



GROUNDWATER MONITORING REPORT SEPTEMBER 2014

MILLER SOUTH #1 SPREAD FIELD REMEDATION #7412

LT Environmental, Inc. (LTE), under the direction of Noble Energy, Inc. (Noble), conducted groundwater monitoring activities at the Miller South #1 Spread Field (Site). The legal description of the Site is the south half of the northwest quarter of Section 29, Township 5 North, Range 64 West, 6th Principal Meridian. The Site is located approximately 0.35 miles east of County Road 51 and 0.25 miles south of County Road 54 in Weld County, Colorado. The Site Location Map is included as Figure 1.

On March 8 and 9, 2012, LTE advanced a total of 16 soil borings (SB01 through SB16). Soil borings (SB01 through SB16) were completed as temporary monitoring wells to assess the potential extent of inorganic constituents in groundwater related to the release of calcium chloride-enriched water. Monitoring well SB09 was located up-gradient from the release area to obtain background concentrations. On September 10 and 11, 2012, a total of 17 monitoring wells (Background 01, Background 02, SB01R through SB08R, and SB17 through SB23) were installed to provide background concentrations of the inorganic constituents of concern (Background 01 and Background 02), replace the destroyed monitoring wells (SB01R through SB08R), and delineate the potential extent of groundwater impacts (SB17 through SB23). On January 8, 2013, monitoring well SB05R2 was installed to replace destroyed monitoring well SB05R. On April 1, 2013, three monitoring wells (SB19R through SB21R) were installed to replace those destroyed during the expansion of the landowner's irrigation pond. Soil boring SB09 was advanced to establish background conditions; however, it was located within the permitted spread field boundaries. Therefore, samples were collected from the Background 01 and Background 02 locations both up-gradient and outside of the permitted spread field and those results were used to calculate the Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1 standard for chloride, sulfate, and total dissolved solids (TDS).

On March 4, 2014, Noble, LTE, and the COGCC (represented by Mr. Rick Allison) conducted a meeting to discuss the Site, specifically regarding the groundwater monitoring program and evaluation of site closure methodology. During the meeting, Noble and the COGCC agreed to the following:

- Conduct a groundwater monitoring event of existing monitoring wells and analyze for inorganic groundwater constituents and bromide;
- Analyze samples from the monitoring wells exhibiting the most elevated levels of chloride (SB04R and SB14R) for anions and cations; and
- Submit data in a monitoring report with consideration and recommendations toward the ongoing groundwater monitoring program and site closure.

Groundwater Monitoring Activities

On September 22, 2014, LTE, under the direction of Noble, were on site to conduct groundwater monitoring activities in 22 monitoring wells (SB01R through SB04R, SB05R2, SB06R through SB08R, SB10 through SB18, SB19R, SB20R, SB21R, SB22, and SB23). Due to the release of water from the nearby ponds, a portion of the site was flooded and samples could not be collected from monitoring wells SB01R, SB02R, SB03R, SB04R, SB05R2, SB17, and SB18. Due to being damaged or destroyed, samples could not be collected from monitoring wells SB08R, SB19R, and SB21R. Due to vegetative growth, monitoring well SB22 could not be located and therefore not sampled. Prior to purging, depth to groundwater was measured and recorded for calculating well-specific target purge volumes and relative groundwater elevations. Depth to groundwater ranged from 1.96 feet below top of casing (btoc) in monitoring well SB13 to 9.39 feet btoc in monitoring well SB20R. The pre-purging depth to groundwater measurements were likely influenced by the localized flooding at the Site and may not be indicative of the static groundwater level. Groundwater gradients vary at the Site, but generally flow east. Northwest gradients are likely influenced by local agricultural activities. The average gradient is approximately 0.013 feet per foot. Relative groundwater elevations are presented on Figure 2 and summarized in Table 1.

During this monitoring event, 11 groundwater samples (SB06R, SB07R, SB10 through SB16, SB20R, and SB23) were collected. All samples were submitted to Origins Laboratory, Inc. (Origins) of Denver, Colorado, for analysis of chloride, bromide, and sulfate by United States Environmental Protection Agency (EPA) Method 300.0 and TDS by Standard Method 2540C.

Surface Water Monitoring

On September 24, 2014, LTE, under the direction of Noble, collected 12 grab samples (SW01 through SW12) of the surface water that remained on the Site to determine the potential for impact to groundwater at the Site associated with the release of the water from the surface water pond. The samples were collected, placed on ice, then submitted with a completed chain of custody form to Origins for analysis of chloride, bromide, and sulfate by EPA Method 300.0 and TDS by Standard Method 2540C.

Groundwater Analytical Results

The COGCC Table 910-1 groundwater standards for chloride, sulfate, and TDS are 1.25 times the background concentrations from samples collected at monitoring wells Background 01 and Background 02. In order to help identify the potential release location, magnitude, or extent, as discussed in the March 4, 2014, meeting, groundwater data was analyzed to include evaluation of the chloride to bromide ratio (Cl^-/Br^-). The Cl^-/Br^- statistic may allow for identification of the potential calcium chloride release by normalizing the data to the background inorganic variability and allowing the release to be identified regardless of the natural variability of background chloride concentrations. A benchmark of 250 (unitless) can be used to compare potential anthropogenic sourced data versus naturally occurring concentrations. The Cl^-/Br^- results are presented on Figure 3 and summarized in Table 1.

An analysis of the data from one of the monitoring wells that has historically exhibited the most elevated levels of chloride, SB14, indicated that the concentrations of chloride and TDS generally correlated directly with the depth of groundwater for the affected shallow alluvial

profile. The data from the current monitoring event appears to contradict this; however, it is likely due to the unnatural influence of the pond release flooding the Site, driving the depth to groundwater measurements to appear shallower than the natural static groundwater elevation. Additionally, the flooded water may be diluting the subsurface chloride concentrations. As seen in data collected from monitoring well SB14, the concentrations of both chloride and TDS in the groundwater generally increase as the groundwater elevation rises, with the exception of the September 2014 monitoring event where groundwater elevations were unnaturally influenced. This indicated the groundwater is coming into contact with soil containing relatively higher concentrations of chloride and TDS at shallower depths. Current trends indicated the sulfate concentrations have not been affected by groundwater elevation and appear to be stable and decreasing. This conclusion supports the understanding that the inorganic groundwater impact is related to the documented calcium chloride fluid release. The aqueous concentrations of chloride, sulfate, and TDS in monitoring well SB14, relative to the relative groundwater elevations, are presented as Figures 4, 5, and 6, respectively. Laboratory groundwater analytical results for chloride, sulfate, and TDS are presented on Figures 7, 8, and 9, respectively. Laboratory groundwater analytical results are summarized in Table 1. The laboratory groundwater analytical report is included as Attachment 1.

Surface Water Analytical Results

The COGCC Table 910-1 standards for chloride, sulfate, and TDS are applicable to groundwater only; therefore, regarding the surface water samples, they were used for reference purposes only. The Cl^-/Br^- was also used for reference purposes only as described above. The surface water analytical results are presented on Figure 10 and summarized in Table 2. The laboratory surface water analytical report is included as Attachment 2.

Summary and Conclusions

As seen by the data collected and detailed in this report, groundwater impacts are generally confined to an area near the release. Monitoring locations at the extent of the investigation area indicated concentrations are generally stable or decreasing, indicating that the source of the impacts are continuing to be degraded through natural processes and the groundwater plume is in the decreasing phase of its life cycle. The inorganic impacts identified are not migrating and the plume does not present a risk to public health or the environment; therefore, monitored natural attenuation is an appropriate remedial method for the Site.

Due to plume stability, Noble proposes a reduction in the frequency and size of the monitoring program. We propose that monitoring wells SB04R, SB05R2, SB06R, SB07R, SB11, SB14, SB18, and SB23, which define the plume extent, be sampled for inorganics and bromide on a semi-annual basis with results summarized in an annual report. The next monitoring event is scheduled for March 2015.

FIGURES

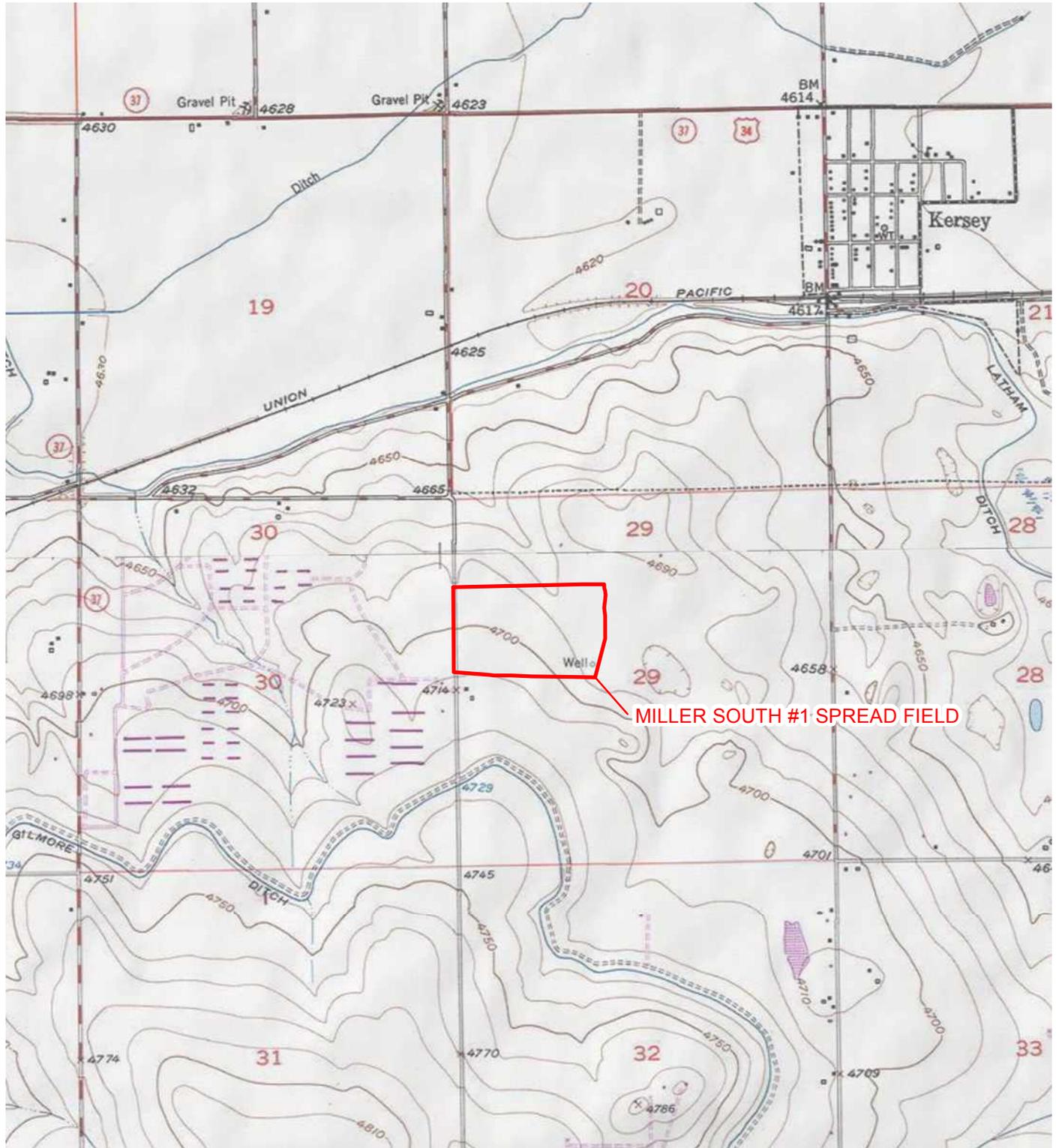
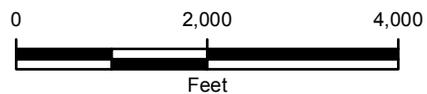


IMAGE COURTESY OF ESRI/USGS

LEGEND

 SITE LOCATION




COLORADO

FIGURE 1
SITE LOCATION MAP
MILLER SOUTH #1 SPREAD FIELD
WELD COUNTY, COLORADO



NOBLE ENERGY, INC.

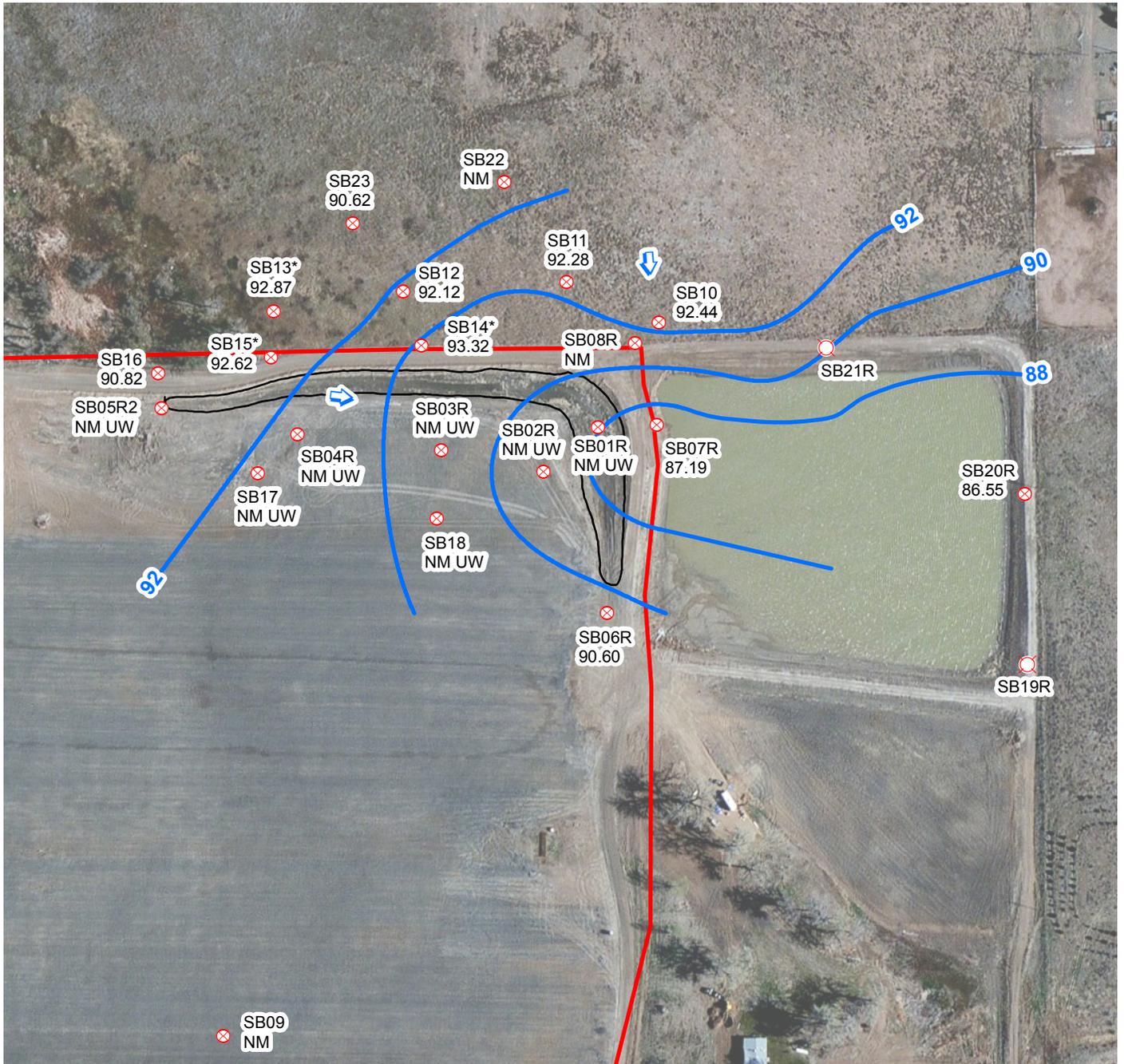


IMAGE COURTESY OF ESRI

LEGEND

- MONITORING WELL
- CALCULATED GROUNDWATER FLOW DIRECTION
- SURFICIAL RELEASE EXTENT
- RELATIVE GROUNDWATER ELEVATION CONTOUR
- CONTOUR INTERVAL = 2 FEET
- GRADIENT = 0.013 FT/FT

