# Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80401

303.277.9310

March 09, 2023

Paul Henehan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Wells Ranch AE20

Work Order # 2303079

Enclosed are the results of analyses for samples received by Summit Scientific on 03/02/23 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Scott Sheely For Paul Shrewsbury

President

| | | |
|---|---|---|
| Fremont Environmental<br>PO Box 1289<br>Wellington CO, 80549 | Project: Noble - Wells Ranch AE20<br>Project Number: [none]<br>Project Manager: Paul Henehan | **Reported:**<br>03/09/23 12:18 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| BKG N 6FT | 2303079-01 | Soil | 03/01/23 00:00 | 03/02/23 16:30 |
| BKG S 6FT | 2303079-02 | Soil | 03/01/23 00:00 | 03/02/23 16:30 |
| BKG E-N 6FT | 2303079-03 | Soil | 03/01/23 00:00 | 03/02/23 16:30 |
| BKG E-S 6FT | 2303079-04 | Soil | 03/01/23 00:00 | 03/02/23 16:30 |
| BKG W 6FT | 2303079-05 | Soil | 03/01/23 00:00 | 03/02/23 16:30 |

Summit Scientific

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

2303079

# Summit Scientific

S2

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

Page 1 of 1

Client: Fremont Environmental
Address:
City/State/Zip:
Phone:
Sampler Name:

Project Manager: Paul Henehan
E-Mail: Fremont Distribution List: PaulH, EthanB, JeffG and ChrisL. @fremontenv.com
Bill to : Dan
Project Name: Noble - Wells Ranch AE20
Project Number:

| | | | | | Preservative | | | | Matrix | | | | Analysis Requested | | | | | | | | Special Instructions |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ID | Sample Description | Date Sampled | Time Sampled | # of containers | HCl | HNO3 | None | Other | Water | Soil | Air-Canister # | Other | BTEX, TMBs, Naph. | TPH | PAH (915) | ~~50, BAR~~ (pH) ~~Base~~ | Metals (915) | TDS, Chloride, Sulfate | | HOLD | |
| 1 | BKG N 6FT | 3/1/23 | | 2 | | | X | | | X | | | | | | X | X | | | | |
| 2 | BKG S 6FT | " | | " | | | " | | | " | | | | | | " | " | | | | |
| 3 | BKG E-N 6FT | " | | " | | | " | | | " | | | | | | " | " | | | | |
| 4 | BKG E-S 6FT | " | | " | | | " | | | " | | | | | | " | " | | | | |
| 5 | BKG W 6FT | " | | " | | | " | | | " | | | | | | " | " | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | |

| | | | |
|---|---|---|---|
| Relinquished by: | Date/Time: 3/2/23 1424 | Received by: S2 | Date/Time: 3/2/23 1424 |
| Relinquished by: S2 | Date/Time: 3/2/23 1630 | Received by: | Date/Time: 3/2/23 1630 |
| Relinquished by: | Date/Time: | Received by: | Date/Time: |

**Turn Around Time** (Check)
Same Day ___ 72 hours ___
24 hours ___ Standard X
48 hours ___

**Sample Integrity:**
Temperature Upon Receipt: 10.1
Samples Intact: (Yes) No

**Notes:**

S2

**Sample Receipt Checklist**

S2 Work Order# 2303079

Client: Fremont Client Project ID: Noble-WellsRanch AE20

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

[ ] [–] [ ] [ ] [ ]

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

Temp (°C) [10.1] Thermometer # [1]

