



GROUNDWATER MONITORING REPORT APRIL 2013

MILLER SOUTH #1 SPREAD FIELD COGCC TRACKING #2223090 & REMEDIATION #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 site history was described in preceding reports. This work has been conducted per the Conditions of Approval (COA) (Document #2614122) following the submission of the Form 27 Site Investigation and Remediation Workplan (Document #200370331).

The COA requires the following actions to document the extent of chloride impact in groundwater and to determine whether sulfate and chloride will stabilize and decline:

1. Conduct quarterly groundwater monitoring of all monitoring wells at the site (SB01R through SB08R, and SB10 through SB23) for four consecutive quarters. The number of monitoring wells sampled may be reduced after additional data is collected.
2. Analyze groundwater samples for chloride, sulfate, and total dissolved solids (TDS).
3. If site conditions change or potential receptors at this Site appear at risk of impact by chloride in groundwater, additional remediation activities may be required.
4. Correctly label and plot groundwater monitoring points and estimate groundwater flow direction based on groundwater elevations to a 0.01 foot resolution.

In order to satisfy the Colorado Oil and Gas Conservation Commission (COGCC) request, LTE, on behalf of Noble, conducted the following work. On September 10 and 11, 2012, LTE advanced a total of 24 soil borings. Soil borings (Background 01, Background 02, SB01R through SB08R, and SB10 through SB23) were installed using a direct-push drill rig operated by ACI Services of Denver, Colorado. On April 1, 2013, LTE installed three replacement monitoring wells (SB19R through SB21R) that were destroyed during expansion of the landowner's irrigation pond on site. The monitoring wells were installed using a hand auger and were constructed of 1-inch diameter polyvinyl chloride (PVC) casing extending from the surface stickups to a depth of approximately 13 feet below ground surface. The lower five feet of the monitoring wells consist of 0.010-inch factory-slotted PVC well screen. Silica sand was placed from the bottom of the well to two feet above the screen to act as filter pack for the monitoring well. Bentonite chips were placed from the top of the silica sand to the ground surface and hydrated to provide a seal against surface contamination and precipitation infiltration. A site map with soil boring locations is provided as Figure 1, and well completion diagrams are provided as Attachment 1.

Twenty-one groundwater samples (SB02R through SB04R, SB05R2, SB06R through SB08R, SB10 through SB18, SB19R through SB21R, SB22, and SB23) were collected on April 1, 2013, from the soil boring locations. Monitoring well SB01R was under water and was not sampled. Due to a laboratory malfunction, LTE re-sampled monitoring wells SB12 and SB16 on April 4, 2013. All samples were submitted to Summit Scientific for analysis of chloride and sulfate by United States Environmental Protection Agency (EPA) Method 300.0 and TDS with a laboratory TDS meter. During sampling, depth to groundwater ranged from 4.29 feet below top of casing (btoc) in soil boring SB17 to 12.65 feet btoc in SB19R. The groundwater flow direction is to the northwest with an average gradient of approximately 0.006 feet per foot (ft/ft). A relative groundwater elevation map is presented as Figure 2.

Groundwater analytical results are illustrated on Figures 3 through 5 and presented in Table 1. The laboratory analytical reports are provided as Attachment 2. The COGCC Table 910-1 groundwater standards for chloride, sulfate, and TDS are based on 1.25 times the background concentration (Background01 and Background02). It is apparent from the analytical results that natural site variability exists in the groundwater for these constituents. Due to the composition of the release (calcium-chloride-enriched water), chloride is the best indicator to determine the extent of impact. However, all waters contain varying concentrations of chloride depending on the mineral content of the earth and regional activities in a given area. Chloride can occur in surface water as a result of several sources including road salting, agricultural runoff, and mineral accumulation due to water evaporation, precipitation of chloride, and other constituents.

Analytical results do not reveal obvious trends in chloride, sulfate, and TDS concentrations in groundwater. The data do not indicate a clear increasing or decreasing trend, and fluctuations are likely the result of natural variability and seasonal fluctuations in the alluvial water table. LTE, under the direction of Noble, will continue to conduct quarterly groundwater monitoring events for one year, two more quarterly events will be completed to satisfy the COA. The next quarterly groundwater monitoring event is scheduled for July 2013.

FIGURES



IMAGE COURTESY OF ESRI/BING MAPS

LEGEND

- ⊗ MONITORING WELL
- ↑ ESTIMATED GROUNDWATER FLOW DIRECTION
- SURFICIAL RELEASE EXTENT
- SPREAD FIELD BOUNDARY

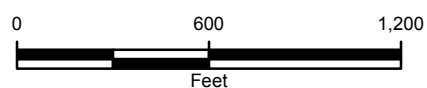


FIGURE 1
SITE MAP
 MILLER SOUTH #1 SPREAD FIELD
 WELD COUNTY, COLORADO

NOBLE ENERGY, INC.