SPREAD FIELD BOUNDARY

*GROUNDWATER ELEVATIONS FROM MONITORING WELLS SB13, SB14 AND SB15 WERE NOT USED TO GENERATE CONTOURS.
 NM: NOT MEASURED
 UW: UNDER WATER

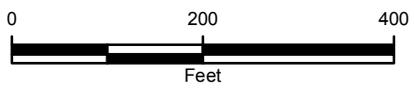
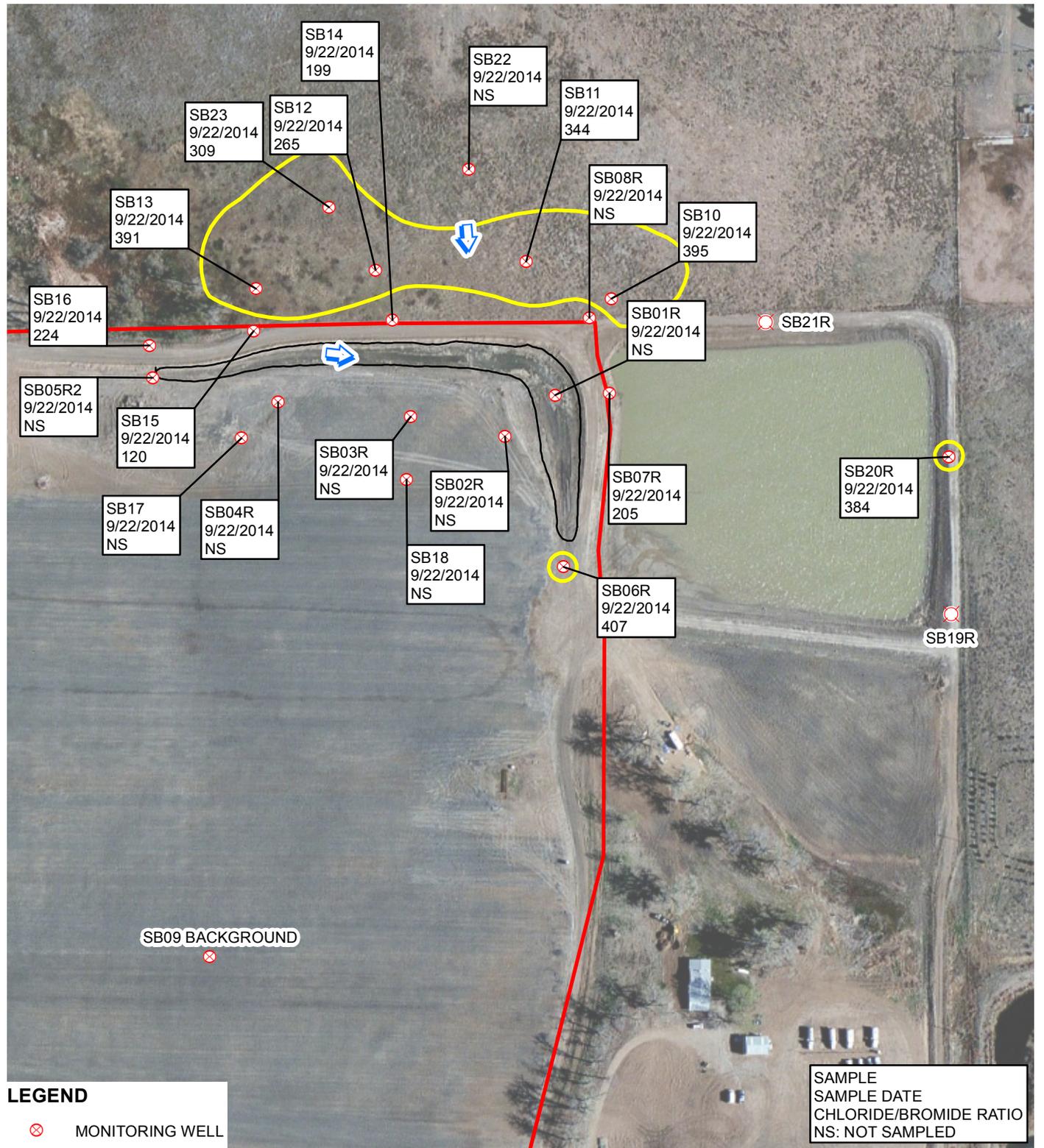


FIGURE 2
 RELATIVE GROUNDWATER ELEVATION MAP
 SEPTEMBER 22, 2014
 MILLER SOUTH #1 SPREAD FIELD
 WELD COUNTY, COLORADO
 NOBLE ENERGY, INC.





LEGEND

- ⊗ MONITORING WELL
- ⊗ DESTROYED MONITORING WELL
- ↑ CALCULATED GROUNDWATER FLOW DIRECTION
- 250 CHLORIDE/BROMIDE RATIO ISOCONCENTRATION CONTOUR
- SURFICIAL RELEASE EXTENT
- ▭ SPREAD FIELD BOUNDARY

SAMPLE
 SAMPLE DATE
 CHLORIDE/BROMIDE RATIO
 NS: NOT SAMPLED

IMAGE COURTESY OF ESRI

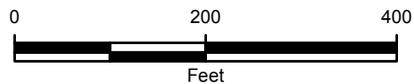
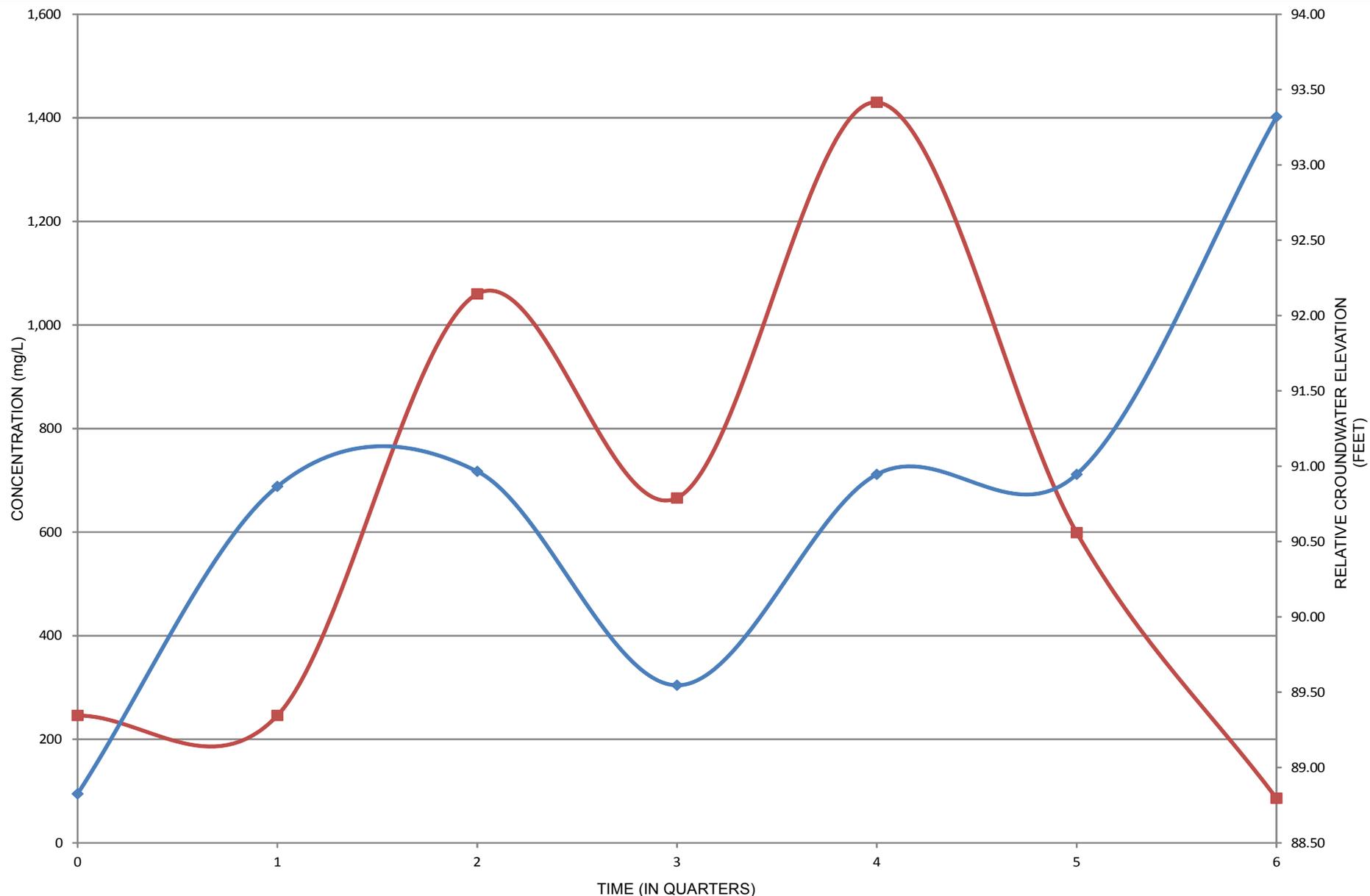


FIGURE 3
CHLORIDE/BROMIDE ANALYTICAL RESULTS
MILLER SOUTH #1 SPREAD FIELD
WELD COUNTY, COLORADO

NOBLE ENERGY, INC.





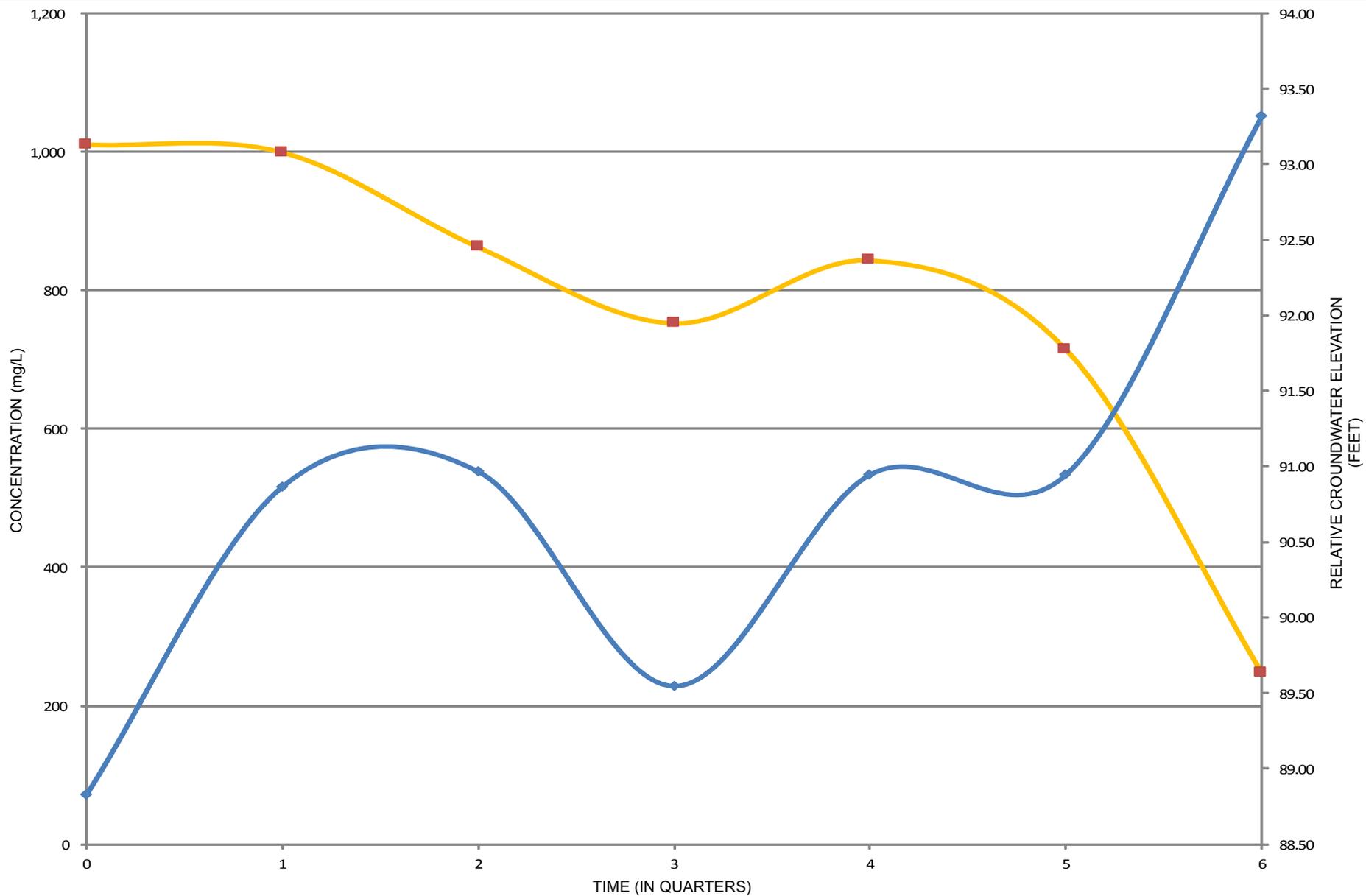
LEGEND

- CHLORIDE CONCENTRATION
- ◆ RELATIVE GROUNDWATER ELEVATION

FIGURE 4
SB14 CHLORIDE HYDROGRAPH
MILLER SOUTH #1 SPREAD FIELD
WELD COUNTY, COLORADO

NOBLE ENERGY, INC.





