | 0.0200 | "         |  |  |  |  |  |  |  |
| Zinc     | ND | 0.400  | "         |  |  |  |  |  |  |  |

**LCS (BGD0940-BS1)**

Prepared: 04/27/23 Analyzed: 04/28/23

|          |      |        |           |      |      |        |
|----------|------|--------|-----------|------|------|--------|
| Arsenic  | 34.7 | 0.200  | mg/kg wet | 40.0 | 86.7 | 80-120 |
| Barium   | 35.7 | 0.400  | "         | 40.0 | 89.2 | 80-120 |
| Cadmium  | 2.00 | 0.200  | "         | 2.00 | 99.8 | 80-120 |
| Copper   | 34.9 | 0.400  | "         | 40.0 | 87.2 | 80-120 |
| Lead     | 18.7 | 0.200  | "         | 20.0 | 93.7 | 80-120 |
| Nickel   | 34.7 | 0.400  | "         | 40.0 | 86.8 | 80-120 |
| Selenium | 3.69 | 0.260  | "         | 4.00 | 92.2 | 80-120 |
| Silver   | 1.98 | 0.0200 | "         | 2.00 | 98.9 | 80-120 |
| Zinc     | 35.2 | 0.400  | "         | 40.0 | 88.1 | 80-120 |

**Duplicate (BGD0940-DUP1)**

Source: 2304116-01

Prepared: 04/27/23 Analyzed: 04/28/23

|          |        |        |           |        |      |    |
|----------|--------|--------|-----------|--------|------|----|
| Arsenic  | 1.58   | 0.225  | mg/kg dry | 1.40   | 12.0 | 20 |
| Barium   | 50.9   | 0.450  | "         | 43.5   | 15.6 | 20 |
| Cadmium  | 0.182  | 0.225  | "         | 0.156  | 15.1 | 20 |
| Copper   | 7.03   | 0.450  | "         | 6.55   | 7.08 | 20 |
| Lead     | 18.1   | 0.225  | "         | 15.9   | 13.0 | 20 |
| Nickel   | 4.03   | 0.450  | "         | 3.64   | 10.0 | 20 |
| Selenium | ND     | 0.260  | "         | ND     |      | 20 |
| Silver   | 0.0315 | 0.0225 | "         | 0.0261 | 18.8 | 20 |
| Zinc     | 20.0   | 0.450  | "         | 18.3   | 8.95 | 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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BGD0940 - EPA 3050B**

**Matrix Spike (BGD0940-MS1)**

Source: 2304116-01

Prepared: 04/27/23 Analyzed: 04/28/23

|          |      |        |           |      |        |      |        |  |  |       |
|----------|------|--------|-----------|------|--------|------|--------|--|--|-------|
| Arsenic  | 37.5 | 0.225  | mg/kg dry | 45.0 | 1.40   | 80.4 | 75-125 |  |  |       |
| Barium   | 89.6 | 0.450  | "         | 45.0 | 43.5   | 102  | 75-125 |  |  |       |
| Cadmium  | 2.03 | 0.225  | "         | 2.25 | 0.156  | 83.2 | 75-125 |  |  |       |
| Copper   | 55.5 | 0.450  | "         | 45.0 | 6.55   | 109  | 75-125 |  |  |       |
| Lead     | ND   | 0.225  | "         | 22.5 | 15.9   | NR   | 75-125 |  |  | QM-07 |
| Nickel   | 30.4 | 0.450  | "         | 45.0 | 3.64   | 59.5 | 75-125 |  |  | QM-07 |
| Selenium | 3.39 | 0.260  | "         | 4.50 | ND     | 75.5 | 75-125 |  |  |       |
| Silver   | 1.84 | 0.0225 | "         | 2.25 | 0.0261 | 80.6 | 75-125 |  |  |       |
| Zinc     | 47.8 | 0.450  | "         | 45.0 | 18.3   | 65.7 | 75-125 |  |  | QM-07 |

**Matrix Spike Dup (BGD0940-MSD1)**

Source: 2304116-01

Prepared: 04/27/23 Analyzed: 04/28/23

|          |      |        |           |      |        |      |        |       |    |       |
|----------|------|--------|-----------|------|--------|------|--------|-------|----|-------|
| Arsenic  | 38.3 | 0.225  | mg/kg dry | 45.0 | 1.40   | 82.1 | 75-125 | 2.01  | 25 |       |
| Barium   | 92.5 | 0.450  | "         | 45.0 | 43.5   | 109  | 75-125 | 3.20  | 25 |       |
| Cadmium  | 2.07 | 0.225  | "         | 2.25 | 0.156  | 85.1 | 75-125 | 2.04  | 25 |       |
| Copper   | 56.1 | 0.450  | "         | 45.0 | 6.55   | 110  | 75-125 | 1.16  | 25 |       |
| Lead     | 48.1 | 0.225  | "         | 22.5 | 15.9   | 143  | 75-125 | 200   | 25 | QM-07 |
| Nickel   | 30.9 | 0.450  | "         | 45.0 | 3.64   | 60.6 | 75-125 | 1.64  | 25 | QM-07 |
| Selenium | 3.44 | 0.260  | "         | 4.50 | ND     | 76.5 | 75-125 | 1.32  | 25 |       |
| Silver   | 1.90 | 0.0225 | "         | 2.25 | 0.0261 | 83.2 | 75-125 | 3.03  | 25 |       |
| Zinc     | 48.2 | 0.450  | "         | 45.0 | 18.3   | 66.5 | 75-125 | 0.807 | 25 | QM-07 |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**Hexavalent Chromium by EPA Method 7196 - Quality Control**  
**Summit Scientific**

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

**Batch BGD0969 - 3060A Mod**

**Blank (BGD0969-BLK1)**

Prepared & Analyzed: 04/28/23

Chromium, Hexavalent      ND      0.30 mg/kg wet

**LCS (BGD0969-BS1)**

Prepared & Analyzed: 04/28/23

Chromium, Hexavalent      20.6      0.30 mg/kg wet      25.0      82.2      80-120

**Duplicate (BGD0969-DUP1)**

**Source: 2304472-01**

Prepared & Analyzed: 04/28/23

Chromium, Hexavalent      ND      0.30 mg/kg dry      ND      20

**Matrix Spike (BGD0969-MS1)**

**Source: 2304472-01**

Prepared & Analyzed: 04/28/23

Chromium, Hexavalent      26.4      0.30 mg/kg dry      29.2      ND      90.2      75-125

**Matrix Spike Dup (BGD0969-MSD2)**

**Source: 2304472-01**

Prepared & Analyzed: 04/28/23

Chromium, Hexavalent      26.7      0.30 mg/kg dry      29.2      ND      91.4      75-125      1.32      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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control**

**Summit Scientific**

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

**Batch BGD0944 - General Preparation**

**Blank (BGD0944-BLK1)**

Prepared: 04/27/23 Analyzed: 05/02/23

|           |    |        |          |  |  |  |  |  |  |  |
|-----------|----|--------|----------|--|--|--|--|--|--|--|
| Calcium   | ND | 0.0500 | mg/L wet |  |  |  |  |  |  |  |
| Magnesium | ND | 0.0500 | "        |  |  |  |  |  |  |  |
| Sodium    | ND | 0.0500 | "        |  |  |  |  |  |  |  |