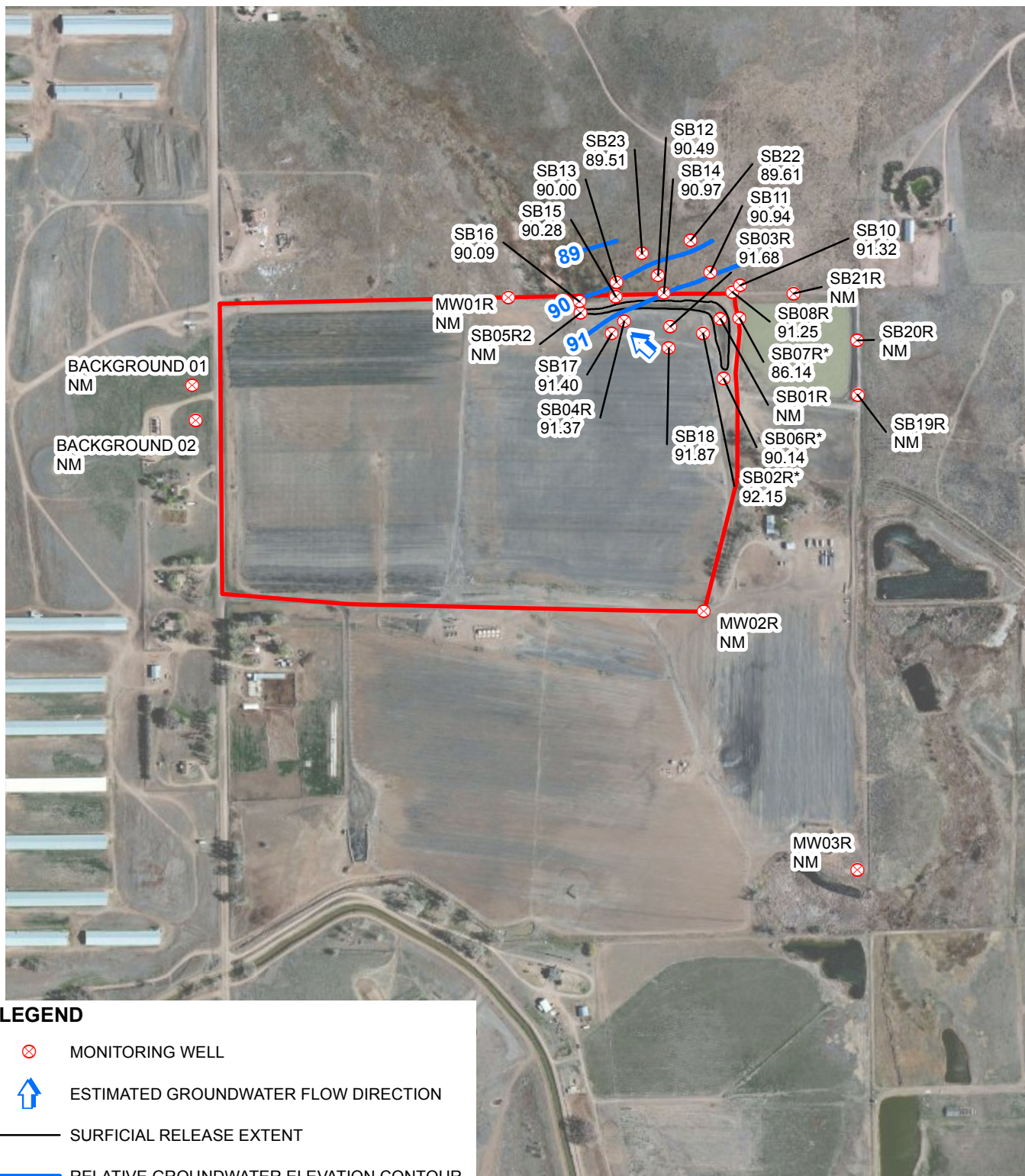


FIGURE 2
RELATIVE GROUNDWATER ELEVATION MAP
 APRIL 1 & 4, 2013
 MILLER SOUTH #1 SPREAD FIELD
 WELD COUNTY, COLORADO
 NOBLE ENERGY, INC.