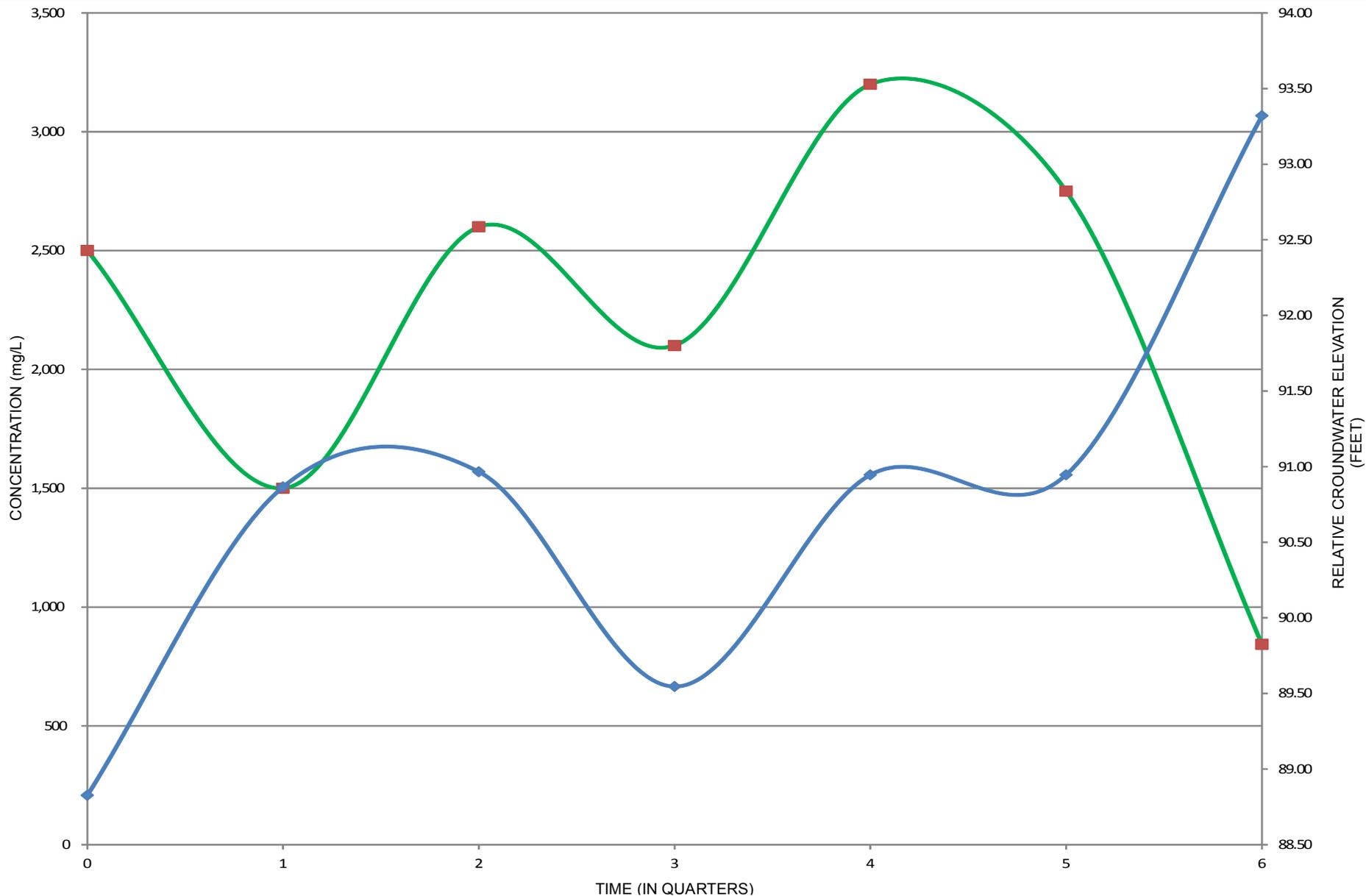
LEGEND

- — Sulfate Concentration
- ◆ — Relative Groundwater Elevation

FIGURE 5
SB14 SULFATE HYDROGRAPH
MILLER SOUTH #1 SPREAD FIELD
WELD COUNTY, COLORADO

NOBLE ENERGY, INC.





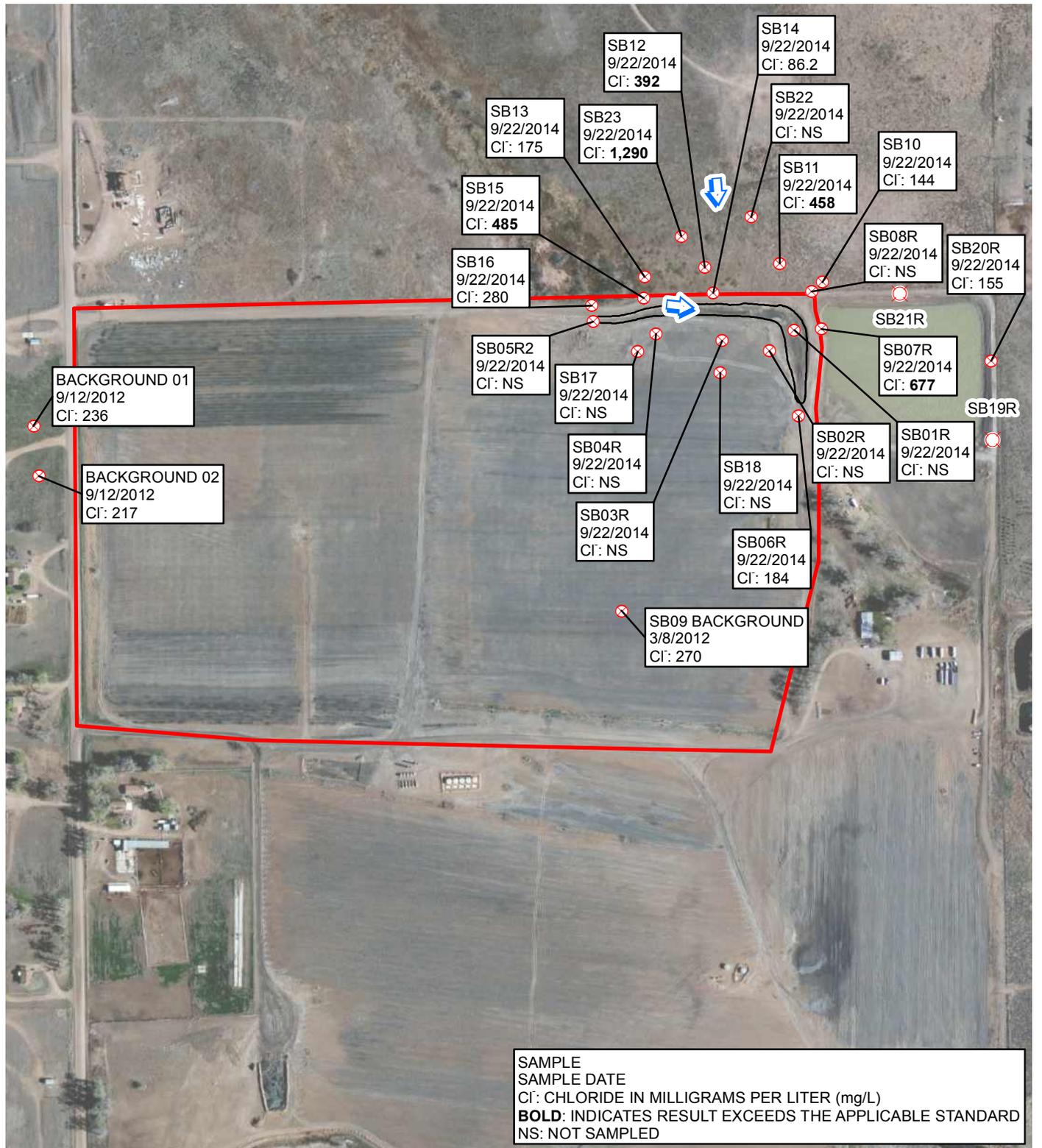
LEGEND

- TOTAL DISSOLVED SOLIDS
- ◆ RELATIVE GROUNDWATER ELEVATION

FIGURE 6
SB14 TOTAL DISSOLVED SOLIDS HYDROGRAPH
MILLER SOUTH #1 SPREAD FIELD
WELD COUNTY, COLORADO



NOBLE ENERGY, INC.



SAMPLE
 SAMPLE DATE
 Cl⁻: CHLORIDE IN MILLIGRAMS PER LITER (mg/L)
BOLD: INDICATES RESULT EXCEEDS THE APPLICABLE STANDARD
 NS: NOT SAMPLED

IMAGE COURTESY OF ESRI

LEGEND

- MONITORING WELL
- CALCULATED GROUNDWATER FLOW DIRECTION
- DESTROYED MONITORING WELL
- SURFICIAL RELEASE EXTENT
- SPREAD FIELD BOUNDARY

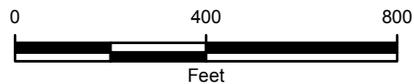
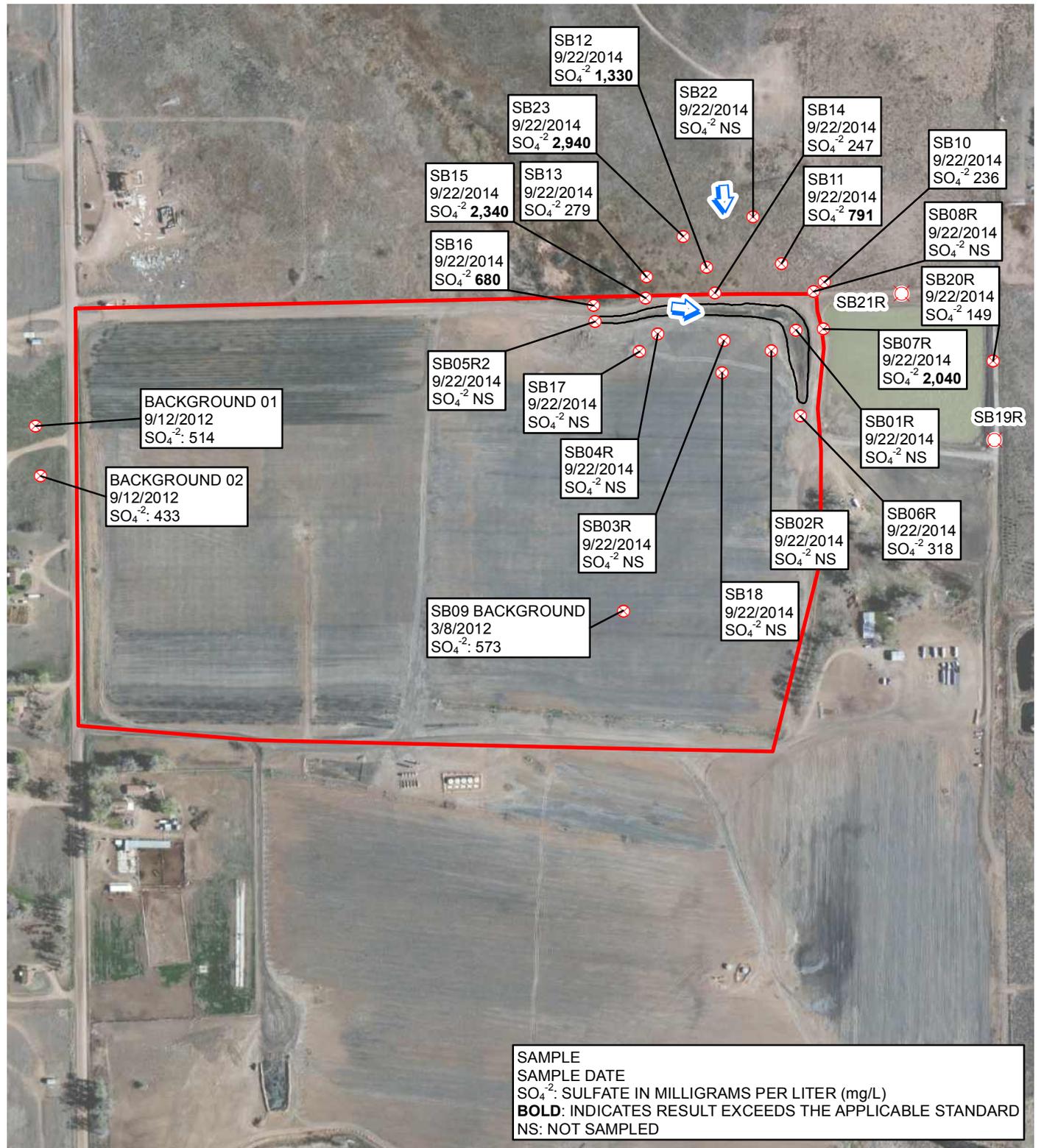


FIGURE 7
CHLORIDE GROUNDWATER ANALYTICAL RESULTS
MILLER SOUTH #1 SPREAD FIELD
WELD COUNTY, COLORADO

NOBLE ENERGY, INC.





SAMPLE
 SAMPLE DATE
 SO₄⁻²: SULFATE IN MILLIGRAMS PER LITER (mg/L)
BOLD: INDICATES RESULT EXCEEDS THE APPLICABLE STANDARD
 NS: NOT SAMPLED

LEGEND

- MONITORING WELL
- CALCULATED GROUNDWATER FLOW DIRECTION
- DESTROYED MONITORING WELL
- SURFICIAL RELEASE EXTENT
- SPREAD FIELD BOUNDARY

IMAGE COURTESY OF ESRI

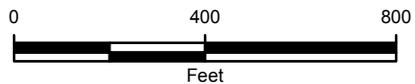
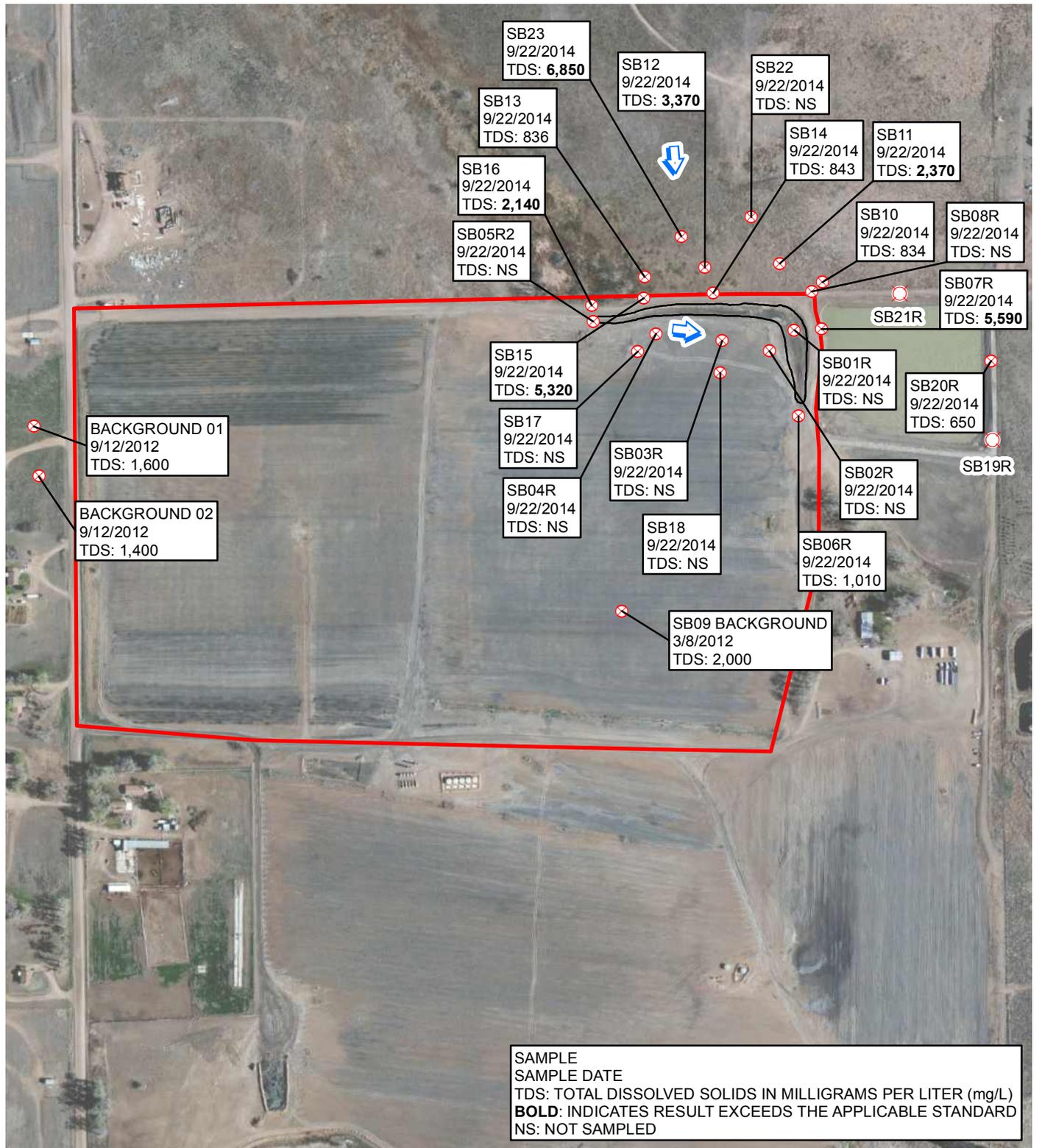


FIGURE 8
SULFATE GROUNDWATER ANALYTICAL RESULTS
MILLER SOUTH #1 SPREAD FIELD
WELD COUNTY, COLORADO

NOBLE ENERGY, INC.