**LCS (BGD0944-BS1)**

Prepared: 04/27/23 Analyzed: 05/02/23

|           |      |        |          |      |  |      |        |  |  |  |
|-----------|------|--------|----------|------|--|------|--------|--|--|--|
| Calcium   | 4.66 | 0.0500 | mg/L wet | 5.00 |  | 93.3 | 70-130 |  |  |  |
| Magnesium | 4.26 | 0.0500 | "        | 5.00 |  | 85.1 | 70-130 |  |  |  |
| Sodium    | 4.05 | 0.0500 | "        | 5.00 |  | 80.9 | 70-130 |  |  |  |

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 - Loloff 2,3,B35-19

Project Number: [none]  
 Project Manager: Jacob Whritenour

**Reported:**  
 05/04/23 11:43

**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 BGD1018 - General Preparation**

**Duplicate (BGD1018-DUP1)**

**Source: 2304524-01**

Prepared: 04/30/23 Analyzed: 05/01/23

|          |      |  |   |  |      |  |  |       |    |  |
|----------|------|--|---|--|------|--|--|-------|----|--|
| % Solids | 85.0 |  | % |  | 85.2 |  |  | 0.234 | 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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control**

**Summit Scientific**

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

**Batch BGD1005 - General Preparation**

**Blank (BGD1005-BLK1)**

Prepared & Analyzed: 04/30/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BGD1005-BS1)**

Prepared & Analyzed: 04/30/23

Specific Conductance (EC) 0.152 0.0100 mmhos/cm 0.150 102 95-105

**Duplicate (BGD1005-DUP1)**

Source: 2304576-01

Prepared & Analyzed: 04/30/23

Specific Conductance (EC) 1.15 0.0100 mmhos/cm 1.17 1.55 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 - Loloff 2,3,B35-19

Project Number: [none]  
 Project Manager: Jacob Whritenour

**Reported:**  
 05/04/23 11:43

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control**

**Summit Scientific**

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

**Batch BGD1006 - General Preparation**

**LCS (BGD1006-BS1)**

Prepared & Analyzed: 04/30/23

|    |      |          |      |      |        |
|----|------|----------|------|------|--------|
| pH | 9.07 | pH Units | 9.18 | 98.8 | 95-105 |
|----|------|----------|------|------|--------|

**Duplicate (BGD1006-DUP1)**

Source: 2304576-01

Prepared & Analyzed: 04/30/23

|    |      |          |      |      |    |
|----|------|----------|------|------|----|
| pH | 7.34 | pH Units | 7.44 | 1.35 | 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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/04/23 11:43

### Notes and Definitions

- 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 80401

303.277.9310

May 30, 2023

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Lolofifi 2,3,B35-19

Work Order # 2305450

Enclosed are the results of analyses for samples received by Summit Scientific on 05/18/23 17:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Scott Sheely For Paul Shrewsbury

President



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

Project: Noble - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/30/23 15:09

**ANALYTICAL REPORT FOR SAMPLES**

| Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|-----------|---------------|--------|----------------|----------------|
| SS05@4'   | 2305450-01    | Soil   | 05/18/23 09:30 | 05/18/23 17:50 |

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.*

# SUMMIT SCIENTIFIC

4653 Table Mountain Drive  
Golden, CO 80403  
303-277-9310

|                |             |
|----------------|-------------|
| Lab ID         | Page 1 of 1 |
| <b>2305450</b> |             |

|                                      |                                        |                                                 |
|--------------------------------------|----------------------------------------|-------------------------------------------------|
| <b>Send Data To:</b>                 |                                        | <b>Send Invoice To:</b>                         |
| Client: Noble / Tasman               | Project Manager: Jake Whritenour       | Company: Chevron                                |
| Address: 6855 W. 119th Ave           | E-Mail: Jwhritenour@tasman-geo.com     | Project Name/Location: <b>Loloff 2,3 B35-19</b> |
| City/State/Zip: Broomfield, CO 80020 |                                        | AFE#:                                           |
| Phone: 303-261-6246                  | Project Name: <b>Loloff 2,3 B35-19</b> | PO/Billing Codes:                               |
| Sampler Name: Stanley Gilbert        | Project Number:                        | Contact: <b>Jacob Rulla</b>                     |

| ID | Sample Description | Date Sampled | Time Sampled | # of containers | Preservative |      |      |       | Matrix |      |                | Analysis Requested |           |           |           |           |             |              | Special Instructions           |
|----|--------------------|--------------|--------------|-----------------|--------------|------|------|-------|--------|------|----------------|--------------------|-----------|-----------|-----------|-----------|-------------|--------------|--------------------------------|
|    |                    |              |              |                 | HCl          | HNO3 | None | Other | Water  | Soil | Air-Canister # | Other              | VOC - 915 | TPH - 915 | PAH - 915 | pH,EC,SAR | Boron - HWS | Metals - 915 |                                |
| 1  | SS05@ 4'           | 5/18/23      | 09:30        | 2               |              |      | /    |       |        | /    |                |                    | /         | /         | /         | /         | /           |              | pH, EC, SAR by saturated paste |
| 2  |                    |              |              |                 |              |      |      |       |        |      |                |                    |           |           |           |           |             |              |                                |
| 3  |                    |              |              |                 |              |      |      |       |        |      |                |                    |           |           |           |           |             |              |                                |
| 4  |                    |              |              |                 |              |      |      |       |        |      |                |                    |           |           |           |           |             |              |                                |
| 5  |                    |              |              |                 |              |      |      |       |        |      |                |                    |           |           |           |           |             |              |                                |
| 6  |                    |              |              |                 |              |      |      |       |        |      |                |                    |           |           |           |           |             |              |                                |
| 7  |                    |              |              |                 |              |      |      |       |        |      |                |                    |           |           |           |           |             |              |                                |
| 8  |                    |              |              |                 |              |      |      |       |        |      |                |                    |           |           |           |           |             |              |                                |
| 9  |                    |              |              |                 |              |      |      |       |        |      |                |                    |           |           |           |           |             |              |                                |
| 10 |                    |              |              |                 |              |      |      |       |        |      |                |                    |           |           |           |           |             |              |                                |
| 11 |                    |              |              |                 |              |      |      |       |        |      |                |                    |           |           |           |           |             |              |                                |
| 12 |                    |              |              |                 |              |      |      |       |        |      |                |                    |           |           |           |           |             |              |                                |
| 13 |                    |              |              |                 |              |      |      |       |        |      |                |                    |           |           |           |           |             |              |                                |
| 14 |                    |              |              |                 |              |      |      |       |        |      |                |                    |           |           |           |           |             |              |                                |
| 15 |                    |              |              |                 |              |      |      |       |        |      |                |                    |           |           |           |           |             |              |                                |

|                                                                   |                                 |                                 |                          |                   |                                                 |        |
|-------------------------------------------------------------------|---------------------------------|---------------------------------|--------------------------|-------------------|-------------------------------------------------|--------|
| Relinquished by: <i>Martin Medeiros</i><br><i>Martin Medeiros</i> | Date/Time: 5/18/23 14:00        | Received by:                    | Date/Time: 5/18/23 14:00 | TAT Business Days | Field DO                                        | Notes: |
| Relinquished by: <i>Tasman Geo</i>                                | Date/Time: 5/18/23 17:50        | Received by: <i>[Signature]</i> | Date/Time: 5/18/23 17:50 | Same Day          | Field EC                                        |        |
| Relinquished by:                                                  | Date/Time:                      | Received by:                    | Date/Time:               | 1 Day             | Field ORP                                       |        |
| Relinquished by:                                                  | Date/Time:                      | Received by:                    | Date/Time:               | 2 Days            | Field pH                                        |        |
| Relinquished by:                                                  | Date/Time:                      | Received by:                    | Date/Time:               | 3 Days            | Field Temp.                                     |        |
| Temperature Upon Receipt: <u>10.2</u>                             | Corrected Temperature: <u>0</u> | IR gun #:                       | HNO3 lot #:              | Standard          | <input checked="" type="checkbox"/> Field Turb. |        |