LEGEND





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

IMAGE COURTESY OF ESRI/BING MAPS

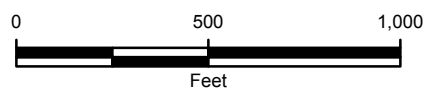
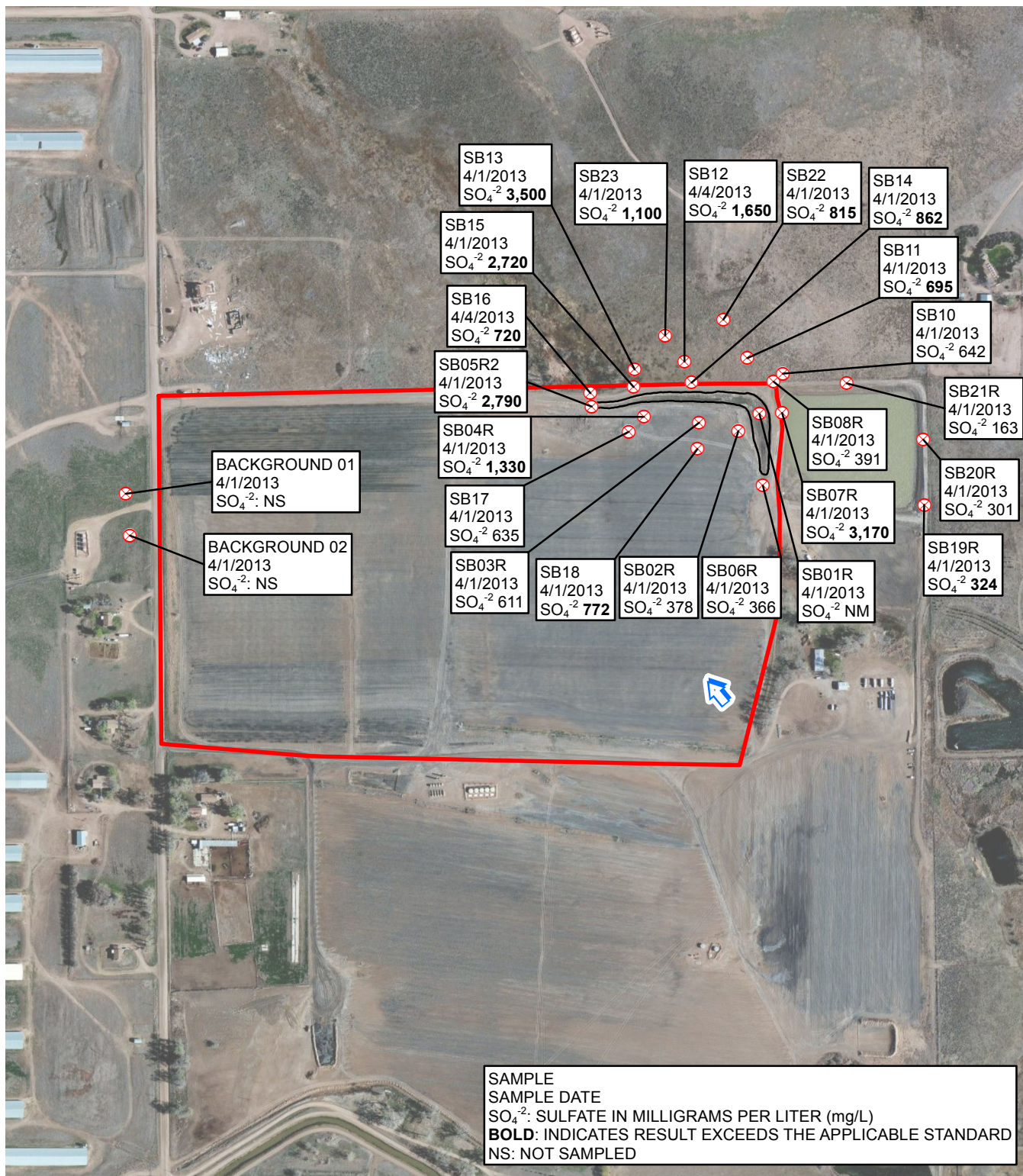


FIGURE 3
CHLORIDE GROUNDWATER ANALYTICAL RESULTS
MILLER SOUTH #1 SPREAD FIELD
WELD COUNTY, COLORADO

NOBLE ENERGY, INC.





LEGEND

- ⊗ MONITORING WELL
- ↑ ESTIMATED GROUNDWATER FLOW DIRECTION
- SURFICIAL RELEASE EXTENT
- SPREAD FIELD BOUNDARY

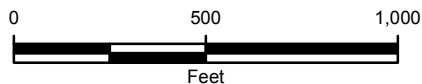
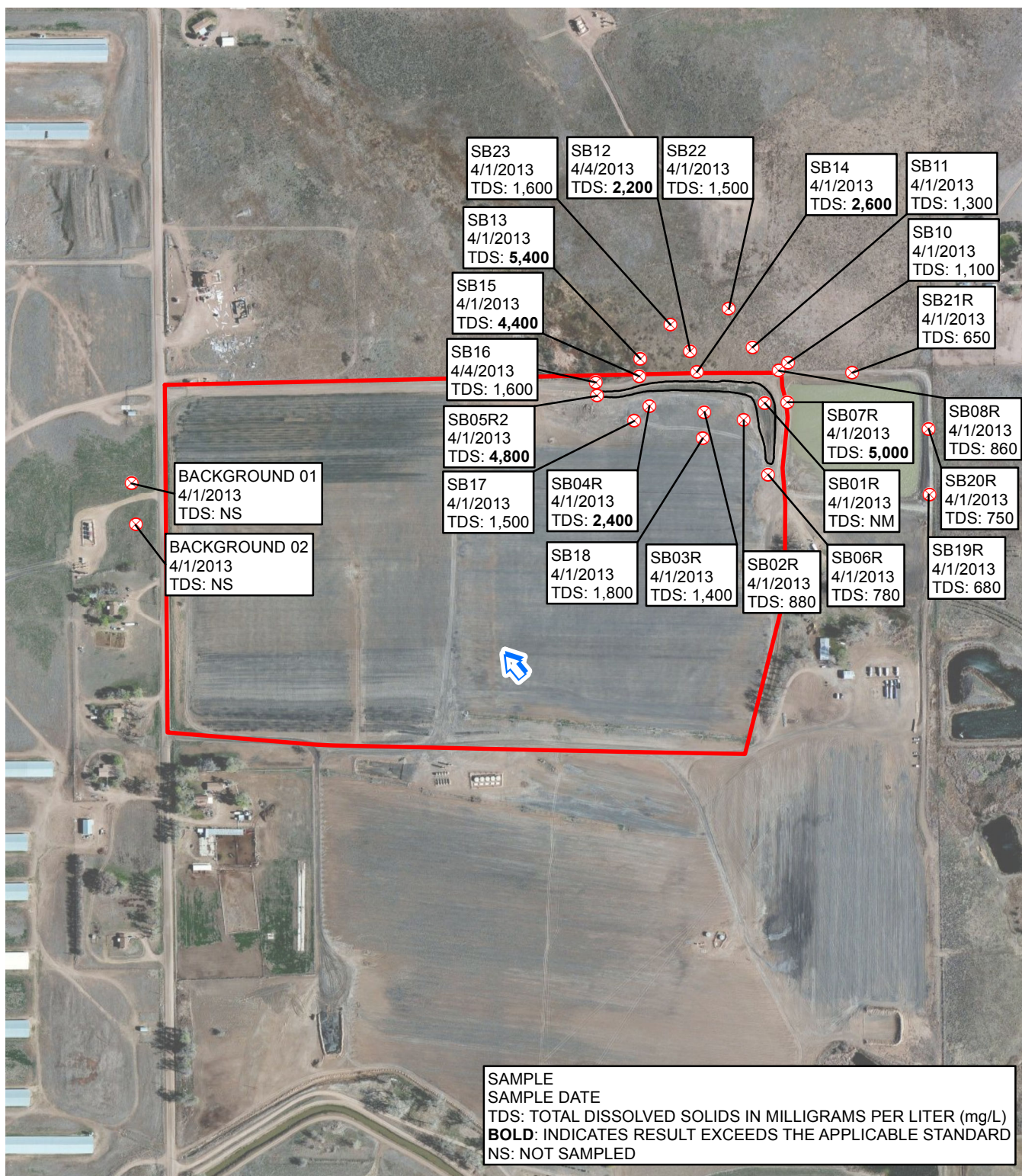