SAMPLE
SAMPLE DATE
TDS: TOTAL DISSOLVED SOLIDS IN MILLIGRAMS PER LITER (mg/L)
BOLD: INDICATES RESULT EXCEEDS THE APPLICABLE STANDARD
NS: NOT SAMPLED

IMAGE COURTESY OF ESRI

LEGEND

- ⊗ MONITORING WELL
- ⊗ DESTROYED MONITORING WELL
- ↑ CALCULATED GROUNDWATER FLOW DIRECTION
- SURFICIAL RELEASE EXTENT
- ▭ SPREAD FIELD BOUNDARY

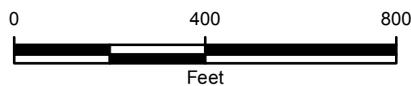
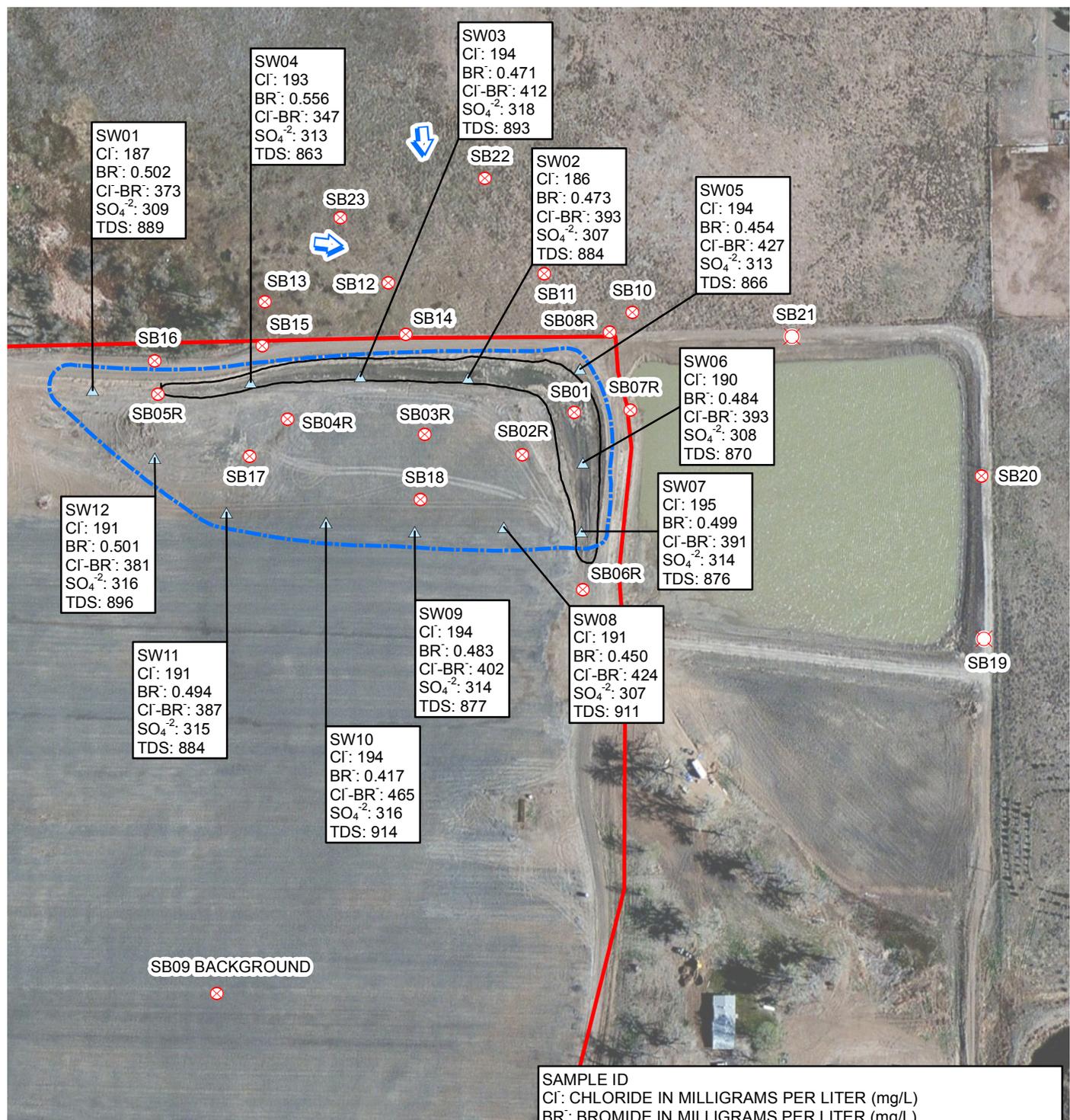


FIGURE 9
TOTAL DISSOLVED SOLIDS
GROUNDWATER ANALYTICAL RESULTS
MILLER SOUTH #1 SPREAD FIELD
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.





SW01
Cl⁻: 187
BR⁻: 0.502
Cl⁻-BR⁻: 373
SO₄²⁻: 309
TDS: 889

SW04
Cl⁻: 193
BR⁻: 0.556
Cl⁻-BR⁻: 347
SO₄²⁻: 313
TDS: 863

SW03
Cl⁻: 194
BR⁻: 0.471
Cl⁻-BR⁻: 412
SO₄²⁻: 318
TDS: 893

SW02
Cl⁻: 186
BR⁻: 0.473
Cl⁻-BR⁻: 393
SO₄²⁻: 307
TDS: 884

SW05
Cl⁻: 194
BR⁻: 0.454
Cl⁻-BR⁻: 427
SO₄²⁻: 313
TDS: 866

SW06
Cl⁻: 190
BR⁻: 0.484
Cl⁻-BR⁻: 393
SO₄²⁻: 308
TDS: 870

SW07
Cl⁻: 195
BR⁻: 0.499
Cl⁻-BR⁻: 391
SO₄²⁻: 314
TDS: 876

SW08
Cl⁻: 191
BR⁻: 0.450
Cl⁻-BR⁻: 424
SO₄²⁻: 307
TDS: 911

SW09
Cl⁻: 194
BR⁻: 0.483
Cl⁻-BR⁻: 402
SO₄²⁻: 314
TDS: 877

SW10
Cl⁻: 194
BR⁻: 0.417
Cl⁻-BR⁻: 465
SO₄²⁻: 316
TDS: 914

SW11
Cl⁻: 191
BR⁻: 0.494
Cl⁻-BR⁻: 387
SO₄²⁻: 315
TDS: 884

SW12
Cl⁻: 191
BR⁻: 0.501
Cl⁻-BR⁻: 381
SO₄²⁻: 316
TDS: 896

SB09 BACKGROUND

SAMPLE ID
Cl⁻: CHLORIDE IN MILLIGRAMS PER LITER (mg/L)
BR⁻: BROMIDE IN MILLIGRAMS PER LITER (mg/L)
Cl⁻-BR⁻: CHLORIDE/BROMIDE RATIO
SO₄²⁻: SULFATE IN MILLIGRAMS PER LITER (mg/L)
TDS: TOTAL DISSOLVED SOLIDS IN MILLIGRAMS PER LITER (mg/L)

IMAGE COURTESY OF ESRI

LEGEND

- ▲ SURFACE WATER SAMPLE
- ⊗ MONITORING WELL
- ⬆️ CALCULATED GROUNDWATER FLOW DIRECTION
- ⊗ DESTROYED MONITORING WELL
- SURFICIAL RELEASE EXTENT
- - - FLOODED AREA
- ▭ SPREAD FIELD BOUNDARY

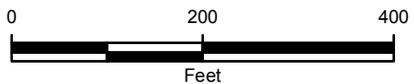


FIGURE 10
SURFACE WATER ANALYTICAL RESULTS
SEPTEMBER 24, 2014
MILLER SOUTH #1 SPREAD FIELD
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.



TABLES

TABLE 1

**GROUNDWATER ANALYTICAL RESULTS
MILLER SOUTH #1 SPREAD FIELD
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.**

| Sample Location | Date Sampled | Depth to Water (feet btoc) | Relative Groundwater Elevation (feet) | Chloride (mg/L) | Bromide (mg/L) | Chloride/Bromide* | Sulfate (mg/L) | Total Dissolved Solids (mg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethylbenzene (µg/L) | Total Xylenes (µg/L) |
|-----------------|--------------|----------------------------|---------------------------------------|-----------------|----------------|-------------------|----------------|-------------------------------|----------------|----------------|---------------------|----------------------|
| Background 01 | 9/12/2012 | 15.36 | 95.02 | 236 | NA | NA | 514 | 1,600 | <1.0 | <1.0 | <1.0 | <1.0 |
| Background 02 | 9/12/2012 | 17.40 | 94.91 | 217 | NA | NA | 433 | 1,400 | <1.0 | <1.0 | <1.0 | <1.0 |
| SB01 | 3/8/2012 | 3.30 | NM | 1,260 | NA | NA | 1,070 | 4,600 | NA | NA | NA | NA |
| | | | | | | | | | | | | |
| SB01R | 9/11/2012 | 4.24 | 90.72 | 181 | NA | NA | 372 | 1,300 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 1/8/2013 | 2.75 | 92.21 | 2,820 | NA | NA | 1,010 | 4,700 | NA | NA | NA | NA |
| | 4/1/2013 | NM | NM | | | | | | | | | |
| | 7/12/2013 | 2.57 | 92.39 | 1,360 | NA | NA | 448 | 2,800 | NA | NA | NA | NA |
| | 10/31/2013 | NM | NM | | | | | | | | | |
| | 11/5/2013 | 9.56 | 85.40 | 208 | NA | NA | 553 | 2,180 | NA | NA | NA | NA |
| | 3/31/2014 | 9.25 | 85.71 | 193 | 0.725 | 266 | 440 | 1,780 | NA | NA | NA | NA |
| | 9/22/2014 | NM | NM | | | | | | | | | |
| SB02 | 3/8/2012 | 6.46 | NM | 220 | NA | NA | 584 | 1,700 | NA | NA | NA | NA |
| | | | | | | | | | | | | |
| SB02R | 9/11/2012 | 8.03 | 91.30 | 214 | NA | NA | 300 | 1,100 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 1/8/2013 | 6.72 | 92.61 | 241 | NA | NA | 366 | 830 | NA | NA | NA | NA |
| | 4/1/2013 | 7.18 | 92.15 | 241 | NA | NA | 378 | 880 | NA | NA | NA | NA |
| | 7/12/2013 | 6.49 | 92.84 | 196 | NA | NA | 365 | 900 | NA | NA | NA | NA |
| | 10/31/2013 | 5.60 | 93.73 | 203 | NA | NA | 392 | 980 | NA | NA | NA | NA |
| | 4/1/2014 | 6.25 | 93.08 | 192 | 0.741 | 259 | 425 | 1,380 | NA | NA | NA | NA |
| | 9/22/2014 | NM | NM | | | | | | | | | |
| SB03 | 3/8/2012 | 6.22 | NM | 348 | NA | NA | 1,070 | 3,100 | NA | NA | NA | NA |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

TABLE 1 (Continued)

GROUNDWATER ANALYTICAL RESULTS
MILLER SOUTH #1 SPREAD FIELD
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.

| Sample Location | Date Sampled | Depth to Water (feet btoc) | Relative Groundwater Elevation (feet) | Chloride (mg/L) | Bromide (mg/L) | Chloride/Bromide* | Sulfate (mg/L) | Total Dissolved Solids (mg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethylbenzene (µg/L) | Total Xylenes (µg/L) | |
|-----------------------------------|--------------|----------------------------|---------------------------------------|-------------------------------------|----------------|-------------------|----------------|-------------------------------|----------------|----------------|---------------------|----------------------|--|
| SB03R | 9/11/2012 | 7.50 | 90.33 | 278 | NA | NA | 646 | 2,300 | <1.0 | <1.0 | <1.0 | <1.0 | |
| | 1/8/2013 | 5.90 | 91.93 | 252 | NA | NA | 741 | 1,500 | NA | NA | NA | NA | |
| | 4/1/2013 | 6.15 | 91.68 | 223 | NA | NA | 611 | 1,400 | NA | NA | NA | NA | |
| | 7/12/2013 | 6.45 | 91.38 | 202 | NA | NA | 463 | 1,300 | NA | NA | NA | NA | |
| | 10/31/2013 | 6.14 | 91.69 | 348 | NA | NA | 1,310 | 2,500 | NA | NA | NA | NA | |
| | 4/1/2014 | 6.30 | 91.53 | 275 | 1.37 | 201 | 1,030 | 2,930 | NA | NA | NA | NA | |
| | 9/22/2014 | NM | NM | No Sample - Under Water | | | | | | | | | |
| SB04 | 3/8/2012 | 7.08 | NM | 296 | NA | NA | 1,220 | 3,100 | NA | NA | NA | NA | |
| Monitoring well destroyed/removed | | | | | | | | | | | | | |
| SB04R | 9/11/2012 | 7.94 | 89.73 | 488 | NA | NA | 1,600 | 4,800 | <1.0 | <1.0 | <1.0 | <1.0 | |
| | 1/8/2013 | 6.83 | 90.84 | 388 | NA | NA | 1,330 | 2,400 | NA | NA | NA | NA | |
| | 4/1/2013 | 6.30 | 91.37 | 356 | NA | NA | 1,330 | 2,400 | NA | NA | NA | NA | |
| | 7/12/2013 | 6.11 | 91.56 | 328 | NA | NA | 1,170 | 2,500 | NA | NA | NA | NA | |
| | 10/31/2013 | NM | NM | Monitoring well damaged - No Sample | | | | | | | | | |
| | 11/5/2013 | 4.28 | 93.39 | 1,420 | NA | NA | 1,010 | 6,030 | NA | NA | NA | NA | |
| | 3/31/2014 | 4.15 | 93.52 | 2,000 | 2.77 | 722 | 948 | 5,790 | NA | NA | NA | NA | |
| 9/22/2014 | NM | NM | No Sample - Under Water | | | | | | | | | | |
| SB05 | 3/8/2012 | 7.94 | NM | 208 | NA | NA | 896 | 2,400 | NA | NA | NA | NA | |
| Monitoring well destroyed/removed | | | | | | | | | | | | | |
| SB05R | 9/11/2012 | 6.51 | 88.62 | 291 | NA | NA | 1,060 | 3,000 | <1.0 | <1.0 | <1.0 | <1.0 | |
| Monitoring well destroyed/removed | | | | | | | | | | | | | |
| SB05R2 | 1/8/2013 | 4.65 | NM | 6,170 | NA | NA | 1,570 | 10,000 | NA | NA | NA | NA | |
| | 4/1/2013 | 6.55 | 90.37 | 1,630 | NA | NA | 2,790 | 4,800 | NA | NA | NA | NA | |
| | 7/12/2013 | 7.95 | 88.97 | 489 | NA | NA | 862 | 2,100 | NA | NA | NA | NA | |
| | 10/31/2013 | 6.70 | 90.22 | 436 | NA | NA | 1,650 | 2,800 | NA | NA | NA | NA | |
| | 3/31/2014 | 6.68 | 90.24 | 853 | 3.60 | 237 | 1,830 | 4,500 | NA | NA | NA | NA | |
| | 9/22/2014 | NM | NM | No Sample - Under Water | | | | | | | | | |