S<sub>2</sub>

Sample Receipt Checklist

S2 Work Order# 2305450

Client: Ndeftasman Client Project ID: 1010423B35-19

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

Matrix (Check all that apply) Air  Soil/Solid  Water  Other

Temp (°C) 10.2 Thermometer # 1

|                                                                                                                                                                                                                                                                                                       | Yes                                 | No                                  | N/A                                 | Comments (if any) |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------|
| If samples require cooling, is the temperature < 6°C? <sup>(1)</sup><br>NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.                                                                                                 | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <u>on ice</u>     |
| If custody seals are present, are they intact? <sup>(1)</sup>                                                                                                                                                                                                                                         | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |                   |
| Are samples due within 48 hours present?                                                                                                                                                                                                                                                              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                   |
| Are water samples with short hold times present?<br>Note the short hold analysis in the comments column<br>- pH, Nitrate/Nitrite, Ferrous Iron (Fe <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                   |
| Is a chain-of-custody (COC) form present and filled out Completely? <sup>(1)</sup>                                                                                                                                                                                                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |                   |
| Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>                                                                                                                                                                                                              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |                   |
| Were all samples received intact? <sup>(1)</sup>                                                                                                                                                                                                                                                      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |                   |
| Was adequate sample volume provided? <sup>(1)</sup>                                                                                                                                                                                                                                                   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |                   |
| Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>                                                                                                                                                                                                                | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |                   |
| Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>                                                                                                                                                                                                                                  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |                   |
| For volatiles in water – is there headspace present? If yes, contact client and note in narrative.                                                                                                                                                                                                    | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                   |
| Are samples preserved that require preservation (excluding cooling)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.                                                                                        | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                   |
| If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> Record the pH in Comments.                                                                                                                                                                                                    | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                   |
| If dissolved metals are requested, were samples field filtered?                                                                                                                                                                                                                                       | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                   |

Additional Comments (if any):

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

AS  
Custodian Printed Name

5/18/23  
Date/Time



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

Project: Noble - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/30/23 15:09

**SS05@4'**  
**2305450-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/18/23 09:30**

| Analyte                     | Result | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------|-----|-------|----------|---------|----------|----------|-----------|-------|
|                             |        | Limit     | MDL |       |          |         |          |          |           |       |
| Benzene                     | ND     | 0.0020    |     | mg/kg | 1        | BGE0713 | 05/19/23 | 05/19/23 | EPA 8260B |       |
| Toluene                     | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND     | 0.010     |     | "     | "        | "       | "        | "        | "         |       |
| 1,2,4-Trimethylbenzene      | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| 1,3,5-Trimethylbenzene      | ND     | 0.0050    |     | "     | "        | "       | "        | "        | "         |       |
| Naphthalene                 | ND     | 0.0038    |     | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND     | 0.50      |     | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **05/18/23 09:30**

| Analyte                          | Result | Reporting |     | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|-----|--------|----------|-------|----------|----------|--------|-------|
|                                  |        | Limit     | MDL |        |          |       |          |          |        |       |
| Surrogate: 1,2-Dichloroethane-d4 |        | 109 %     |     | 50-150 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 98.7 %    |     | 50-150 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 104 %     |     | 50-150 |          | "     | "        | "        | "      |       |

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/18/23 09:30**

| Analyte       | Result | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------------|--------|-----------|-----|-------|----------|---------|----------|----------|-----------|-------|
|               |        | Limit     | MDL |       |          |         |          |          |           |       |
| C10-C28 (DRO) | ND     | 50        |     | mg/kg | 1        | BGE0715 | 05/19/23 | 05/20/23 | EPA 8015M |       |
| C28-C36 (ORO) | ND     | 50        |     | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **05/18/23 09:30**

| Analyte                | Result | Reporting |     | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|-----|--------|----------|-------|----------|----------|--------|-------|
|                        |        | Limit     | MDL |        |          |       |          |          |        |       |
| Surrogate: o-Terphenyl |        | 121 %     |     | 30-150 |          | "     | "        | "        | "      |       |

**PAH by EPA Method 8270D SIM**

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/30/23 15:09

**SS05@4'**  
**2305450-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/18/23 09:30**

| Analyte                  | Result | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method        | Notes |
|--------------------------|--------|-----------|-----|-------|----------|---------|----------|----------|---------------|-------|
|                          |        | Limit     | MDL |       |          |         |          |          |               |       |
| Acenaphthene             | ND     | 0.00500   |     | mg/kg | 1        | BGE0674 | 05/19/23 | 05/20/23 | EPA 8270D SIM |       |
| Anthracene               | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             |       |
| Benzo (a) anthracene     | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             |       |
| Benzo (a) pyrene         | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             |       |
| Benzo (b) fluoranthene   | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             |       |
| Benzo (k) fluoranthene   | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             |       |
| Chrysene                 | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             |       |
| Dibenz (a,h) anthracene  | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             |       |
| Fluoranthene             | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             |       |
| Fluorene                 | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             |       |
| Indeno (1,2,3-cd) pyrene | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             |       |
| Pyrene                   | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             |       |
| 1-Methylnaphthalene      | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             |       |
| 2-Methylnaphthalene      | ND     | 0.00500   |     | "     | "        | "       | "        | "        | "             |       |

Date Sampled: **05/18/23 09:30**

| Analyte                            | Result | Reporting |     | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------------------|--------|-----------|-----|--------|----------|-------|----------|----------|--------|-------|
|                                    |        | Limit     | MDL |        |          |       |          |          |        |       |
| Surrogate: 2-Methylnaphthalene-d10 |        | 60.2 %    |     | 40-150 |          | "     | "        | "        | "      |       |
| Surrogate: Fluoranthene-d10        |        | 80.0 %    |     | 40-150 |          | "     | "        | "        | "      |       |

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **05/18/23 09:30**

| Analyte      | Result       | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|--------------|--------------|-----------|-----|-------|----------|---------|----------|----------|-----------|-------|
|              |              | Limit     | MDL |       |          |         |          |          |           |       |
| <b>Boron</b> | <b>0.227</b> | 0.0100    |     | mg/L  | 1        | BGE0839 | 05/24/23 | 05/27/23 | EPA 6020B |       |

**Total Metals by EPA 6020B**

Date Sampled: **05/18/23 09:30**

| Analyte | Result | Reporting |     | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|-----------|-----|-------|----------|-------|----------|----------|--------|-------|
|         |        | Limit     | MDL |       |          |       |          |          |        |       |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/30/23 15:09