FIGURE 4
SULFATE GROUNDWATER ANALYTICAL RESULTS
MILLER SOUTH #1 SPREAD FIELD
WELD COUNTY, COLORADO

NOBLE ENERGY, INC.





LEGEND

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

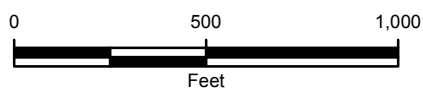


IMAGE COURTESY OF BING MAPS/ESRI



FIGURE 5
 TOTAL DISSOLVED SOLIDS
 GROUNDWATER ANALYTICAL RESULTS
 MILLER SOUTH #1 SPREAD FIELD
 WELD COUNTY, COLORADO
 NOBLE ENERGY, INC.



TABLE

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)	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	514	1,600	<1.0	<1.0	<1.0	<1.0
Background 02	9/12/2012	17.40	94.91	217	433	1,400	<1.0	<1.0	<1.0	<1.0
SB01	3/8/2012	3.30	NM	1,260	1,070	4,600	NA	NA	NA	NA
SB01R	9/11/2012	4.24	90.72	181	372	1,300	<1.0	<1.0	<1.0	<1.0
	1/8/2013	2.75	92.21	2,820	1,010	4,700	NA	NA	NA	NA
	4/1/2013	NM	NM	No Sample - Under Water						
SB02	3/8/2012	6.46	NM	220	584	1,700	NA	NA	NA	NA
SB02R	9/11/2012	8.03	91.30	214	300	1,100	<1.0	<1.0	<1.0	<1.0
	1/8/2013	6.72	92.61	241	366	830	NA	NA	NA	NA
	4/1/2013	7.18	92.15	241	378	880	NA	NA	NA	NA
SB03	3/8/2012	6.22	NM	348	1,070	3,100	NA	NA	NA	NA
SB03R	9/11/2012	7.50	90.33	278	646	2,300	<1.0	<1.0	<1.0	<1.0
	1/8/2013	5.90	91.93	252	741	1,500	NA	NA	NA	NA
	4/1/2013	6.15	91.68	223	611	1,400	NA	NA	NA	NA
SB04	3/8/2012	7.08	NM	296	1,220	3,100	NA	NA	NA	NA
SB04R	9/11/2012	7.94	89.73	488	1,600	4,800	<1.0	<1.0	<1.0	<1.0
	1/8/2013	6.83	90.84	388	1,330	2,400	NA	NA	NA	NA
	4/1/2013	6.30	91.37	356	1,330	2,400	NA	NA	NA	NA
SB05	3/8/2012	7.94	NM	208	896	2,400	NA	NA	NA	NA
SB05R	9/11/2012	6.51	88.62	291	1,060	3,000	<1.0	<1.0	<1.0	<1.0
	1/8/2013	4.65	NM	6,170	1,570	10,000	NA	NA	NA	NA
	4/1/2013	6.55	90.37	1,630	2,790	4,800	NA	NA	NA	NA
SB06	3/8/2012	7.82	NM	147	280	890	NA	NA	NA	NA
SB06R	9/11/2012	7.45	89.68	186	325	1,200	<1.0	<1.0	<1.0	<1.0
	1/8/2013	6.32	90.81	218	401	770	NA	NA	NA	NA
	4/1/2013	6.99	90.14	199	366	780	NA	NA	NA	NA
SB07	3/8/2012	6.93	NM	1,020	1,620	4,700	NA	NA	NA	NA
SB07R	9/11/2012	9.68	84.95	773	896	3,400	<1.0	<1.0	<1.0	<1.0
	1/8/2013	7.89	86.74	1,150	2,930	4,900	NA	NA	NA	NA
	4/1/2013	8.49	86.14	1,050	3,170	5,000	NA	NA	NA	NA
SB08	3/8/2012	9.73	NM	182	395	1,100	NA	NA	NA	NA
SB08R	9/11/2012	11.77	89.27	2,140	500	1,600	<1.0	<1.0	<1.0	<1.0
	1/8/2013	9.39	91.65	247	736	1,100	NA	NA	NA	NA
	4/1/2013	9.79	91.25	202	391	860	NA	NA	NA	NA
SB09 (background)	3/8/2012	8.09	NM	270	573	2,000	NA	NA	NA	NA
SB10	3/9/2012	9.64	NM	157	414	1,100	NA	NA	NA	NA
	9/12/2012	10.39	89.90	146	203	1,000	<1.0	<1.0	<1.0	<1.0
	1/8/2013	8.42	91.87	195	356	970	NA	NA	NA	NA