TABLE 1 (Continued)

**GROUNDWATER ANALYTICAL RESULTS
MILLER SOUTH #1 SPREAD FIELD
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.**

| Sample Location | Date Sampled | Depth to Water (feet btoc) | Relative Groundwater Elevation (feet) | Chloride (mg/L) | Bromide (mg/L) | Chloride/Bromide* | Sulfate (mg/L) | Total Dissolved Solids (mg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethylbenzene (µg/L) | Total Xylenes (µg/L) |
|-----------------|--------------|----------------------------|---------------------------------------|-----------------|----------------|-------------------|-------------------------------------|-------------------------------|----------------|----------------|---------------------|----------------------|
| SB06 | 3/8/2012 | 7.82 | NM | 147 | NA | NA | 280 | 890 | NA | NA | NA | NA |
| | | | | | | | Monitoring well destroyed/removed | | | | | |
| SB06R | 9/11/2012 | 7.45 | 89.68 | 186 | NA | NA | 325 | 1,200 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 1/8/2013 | 6.32 | 90.81 | 218 | NA | NA | 401 | 770 | NA | NA | NA | NA |
| | 4/1/2013 | 6.99 | 90.14 | 199 | NA | NA | 366 | 780 | NA | NA | NA | NA |
| | 7/12/2013 | 4.78 | 92.35 | 171 | NA | NA | 307 | 750 | NA | NA | NA | NA |
| | 10/31/2013 | 5.89 | 91.24 | 223 | NA | NA | 242 | 730 | NA | NA | NA | NA |
| | 4/1/2014 | 7.70 | 89.43 | 221 | 1.03 | 215 | 308 | 1,090 | NA | NA | NA | NA |
| | 9/22/2014 | 6.53 | 90.60 | 184 | 0.452 | 407 | 318 | 1,010 | NA | NA | NA | NA |
| SB07 | 3/8/2012 | 6.93 | NM | 1,020 | NA | NA | 1,620 | 4,700 | NA | NA | NA | NA |
| | | | | | | | Monitoring well destroyed/removed | | | | | |
| SB07R | 9/11/2012 | 9.68 | 84.95 | 773 | NA | NA | 896 | 3,400 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 1/8/2013 | 7.89 | 86.74 | 1,150 | NA | NA | 2,930 | 4,900 | NA | NA | NA | NA |
| | 4/1/2013 | 8.49 | 86.14 | 1,050 | NA | NA | 3,170 | 5,000 | NA | NA | NA | NA |
| | 7/12/2013 | 6.98 | 87.65 | 551 | NA | NA | 3,020 | 3,900 | NA | NA | NA | NA |
| | 10/31/2013 | 7.48 | 87.15 | 839 | NA | NA | 2,530 | 4,000 | NA | NA | NA | NA |
| | 4/1/2014 | 7.78 | 86.85 | 189 | 3.86 | 49 | 502 | 5,650 | NA | NA | NA | NA |
| | 9/22/2014 | 7.44 | 87.19 | 677 | 3.31 | 205 | 2,040 | 5,590 | NA | NA | NA | NA |
| SB08 | 3/8/2012 | 9.73 | NM | 182 | NA | NA | 395 | 1,100 | NA | NA | NA | NA |
| | | | | | | | Monitoring well destroyed/removed | | | | | |
| SB08R | 9/11/2012 | 11.77 | 89.27 | 2,140 | NA | NA | 500 | 1,600 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 1/8/2013 | 9.39 | 91.65 | 247 | NA | NA | 736 | 1,100 | NA | NA | NA | NA |
| | 4/1/2013 | 9.79 | 91.25 | 202 | NA | NA | 391 | 860 | NA | NA | NA | NA |
| | 7/12/2013 | 8.80 | 92.24 | 370 | NA | NA | 816 | 1,600 | NA | NA | NA | NA |
| | 10/31/2013 | 8.22 | 92.82 | 277 | NA | NA | 475 | 1,100 | NA | NA | NA | NA |
| | 4/1/2014 | 9.07 | 91.97 | 272 | 0.764 | 356 | 348 | 1,270 | NA | NA | NA | NA |
| | 9/22/2014 | NM | NM | | | | No Sample - Monitoring well damaged | | | | | |

TABLE 1 (Continued)

GROUNDWATER ANALYTICAL RESULTS
MILLER SOUTH #1 SPREAD FIELD
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.

| Sample Location | Date Sampled | Depth to Water (feet btoc) | Relative Groundwater Elevation (feet) | Chloride (mg/L) | Bromide (mg/L) | Chloride/Bromide* | Sulfate (mg/L) | Total Dissolved Solids (mg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethylbenzene (µg/L) | Total Xylenes (µg/L) |
|----------------------|--------------|----------------------------|---------------------------------------|-----------------|----------------|-------------------|----------------|-------------------------------|----------------|----------------|---------------------|----------------------|
| SB09 (background) | 3/8/2012 | 8.09 | NM | 270 | NA | NA | 573 | 2,000 | NA | NA | NA | NA |
| SB10 | 3/9/2012 | 9.64 | NM | 157 | NA | NA | 414 | 1,100 | NA | NA | NA | NA |
| | 9/12/2012 | 10.39 | 89.90 | 146 | NA | NA | 203 | 1,000 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 1/8/2013 | 8.42 | 91.87 | 195 | NA | NA | 356 | 970 | NA | NA | NA | NA |
| | 4/1/2013 | 8.97 | 91.32 | 202 | NA | NA | 642 | 1,100 | NA | NA | NA | NA |
| | 7/12/2013 | 8.67 | 91.62 | 168 | NA | NA | 308 | 780 | NA | NA | NA | NA |
| | 10/31/2013 | 8.20 | 92.09 | 196 | NA | NA | 212 | 760 | NA | NA | NA | NA |
| | 4/1/2014 | 9.13 | 91.16 | 219 | 0.496 | 442 | 267 | 960 | NA | NA | NA | NA |
| | 9/22/2014 | 7.85 | 92.44 | 144 | 0.365 | 395 | 236 | 834 | NA | NA | NA | NA |
| SB11 | 3/9/2012 | 8.58 | NM | 267 | NA | NA | 717 | 1,900 | NA | NA | NA | NA |
| | 9/12/2012 | 9.78 | 89.05 | 263 | NA | NA | 639 | 1,900 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 1/8/2013 | 7.72 | 91.11 | 309 | NA | NA | 808 | 1,300 | NA | NA | NA | NA |
| | 4/1/2013 | 7.89 | 90.94 | 306 | NA | NA | 695 | 1,300 | NA | NA | NA | NA |
| | 7/12/2013 | 8.68 | 90.15 | 382 | NA | NA | 775 | 1,600 | NA | NA | NA | NA |
| | 10/31/2013 | 7.69 | 91.14 | 300 | NA | NA | 686 | 1,300 | NA | NA | NA | NA |
| | 3/31/2014 | 7.90 | 90.93 | 272 | 0.796 | 342 | 593 | 1,780 | NA | NA | NA | NA |
| | 9/22/2014 | 6.55 | 92.28 | 458 | 1.33 | 344 | 791 | 2,370 | NA | NA | NA | NA |
| SB12 | 3/9/2012 | 6.16 | NM | 300 | NA | NA | 1,230 | 2,500 | NA | NA | NA | NA |
| | 9/12/2012 | 8.70 | 88.03 | 270 | NA | NA | 643 | 1,900 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 1/8/2013 | 6.45 | 90.28 | 424 | NA | NA | 921 | 1,600 | NA | NA | NA | NA |
| | 4/1/2013 | 6.25 | 90.48 | 366 | NA | NA | 1,650 | 2,200 | NA | NA | NA | NA |
| | 4/4/2013 | 6.24 | 90.49 | 371 | NA | NA | 1,650 | 2,200 | NA | NA | NA | NA |
| | 7/12/2013 | 7.94 | 88.79 | 393 | NA | NA | 1,100 | 2,000 | NA | NA | NA | NA |
| | 10/31/2013 | 6.53 | 90.20 | 311 | NA | NA | 1,210 | 2,100 | NA | NA | NA | NA |
| | 3/31/2014 | 6.20 | 90.53 | 1,150 | 5.29 | 217 | 3,000 | 6,510 | NA | NA | NA | NA |
| | 9/22/2014 | 4.61 | 92.12 | 392 | 1.48 | 265 | 1,330 | 3,370 | NA | NA | NA | NA |

TABLE 1 (Continued)

**GROUNDWATER ANALYTICAL RESULTS
MILLER SOUTH #1 SPREAD FIELD
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.**

| Sample Location | Date Sampled | Depth to Water (feet btoc) | Relative Groundwater Elevation (feet) | Chloride (mg/L) | Bromide (mg/L) | Chloride/Bromide* | Sulfate (mg/L) | Total Dissolved Solids (mg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethylbenzene (µg/L) | Total Xylenes (µg/L) |
|-----------------|--------------|----------------------------|---------------------------------------|-----------------|----------------|-------------------|----------------|--------------------------------|----------------|----------------|---------------------|----------------------|
| SB13 | 3/9/2012 | 5.61 | NM | 439 | NA | NA | 1,210 | 2,900 | NA | NA | NA | NA |
| | 9/12/2012 | 7.43 | 87.40 | 314 | NA | NA | 902 | 2,400 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 1/8/2013 | 5.02 | 89.81 | 352 | NA | NA | 1,010 | 1,700 | NA | NA | NA | NA |
| | 4/1/2013 | 4.83 | 90.00 | 1,800 | NA | NA | 3,500 | 5,400 | NA | NA | NA | NA |
| | 7/12/2013 | 7.03 | 87.80 | 373 | NA | NA | 937 | 1,800 | NA | NA | NA | NA |
| | 10/31/2013 | 5.17 | 89.66 | 596 | NA | NA | 1,380 | 2,500 | NA | NA | NA | NA |
| | 3/31/2014 | 4.60 | 90.23 | 656 | 2.15 | 305 | 1,460 | 3,970 | NA | NA | NA | NA |
| | 9/22/2014 | 1.96 | 92.87 | 175 | 0.447 | 391 | 279 | 836 | NA | NA | NA | NA |
| SB14 | 3/9/2012 | 6.15 | NM | 125 | NA | NA | 991 | 1,900 | NA | NA | NA | NA |
| | 9/12/2012 | 8.32 | 88.83 | 246 | NA | NA | 1,010 | 2,500 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 1/8/2013 | 6.28 | 90.87 | 246 | NA | NA | 999 | 1,500 | NA | NA | NA | NA |
| | 4/1/2013 | 6.18 | 90.97 | 1,060 | NA | NA | 862 | 2,600 | NA | NA | NA | NA |
| | 7/12/2013 | 7.60 | 89.55 | 666 | NA | NA | 752 | 2,100 | NA | NA | NA | NA |
| | 10/31/2013 | 6.20 | 90.95 | 1,430 | NA | NA | 843 | 3,200 | NA | NA | NA | NA |
| | 3/31/2014 | 6.20 | 90.95 | 599 | 1.52 | 394 | 714 | 2,750 | NA | NA | NA | NA |
| | 9/22/2014 | 3.83 | 93.32 | 86.2 | 0.433 | 199 | 247 | 843 | NA | NA | NA | NA |
| SB15 | 3/9/2012 | 10.97 | NM | | | | | No Sample - Dry | | | | |
| | 9/12/2012 | 7.89 | 87.88 | 292 | NA | NA | 900 | 2,500 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 1/8/2013 | 5.65 | 90.12 | 654 | NA | NA | 3,520 | 4,800 | NA | NA | NA | NA |
| | 4/1/2013 | 5.49 | 90.28 | 588 | NA | NA | 2,720 | 4,400 | NA | NA | NA | NA |
| | 7/12/2013 | 7.52 | 88.25 | 465 | NA | NA | 1,020 | 2,300 | NA | NA | NA | NA |
| | 10/31/2013 | 5.72 | 90.05 | 528 | NA | NA | 1,790 | 4,000 | NA | NA | NA | NA |
| | 4/1/2014 | 5.50 | 90.27 | | | | | No sample - Insufficient water | | | | |
| | 9/22/2014 | 3.15 | 92.62 | 485 | 4.04 | 120 | 2,340 | 5,320 | NA | NA | NA | NA |

TABLE 1 (Continued)