**SS05@4'**  
**2305450-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

| Analyte  | Result | Limit  | MDL   | Units     | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|----------|--------|--------|-------|-----------|----------|---------|----------|----------|-----------|-------|
| Arsenic  | 1.37   | 0.242  |       | mg/kg dry | 1        | BGE0782 | 05/23/23 | 05/23/23 | EPA 6020B |       |
| Barium   | 75.2   | 0.483  |       | "         | "        | "       | "        | "        | "         |       |
| Cadmium  | ND     | 0.242  |       | "         | "        | "       | "        | "        | "         |       |
| Copper   | 3.52   | 0.483  |       | "         | "        | "       | "        | "        | "         |       |
| Lead     | 8.32   | 0.242  |       | "         | "        | "       | "        | "        | "         |       |
| Nickel   | 2.93   | 0.483  |       | "         | "        | "       | "        | "        | "         |       |
| Selenium | ND     | 0.260  | 0.175 | "         | "        | "       | "        | "        | "         |       |
| Silver   | 0.0372 | 0.0242 |       | "         | "        | "       | "        | "        | "         |       |
| Zinc     | 13.0   | 0.483  |       | "         | "        | "       | "        | "        | "         |       |

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **05/18/23 09:30**

| Analyte              | Result | Reporting Limit | MDL | Units     | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|----------------------|--------|-----------------|-----|-----------|----------|---------|----------|----------|-----------|-------|
| Chromium, Hexavalent | ND     | 0.30            |     | mg/kg dry | 1        | BGE0685 | 05/19/23 | 05/19/23 | EPA 7196A |       |

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **05/18/23 09:30**

| Analyte   | Result | Reporting Limit | MDL | Units    | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------|--------|-----------------|-----|----------|----------|---------|----------|----------|-----------|-------|
| Calcium   | 104    | 0.0604          |     | mg/L dry | 1        | BGE0872 | 05/24/23 | 05/26/23 | EPA 6020B |       |
| Magnesium | 24.5   | 0.0604          |     | "        | "        | "       | "        | "        | "         |       |
| Sodium    | 5.62   | 0.0604          |     | "        | "        | "       | "        | "        | "         |       |

**Calculated Analysis**

Date Sampled: **05/18/23 09:30**

| Analyte                 | Result | Reporting Limit | MDL | Units | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|-------------------------|--------|-----------------|-----|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.129  | 0.00100         |     | units | 1        | BGE1002 | 05/29/23 | 05/29/23 | Calculation |       |

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

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/30/23 15:09

**SS05@4'**  
**2305450-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/18/23 09:30**

| Analyte  | Result | Reporting |     | Units | Dilution | Batch   | Prepared | Analyzed | Method      | Notes |
|----------|--------|-----------|-----|-------|----------|---------|----------|----------|-------------|-------|
|          |        | Limit     | MDL |       |          |         |          |          |             |       |
| % Solids | 82.8   |           |     | %     | 1        | BGE0687 | 05/19/23 | 05/19/23 | Calculation |       |

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/18/23 09:30**

| Analyte                   | Result | Reporting |     | Units    | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------------------------|--------|-----------|-----|----------|----------|---------|----------|----------|-----------|-------|
|                           |        | Limit     | MDL |          |          |         |          |          |           |       |
| Specific Conductance (EC) | 0.253  | 0.0100    |     | mmhos/cm | 1        | BGE0905 | 05/25/23 | 05/25/23 | EPA 120.1 |       |

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **05/18/23 09:30**

| Analyte | Result | Reporting |     | Units    | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---------|--------|-----------|-----|----------|----------|---------|----------|----------|-----------|-------|
|         |        | Limit     | MDL |          |          |         |          |          |           |       |
| pH      | 7.36   |           |     | pH Units | 1        | BGE0904 | 05/25/23 | 05/25/23 | EPA 9045D |       |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/30/23 15:09

### 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 BGE0713 - EPA 5030 Soil MS

##### Blank (BGE0713-BLK1)

Prepared & Analyzed: 05/19/23

|                                         |               |        |          |               |  |             |  |               |  |  |  |
|-----------------------------------------|---------------|--------|----------|---------------|--|-------------|--|---------------|--|--|--|
| Benzene                                 | ND            | 0.0020 | mg/kg    |               |  |             |  |               |  |  |  |
| Toluene                                 | ND            | 0.0050 | "        |               |  |             |  |               |  |  |  |
| Ethylbenzene                            | ND            | 0.0050 | "        |               |  |             |  |               |  |  |  |
| Xylenes (total)                         | ND            | 0.010  | "        |               |  |             |  |               |  |  |  |
| 1,2,4-Trimethylbenzene                  | ND            | 0.0050 | "        |               |  |             |  |               |  |  |  |
| 1,3,5-Trimethylbenzene                  | ND            | 0.0050 | "        |               |  |             |  |               |  |  |  |
| Naphthalene                             | ND            | 0.0038 | "        |               |  |             |  |               |  |  |  |
| Gasoline Range Hydrocarbons             | ND            | 0.50   | "        |               |  |             |  |               |  |  |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.0432</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>108</i>  |  | <i>50-150</i> |  |  |  |
| <i>Surrogate: Toluene-d8</i>            | <i>0.0381</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>95.2</i> |  | <i>50-150</i> |  |  |  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.0396</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>99.1</i> |  | <i>50-150</i> |  |  |  |

##### LCS (BGE0713-BS1)

Prepared & Analyzed: 05/19/23

|                                         |               |        |          |               |  |             |  |               |  |  |  |
|-----------------------------------------|---------------|--------|----------|---------------|--|-------------|--|---------------|--|--|--|
| Benzene                                 | 0.0731        | 0.0020 | mg/kg    | 0.100         |  | 73.1        |  | 70-130        |  |  |  |
| Toluene                                 | 0.0881        | 0.0050 | "        | 0.100         |  | 88.1        |  | 70-130        |  |  |  |
| Ethylbenzene                            | 0.108         | 0.0050 | "        | 0.100         |  | 108         |  | 70-130        |  |  |  |
| m,p-Xylene                              | 0.217         | 0.010  | "        | 0.200         |  | 108         |  | 70-130        |  |  |  |
| o-Xylene                                | 0.103         | 0.0050 | "        | 0.100         |  | 103         |  | 70-130        |  |  |  |
| 1,2,4-Trimethylbenzene                  | 0.117         | 0.0050 | "        | 0.100         |  | 117         |  | 70-130        |  |  |  |
| 1,3,5-Trimethylbenzene                  | 0.120         | 0.0050 | "        | 0.100         |  | 120         |  | 70-130        |  |  |  |
| Naphthalene                             | 0.0867        | 0.0038 | "        | 0.100         |  | 86.7        |  | 70-130        |  |  |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.0401</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>100</i>  |  | <i>50-150</i> |  |  |  |
| <i>Surrogate: Toluene-d8</i>            | <i>0.0385</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>96.2</i> |  | <i>50-150</i> |  |  |  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.0368</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>91.9</i> |  | <i>50-150</i> |  |  |  |