	4/1/2013	8.97	91.32	202	642	1,100	NA	NA	NA	NA
SB11	3/9/2012	8.58	NM	267	717	1,900	NA	NA	NA	NA
	9/12/2012	9.78	89.05	263	639	1,900	<1.0	<1.0	<1.0	<1.0
	1/8/2013	7.72	91.11	309	808	1,300	NA	NA	NA	NA
	4/1/2013	7.89	90.94	306	695	1,300	NA	NA	NA	NA
SB12	3/9/2012	6.16	NM	300	1,230	2,500	NA	NA	NA	NA
	9/12/2012	8.70	88.03	270	643	1,900	<1.0	<1.0	<1.0	<1.0
	1/8/2013	6.45	90.28	424	921	1,600	NA	NA	NA	NA
	4/1/2013	6.25	90.48	366	1,650	2,200	NA	NA	NA	NA
	4/4/2013	6.24	90.49	371	1,650	2,200	NA	NA	NA	NA
SB13	3/9/2012	5.61	NM	439	1,210	2,900	NA	NA	NA	NA
	9/12/2012	7.43	87.40	314	902	2,400	<1.0	<1.0	<1.0	<1.0
	1/8/2013	5.02	89.81	352	1,010	1,700	NA	NA	NA	NA
	4/1/2013	4.83	90.00	1,800	3,500	5,400	NA	NA	NA	NA
SB14	3/9/2012	6.15	NM	125	991	1,900	NA	NA	NA	NA
	9/12/2012	8.32	88.83	246	1,010	2,500	<1.0	<1.0	<1.0	<1.0
	1/8/2013	6.28	90.87	246	999	1,500	NA	NA	NA	NA
	4/1/2013	6.18	90.97	1,060	862	2,600	NA	NA	NA	NA
SB15	3/9/2012	10.97	NM	No Sample - Dry						
	9/12/2012	7.89	87.88	292	900	2,500	<1.0	<1.0	<1.0	<1.0
	1/8/2013	5.65	90.12	654	3,520	4,800	NA	NA	NA	NA
	4/1/2013	5.49	90.28	588	2,720	4,400	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)	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	730	2,200	NA	NA	NA	NA
	9/12/2012	9.15	88.52	194	597	2,000	<1.0	<1.0	<1.0	<1.0
	1/8/2013	7.60	90.07	264	734	1,500	NA	NA	NA	NA
	4/4/2013	7.58	90.09	305	720	1,600	NA	NA	NA	NA
SB17	9/11/2012	5.55	90.14	237	584	2,100	<1.0	<1.0	<1.0	<1.0
	1/8/2013	4.33	91.36	262	621	1,400	NA	NA	NA	NA
	4/1/2013	4.29	91.40	253	635	1,500	NA	NA	NA	NA
SB18	9/11/2012	7.75	90.85	290	920	3,000	<1.0	<1.0	<1.0	<1.0
	1/8/2013	6.50	92.10	313	866	1,800	NA	NA	NA	NA
	4/1/2013	6.73	91.87	284	772	1,800	NA	NA	NA	NA
SB19	9/11/2012	8.56	91.77	196	317	1,300	<1.0	<1.0	<1.0	<1.0
	1/8/2013	6.85	93.48	390	831	1,600	NA	NA	NA	NA
SB19R	4/1/2013	12.65	85.10	190	324	680	NA	NA	NA	NA
SB20	9/11/2012	10.33	89.50	183	180	1,000	<1.0	<1.0	<1.0	<1.0
	1/8/2013	9.40	90.43	209	329	710	NA	NA	NA	NA
SB20R	4/1/2013	11.23	84.71	234	301	750	NA	NA	NA	NA
SB21	9/11/2012	10.17	90.62	162	490	1,200	<1.0	<1.0	<1.0	<1.0
	1/8/2013	8.36	92.43	196	350	660	NA	NA	NA	NA
SB21R	4/1/2013	9.95	86.89	190	163	650	NA	NA	NA	NA
SB22	9/12/2012	11.14	87.53	355	815	2,200	<1.0	<1.0	<1.0	<1.0
	1/8/2013	9.14	89.53	378	884	1,400	NA	NA	NA	NA
	4/1/2013	9.06	89.61	337	815	1,500	NA	NA	NA	NA
SB23	9/12/2012	11.25	86.21	212	515	1,500	<1.0	<1.0	<1.0	<1.0
	1/8/2013	8.26	89.20	268	712	1,100	NA	NA	NA	NA
	4/1/2013	7.95	89.51	354	1,100	1,600	NA	NA	NA	NA
COGCC Table 910-1				295	642.5	2,000	5	560	700	1,400