**GROUNDWATER ANALYTICAL RESULTS
MILLER SOUTH #1 SPREAD FIELD
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.**

| Sample Location | Date Sampled | Depth to Water (feet btoc) | Relative Groundwater Elevation (feet) | Chloride (mg/L) | Bromide (mg/L) | Chloride/Bromide* | Sulfate (mg/L) | Total Dissolved Solids (mg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethylbenzene (µg/L) | Total Xylenes (µg/L) |
|-----------------|--------------|----------------------------|---------------------------------------|-----------------|----------------|-------------------|----------------|-----------------------------------|----------------|----------------|---------------------|----------------------|
| SB16 | 3/9/2012 | 7.36 | NM | 297 | NA | NA | 730 | 2,200 | NA | NA | NA | NA |
| | 9/12/2012 | 9.15 | 88.52 | 194 | NA | NA | 597 | 2,000 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 1/8/2013 | 7.60 | 90.07 | 264 | NA | NA | 734 | 1,500 | NA | NA | NA | NA |
| | 4/4/2013 | 7.58 | 90.09 | 305 | NA | NA | 720 | 1,600 | NA | NA | NA | NA |
| | 7/12/2013 | 9.12 | 88.55 | 251 | NA | NA | 654 | 1,600 | NA | NA | NA | NA |
| | 10/31/2013 | 7.66 | 90.01 | 253 | NA | NA | 582 | 1,400 | NA | NA | NA | NA |
| | 3/31/2014 | 7.62 | 90.05 | 238 | 1.03 | 231 | 644 | 2,070 | NA | NA | NA | NA |
| | 9/22/2014 | 6.85 | 90.82 | 280 | 1.25 | 224 | 680 | 2,140 | NA | NA | NA | NA |
| SB17 | 9/11/2012 | 5.55 | 90.14 | 237 | NA | NA | 584 | 2,100 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 1/8/2013 | 4.33 | 91.36 | 262 | NA | NA | 621 | 1,400 | NA | NA | NA | NA |
| | 4/1/2013 | 4.29 | 91.40 | 253 | NA | NA | 635 | 1,500 | NA | NA | NA | NA |
| | 7/12/2013 | 5.24 | 90.45 | 281 | NA | NA | 986 | 2,100 | NA | NA | NA | NA |
| | 10/31/2013 | 4.33 | 91.36 | | | | | Not Sampled | | | | |
| | 11/5/2013 | 4.33 | 91.36 | 250 | NA | NA | 873 | 2,510 | NA | NA | NA | NA |
| | 3/31/2014 | 4.45 | 91.24 | 262 | 1.19 | 220 | 903 | 2,480 | NA | NA | NA | NA |
| | 9/22/2014 | NM | NM | | | | | No Sample - Under Water | | | | |
| SB18 | 9/11/2012 | 7.75 | 90.85 | 290 | NA | NA | 920 | 3,000 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 1/8/2013 | 6.50 | 92.10 | 313 | NA | NA | 866 | 1,800 | NA | NA | NA | NA |
| | 4/1/2013 | 6.73 | 91.87 | 284 | NA | NA | 772 | 1,800 | NA | NA | NA | NA |
| | 7/12/2013 | 7.11 | 91.49 | 265 | NA | NA | 714 | 2,000 | NA | NA | NA | NA |
| | 10/31/2013 | 6.27 | 92.33 | 330 | NA | NA | 699 | 1,900 | NA | NA | NA | NA |
| | 4/1/2014 | 6.95 | 91.65 | 282 | 0.979 | 288 | 623 | 2,260 | NA | NA | NA | NA |
| | 9/22/2014 | NM | NM | | | | | No Sample - Under Water | | | | |
| | SB19 | 9/11/2012 | 8.56 | 91.77 | 196 | NA | NA | 317 | 1,300 | <1.0 | <1.0 | <1.0 |
| 1/8/2013 | | 6.85 | 93.48 | 390 | NA | NA | 831 | 1,600 | NA | NA | NA | NA |
| | | | | | | | | Monitoring well destroyed/removed | | | | |

TABLE 1 (Continued)

**GROUNDWATER ANALYTICAL RESULTS
MILLER SOUTH #1 SPREAD FIELD
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.**

| Sample Location | Date Sampled | Depth to Water (feet btoc) | Relative Groundwater Elevation (feet) | Chloride (mg/L) | Bromide (mg/L) | Chloride/Bromide* | Sulfate (mg/L) | Total Dissolved Solids (mg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethylbenzene (µg/L) | Total Xylenes (µg/L) |
|-----------------|--------------|----------------------------|---------------------------------------|---------------------------------------|----------------|-------------------|----------------|-------------------------------|----------------|----------------|---------------------|----------------------|
| SB19R | 4/1/2013 | 12.65 | 85.10 | 190 | NA | NA | 324 | 680 | NA | NA | NA | NA |
| | 7/12/2013 | 6.78 | 90.97 | 211 | NA | NA | 368 | 810 | NA | NA | NA | NA |
| | 10/31/2013 | 10.23 | 87.52 | 239 | NA | NA | 317 | 860 | NA | NA | NA | NA |
| | 4/1/2014 | 12.00 | 85.75 | No sample - Insufficient water | | | | | | | | |
| | 9/22/2014 | NM | NM | No sample - Monitoring well destroyed | | | | | | | | |
| SB20 | 9/11/2012 | 10.33 | 89.50 | 183 | NA | NA | 180 | 1,000 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 1/8/2013 | 9.40 | 90.43 | 209 | NA | NA | 329 | 710 | NA | NA | NA | NA |
| SB20R | 4/1/2013 | 11.23 | 84.71 | 234 | NA | NA | 301 | 750 | NA | NA | NA | NA |
| | 7/12/2013 | 7.56 | 88.38 | 234 | NA | NA | 342 | 880 | NA | NA | NA | NA |
| | 10/31/2013 | 8.69 | 87.25 | 244 | NA | NA | 283 | 700 | NA | NA | NA | NA |
| | 4/1/2014 | 11.42 | 84.52 | No sample - Insufficient water | | | | | | | | |
| | 9/22/2014 | 9.39 | 86.55 | 155 | 0.404 | 384 | 149 | 650 | NA | NA | NA | NA |
| SB21 | 9/11/2012 | 10.17 | 90.62 | 162 | NA | NA | 490 | 1,200 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 1/8/2013 | 8.36 | 92.43 | 196 | NA | NA | 350 | 660 | NA | NA | NA | NA |
| SB21R | 4/1/2013 | 9.95 | 86.89 | 190 | NA | NA | 163 | 650 | NA | NA | NA | NA |
| | 7/12/2013 | 5.81 | 91.03 | 223 | NA | NA | 369 | 880 | NA | NA | NA | NA |
| | 10/31/2013 | 7.93 | 88.91 | 238 | NA | NA | 239 | 710 | NA | NA | NA | NA |
| | 4/1/2014 | 11.13 | 85.71 | No sample - Insufficient water | | | | | | | | |
| | 9/22/2014 | NM | NM | No sample - Monitoring well destroyed | | | | | | | | |
| SB22 | 9/12/2012 | 11.14 | 87.53 | 355 | NA | NA | 815 | 2,200 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 1/8/2013 | 9.14 | 89.53 | 378 | NA | NA | 884 | 1,400 | NA | NA | NA | NA |
| | 4/1/2013 | 9.06 | 89.61 | 337 | NA | NA | 815 | 1,500 | NA | NA | NA | NA |
| | 7/12/2013 | 10.08 | 88.59 | 359 | NA | NA | 808 | 1,700 | NA | NA | NA | NA |
| | 10/31/2013 | 9.42 | 89.25 | 416 | NA | NA | 897 | 1,700 | NA | NA | NA | NA |
| | 3/31/2014 | 8.90 | 89.77 | 380 | 1.22 | 311 | 874 | 2,330 | NA | NA | NA | NA |
| | 9/22/2014 | NM | NM | No sample - Could not locate | | | | | | | | |

TABLE 1 (Continued)

GROUNDWATER ANALYTICAL RESULTS
MILLER SOUTH #1 SPREAD FIELD
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.

| Sample Location | Date Sampled | Depth to Water (feet btoc) | Relative Groundwater Elevation (feet) | Chloride (mg/L) | Bromide (mg/L) | Chloride/Bromide* | Sulfate (mg/L) | Total Dissolved Solids (mg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethylbenzene (µg/L) | Total Xylenes (µg/L) |
|-----------------------------------|--------------|----------------------------|---------------------------------------|-----------------|----------------|-------------------|----------------|-------------------------------|----------------|----------------|---------------------|----------------------|
| SB23 | 9/12/2012 | 11.25 | 86.21 | 212 | NA | NA | 515 | 1,500 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 1/8/2013 | 8.26 | 89.20 | 268 | NA | NA | 712 | 1,100 | NA | NA | NA | NA |
| | 4/1/2013 | 7.95 | 89.51 | 354 | NA | NA | 1,100 | 1,600 | NA | NA | NA | NA |
| | 7/12/2013 | 9.65 | 87.81 | 368 | NA | NA | 1,120 | 1,900 | NA | NA | NA | NA |
| | 10/31/2013 | 8.61 | 88.85 | 237 | NA | NA | 607 | 1,400 | NA | NA | NA | NA |
| | 3/31/2014 | 7.72 | 89.74 | 604 | 2.38 | 254 | 1,830 | 3,950 | NA | NA | NA | NA |
| | 9/22/2014 | 6.84 | 90.62 | 1,290 | 4.18 | 309 | 2,940 | 6,850 | NA | NA | NA | NA |
| COGCC Table 910-1 Standard | | | | 295 | -- | 250* | 642.5 | 2,000 | 5 | 560 | 700 | 1,400 |

NOTES:

btoc - below top of casing

COGCC - Colorado Oil and Gas Conservation Commission

mg/L - milligrams per liter

NA - not analyzed

NM- not measured

µg/L - micrograms per liter

< - indicates result is less than the stated laboratory reporting limit

-- - indicates there is no standard

Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B

Chloride, sulfate, and total dissolved solids standards are calculated based on 1.25 times background concentrations

Chloride, bromide, and sulfate analyzed by EPA Method 300.0

Total dissolved solids analyzed by Standard Method 2540C and EPA Method 160.1

BOLD indicates result exceeds the applicable standard

* - This value is not a regulatory limit and is included for reference purposes only. Unimpacted groundwater would not be expected to exhibit a ratio of chloride to bromide that exceeds this naturally occurring value.

TABLE 2

**SURFACE WATER ANALYTICAL RESULTS
MILLER SOUTH #1 SPREAD FIELD
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.**

| Sample ID | Date Sampled | Chloride (mg/L) | Bromide (mg/L) | Chloride/Bromide* | Sulfate (mg/L) | Total Dissolved Solids (mg/L) |
|------------------------------------|---------------------|------------------------|-----------------------|--------------------------|-----------------------|--------------------------------------|
| SW01 | 9/24/2014 | 187 | 0.502 | 373 | 309 | 889 |
| SW02 | 9/24/2014 | 186 | 0.473 | 393 | 307 | 884 |
| SW03 | 9/24/2014 | 194 | 0.471 | 412 | 318 | 893 |
| SW04 | 9/24/2014 | 193 | 0.556 | 347 | 313 | 863 |
| SW05 | 9/24/2014 | 194 | 0.454 | 427 | 313 | 866 |
| SW06 | 9/24/2014 | 190 | 0.484 | 393 | 308 | 870 |
| SW07 | 9/24/2014 | 195 | 0.499 | 391 | 314 | 876 |
| SW08 | 9/24/2014 | 191 | 0.450 | 424 | 307 | 911 |
| SW09 | 9/24/2014 | 194 | 0.483 | 402 | 314 | 877 |
| SW10 | 9/24/2014 | 194 | 0.417 | 465 | 316 | 914 |
| SW11 | 9/24/2014 | 191 | 0.494 | 387 | 315 | 884 |
| SW12 | 9/24/2014 | 191 | 0.501 | 381 | 316 | 896 |
| COGCC Table 910-1 Standard* | | 295 | -- | 250** | 642.5 | 2,000 |

NOTES:

COGCC - Colorado Oil and Gas Conservation Commission

mg/L - milligrams per liter

-- - indicates there is no standard

Chloride, bromide, and sulfate analyzed by EPA Method 300.0

Total dissolved solids analyzed by Standard Method 2540C

Chloride, sulfate, and total dissolved solids standards are calculated based on 1.25 times background groundwater concentrations collected on September 12, 2012.

* - The COGCC Table 910-1 Standards apply to groundwater only. They are presented here for reference purposes only.

** - This value is not a regulatory limit and is included for reference purposes only. Unimpacted water would not be expected to exhibit a ratio of chloride to bromide that exceeds this naturally occurring estimated value.

ATTACHMENT 1
GROUNDWATER LABORATORY ANALYTICAL REPORT

October 02, 2014

LT Environmental, Inc.

Steve Kahn

4600 West 60th Avenue

Arvada CO 80003

Project Name - Noble - Miller #1 South

Project Number - 008312061

Attached are your analytical results for Noble - Miller #1 South received by Origins Laboratory, Inc. September 23, 2014. This project is associated with Origins project number X409245-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Steve Kahn
Project Number: 008312061
Project: Noble - Miller #1 South

CROSS REFERENCE REPORT

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|-----------|---------------|--------|--------------------------|------------------|
| SB06R | X409245-01 | Water | September 22, 2014 13:30 | 09/23/2014 17:00 |
| SB07R | X409245-02 | Water | September 22, 2014 13:40 | 09/23/2014 17:00 |
| SB10 | X409245-03 | Water | September 22, 2014 14:00 | 09/23/2014 17:00 |
| SB11 | X409245-04 | Water | September 22, 2014 14:10 | 09/23/2014 17:00 |
| SB12 | X409245-05 | Water | September 22, 2014 14:20 | 09/23/2014 17:00 |
| SB13 | X409245-06 | Water | September 22, 2014 14:30 | 09/23/2014 17:00 |
| SB14 | X409245-07 | Water | September 22, 2014 14:40 | 09/23/2014 17:00 |
| SB15 | X409245-08 | Water | September 22, 2014 14:50 | 09/23/2014 17:00 |
| SB16 | X409245-09 | Water | September 22, 2014 15:00 | 09/23/2014 17:00 |
| SB20R | X409245-10 | Water | September 22, 2014 15:10 | 09/23/2014 17:00 |

Origins Laboratory, Inc.



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.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Steve Kahn
Project Number: 008312061
Project: Noble - Miller #1 South

CROSS REFERENCE REPORT

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|-----------|---------------|--------|--------------------------|------------------|
| SB23 | X409245-11 | Water | September 22, 2014 15:30 | 09/23/2014 17:00 |

Origins Laboratory, Inc.



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.

Noelle Doyle Mathis, President

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Steve Kahn
 Project Number: 008312061
 Project: Noble - Miller #1 South

Origins Laboratory

F-012207-01-R1
 Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X409245

Client: LTE

Client Project ID: Noble - Miller #1 South

Checklist Completed by: Jeff Smith

Shipped Via: Pick up
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 7/23/12

Airbill #: BA

Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____

Cooler Number/Temperature: 1 / 12.8 °C / _____ °C / _____ °C (Describe)

Thermometer ID: T002

| Requirement Description | Yes | No | N/A | Comments (if any) |
|--|-----|----|-----|-------------------|
| If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ? | X | | | |
| Is there ice present (document if blue ice is used)? | X | | | |
| Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact) | | X | | |
| Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact) | | X | | |
| Were all samples received intact ⁽¹⁾ ? | X | | | |
| Was adequate sample volume provided ⁽¹⁾ ? | X | | | |
| Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ? | | X | | |
| Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ? | X | | | |
| Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ? | X | | | |
| Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ? | X | | | |
| Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ? | X | | | |
| For volatiles in water — is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative. | | X | X | |
| Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analytes in order to insure sample integrity)(pH <2 for samples preserved with HNO3; rCL, H2SO4) / (pH >10 for samples preserved with NaAcO2+NaOH, ZnAc+NaOH) | | X | X | |
| Additional Comments (if any): | | | | |

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Jeff Smith
 Reviewed by (Project Manager)

7/24/12
 Date/Time Reviewed

Origins Laboratory, Inc.