##### Matrix Spike (BGE0713-MS1)

Source: 2305443-01

Prepared & Analyzed: 05/19/23

|                                         |               |        |          |               |         |             |  |               |  |  |  |
|-----------------------------------------|---------------|--------|----------|---------------|---------|-------------|--|---------------|--|--|--|
| Benzene                                 | 0.0713        | 0.0020 | mg/kg    | 0.100         | ND      | 71.3        |  | 70-130        |  |  |  |
| Toluene                                 | 0.0900        | 0.0050 | "        | 0.100         | ND      | 90.0        |  | 70-130        |  |  |  |
| Ethylbenzene                            | 0.111         | 0.0050 | "        | 0.100         | ND      | 111         |  | 70-130        |  |  |  |
| m,p-Xylene                              | 0.234         | 0.010  | "        | 0.200         | 0.0164  | 109         |  | 70-130        |  |  |  |
| o-Xylene                                | 0.115         | 0.0050 | "        | 0.100         | 0.0118  | 103         |  | 70-130        |  |  |  |
| 1,2,4-Trimethylbenzene                  | 0.148         | 0.0050 | "        | 0.100         | 0.0326  | 116         |  | 70-130        |  |  |  |
| 1,3,5-Trimethylbenzene                  | 0.123         | 0.0050 | "        | 0.100         | 0.00927 | 114         |  | 70-130        |  |  |  |
| Naphthalene                             | 0.105         | 0.0038 | "        | 0.100         | 0.0106  | 94.1        |  | 70-130        |  |  |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.0388</i> |        | <i>"</i> | <i>0.0400</i> |         | <i>96.9</i> |  | <i>50-150</i> |  |  |  |
| <i>Surrogate: Toluene-d8</i>            | <i>0.0384</i> |        | <i>"</i> | <i>0.0400</i> |         | <i>95.9</i> |  | <i>50-150</i> |  |  |  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.0399</i> |        | <i>"</i> | <i>0.0400</i> |         | <i>99.8</i> |  | <i>50-150</i> |  |  |  |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/30/23 15:09

**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 BGE0713 - EPA 5030 Soil MS**

| <b>Matrix Spike Dup (BGE0713-MSD1)</b>  | <b>Source: 2305443-01</b> |        |          | <b>Prepared &amp; Analyzed: 05/19/23</b> |         |             |               |       |    |  |
|-----------------------------------------|---------------------------|--------|----------|------------------------------------------|---------|-------------|---------------|-------|----|--|
| Benzene                                 | 0.0724                    | 0.0020 | mg/kg    | 0.100                                    | ND      | 72.4        | 70-130        | 1.59  | 30 |  |
| Toluene                                 | 0.0895                    | 0.0050 | "        | 0.100                                    | ND      | 89.5        | 70-130        | 0.602 | 30 |  |
| Ethylbenzene                            | 0.106                     | 0.0050 | "        | 0.100                                    | ND      | 106         | 70-130        | 3.81  | 30 |  |
| m,p-Xylene                              | 0.222                     | 0.010  | "        | 0.200                                    | 0.0164  | 103         | 70-130        | 5.39  | 30 |  |
| o-Xylene                                | 0.110                     | 0.0050 | "        | 0.100                                    | 0.0118  | 98.2        | 70-130        | 4.01  | 30 |  |
| 1,2,4-Trimethylbenzene                  | 0.141                     | 0.0050 | "        | 0.100                                    | 0.0326  | 108         | 70-130        | 5.36  | 30 |  |
| 1,3,5-Trimethylbenzene                  | 0.120                     | 0.0050 | "        | 0.100                                    | 0.00927 | 111         | 70-130        | 2.54  | 30 |  |
| Naphthalene                             | 0.106                     | 0.0038 | "        | 0.100                                    | 0.0106  | 95.7        | 70-130        | 1.54  | 30 |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.0404</i>             |        | <i>"</i> | <i>0.0400</i>                            |         | <i>101</i>  | <i>50-150</i> |       |    |  |
| <i>Surrogate: Toluene-d8</i>            | <i>0.0392</i>             |        | <i>"</i> | <i>0.0400</i>                            |         | <i>98.0</i> | <i>50-150</i> |       |    |  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.0401</i>             |        | <i>"</i> | <i>0.0400</i>                            |         | <i>100</i>  | <i>50-150</i> |       |    |  |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/30/23 15:09

**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 BGE0715 - EPA 3550A**

**Blank (BGE0715-BLK1)**

Prepared: 05/19/23 Analyzed: 05/20/23

|                                |      |    |       |      |  |     |  |        |  |  |  |
|--------------------------------|------|----|-------|------|--|-----|--|--------|--|--|--|
| C10-C28 (DRO)                  | ND   | 50 | mg/kg |      |  |     |  |        |  |  |  |
| C28-C36 (ORO)                  | ND   | 50 | "     |      |  |     |  |        |  |  |  |
| Surrogate: <i>o</i> -Terphenyl | 15.8 |    | "     | 12.5 |  | 126 |  | 30-150 |  |  |  |

**LCS (BGE0715-BS1)**

Prepared: 05/19/23 Analyzed: 05/20/23

|                                |      |    |       |      |  |     |  |        |  |  |  |
|--------------------------------|------|----|-------|------|--|-----|--|--------|--|--|--|
| C10-C28 (DRO)                  | 573  | 50 | mg/kg | 500  |  | 115 |  | 70-130 |  |  |  |
| Surrogate: <i>o</i> -Terphenyl | 15.8 |    | "     | 12.5 |  | 126 |  | 30-150 |  |  |  |

**Matrix Spike (BGE0715-MS1)**

Source: 2305443-01

Prepared: 05/19/23 Analyzed: 05/20/23

|                                |      |    |       |      |     |      |  |        |  |  |  |
|--------------------------------|------|----|-------|------|-----|------|--|--------|--|--|--|
| C10-C28 (DRO)                  | 500  | 50 | mg/kg | 500  | 105 | 79.0 |  | 70-130 |  |  |  |
| Surrogate: <i>o</i> -Terphenyl | 16.3 |    | "     | 12.5 |     | 130  |  | 30-150 |  |  |  |

**Matrix Spike Dup (BGE0715-MSD1)**

Source: 2305443-01

Prepared: 05/19/23 Analyzed: 05/20/23

|                                |      |    |       |      |     |      |  |        |      |    |  |
|--------------------------------|------|----|-------|------|-----|------|--|--------|------|----|--|
| C10-C28 (DRO)                  | 513  | 50 | mg/kg | 500  | 105 | 81.4 |  | 70-130 | 2.46 | 20 |  |
| Surrogate: <i>o</i> -Terphenyl | 16.0 |    | "     | 12.5 |     | 128  |  | 30-150 |      |    |  |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/30/23 15:09