| | Yes | No | N/A | Comments (if any) |
|---|---|---|---|---|
| If samples require cooling, is the temperature < 6°C? (1) **NOTE:** If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun. | – | | | ONICE |
| If custody seals are present, are they intact? (1) | – | | | |
| Are samples due within 48 hours present? | | – | | |
| Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron ($Fe^{2+}$), Hexavalent Chromium ($Cr^{6+}$, Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen | | | – | |
| Is a chain-of-custody (COC) form present and filled out Completely? (1) | – | | | |
| Is the COC properly relinquished by the client w/ date and time recorded? (1) | – | | | |
| Were all samples received intact? (1) | ✓ | | | |
| Was adequate sample volume provided? (1) | ✓ | | | |
| Does the COC agree with the number and type of sample bottles received? (1) | ✓ | | | |
| Do the sample IDs on the bottle labels match the COC? (1) | ✓ | | | |
| For volatiles in water – is there headspace present? **If yes, contact client and note in narrative.** | | | ✓ | |
| Are samples preserved that require preservation **(excluding cooling)?** (1) Note the type of preservative in the comments column – HCl, $H_2SO_4$, NaOH, $HNO_3$, etc. | | | ✓ | |
| If samples are acid preserved for metals, is the pH ≤ 2? (1) Record the pH in Comments. | | | ✓ | |
| If dissolved metals are requested, were samples field filtered? | | | ✓ | |
| Additional Comments (if any): | | | | |
| (1) If NO, then contact the client before proceeding with analysis and note in case narrative. | | | | |

AB
Custodian Printed Name

3/2/23
Date/Time

| | | |
|---|---|---|
| Fremont Environmental<br>PO Box 1289<br>Wellington CO, 80549 | Project: Noble - Wells Ranch AE20<br>Project Number: [none]<br>Project Manager: Paul Henehan | **Reported:**<br>03/09/23 12:18 |

**BKG N 6FT**

**2303079-01 (Soil)**

**Summit Scientific**

## Total Metals by EPA 6020B

Date Sampled: **03/01/23 00:00**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **2.87** | 0.216 | 0.182 | mg/kg dry | 1 | BGC0119 | 03/05/23 | 03/07/23 | EPA 6020B | |
| **Barium** | **61.8** | 0.432 | 0.342 | " | " | " | " | " | " | |
| **Cadmium** | **0.129** | 0.216 | 0.00778 | " | " | " | " | " | " | |
| **Copper** | **2.54** | 0.432 | 0.0226 | " | " | " | " | " | " | |
| **Lead** | **4.14** | 0.216 | 0.0594 | " | " | " | " | " | " | |
| **Nickel** | **3.02** | 0.432 | 0.0659 | " | " | " | " | " | " | |
| Selenium | ND | 0.260 | 0.175 | " | " | " | " | " | " | |
| **Silver** | **0.0134** | 0.0216 | 0.00289 | " | " | " | " | " | " | |
| **Zinc** | **10.3** | 0.432 | 0.288 | " | " | " | " | " | " | |

## Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/01/23 00:00**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| Chromium, Hexavalent | ND | 0.30 | | mg/kg dry | 1 | BGC0110 | 03/04/23 | 03/04/23 | EPA 7196A | |

## Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/01/23 00:00**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **% Solids** | **92.5** | | | % | 1 | BGC0196 | 03/07/23 | 03/08/23 | Calculation | |

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

Date Sampled: **03/01/23 00:00**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **pH** | **8.52** | | | pH Units | 1 | BGC0108 | 03/04/23 | 03/04/23 | EPA 9045D | |

Summit Scientific

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| | | |
|---|---|---|
| Fremont Environmental<br>PO Box 1289<br>Wellington CO, 80549 | Project: Noble - Wells Ranch AE20<br>Project Number: [none]<br>Project Manager: Paul Henehan | **Reported:**<br>03/09/23 12:18 |

## BKG S 6FT

**2303079-02 (Soil)**

**Summit Scientific**

### Total Metals by EPA 6020B

Date Sampled: **03/01/23 00:00**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **1.64** | 0.218 | 0.184 | mg/kg dry | 1 | BGC0119 | 03/05/23 | 03/07/23 | EPA 6020B | |
| **Barium** | **22.5** | 0.436 | 0.345 | " | " | " | " | " | " | |
| **Cadmium** | **0.110** | 0.218 | 0.00785 | " | " | " | " | " | " | |
| **Copper** | **3.93** | 0.436 | 0.0228 | " | " | " | " | " | " | |
| **Lead** | **5.51** | 0.218 | 0.0599 | " | " | " | " | " | " | |
| **Nickel** | **2.28** | 0.436 | 0.0665 | " | " | " | " | " | " | |
| Selenium | ND | 0.260 | 0.175 | " | " | " | " | " | " | |
| **Silver** | **0.0214** | 0.0218 | 0.00291 | " | " | " | " | " | " | |
| **Zinc** | **15.5** | 0.436 | 0.290 | " | " | " | " | " | " | |

### Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/01/23 00:00**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| Chromium, Hexavalent | ND | 0.30 | | mg/kg dry | 1 | BGC0110 | 03/04/23 | 03/04/23 | EPA 7196A | |

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

Date Sampled: **03/01/23 00:00**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **% Solids** | **91.7** | | | % | 1 | BGC0196 | 03/07/23 | 03/08/23 | Calculation | |

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

Date Sampled: **03/01/23 00:00**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **pH** | **6.21** | | | pH Units | 1 | BGC0108 | 03/04/23 | 03/04/23 | EPA 9045D | |

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| | | |
|---|---|---|
| Fremont Environmental<br>PO Box 1289<br>Wellington CO, 80549 | Project: Noble - Wells Ranch AE20<br>Project Number: [none]<br>Project Manager: Paul Henehan | **Reported:**<br>03/09/23 12:18 |

## BKG E-N 6FT

**2303079-03 (Soil)**

**Summit Scientific**

### Total Metals by EPA 6020B

Date Sampled: **03/01/23 00:00**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **1.41** | 0.225 | 0.190 | mg/kg dry | 1 | BGC0119 | 03/05/23 | 03/07/23 | EPA 6020B | |
| **Barium** | **85.8** | 0.451 | 0.356 | " | " | " | " | " | " | |
| **Cadmium** | **0.123** | 0.225 | 0.00812 | " | " | " | " | " | " | |
| **Copper** | **3.23** | 0.451 | 0.0236 | " | " | " | " | " | " | |
| **Lead** | **3.64** | 0.225 | 0.0620 | " | " | " | " | " | " | |
| **Nickel** | **2.43** | 0.451 | 0.0688 | " | " | " | " | " | " | |
| Selenium | ND | 0.260 | 0.175 | " | " | " | " | " | " | |
| **Silver** | **0.0140** | 0.0225 | 0.00301 | " | " | " | " | " | " | |
| **Zinc** | **12.6** | 0.451 | 0.300 | " | " | " | " | " | " | |

### Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/01/23 00:00**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| Chromium, Hexavalent | ND | 0.30 | | mg/kg dry | 1 | BGC0110 | 03/04/23 | 03/04/23 | EPA 7196A | |

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

Date Sampled: **03/01/23 00:00**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **% Solids** | **88.7** | | | % | 1 | BGC0196 | 03/07/23 | 03/08/23 | Calculation | |

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

Date Sampled: **03/01/23 00:00**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **pH** | **8.09** | | | pH Units | 1 | BGC0108 | 03/04/23 | 03/04/23 | EPA 9045D | |

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| | | |
|---|---|---|
| Fremont Environmental<br>PO Box 1289<br>Wellington CO, 80549 | Project: Noble - Wells Ranch AE20<br>Project Number: [none]<br>Project Manager: Paul Henehan | **Reported:**<br>03/09/23 12:18 |

## BKG E-S 6FT

**2303079-04 (Soil)**

**Summit Scientific**

### Total Metals by EPA 6020B

Date Sampled: **03/01/23 00:00**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **1.55** | 0.239 | 0.201 | mg/kg dry | 1 | BGC0119 | 03/05/23 | 03/07/23 | EPA 6020B | |
| **Barium** | **344** | 0.477 | 0.377 | " | " | " | " | " | " | |
| **Cadmium** | **0.137** | 0.239 | 0.00859 | " | " | " | " | " | " | |
| **Copper** | **4.21** | 0.477 | 0.0249 | " | " | " | " | " | " | |
| **Lead** | **3.38** | 0.239 | 0.0656 | " | " | " | " | " | " | |
| **Nickel** | **2.94** | 0.477 | 0.0728 | " | " | " | " | " | " | |
| Selenium | ND | 0.260 | 0.175 | " | " | " | " | " | " | |
| **Silver** | **0.0177** | 0.0239 | 0.00319 | " | " | " | " | " | " | |
| **Zinc** | **14.4** | 0.477 | 0.317 | " | " | " | " | " | " | |

### Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/01/23 00:00**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| Chromium, Hexavalent | ND | 0.30 | | mg/kg dry | 1 | BGC0110 | 03/04/23 | 03/04/23 | EPA 7196A | |

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

Date Sampled: **03/01/23 00:00**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **% Solids** | **83.8** | | | % | 1 | BGC0196 | 03/07/23 | 03/08/23 | Calculation | |

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

Date Sampled: **03/01/23 00:00**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **pH** | **7.89** | | | pH Units | 1 | BGC0108 | 03/04/23 | 03/04/23 | EPA 9045D | |

Summit Scientific

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| | | |
|---|---|---|
| Fremont Environmental<br>PO Box 1289<br>Wellington CO, 80549 | Project: Noble - Wells Ranch AE20<br>Project Number: [none]<br>Project Manager: Paul Henehan | **Reported:**<br>03/09/23 12:18 |

## BKG W 6FT

**2303079-05 (Soil)**

**Summit Scientific**

### Total Metals by EPA 6020B

Date Sampled: **03/01/23 00:00**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **1.45** | 0.239 | 0.201 | mg/kg dry | 1 | BGC0119 | 03/05/23 | 03/07/23 | EPA 6020B | |
| **Barium** | **78.4** | 0.478 | 0.377 | " | " | " | " | " | " | |
| **Cadmium** | **0.129** | 0.239 | 0.00860 | " | " | " | " | " | " | |
| **Copper** | **3.88** | 0.478 | 0.0250 | " | " | " | " | " | " | |
| **Lead** | **4.78** | 0.239 | 0.0656 | " | " | " | " | " | " | |
| **Nickel** | **2.55** | 0.478 | 0.0728 | " | " | " | " | " | " | |
| Selenium | ND | 0.260 | 0.175 | " | " | " | " | " | " | |
| **Silver** | **0.0158** | 0.0239 | 0.00319 | " | " | " | " | " | " | |
| **Zinc** | **15.6** | 0.478 | 0.318 | " | " | " | " | " | " | |

### Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/01/23 00:00**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| Chromium, Hexavalent | ND | 0.30 | | mg/kg dry | 1 | BGC0110 | 03/04/23 | 03/04/23 | EPA 7196A | |

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

Date Sampled: **03/01/23 00:00**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **% Solids** | **83.8** | | | % | 1 | BGC0196 | 03/07/23 | 03/08/23 | Calculation | |

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

Date Sampled: **03/01/23 00:00**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **pH** | **7.96** | | | pH Units | 1 | BGC0108 | 03/04/23 | 03/04/23 | EPA 9045D | |

| | | |
|---|---|---|
| Fremont Environmental | Project: Noble - Wells Ranch AE20 | |
| PO Box 1289 | Project Number: [none] | **Reported:** |
| Wellington CO, 80549 | Project Manager: Paul Henehan | 03/09/23 12:18 |