NOTES:

btoc - below top of casing

µg/L - micrograms per liter

mg/L - milligrams per liter

NA - not analyzed

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

COGCC - Colorado Oil and Gas Conservation Commission

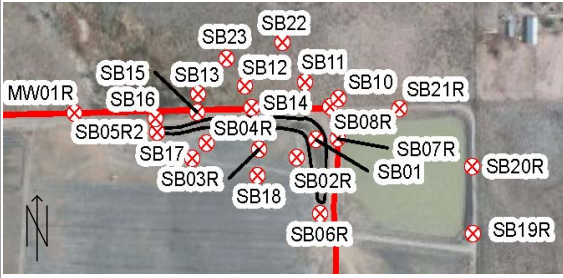
BOLD - indicates result exceeds the applicable standard

Chloride, sulfate, and total dissolved solids standard is <1.25 x background concentrations

ATTACHMENT 1

WELL COMPLETION DIAGRAMS

Location Map



Compliance • Engineering • Remediation
LT Environmental, Inc.
 4600 W. 60th Avenue
 Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

BORING/WELL NO.: SB19R
DATE: 4/1/2013
LOGGED BY: Ryan Kritzberger
DRILL MTHD: Hand Auger

PROJECT: Miller South #1
PROJECT NO.: 008312061
DRILLED BY: Ryan Kritzberger
SAMPLE MTHD: UltraRae 3000

DETECTOR: NA

GRAVEL PACK: 10-20 Silica Sand

CASING TYPE: SCH. 40 PVC

SCREEN TYPE: SCH. 40 PVC

HOLE DIA.: 4"

SEAL: Bent. Chips

CASING DIA.: 1"


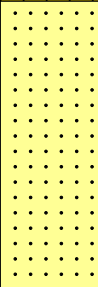
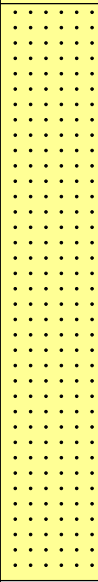
SCREEN SLOT: 0.010 in.

TD: 14' **DTW:** 12.5'

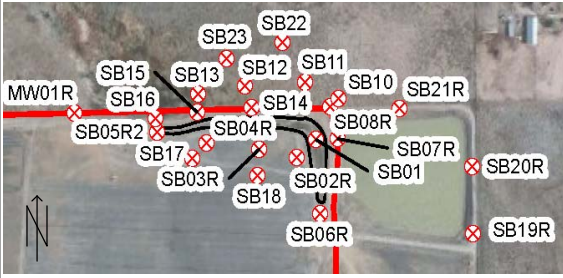
GROUT: NA

CASING LENGTH: 9'

SCREEN LENGTH: 5'

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
	Moist					0	CL		CL: Clay - 0'-2' - sandy, dark brown, moist, no odor	
	Dry						SW		SW: Sand - 2'-6' - fine grained, light brown, dry, no odor	
		0.0				5				
	Moist								SW: Sand - 6'-14' - fine grained, light brown, moist, wet @ 12.5', no odor	
		0.0				10				
	Wet									
		0.0								
						15			No Staining Observed Stickup: 3.5'	

Location Map



Compliance • Engineering • Remediation

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

BORING/WELL NO.: SB20R

DATE: 4/1/2013

LOGGED BY: Ryan Kritzberger

DRILL MTHD: Hand Auger

PROJECT: Miller South #1

PROJECT NO.: 008312061

DRILLED BY: Ryan Kritzberger

SAMPLE MTHD: UltraRae 3000

DETECTOR: NA

GRAVEL PACK: 10-20 Silica Sand

CASING TYPE: SCH. 40 PVC

SCREEN TYPE: SCH. 40 PVC

HOLE DIA.: 4"

SEAL: Bent. Chips

CASING DIA.: 1"


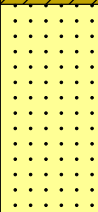
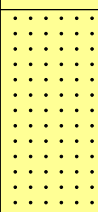
SCREEN SLOT: 0.010 in.

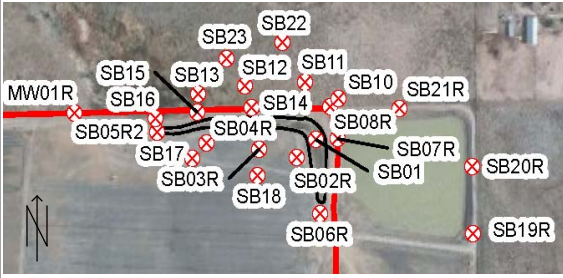
TD: 14' **DTW:** 11'

GROUT: NA

CASING LENGTH: 9'

SCREEN LENGTH: 5'

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
	Moist					0	CL		CL: Clay - 0'-3' - sandy, dark brown, moist, no odor	
	Dry					5	SW		SW: Sand - 3'-6' - fine grained, light brown, dry, no odor	
	Moist	0.0				10			SW: Sand - 6'-14' - fine grained, light brown, moist, wet @ 11', no odor	
	Wet	0.0				15			No Staining Observed Stickup: 3.5'	

Location Map


Compliance • Engineering • Remediation

LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, Colorado 80003
BORING LOG/MONITORING WELL COMPLETION DIAGRAM
BORING/WELL NO.: SB21R

DATE: 4/1/2013

LOGGED BY: Ryan Kritzberger

DRILL MTHD: Hand Auger

PROJECT: Miller South #1

PROJECT NO.: 008312061

DRILLED BY: Ryan Kritzberger

SAMPLE MTHD: UltraRae 3000

DETECTOR: NA

GRAVEL PACK: 10-20 Silica Sand

CASING TYPE: SCH. 40 PVC

SCREEN TYPE: SCH. 40 PVC

HOLE DIA.: 4"

SEAL: Bent. Chips

CASING DIA.: 1"

SCREEN SLOT: 0.010 in.