**PAH by EPA Method 8270D SIM - Quality Control**

**Summit Scientific**

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

**Batch BGE0674 - EPA 5030 Soil MS**

**Blank (BGE0674-BLK1)**

Prepared & Analyzed: 05/19/23

|                                    |        |         |       |        |  |      |        |  |  |  |
|------------------------------------|--------|---------|-------|--------|--|------|--------|--|--|--|
| Acenaphthene                       | ND     | 0.00500 | mg/kg |        |  |      |        |  |  |  |
| Anthracene                         | ND     | 0.00500 | "     |        |  |      |        |  |  |  |
| Benzo (a) anthracene               | ND     | 0.00500 | "     |        |  |      |        |  |  |  |
| Benzo (a) pyrene                   | ND     | 0.00500 | "     |        |  |      |        |  |  |  |
| Benzo (b) fluoranthene             | ND     | 0.00500 | "     |        |  |      |        |  |  |  |
| Benzo (k) fluoranthene             | ND     | 0.00500 | "     |        |  |      |        |  |  |  |
| Chrysene                           | ND     | 0.00500 | "     |        |  |      |        |  |  |  |
| Dibenz (a,h) anthracene            | ND     | 0.00500 | "     |        |  |      |        |  |  |  |
| Fluoranthene                       | ND     | 0.00500 | "     |        |  |      |        |  |  |  |
| Fluorene                           | ND     | 0.00500 | "     |        |  |      |        |  |  |  |
| Indeno (1,2,3-cd) pyrene           | ND     | 0.00500 | "     |        |  |      |        |  |  |  |
| Pyrene                             | ND     | 0.00500 | "     |        |  |      |        |  |  |  |
| 1-Methylnaphthalene                | ND     | 0.00500 | "     |        |  |      |        |  |  |  |
| 2-Methylnaphthalene                | ND     | 0.00500 | "     |        |  |      |        |  |  |  |
| Surrogate: 2-Methylnaphthalene-d10 | 0.0237 |         | "     | 0.0333 |  | 71.2 | 40-150 |  |  |  |
| Surrogate: Fluoranthene-d10        | 0.0293 |         | "     | 0.0333 |  | 87.9 | 40-150 |  |  |  |

**LCS (BGE0674-BS1)**

Prepared & Analyzed: 05/19/23

|                                    |        |         |       |        |  |      |        |  |  |  |
|------------------------------------|--------|---------|-------|--------|--|------|--------|--|--|--|
| Acenaphthene                       | 0.0257 | 0.00500 | mg/kg | 0.0333 |  | 77.2 | 31-137 |  |  |  |
| Anthracene                         | 0.0273 | 0.00500 | "     | 0.0333 |  | 81.8 | 30-120 |  |  |  |
| Benzo (a) anthracene               | 0.0282 | 0.00500 | "     | 0.0333 |  | 84.5 | 30-120 |  |  |  |
| Benzo (a) pyrene                   | 0.0246 | 0.00500 | "     | 0.0333 |  | 73.8 | 30-120 |  |  |  |
| Benzo (b) fluoranthene             | 0.0239 | 0.00500 | "     | 0.0333 |  | 71.7 | 30-120 |  |  |  |
| Benzo (k) fluoranthene             | 0.0243 | 0.00500 | "     | 0.0333 |  | 72.9 | 30-120 |  |  |  |
| Chrysene                           | 0.0280 | 0.00500 | "     | 0.0333 |  | 83.9 | 30-120 |  |  |  |
| Dibenz (a,h) anthracene            | 0.0213 | 0.00500 | "     | 0.0333 |  | 63.9 | 30-120 |  |  |  |
| Fluoranthene                       | 0.0257 | 0.00500 | "     | 0.0333 |  | 77.2 | 30-120 |  |  |  |
| Fluorene                           | 0.0253 | 0.00500 | "     | 0.0333 |  | 75.9 | 30-120 |  |  |  |
| Indeno (1,2,3-cd) pyrene           | 0.0143 | 0.00500 | "     | 0.0333 |  | 43.0 | 30-120 |  |  |  |
| Pyrene                             | 0.0289 | 0.00500 | "     | 0.0333 |  | 86.6 | 35-142 |  |  |  |
| 1-Methylnaphthalene                | 0.0171 | 0.00500 | "     | 0.0333 |  | 51.4 | 35-142 |  |  |  |
| 2-Methylnaphthalene                | 0.0205 | 0.00500 | "     | 0.0333 |  | 61.6 | 35-142 |  |  |  |
| Surrogate: 2-Methylnaphthalene-d10 | 0.0243 |         | "     | 0.0333 |  | 72.8 | 40-150 |  |  |  |
| Surrogate: Fluoranthene-d10        | 0.0261 |         | "     | 0.0333 |  | 78.4 | 40-150 |  |  |  |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

Reported:  
05/30/23 15:09

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGE0674 - EPA 5030 Soil MS

| Matrix Spike (BGE0674-MS1)         | Source: 2305434-01 |         |       | Prepared & Analyzed: 05/19/23 |    |      |        |  |  |  |
|------------------------------------|--------------------|---------|-------|-------------------------------|----|------|--------|--|--|--|
| Acenaphthene                       | 0.0207             | 0.00500 | mg/kg | 0.0333                        | ND | 62.0 | 31-137 |  |  |  |
| Anthracene                         | 0.0207             | 0.00500 | "     | 0.0333                        | ND | 62.2 | 30-120 |  |  |  |
| Benzo (a) anthracene               | 0.0236             | 0.00500 | "     | 0.0333                        | ND | 70.8 | 30-120 |  |  |  |
| Benzo (a) pyrene                   | 0.0196             | 0.00500 | "     | 0.0333                        | ND | 58.7 | 30-120 |  |  |  |
| Benzo (b) fluoranthene             | 0.0179             | 0.00500 | "     | 0.0333                        | ND | 53.8 | 30-120 |  |  |  |
| Benzo (k) fluoranthene             | 0.0182             | 0.00500 | "     | 0.0333                        | ND | 54.6 | 30-120 |  |  |  |
| Chrysene                           | 0.0208             | 0.00500 | "     | 0.0333                        | ND | 62.5 | 30-120 |  |  |  |
| Dibenz (a,h) anthracene            | 0.0145             | 0.00500 | "     | 0.0333                        | ND | 43.5 | 30-120 |  |  |  |
| Fluoranthene                       | 0.0201             | 0.00500 | "     | 0.0333                        | ND | 60.4 | 30-120 |  |  |  |
| Fluorene                           | 0.0208             | 0.00500 | "     | 0.0333                        | ND | 62.3 | 30-120 |  |  |  |
| Indeno (1,2,3-cd) pyrene           | 0.0193             | 0.00500 | "     | 0.0333                        | ND | 57.9 | 30-120 |  |  |  |
| Pyrene                             | 0.0215             | 0.00500 | "     | 0.0333                        | ND | 64.6 | 35-142 |  |  |  |
| 1-Methylnaphthalene                | 0.0189             | 0.00500 | "     | 0.0333                        | ND | 56.6 | 15-130 |  |  |  |
| 2-Methylnaphthalene                | 0.0174             | 0.00500 | "     | 0.0333                        | ND | 52.3 | 15-130 |  |  |  |
| Surrogate: 2-Methylnaphthalene-d10 | 0.0170             |         | "     | 0.0333                        |    | 51.0 | 40-150 |  |  |  |
| Surrogate: Fluoranthene-d10        | 0.0218             |         | "     | 0.0333                        |    | 65.5 | 40-150 |  |  |  |