## Total Metals by EPA 6020B - Quality Control

## Summit Scientific

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BGC0119 - EPA 3050B** | | | | | | | | | | |
| **Blank (BGC0119-BLK1)** | | | | Prepared: 03/05/23 Analyzed: 03/07/23 | | | | | | |
| 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 (BGC0119-BS1)** | | | | Prepared: 03/05/23 Analyzed: 03/07/23 | | | | | | |
| Arsenic | 46.4 | 0.200 | mg/kg wet | 40.0 | | 116 | 80-120 | | | |
| Barium | 45.6 | 0.400 | " | 40.0 | | 114 | 80-120 | | | |
| Cadmium | 2.34 | 0.200 | " | 2.00 | | 117 | 80-120 | | | |
| Copper | 44.5 | 0.400 | " | 40.0 | | 111 | 80-120 | | | |
| Lead | 20.4 | 0.200 | " | 20.0 | | 102 | 80-120 | | | |
| Nickel | 46.2 | 0.400 | " | 40.0 | | 116 | 80-120 | | | |
| Selenium | 4.71 | 0.260 | " | 4.00 | | 118 | 80-120 | | | |
| Silver | 2.35 | 0.0200 | " | 2.00 | | 117 | 80-120 | | | |
| Zinc | 47.6 | 0.400 | " | 40.0 | | 119 | 80-120 | | | |
| **Duplicate (BGC0119-DUP1)** | **Source: 2303079-01** | | | Prepared: 03/05/23 Analyzed: 03/07/23 | | | | | | |
| Arsenic | 2.93 | 0.216 | mg/kg dry | | 2.87 | | | 2.04 | 20 | |
| Barium | 59.9 | 0.432 | " | | 61.8 | | | 3.12 | 20 | |
| Cadmium | 0.134 | 0.216 | " | | 0.129 | | | 3.61 | 20 | |
| Copper | 2.59 | 0.432 | " | | 2.54 | | | 2.17 | 20 | |
| Lead | 4.57 | 0.216 | " | | 4.14 | | | 9.85 | 20 | |
| Nickel | 3.12 | 0.432 | " | | 3.02 | | | 3.36 | 20 | |
| Selenium | ND | 0.260 | " | | ND | | | | 20 | |
| Silver | 0.0104 | 0.0216 | " | | 0.0134 | | | 25.5 | 20 | QR-01 |
| Zinc | 10.6 | 0.432 | " | | 10.3 | | | 3.03 | 20 | |

| | | |
|---|---|---|
| Fremont Environmental<br>PO Box 1289<br>Wellington CO, 80549 | Project: Noble - Wells Ranch AE20<br>Project Number: [none]<br>Project Manager: Paul Henehan | **Reported:**<br>03/09/23 12:18 |

## Total Metals by EPA 6020B - Quality Control

## Summit Scientific

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BGC0119 - EPA 3050B** | | | | | | | | | | |
| **Matrix Spike (BGC0119-MS1)** | **Source: 2303079-01** | | | Prepared: 03/05/23 Analyzed: 03/07/23 | | | | | | |
| Arsenic | 51.9 | 0.216 | mg/kg dry | 43.2 | 2.87 | 113 | 75-125 | | | |
| Barium | 103 | 0.432 | " | 43.2 | 61.8 | 95.6 | 75-125 | | | |
| Cadmium | 2.69 | 0.216 | " | 2.16 | 0.129 | 118 | 75-125 | | | |
| Copper | 45.1 | 0.432 | " | 43.2 | 2.54 | 98.5 | 75-125 | | | |
| Lead | 28.6 | 0.216 | " | 21.6 | 4.14 | 113 | 75-125 | | | |
| Nickel | 44.4 | 0.432 | " | 43.2 | 3.02 | 95.8 | 75-125 | | | |
| Selenium | 5.63 | 0.260 | " | 4.32 | ND | 130 | 75-125 | | | QM-07 |
| Silver | 2.51 | 0.0216 | " | 2.16 | 0.0134 | 116 | 75-125 | | | |
| Zinc | 50.6 | 0.432 | " | 43.2 | 10.3 | 93.1 | 75-125 | | | |
| **Matrix Spike Dup (BGC0119-MSD1)** | **Source: 2303079-01** | | | Prepared: 03/05/23 Analyzed: 03/07/23 | | | | | | |
| Arsenic | 52.9 | 0.216 | mg/kg dry | 43.2 | 2.87 | 116 | 75-125 | 2.07 | 25 | |
| Barium | 107 | 0.432 | " | 43.2 | 61.8 | 105 | 75-125 | 3.78 | 25 | |
| Cadmium | 2.79 | 0.216 | " | 2.16 | 0.129 | 123 | 75-125 | 3.71 | 25 | |
| Copper | 44.9 | 0.432 | " | 43.2 | 2.54 | 97.9 | 75-125 | 0.588 | 25 | |
| Lead | 29.9 | 0.216 | " | 21.6 | 4.14 | 119 | 75-125 | 4.30 | 25 | |
| Nickel | 44.5 | 0.432 | " | 43.2 | 3.02 | 95.9 | 75-125 | 0.0467 | 25 | |
| Selenium | 5.26 | 0.260 | " | 4.32 | ND | 122 | 75-125 | 6.77 | 25 | |
| Silver | 2.61 | 0.0216 | " | 2.16 | 0.0134 | 120 | 75-125 | 3.63 | 25 | |
| Zinc | 50.4 | 0.432 | " | 43.2 | 10.3 | 92.7 | 75-125 | 0.368 | 25 | |