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.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Steve Kahn
 Project Number: 008312061
 Project: Noble - Miller #1 South

SB06R
 9/22/2014 1:30:00PM

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

GEL Laboratories, LLC
 X409245-01 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|-------|-------|------|----|---------|---|------------|--|
| Bromide | 0.452 | 0.200 | mg/L | 1 | 1422297 | | 09/26/2014 | |
| Chloride | 184 | 10.0 | " | 50 | " | " | 09/27/2014 | |
| Sulfate | 318 | 20.0 | " | " | " | " | " | |

TDS by SM2540C

| | | | | | | | | |
|------------------------|------|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 1010 | 14.3 | mg/L | 1 | 1422334 | " | 09/26/2014 | |
|------------------------|------|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Steve Kahn
 Project Number: 008312061
 Project: Noble - Miller #1 South

SB07R
 9/22/2014 1:40:00PM

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

GEL Laboratories, LLC
 X409245-02 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|------|-------|------|-----|---------|---|------------|---|
| Bromide | 3.31 | 0.400 | mg/L | 2 | 1422297 | | 09/27/2014 | |
| Chloride | 677 | 40.0 | " | 200 | " | " | " | " |
| Sulfate | 2040 | 80.0 | " | " | " | " | " | " |

TDS by SM2540C

| | | | | | | | | |
|------------------------|------|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 5590 | 14.3 | mg/L | 1 | 1422334 | " | 09/26/2014 | |
|------------------------|------|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Steve Kahn
 Project Number: 008312061
 Project: Noble - Miller #1 South

SB10

9/22/2014 2:00:00PM

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

GEL Laboratories, LLC
 X409245-03 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|-------|-------|------|----|---------|---|------------|--|
| Bromide | 0.365 | 0.200 | mg/L | 1 | 1422297 | | 09/26/2014 | |
| Chloride | 144 | 10.0 | " | 50 | " | " | 09/27/2014 | |
| Sulfate | 236 | 20.0 | " | " | " | " | " | |

TDS by SM2540C

| | | | | | | | | |
|------------------------|-----|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 834 | 14.3 | mg/L | 1 | 1422334 | " | 09/26/2014 | |
|------------------------|-----|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Steve Kahn
 Project Number: 008312061
 Project: Noble - Miller #1 South

SB11

9/22/2014 2:10:00PM

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

GEL Laboratories, LLC
 X409245-04 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|------|-------|------|-----|---------|---|------------|--|
| Bromide | 1.33 | 0.200 | mg/L | 1 | 1422297 | | 09/26/2014 | |
| Chloride | 458 | 20.0 | " | 100 | " | " | 09/27/2014 | |
| Sulfate | 791 | 40.0 | " | " | " | " | " | |

TDS by SM2540C

| | | | | | | | | |
|------------------------|------|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 2370 | 14.3 | mg/L | 1 | 1422334 | " | 09/26/2014 | |
|------------------------|------|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Steve Kahn
 Project Number: 008312061
 Project: Noble - Miller #1 South

SB12

9/22/2014 2:20:00PM

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

GEL Laboratories, LLC
 X409245-05 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|------|-------|------|-----|---------|---|------------|--|
| Bromide | 1.48 | 0.200 | mg/L | 1 | 1422297 | | 09/26/2014 | |
| Chloride | 392 | 40.0 | " | 200 | " | " | 09/27/2014 | |
| Sulfate | 1330 | 80.0 | " | " | " | " | " | |

TDS by SM2540C

| | | | | | | | | |
|------------------------|------|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 3370 | 14.3 | mg/L | 1 | 1422334 | " | 09/26/2014 | |
|------------------------|------|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Steve Kahn
 Project Number: 008312061
 Project: Noble - Miller #1 South

SB13

9/22/2014 2:30:00PM

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

GEL Laboratories, LLC
 X409245-06 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|-------|-------|------|----|---------|---|------------|--|
| Bromide | 0.447 | 0.200 | mg/L | 1 | 1422297 | | 09/26/2014 | |
| Chloride | 175 | 10.0 | " | 50 | " | " | 09/27/2014 | |
| Sulfate | 279 | 20.0 | " | " | " | " | " | |

TDS by SM2540C

| | | | | | | | | |
|------------------------|-----|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 836 | 14.3 | mg/L | 1 | 1422334 | " | 09/26/2014 | |
|------------------------|-----|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Steve Kahn
 Project Number: 008312061
 Project: Noble - Miller #1 South

SB14

9/22/2014 2:40:00PM

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

GEL Laboratories, LLC
 X409245-07 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|-------|-------|------|----|---------|---|------------|--|
| Bromide | 0.433 | 0.200 | mg/L | 1 | 1422297 | | 09/26/2014 | |
| Chloride | 86.2 | 4.00 | " | 20 | " | " | 09/27/2014 | |
| Sulfate | 247 | 8.00 | " | " | " | " | " | |

TDS by SM2540C

| | | | | | | | | |
|------------------------|-----|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 843 | 14.3 | mg/L | 1 | 1422334 | " | 09/26/2014 | |
|------------------------|-----|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Steve Kahn
 Project Number: 008312061
 Project: Noble - Miller #1 South

SB15

9/22/2014 2:50:00PM

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

GEL Laboratories, LLC
 X409245-08 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|------|------|------|-----|---------|---|------------|---|
| Bromide | 4.04 | 1.00 | mg/L | 5 | 1422297 | | 09/27/2014 | |
| Chloride | 485 | 40.0 | " | 200 | " | " | " | " |
| Sulfate | 2340 | 80.0 | " | " | " | " | " | " |

TDS by SM2540C

| | | | | | | | | |
|------------------------|------|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 5320 | 14.3 | mg/L | 1 | 1422334 | " | 09/26/2014 | |
|------------------------|------|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Steve Kahn
 Project Number: 008312061
 Project: Noble - Miller #1 South

SB16

9/22/2014 3:00:00PM

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

GEL Laboratories, LLC
 X409245-09 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|------|-------|------|----|---------|---|------------|--|
| Bromide | 1.25 | 0.200 | mg/L | 1 | 1422297 | | 09/26/2014 | |
| Chloride | 280 | 10.0 | " | 50 | " | " | 09/27/2014 | |
| Sulfate | 680 | 20.0 | " | " | " | " | " | |

TDS by SM2540C

| | | | | | | | | |
|------------------------|------|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 2140 | 14.3 | mg/L | 1 | 1422334 | " | 09/26/2014 | |
|------------------------|------|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Steve Kahn
 Project Number: 008312061
 Project: Noble - Miller #1 South

SB20R
 9/22/2014 3:10:00PM

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

GEL Laboratories, LLC
 X409245-10 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|-------|-------|------|----|---------|---|------------|--|
| Bromide | 0.404 | 0.200 | mg/L | 1 | 1422297 | | 09/26/2014 | |
| Chloride | 155 | 5.00 | " | 25 | " | " | 09/27/2014 | |
| Sulfate | 149 | 10.0 | " | " | " | " | " | |

TDS by SM2540C

| | | | | | | | | |
|------------------------|-----|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 650 | 14.3 | mg/L | 1 | 1422334 | " | 09/26/2014 | |
|------------------------|-----|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Steve Kahn
 Project Number: 008312061
 Project: Noble - Miller #1 South

SB23

9/22/2014 3:30:00PM

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

GEL Laboratories, LLC
 X409245-11 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|------|-------|------|-----|---------|---|------------|--|
| Bromide | 4.18 | 0.400 | mg/L | 2 | 1422297 | | 09/27/2014 | |
| Chloride | 1290 | 50.0 | " | 250 | " | " | 09/28/2014 | |
| Sulfate | 2940 | 100 | " | " | " | " | " | |

TDS by SM2540C

| | | | | | | | | |
|------------------------|------|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 6850 | 14.3 | mg/L | 1 | 1422334 | " | 09/26/2014 | |
|------------------------|------|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Steve Kahn
 Project Number: 008312061
 Project: Noble - Miller #1 South

Anions by EPA300.0 - Quality Control
GEL Laboratories, LLC

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|-------------------------------|--------|-----------------|-------|-------------|--------------------------------|------|--------------------------------|-------|-----------|-------|
| Batch 1422297 - | | | | | | | | | | |
| BLANK (1203175357-BLK) | | | | | Prepared: Analyzed: 09/26/2014 | | | | | |
| Chloride | ND | 0.200 | mg/L | | | | - | | | U |
| Sulfate | ND | 0.400 | " | | | | - | | | U |
| Bromide | ND | 0.200 | " | | | | - | | | U |
| LCS (1203175358-BKS) | | | | | Prepared: Analyzed: 09/26/2014 | | | | | |
| Bromide | 1.25 | 0.200 | mg/L | 1.25 | | 100 | 90-110 | | | |
| Chloride | 4.67 | 0.200 | " | 5.00 | | 93.4 | 90-110 | | | |
| Sulfate | 9.53 | 0.400 | " | 10.0 | | 95.3 | 90-110 | | | |
| DUP (1203175359 D) | | | | | Source: X409245-11 | | Prepared: Analyzed: 09/28/2014 | | | |
| Sulfate | 2950 | 100 | mg/L | | 2940 | | 0-20 | 0.132 | 20 | |
| Bromide | 4.25 | 0.400 | " | | 4.18 | | 0-20 | 1.68 | 20 | |
| Chloride | 1280 | 50.0 | " | | 1290 | | 0-20 | 0.306 | 20 | |
| DUP (1203175360 D) | | | | | Source: 357449001 | | Prepared: Analyzed: 09/26/2014 | | | |
| Chloride | 6.86 | 0.200 | mg/L | | 6.88 | | 0-20 | 0.399 | 20 | |
| Sulfate | 14.2 | 0.400 | " | | 14.5 | | 0-20 | 1.66 | 20 | |
| Bromide | 0.149 | 0.200 | " | | 0.137 | | 0-20 | 8.49 | 20 | J |
| PS (1203175361 S) | | | | | Source: X409245-11 | | Prepared: Analyzed: 09/27/2014 | | | |
| Bromide | 6.69 | 0.400 | mg/L | 1.25 | | 101 | 90-110 | | | |
| Chloride | 2620 | 50.0 | " | 5.00 | | 107 | 90-110 | | | |
| Sulfate | 5610 | 100 | " | 10.0 | | 107 | 90-110 | | | |
| PS (1203175362 S) | | | | | Source: 357449001 | | Prepared: Analyzed: 09/26/2014 | | | |
| Bromide | 1.43 | 0.200 | mg/L | 1.25 | | 103 | 90-110 | | | |
| Chloride | 12.3 | 0.200 | " | 5.00 | | 108 | 90-110 | | | |
| Sulfate | 25.1 | 0.400 | " | 10.0 | | 107 | 90-110 | | | |

Origins Laboratory, Inc.



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.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Steve Kahn
 Project Number: 008312061
 Project: Noble - Miller #1 South

TDS by SM2540C - Quality Control
 GEL Laboratories, LLC

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|------------------------|--------|-----------------|-------|-------------|--------------------------------|------|-------------|-----|-----------|-------|
| Batch 1422334 - | | | | | | | | | | |
| BLANK (1203175420-BLK) | | | | | Prepared: Analyzed: 09/26/2014 | | | | | |
| Total Dissolved Solids | ND | 14.3 | mg/L | | | | - | | | U |
| LCS (1203175421-BKS) | | | | | Prepared: Analyzed: 09/26/2014 | | | | | |
| Total Dissolved Solids | 293 | 14.3 | mg/L | 300 | | 97.6 | 95-105 | | | |

Origins Laboratory, Inc.



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.

Noelle Doyle Mathis, President

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Steve Kahn
Project Number: 008312061
Project: Noble - Miller #1 South

Notes and Definitions

- U Result not detected above the detection limit
- J Greater than the detection limit but less than the reporting limit
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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.

Noelle Doyle Mathis, President

ATTACHMENT 2
SURFACE WATER LABORATORY ANALYTICAL REPORT

October 03, 2014

LT Environmental, Inc.

Charles Greeson

4600 West 60th Avenue

Arvada CO 80003

Project Name - Noble - Miller #1 South CACL

Project Number - [none]

Attached are your analytical results for Noble - Miller #1 South CACL received by Origins Laboratory, Inc. September 24, 2014. This project is associated with Origins project number X409253-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Charles Greeson
Project Number: [none]
Project: Noble - Miller #1 South CACL

CROSS REFERENCE REPORT

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|-----------|---------------|--------|--------------------------|------------------|
| SW01 | X409253-01 | Water | September 24, 2014 10:10 | 09/24/2014 15:20 |
| SW02 | X409253-02 | Water | September 24, 2014 10:15 | 09/24/2014 15:20 |
| SW03 | X409253-03 | Water | September 24, 2014 10:20 | 09/24/2014 15:20 |
| SW04 | X409253-04 | Water | September 24, 2014 10:25 | 09/24/2014 15:20 |
| SW05 | X409253-05 | Water | September 24, 2014 10:30 | 09/24/2014 15:20 |
| SW06 | X409253-06 | Water | September 24, 2014 10:35 | 09/24/2014 15:20 |
| SW07 | X409253-07 | Water | September 24, 2014 10:40 | 09/24/2014 15:20 |
| SW08 | X409253-08 | Water | September 24, 2014 10:45 | 09/24/2014 15:20 |
| SW09 | X409253-09 | Water | September 24, 2014 10:50 | 09/24/2014 15:20 |
| SW10 | X409253-10 | Water | September 24, 2014 10:55 | 09/24/2014 15:20 |

Origins Laboratory, Inc.



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.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Charles Greeson
Project Number: [none]
Project: Noble - Miller #1 South CACL

CROSS REFERENCE REPORT

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|-----------|---------------|--------|--------------------------|------------------|
| SW11 | X409253-11 | Water | September 24, 2014 11:00 | 09/24/2014 15:20 |
| SW12 | X409253-12 | Water | September 24, 2014 11:05 | 09/24/2014 15:20 |

Origins Laboratory, Inc.



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.