| Matrix Spike Dup (BGE0674-MSD1)    | Source: 2305434-01 |         |       | Prepared & Analyzed: 05/19/23 |    |      |        |       |    |  |
|------------------------------------|--------------------|---------|-------|-------------------------------|----|------|--------|-------|----|--|
| Acenaphthene                       | 0.0208             | 0.00500 | mg/kg | 0.0333                        | ND | 62.3 | 31-137 | 0.550 | 30 |  |
| Anthracene                         | 0.0224             | 0.00500 | "     | 0.0333                        | ND | 67.3 | 30-120 | 7.84  | 30 |  |
| Benzo (a) anthracene               | 0.0265             | 0.00500 | "     | 0.0333                        | ND | 79.6 | 30-120 | 11.7  | 30 |  |
| Benzo (a) pyrene                   | 0.0230             | 0.00500 | "     | 0.0333                        | ND | 69.1 | 30-120 | 16.2  | 30 |  |
| Benzo (b) fluoranthene             | 0.0220             | 0.00500 | "     | 0.0333                        | ND | 66.1 | 30-120 | 20.5  | 30 |  |
| Benzo (k) fluoranthene             | 0.0203             | 0.00500 | "     | 0.0333                        | ND | 60.9 | 30-120 | 10.8  | 30 |  |
| Chrysene                           | 0.0233             | 0.00500 | "     | 0.0333                        | ND | 69.8 | 30-120 | 11.0  | 30 |  |
| Dibenz (a,h) anthracene            | 0.0168             | 0.00500 | "     | 0.0333                        | ND | 50.4 | 30-120 | 14.7  | 30 |  |
| Fluoranthene                       | 0.0229             | 0.00500 | "     | 0.0333                        | ND | 68.6 | 30-120 | 12.8  | 30 |  |
| Fluorene                           | 0.0209             | 0.00500 | "     | 0.0333                        | ND | 62.8 | 30-120 | 0.846 | 30 |  |
| Indeno (1,2,3-cd) pyrene           | 0.0215             | 0.00500 | "     | 0.0333                        | ND | 64.4 | 30-120 | 10.6  | 30 |  |
| Pyrene                             | 0.0243             | 0.00500 | "     | 0.0333                        | ND | 72.8 | 35-142 | 11.9  | 30 |  |
| 1-Methylnaphthalene                | 0.0153             | 0.00500 | "     | 0.0333                        | ND | 45.9 | 15-130 | 20.9  | 50 |  |
| 2-Methylnaphthalene                | 0.0192             | 0.00500 | "     | 0.0333                        | ND | 57.5 | 15-130 | 9.50  | 50 |  |
| Surrogate: 2-Methylnaphthalene-d10 | 0.0212             |         | "     | 0.0333                        |    | 63.6 | 40-150 |       |    |  |
| Surrogate: Fluoranthene-d10        | 0.0241             |         | "     | 0.0333                        |    | 72.4 | 40-150 |       |    |  |

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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/30/23 15:09

**Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control**  
**Summit Scientific**

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

**Batch BGE0839 - EPA 3050B**

**Blank (BGE0839-BLK1)**

Prepared: 05/24/23 Analyzed: 05/27/23

Boron ND 0.0100 mg/L

**LCS (BGE0839-BS1)**

Prepared: 05/24/23 Analyzed: 05/27/23

Boron 4.89 0.0100 mg/L 5.00 97.8 80-120

**Duplicate (BGE0839-DUP1)**

Source: 2305449-01

Prepared: 05/24/23 Analyzed: 05/27/23

Boron 0.158 0.0100 mg/L 0.158 0.133 20

**Matrix Spike (BGE0839-MS1)**

Source: 2305449-01

Prepared: 05/24/23 Analyzed: 05/27/23

Boron 5.35 0.0100 mg/L 5.00 0.158 104 75-125

**Matrix Spike Dup (BGE0839-MSD1)**

Source: 2305449-01

Prepared: 05/24/23 Analyzed: 05/27/23

Boron 5.53 0.0100 mg/L 5.00 0.158 107 75-125 3.27 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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/30/23 15:09

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BGE0782 - EPA 3050B**

**Blank (BGE0782-BLK1)**

Prepared & Analyzed: 05/23/23

|          |    |        |           |  |  |  |  |  |  |
|----------|----|--------|-----------|--|--|--|--|--|--|
| Arsenic  | ND | 0.200  | mg/kg wet |  |  |  |  |  |  |
| Barium   | ND | 0.400  | "         |  |  |  |  |  |  |
| Cadmium  | ND | 0.200  | "         |  |  |  |  |  |  |
| Copper   | ND | 0.400  | "         |  |  |  |  |  |  |
| Lead     | ND | 0.200  | "         |  |  |  |  |  |  |
| Nickel   | ND | 0.400  | "         |  |  |  |  |  |  |
| Selenium | ND | 0.260  | "         |  |  |  |  |  |  |
| Silver   | ND | 0.0200 | "         |  |  |  |  |  |  |
| Zinc     | ND | 0.400  | "         |  |  |  |  |  |  |

**LCS (BGE0782-BS1)**

Prepared: 05/23/23 Analyzed: 05/24/23

|          |      |        |           |      |      |        |
|----------|------|--------|-----------|------|------|--------|
| Arsenic  | 38.8 | 0.200  | mg/kg wet | 40.0 | 97.1 | 80-120 |
| Barium   | 38.9 | 0.400  | "         | 40.0 | 97.1 | 80-120 |
| Cadmium  | 1.98 | 0.200  | "         | 2.00 | 98.9 | 80-120 |
| Copper   | 40.5 | 0.400  | "         | 40.0 | 101  | 80-120 |
| Lead     | 18.8 | 0.200  | "         | 20.0 | 93.9 | 80-120 |
| Nickel   | 39.1 | 0.400  | "         | 40.0 | 97.7 | 80-120 |
| Selenium | 4.33 | 0.260  | "         | 4.00 | 108  | 80-120 |
| Silver   | 2.00 | 0.0200 | "         | 2.00 | 99.9 | 80-120 |
| Zinc     | 38.1 | 0.400  | "         | 40.0 | 95.1 | 80-120 |

**Duplicate (BGE0782-DUP1)**

Source: 2305437-01

Prepared: 05/23/23 Analyzed: 05/24/23

|          |        |        |           |        |       |    |
|----------|--------|--------|-----------|--------|-------|----|
| Arsenic  | 0.507  | 0.219  | mg/kg dry | 0.513  | 1.11  | 20 |
| Barium   | 87.6   | 0.437  | "         | 92.3   | 5.21  | 20 |
| Cadmium  | 0.0664 | 0.219  | "         | 0.0725 | 8.81  | 20 |
| Copper   | 2.10   | 0.437  | "         | 2.06   | 2.00  | 20 |
| Lead     | 2.96   | 0.219  | "         | 3.07   | 3.87  | 20 |
| Nickel   | 1.27   | 0.437  | "         | 1.27   | 0.757 | 20 |
| Selenium | ND     | 0.260  | "         | ND     |       | 20 |
| Silver   | 0.0144 | 0.0219 | "         | 0.0166 | 14.1  | 20 |
| Zinc     | 6.96   | 0.437  | "         | 6.67   | 4.15  | 20 |

Summit Scientific

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



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

Project: Noble - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/30/23 15:09