| | | |
|---|---|---|
| Fremont Environmental<br>PO Box 1289<br>Wellington CO, 80549 | Project: Noble - Wells Ranch AE20<br>Project Number: [none]<br>Project Manager: Paul Henehan | **Reported:**<br>03/09/23 12:18 |

## Hexavalent Chromium by EPA Method 7196 - Quality Control

## Summit Scientific

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BGC0110 - 3060A_Mod** | | | | | | | | | | |
| **Blank (BGC0110-BLK1)** | | | | Prepared & Analyzed: 03/04/23 | | | | | | |
| Chromium, Hexavalent | ND | 0.30 | mg/kg wet | | | | | | | |
| **LCS (BGC0110-BS1)** | | | | Prepared & Analyzed: 03/04/23 | | | | | | |
| Chromium, Hexavalent | 23.4 | 0.30 | mg/kg wet | 25.0 | | 93.4 | 80-120 | | | |
| **Duplicate (BGC0110-DUP1)** | | **Source: 2303079-01** | | Prepared & Analyzed: 03/04/23 | | | | | | |
| Chromium, Hexavalent | ND | 0.30 | mg/kg dry | | ND | | | | 20 | |
| **Matrix Spike (BGC0110-MS1)** | | **Source: 2303079-01** | | Prepared & Analyzed: 03/04/23 | | | | | | |
| Chromium, Hexavalent | 25.5 | 0.30 | mg/kg dry | 27.0 | ND | 94.2 | 75-125 | | | |
| **Matrix Spike Dup (BGC0110-MSD1)** | | **Source: 2303079-01** | | Prepared & Analyzed: 03/04/23 | | | | | | |
| Chromium, Hexavalent | 25.1 | 0.30 | mg/kg dry | 27.0 | ND | 92.8 | 75-125 | 1.50 | 20 | |

| | | |
|---|---|---|
| Fremont Environmental<br>PO Box 1289<br>Wellington CO, 80549 | Project: Noble - Wells Ranch AE20<br>Project Number: [none]<br>Project Manager: Paul Henehan | **Reported:**<br>03/09/23 12:18 |

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

## Summit Scientific

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BGC0196 - General Preparation** | | | | | | | | | | |
| **Duplicate (BGC0196-DUP1)** | | **Source: 2302120-32** | | Prepared: 03/07/23 Analyzed: 03/08/23 | | | | | | |
| % Solids | 88.6 | | % | | 88.7 | | | 0.128 | 20 | |

| | | |
|---|---|---|
| Fremont Environmental<br>PO Box 1289<br>Wellington CO, 80549 | Project: Noble - Wells Ranch AE20<br>Project Number: [none]<br>Project Manager: Paul Henehan | **Reported:**<br>03/09/23 12:18 |

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

## Summit Scientific

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BGC0108 - General Preparation** | | | | | | | | | | |
| **LCS (BGC0108-BS1)** | | | | Prepared & Analyzed: 03/04/23 | | | | | | |
| pH | 9.23 | | pH Units | 9.18 | | 101 | 95-105 | | | |
| **Duplicate (BGC0108-DUP1)** | | **Source: 2302478-03** | | Prepared & Analyzed: 03/04/23 | | | | | | |
| pH | 8.19 | | pH Units | | 8.24 | | | 0.609 | 20 | |

| | | | |
|---|---|---|---|
| Fremont Environmental | Project: | Noble - Wells Ranch AE20 | |
| PO Box 1289 | Project Number: | [none] | **Reported:** |
| Wellington CO, 80549 | Project Manager: | Paul Henehan | 03/09/23 12:18 |

## Notes and Definitions

| | |
|---|---|
| QR-01 | Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results. |
| 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 |