TD: 13' **DTW:** 10'

GROUT: NA

CASING LENGTH: 8'

SCREEN LENGTH: 5'

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
	Dry					0	SW		SW: Sand - 0'-5' - fine grained, light brown, dry, no odor	
	Moist	0.0				5			SW: Sand - 5'-13' - fine grained, light brown, moist, wet @ 10', no odor	
	Wet	0.0				10				
		0.0				15			No Staining Observed Stickup: 3.5'	

ATTACHMENT 2
LABORATORY ANALYTICAL REPORTS

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 08, 2013

Liz Houle

LT Environmental, Inc.

4600 West 60th Avenue

Arvada, CO 80003

RE: NEP - Miller S #1 CaCl

Enclosed are the results of analyses for samples received by Summit Scientific on 04/02/13 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Joseph J Egry IV For Ben Shrewsbury

President / Laboratory Manager

This report shall not be reproduced, except in its entirety, without the written approval of Summit Scientific. Test results relate only to samples analyzed.

Summit Scientific is the sole authority for authorizing edits or modifications to this document. Unauthorized modification of this report is strictly prohibited.



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB02R	R304024-01	Water	04/01/13 17:15	04/02/13 17:00
SB03R	R304024-02	Water	04/01/13 17:25	04/02/13 17:00
SB04R	R304024-03	Water	04/01/13 16:55	04/02/13 17:00
SB05R2	R304024-04	Water	04/01/13 16:45	04/02/13 17:00
SB06R	R304024-05	Water	04/01/13 17:35	04/02/13 17:00
SB07R	R304024-06	Water	04/01/13 17:45	04/02/13 17:00
SB08R	R304024-07	Water	04/01/13 15:05	04/02/13 17:00
SB10	R304024-08	Water	04/01/13 14:55	04/02/13 17:00
SB11	R304024-09	Water	04/01/13 15:15	04/02/13 17:00
SB12	R304024-10	Water	04/01/13 15:45	04/02/13 17:00
SB13	R304024-11	Water	04/01/13 16:15	04/02/13 17:00
SB14	R304024-12	Water	04/01/13 15:35	04/02/13 17:00
SB15	R304024-13	Water	04/01/13 16:25	04/02/13 17:00
SB17	R304024-15	Water	04/01/13 17:55	04/02/13 17:00
SB18	R304024-16	Water	04/01/13 16:05	04/02/13 17:00
SB19R	R304024-17	Water	04/01/13 14:25	04/02/13 17:00
SB20R	R304024-18	Water	04/01/13 14:35	04/02/13 17:00
SB21R	R304024-19	Water	04/01/13 14:45	04/02/13 17:00
SB22	R304024-20	Water	04/01/13 15:25	04/02/13 17:00
SB23	R304024-21	Water	04/01/13 15:55	04/02/13 17:00

Summit Scientific

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



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

R304024-1

Summit Scientific

S₂

741 Corporate Circle Suite 1 • Golden, Colorado 80401
303-277-5910 • 303-277-5931 Fax

Page 1 of 3

Client: LT Environmental, Inc.
Address: 4600 West 60th Avenue
City/State/Zip: Arvada, CO 80003
Phone: (303) 433-9788
Sample Name: Rym hithlerof
Project Manager: Denise Bums
E-Mail: dbums@summit-sc.com
Project Name: Miller S #1
Project Number: 0083-12061

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix				Analyze For:				Special Instructions	
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	DRO	GBTEX	BTEX	SO ₂		SO ₄
15802R	4/1/13	1715	3	X				X									
15803R	4/1/13	1725	3	X				X									
15804R	4/1/13	1655	3	X				X									
15805R	4/1/13	1645	3	X				X									
15806R	4/1/13	1735	3	X				X									
15807R	4/1/13	1745	3	X				X									
15808R	4/1/13	1505	3	X				X									
15810	4/1/13	1455	3	X				X									
15811	4/1/13	1515	3	X				X									
15812	4/1/13	1545	3	X				X									

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time (Check)	Notes:
Pat T...	4/2/13	[Signature]	4/12/13 1700	72 Hours Standard	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:	Temperature Upon Receipt:	

www.summit-sc.com

[Signature]



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

R3040242

Summit Scientific

S₂

741 Corporate Circle Suite 1 • Golden, Colorado 80401
303-277-5930 • 303-277-5931 Fax

Page 2 of 3

Client: LT Environmental, Inc.