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BGE0782 - EPA 3050B**

**Matrix Spike (BGE0782-MS1)**

Source: 2305437-01

Prepared: 05/23/23 Analyzed: 05/24/23

|          |      |        |           |      |        |      |        |  |  |  |       |
|----------|------|--------|-----------|------|--------|------|--------|--|--|--|-------|
| Arsenic  | 14.9 | 0.219  | mg/kg dry | 43.7 | 0.513  | 33.0 | 75-125 |  |  |  | QM-05 |
| Barium   | 146  | 0.437  | "         | 43.7 | 92.3   | 123  | 75-125 |  |  |  |       |
| Cadmium  | 1.84 | 0.219  | "         | 2.19 | 0.0725 | 80.8 | 75-125 |  |  |  |       |
| Copper   | 17.0 | 0.437  | "         | 43.7 | 2.06   | 34.2 | 75-125 |  |  |  | QM-05 |
| Lead     | 19.8 | 0.219  | "         | 21.9 | 3.07   | 76.3 | 75-125 |  |  |  |       |
| Nickel   | 16.1 | 0.437  | "         | 43.7 | 1.27   | 34.0 | 75-125 |  |  |  | QM-05 |
| Selenium | 4.09 | 0.260  | "         | 4.37 | ND     | 93.5 | 75-125 |  |  |  |       |
| Silver   | 1.81 | 0.0219 | "         | 2.19 | 0.0166 | 82.1 | 75-125 |  |  |  |       |
| Zinc     | 22.3 | 0.437  | "         | 43.7 | 6.67   | 35.7 | 75-125 |  |  |  | QM-05 |

**Matrix Spike Dup (BGE0782-MSD1)**

Source: 2305437-01

Prepared: 05/23/23 Analyzed: 05/24/23

|          |      |        |           |      |        |      |        |       |    |  |       |
|----------|------|--------|-----------|------|--------|------|--------|-------|----|--|-------|
| Arsenic  | 15.2 | 0.219  | mg/kg dry | 43.7 | 0.513  | 33.7 | 75-125 | 2.00  | 25 |  | QM-05 |
| Barium   | 145  | 0.437  | "         | 43.7 | 92.3   | 120  | 75-125 | 0.825 | 25 |  |       |
| Cadmium  | 1.83 | 0.219  | "         | 2.19 | 0.0725 | 80.5 | 75-125 | 0.429 | 25 |  |       |
| Copper   | 17.1 | 0.437  | "         | 43.7 | 2.06   | 34.3 | 75-125 | 0.369 | 25 |  | QM-05 |
| Lead     | 19.6 | 0.219  | "         | 21.9 | 3.07   | 75.7 | 75-125 | 0.739 | 25 |  |       |
| Nickel   | 16.1 | 0.437  | "         | 43.7 | 1.27   | 33.9 | 75-125 | 0.147 | 25 |  | QM-05 |
| Selenium | 4.42 | 0.260  | "         | 4.37 | ND     | 101  | 75-125 | 7.96  | 25 |  |       |
| Silver   | 1.77 | 0.0219 | "         | 2.19 | 0.0166 | 80.1 | 75-125 | 2.52  | 25 |  |       |
| Zinc     | 22.1 | 0.437  | "         | 43.7 | 6.67   | 35.3 | 75-125 | 0.664 | 25 |  | QM-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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/30/23 15:09

**Hexavalent Chromium by EPA Method 7196 - Quality Control**  
**Summit Scientific**

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

**Batch BGE0685 - 3060A Mod**

**Blank (BGE0685-BLK1)**

Prepared & Analyzed: 05/19/23

Chromium, Hexavalent      ND      0.30    mg/kg wet

**LCS (BGE0685-BS1)**

Prepared & Analyzed: 05/19/23

Chromium, Hexavalent      24.1      0.30    mg/kg wet      25.0      96.4      80-120

**Duplicate (BGE0685-DUP1)**

**Source: 2305435-01**

Prepared & Analyzed: 05/19/23

Chromium, Hexavalent      ND      0.30    mg/kg dry      ND      20

**Matrix Spike (BGE0685-MS1)**

**Source: 2305435-01**

Prepared & Analyzed: 05/19/23

Chromium, Hexavalent      27.0      0.30    mg/kg dry      28.7      ND      94.2      75-125

**Matrix Spike Dup (BGE0685-MSD1)**

**Source: 2305435-01**

Prepared & Analyzed: 05/19/23

Chromium, Hexavalent      27.1      0.30    mg/kg dry      28.7      ND      94.4      75-125      0.212      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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/30/23 15:09

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control**

**Summit Scientific**

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

**Batch BGE0872 - General Preparation**

**Blank (BGE0872-BLK1)**

Prepared: 05/24/23 Analyzed: 05/26/23

|           |    |        |          |  |  |  |  |  |  |  |
|-----------|----|--------|----------|--|--|--|--|--|--|--|
| Calcium   | ND | 0.0500 | mg/L wet |  |  |  |  |  |  |  |
| Magnesium | ND | 0.0500 | "        |  |  |  |  |  |  |  |
| Sodium    | ND | 0.0500 | "        |  |  |  |  |  |  |  |

**LCS (BGE0872-BS1)**

Prepared: 05/24/23 Analyzed: 05/26/23

|           |      |        |          |      |      |        |
|-----------|------|--------|----------|------|------|--------|
| Calcium   | 4.36 | 0.0500 | mg/L wet | 5.00 | 87.1 | 70-130 |
| Magnesium | 4.56 | 0.0500 | "        | 5.00 | 91.3 | 70-130 |
| Sodium    | 4.50 | 0.0500 | "        | 5.00 | 90.0 | 70-130 |

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 - Loloff 2,3,B35-19

Project Number: [none]  
 Project Manager: Jacob Whritenour

**Reported:**  
 05/30/23 15:09

**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 BGE0687 - General Preparation**

| <b>Duplicate (BGE0687-DUP1)</b> |      | <b>Source: 2305374-01</b> |   |  | <b>Prepared &amp; Analyzed: 05/19/23</b> |  |       |    |
|---------------------------------|------|---------------------------|---|--|------------------------------------------|--|-------|----|
| % Solids                        | 93.0 |                           | % |  | 93.3                                     |  | 0.327 | 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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/30/23 15:09

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control**  
**Summit Scientific**

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

**Batch BGE0905 - General Preparation**

**Blank (BGE0905-BLK1)**

Prepared & Analyzed: 05/25/23

Specific Conductance (EC)      ND      0.0100    mmhos/cm

**LCS (BGE0905-BS1)**

Prepared & Analyzed: 05/25/23

Specific Conductance (EC)      0.150      0.0100    mmhos/cm      0.150      100      95-105

**Duplicate (BGE0905-DUP1)**

**Source: 2305439-01**

Prepared & Analyzed: 05/25/23

Specific Conductance (EC)      0.616      0.0100    mmhos/cm      0.631      2.44      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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/30/23 15:09

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control**

**Summit Scientific**

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

**Batch BGE0904 - General Preparation**

**LCS (BGE0904-BS1)**

Prepared & Analyzed: 05/25/23

|    |      |  |          |      |  |      |        |  |  |
|----|------|--|----------|------|--|------|--------|--|--|
| pH | 8.99 |  | pH Units | 9.18 |  | 97.9 | 95-105 |  |  |
|----|------|--|----------|------|--|------|--------|--|--|

**Duplicate (BGE0904-DUP1)**

Source: 2305439-01

Prepared & Analyzed: 05/25/23

|    |      |  |          |      |  |  |      |    |  |
|----|------|--|----------|------|--|--|------|----|--|
| pH | 10.4 |  | pH Units | 10.3 |  |  | 1.16 | 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 - Loloff 2,3,B35-19

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/30/23 15:09

### Notes and Definitions

- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
- 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