Noelle Doyle Mathis, President

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Charles Greeson
 Project Number: [none]
 Project: Noble - Miller #1 South CACL

www.originslaboratory.com

X409253

ORIGINS
 LABORATORY, INC

page 1 of 2

Client: LTE Project Manager/Send Report To: Charles Greeson
 Address: _____ Email Address: Miller #1 South CACL 60033
 Project Name/Number: _____ Project Name/Number: CGreeson@ltenv.com
 Telephone Number: _____ Samples Collected By: Jason Grogan/Steve

1725 Elk Place | Denver, CO 80211 | Phone: 303.438.1222 | Fax: 303.255.9645

| Sample ID Description | Date Sampled | Time Sampled | # of Containers | Preservative | | | | | Matrix | | | Analysis/Method | Sample Instructions | |
|-----------------------|--------------|---------------|-----------------|--------------|-----|------------------|-------|--------------|--------|---------------|------------|------------------|---------------------|--|
| | | | | Unpreserved | HCl | HNO ₃ | Other | Groundwater | Soil | Aspirate | Other | | | |
| S1001 | 7/24/14 | 1010 | 2X | | | | | X | | | | XXX | | |
| S1002 | | 1015 | 1 | | | | | | | | | | | |
| S1003 | | 1020 | 1 | | | | | | | | | | | |
| S1004 | | 1025 | 1 | | | | | | | | | | | |
| S1005 | | 1030 | 1 | | | | | | | | | | | |
| S1006 | | 1035 | 1 | | | | | | | | | | | |
| S1007 | | 1040 | 1 | | | | | | | | | | | |
| S1008 | | 1045 | 1 | | | | | | | | | | | |
| S1009 | | 1050 | 1 | | | | | | | | | | | |
| S1010 | | 1055 | 1 | | | | | | | | | | | |
| Relinquished by: | | Date: 9/16/14 | Time: 1520 | Received by: | | | | Received by: | | Date: 9/16/14 | Time: 1520 | Turnaround Time: | | Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 19.8 |
| Relinquished by: | | Date: | Time: | Received by: | | | | Received by: | | Date: | Time: | | | |

Comments: _____ Date Results Needed: _____

Origins Laboratory, Inc.

 Noelle Doyle Mathis, President

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.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Charles Greeson
 Project Number: [none]
 Project: Noble - Miller #1 South CACL

Origins Laboratory

F-012207-01-R1
 Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X409253

Client: LTE

Client Project ID: Miller #1 South CACL

Checklist Completed by: Jeff Smith

Shipped Via: HTD

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/Time completed: 7/24/14 1539

Airbill #: NA

Matrix(s) Received: (Check all that apply): Soil/Solid Water Other _____

Cooler Number/Temperature: 1 119.8 °C / _____ °C / _____ °C (Describe) _____ °C

Thermometer ID: 70902

| Requirement Description | Yes | No | N/A | Comments (if any) |
|---|-----|----|-----|-------------------|
| If samples require cooling was the temperature between 0°C to ≤ 5°C ⁽¹⁾ ? | | X | | Sample Spilled |
| Is there ice present (document if blue ice is used) | X | | | Melted |
| Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact) | | X | | |
| Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact) | | X | | |
| Were all samples received intact ⁽¹⁾ ? | X | | | |
| Was adequate sample volume provided ⁽¹⁾ ? | X | | | |
| Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ? | | X | | |
| Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ? | X | | | |
| Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ? | X | | | |
| Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ? | X | | | |
| Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ? | X | | | |
| For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative. | | | X | |
| Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to ensure sample integrity) (pH < 2 for samples preserved with HNO ₃ , HCl, H ₂ SO ₄) / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH) | | | X | |
| Additional Comments (if any): | | | | |

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

[Signature]
 Reviewed by (Project Manager)

9-25-14 0931
 Date/Time Reviewed

Origins Laboratory, Inc.

[Signature]

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.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Charles Greeson
Project Number: [none]
Project: Noble - Miller #1 South CACL

SW01
9/24/2014 10:10:00AM

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

GEL Laboratories, LLC
X409253-01 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|-------|-------|------|----|---------|---|------------|--|
| Bromide | 0.502 | 0.200 | mg/L | 1 | 1422703 | | 09/28/2014 | |
| Chloride | 187 | 10.0 | " | 50 | " | " | 10/01/2014 | |
| Sulfate | 309 | 20.0 | " | " | " | " | " | |

TDS by SM2540C

| | | | | | | | | |
|------------------------|-----|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 889 | 14.3 | mg/L | 1 | 1422770 | " | 09/29/2014 | |
|------------------------|-----|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Charles Greeson
Project Number: [none]
Project: Noble - Miller #1 South CACL

SW02
9/24/2014 10:15:00AM

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

GEL Laboratories, LLC
X409253-02 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|-------|-------|------|----|---------|---|------------|--|
| Bromide | 0.473 | 0.200 | mg/L | 1 | 1422703 | | 09/28/2014 | |
| Chloride | 186 | 10.0 | " | 50 | " | " | 10/01/2014 | |
| Sulfate | 307 | 20.0 | " | " | " | " | " | |

TDS by SM2540C

| | | | | | | | | |
|------------------------|-----|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 884 | 14.3 | mg/L | 1 | 1422770 | " | 09/29/2014 | |
|------------------------|-----|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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.

Noelle Doyle Mathis, President

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Charles Greeson
Project Number: [none]
Project: Noble - Miller #1 South CACL

SW03
9/24/2014 10:20:00AM

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

GEL Laboratories, LLC
X409253-03 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|-------|-------|------|----|---------|---|------------|--|
| Bromide | 0.471 | 0.200 | mg/L | 1 | 1422703 | | 09/28/2014 | |
| Chloride | 194 | 10.0 | " | 50 | " | " | 10/01/2014 | |
| Sulfate | 318 | 20.0 | " | " | " | " | " | |

TDS by SM2540C

| | | | | | | | | |
|------------------------|-----|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 893 | 14.3 | mg/L | 1 | 1422770 | " | 09/29/2014 | |
|------------------------|-----|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Charles Greeson
Project Number: [none]
Project: Noble - Miller #1 South CACL

SW04
9/24/2014 10:25:00AM

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

GEL Laboratories, LLC
X409253-04 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|-------|-------|------|----|---------|---|------------|--|
| Bromide | 0.556 | 0.200 | mg/L | 1 | 1422703 | | 09/28/2014 | |
| Chloride | 193 | 10.0 | " | 50 | " | " | 10/01/2014 | |
| Sulfate | 313 | 20.0 | " | " | " | " | " | |

TDS by SM2540C

| | | | | | | | | |
|------------------------|-----|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 863 | 14.3 | mg/L | 1 | 1422770 | " | 09/29/2014 | |
|------------------------|-----|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Charles Greeson
 Project Number: [none]
 Project: Noble - Miller #1 South CACL

SW05
9/24/2014 10:30:00AM

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

GEL Laboratories, LLC
X409253-05 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|-------|-------|------|----|---------|---|------------|--|
| Bromide | 0.454 | 0.200 | mg/L | 1 | 1422703 | | 09/28/2014 | |
| Chloride | 194 | 10.0 | " | 50 | " | " | 10/01/2014 | |
| Sulfate | 313 | 20.0 | " | " | " | " | " | |

TDS by SM2540C

| | | | | | | | | |
|------------------------|-----|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 866 | 14.3 | mg/L | 1 | 1422770 | " | 09/29/2014 | |
|------------------------|-----|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Charles Greeson
Project Number: [none]
Project: Noble - Miller #1 South CACL

SW06
9/24/2014 10:35:00AM

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

GEL Laboratories, LLC
X409253-06 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|-------|-------|------|----|---------|---|------------|--|
| Bromide | 0.484 | 0.200 | mg/L | 1 | 1422703 | | 09/28/2014 | |
| Chloride | 190 | 10.0 | " | 50 | " | " | 10/01/2014 | |
| Sulfate | 308 | 20.0 | " | " | " | " | " | |

TDS by SM2540C

| | | | | | | | | |
|------------------------|-----|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 870 | 14.3 | mg/L | 1 | 1422770 | " | 09/29/2014 | |
|------------------------|-----|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Charles Greeson
 Project Number: [none]
 Project: Noble - Miller #1 South CACL

SW07
9/24/2014 10:40:00AM

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

GEL Laboratories, LLC
X409253-07 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|-------|-------|------|----|---------|---|------------|--|
| Bromide | 0.499 | 0.200 | mg/L | 1 | 1422703 | | 09/28/2014 | |
| Chloride | 195 | 10.0 | " | 50 | " | " | 10/02/2014 | |
| Sulfate | 314 | 20.0 | " | " | " | " | " | |

TDS by SM2540C

| | | | | | | | | |
|------------------------|-----|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 876 | 14.3 | mg/L | 1 | 1422770 | " | 09/29/2014 | |
|------------------------|-----|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Charles Greeson
 Project Number: [none]
 Project: Noble - Miller #1 South CACL

SW08
9/24/2014 10:45:00AM

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

GEL Laboratories, LLC
X409253-08 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|-------|-------|------|----|---------|---|------------|--|
| Bromide | 0.450 | 0.200 | mg/L | 1 | 1422703 | | 09/28/2014 | |
| Chloride | 191 | 10.0 | " | 50 | " | " | 10/02/2014 | |
| Sulfate | 307 | 20.0 | " | " | " | " | " | |

TDS by SM2540C

| | | | | | | | | |
|------------------------|-----|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 911 | 14.3 | mg/L | 1 | 1422770 | " | 09/29/2014 | |
|------------------------|-----|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Charles Greeson
 Project Number: [none]
 Project: Noble - Miller #1 South CACL

SW09
9/24/2014 10:50:00AM

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

GEL Laboratories, LLC
X409253-09 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|-------|-------|------|----|---------|---|------------|--|
| Bromide | 0.483 | 0.200 | mg/L | 1 | 1422703 | | 09/28/2014 | |
| Chloride | 194 | 10.0 | " | 50 | " | " | 10/02/2014 | |
| Sulfate | 314 | 20.0 | " | " | " | " | " | |

TDS by SM2540C

| | | | | | | | | |
|------------------------|-----|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 877 | 14.3 | mg/L | 1 | 1422770 | " | 09/29/2014 | |
|------------------------|-----|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Charles Greeson
 Project Number: [none]
 Project: Noble - Miller #1 South CACL

SW10
9/24/2014 10:55:00AM

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

GEL Laboratories, LLC
X409253-10 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|-------|-------|------|----|---------|---|------------|--|
| Bromide | 0.417 | 0.200 | mg/L | 1 | 1422703 | | 09/28/2014 | |
| Chloride | 194 | 10.0 | " | 50 | " | " | 10/02/2014 | |
| Sulfate | 316 | 20.0 | " | " | " | " | " | |

TDS by SM2540C

| | | | | | | | | |
|------------------------|-----|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 914 | 14.3 | mg/L | 1 | 1422770 | " | 09/29/2014 | |
|------------------------|-----|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Charles Greeson
Project Number: [none]
Project: Noble - Miller #1 South CACL

SW11
9/24/2014 11:00:00AM

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

GEL Laboratories, LLC
X409253-11 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|-------|-------|------|----|---------|---|------------|--|
| Bromide | 0.494 | 0.200 | mg/L | 1 | 1422703 | | 09/28/2014 | |
| Chloride | 191 | 10.0 | " | 50 | " | " | 10/02/2014 | |
| Sulfate | 315 | 20.0 | " | " | " | " | " | |

TDS by SM2540C

| | | | | | | | | |
|------------------------|-----|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 884 | 14.3 | mg/L | 1 | 1422770 | " | 09/29/2014 | |
|------------------------|-----|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Charles Greeson
Project Number: [none]
Project: Noble - Miller #1 South CACL

SW12
9/24/2014 11:05:00AM

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

GEL Laboratories, LLC
X409253-12 (Water)

Anions by EPA300.0

| | | | | | | | | |
|----------|-------|-------|------|----|---------|---|------------|--|
| Bromide | 0.501 | 0.200 | mg/L | 1 | 1422703 | | 09/28/2014 | |
| Chloride | 191 | 10.0 | " | 50 | " | " | 10/02/2014 | |
| Sulfate | 316 | 20.0 | " | " | " | " | " | |

TDS by SM2540C

| | | | | | | | | |
|------------------------|-----|------|------|---|---------|---|------------|--|
| Total Dissolved Solids | 896 | 14.3 | mg/L | 1 | 1422770 | " | 09/29/2014 | |
|------------------------|-----|------|------|---|---------|---|------------|--|

Origins Laboratory, Inc.



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.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Charles Greeson
 Project Number: [none]
 Project: Noble - Miller #1 South CACL

Anions by EPA300.0 - Quality Control
GEL Laboratories, LLC

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|-------------------------------|--------|-----------------|-------|-------------|--------------------------------|------|--------------------------------|-------|-----------|-------|
| Batch 1422703 - | | | | | | | | | | |
| BLANK (1203176247-BLK) | | | | | Prepared: Analyzed: 10/01/2014 | | | | | |
| Chloride | ND | 0.200 | mg/L | | | | - | | | U |
| Sulfate | ND | 0.400 | " | | | | - | | | U |
| Bromide | ND | 0.200 | " | | | | - | | | U |
| LCS (1203176248-BKS) | | | | | Prepared: Analyzed: 09/28/2014 | | | | | |
| Bromide | 1.28 | 0.200 | mg/L | 1.25 | | 102 | 90-110 | | | |
| Chloride | 4.60 | 0.200 | " | 5.00 | | 92.1 | 90-110 | | | |
| Sulfate | 9.44 | 0.400 | " | 10.0 | | 94.4 | 90-110 | | | |
| DUP (1203176249 D) | | | | | Source: X409253-01 | | Prepared: Analyzed: 10/01/2014 | | | |
| Sulfate | 309 | 20.0 | mg/L | | 309 | | 0-20 | 0.120 | 20 | |
| Bromide | 0.494 | 0.200 | " | | 0.502 | | 0-20 | 1.47 | 20 | |
| Chloride | 186 | 10.0 | " | | 187 | | 0-20 | 0.166 | 20 | |
| DUP (1203176250 D) | | | | | Source: X409253-02 | | Prepared: Analyzed: 10/01/2014 | | | |
| Chloride | 186 | 10.0 | mg/L | | 186 | | 0-20 | 0.341 | 20 | |
| Sulfate | 307 | 20.0 | " | | 307 | | 0-20 | 0.124 | 20 | |
| Bromide | 0.512 | 0.200 | " | | 0.473 | | 0-20 | 7.86 | 20 | |
| PS (1203176251 S) | | | | | Source: X409253-01 | | Prepared: Analyzed: 09/28/2014 | | | |
| Bromide | 1.74 | 0.200 | mg/L | 1.25 | | 98.8 | 90-110 | | | |
| Chloride | 449 | 10.0 | " | 5.00 | | 105 | 90-110 | | | |
| Sulfate | 814 | 20.0 | " | 10.0 | | 101 | 90-110 | | | |
| PS (1203176252 S) | | | | | Source: X409253-02 | | Prepared: Analyzed: 09/28/2014 | | | |
| Bromide | 1.78 | 0.200 | mg/L | 1.25 | | 104 | 90-110 | | | |
| Chloride | 448 | 10.0 | " | 5.00 | | 105 | 90-110 | | | |
| Sulfate | 811 | 20.0 | " | 10.0 | | 101 | 90-110 | | | |

Origins Laboratory, Inc.



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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Charles Greeson
Project Number: [none]
Project: Noble - Miller #1 South CACL

TDS by SM2540C - Quality Control
GEL Laboratories, LLC

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

Batch 1422770 -

DUP (1203176414 D)

Source: X409253-05

Prepared: Analyzed: 09/29/2014

| | | | | | | | | | | |
|------------------------|-----|------|------|--|-----|--|------|-------|----|--|
| Total Dissolved Solids | 870 | 14.3 | mg/L | | 866 | | 0-10 | 0.494 | 10 | |
|------------------------|-----|------|------|--|-----|--|------|-------|----|--|

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Charles Greeson
Project Number: [none]
Project: Noble - Miller #1 South CACL

Notes and Definitions

- U Result not detected above the detection limit
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President