Address: 4600 West 60th Avenue

City/State/Zip: Arvada, CO 80003

Phone: (303) 433-5788

Sample Name: Ryan Kitzberger

Project Manager: Chris Roy

E-Mail: chris.roy@summit-sc.com

Project Name: Miller South #1

Project Number: 0083-12061

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix				Analyze For:				Special Instructions	
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	DRO	GBTEX	BTEX	SC-1 Fe-Te		705
15813	4/1/13	1605	32			X											
15814	4/1/13	1535	3			X											
15815	4/1/13	1625	3			X											
15816	4/1/13	1635	3			X											
15817	4/1/13	1755	3			X											
15818	4/1/13	1605	32			X											
15819	4/1/13	1425	32			X											
15820	4/1/13	1435	32			X											
15821	4/1/13	1445	3			X											
15822	4/1/13	1525	32			X											
Relinquished by:	Date Time:	Received by:	Date Time:	Turn Around Time (Check)				Notes:									
Relinquished by:	Date Time:	Received by:	Date Time:	Same Day				72 Hours									
Relinquished by:	Date Time:	Received by:	Date Time:	24 Hours				Standard									
Relinquished by:	Date Time:	Received by:	Date Time:	48 Hours													
Relinquished by:	Date Time:	Received by:	Date Time:	Sample Integrity:				Temperature Upon Receipt:									
Relinquished by:	Date Time:	Received by:	Date Time:	Intact: (G) No													

www.summit-sc.com

[Signature]



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

SB02R
R304024-01 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **04/01/13 17:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	241	10.0	mg/L	10	3040403	04/04/13	04/05/13	EPA 300.0	

Date Sampled: **04/01/13 17:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	378	10.0	"	"	"	"	"	"	

Miscellaneous Physical/Conventional Chemistry Parameters

Date Sampled: **04/01/13 17:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	880	1.0	mg/L	1	3040408	04/04/13	04/04/13	TDS Meter	

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.



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

SB03R
R304024-02 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **04/01/13 17:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	223	10.0	mg/L	10	3040403	04/04/13	04/05/13	EPA 300.0	

Date Sampled: **04/01/13 17:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	611	10.0	"	"	"	"	"	"	

Miscellaneous Physical/Conventional Chemistry Parameters

Date Sampled: **04/01/13 17:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	1400	1.0	mg/L	1	3040408	04/04/13	04/04/13	TDS Meter	

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.



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

SB04R
R304024-03 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **04/01/13 16:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	356	10.0	mg/L	10	3040403	04/04/13	04/05/13	EPA 300.0	

Date Sampled: **04/01/13 16:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	1330	100	"	100	"	"	"	"	

Miscellaneous Physical/Conventional Chemistry Parameters

Date Sampled: **04/01/13 16:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	2400	1.0	mg/L	1	3040408	04/04/13	04/04/13	TDS Meter	

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.



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

SB05R2
R304024-04 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **04/01/13 16:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	1630	100	mg/L	100	3040403	04/04/13	04/05/13	EPA 300.0	

Date Sampled: **04/01/13 16:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	2790	100	"	"	"	"	"	"	

Miscellaneous Physical/Conventional Chemistry Parameters

Date Sampled: **04/01/13 16:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	4800	1.0	mg/L	1	3040408	04/04/13	04/04/13	TDS Meter	

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.



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

SB06R
R304024-05 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **04/01/13 17:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	199	10.0	mg/L	10	3040403	04/04/13	04/05/13	EPA 300.0	

Date Sampled: **04/01/13 17:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	366	10.0	"	"	"	"	"	"	

Miscellaneous Physical/Conventional Chemistry Parameters

Date Sampled: **04/01/13 17:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	780	1.0	mg/L	1	3040408	04/04/13	04/04/13	TDS Meter	

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.



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

SB07R
R304024-06 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **04/01/13 17:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	1050	10.0	mg/L	10	3040403	04/04/13	04/05/13	EPA 300.0	

Date Sampled: **04/01/13 17:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	3170	100	"	100	"	"	"	"	

Miscellaneous Physical/Conventional Chemistry Parameters

Date Sampled: **04/01/13 17:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	5000	1.0	mg/L	1	3040408	04/04/13	04/04/13	TDS Meter	

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.



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

Project: NEP - Miller S #1 CaCl
Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

SB08R
R304024-07 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **04/01/13 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	202	10.0	mg/L	10	3040403	04/04/13	04/05/13	EPA 300.0	

Date Sampled: **04/01/13 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	391	10.0	"	"	"	"	"	"	

Miscellaneous Physical/Conventional Chemistry Parameters

Date Sampled: **04/01/13 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	860	1.0	mg/L	1	3040408	04/04/13	04/04/13	TDS Meter	

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.



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

Project: NEP - Miller S #1 CaCl
Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

SB10
R304024-08 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **04/01/13 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	202	10.0	mg/L	10	3040403	04/04/13	04/05/13	EPA 300.0	

Date Sampled: **04/01/13 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	642	10.0	"	"	"	"	"	"	

Miscellaneous Physical/Conventional Chemistry Parameters

Date Sampled: **04/01/13 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	1100	1.0	mg/L	1	3040408	04/04/13	04/04/13	TDS Meter	

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.



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

SB11
R304024-09 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **04/01/13 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	306	10.0	mg/L	10	3040403	04/04/13	04/05/13	EPA 300.0	

Date Sampled: **04/01/13 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	695	10.0	"	"	"	"	"	"	

Miscellaneous Physical/Conventional Chemistry Parameters

Date Sampled: **04/01/13 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	1300	1.0	mg/L	1	3040408	04/04/13	04/04/13	TDS Meter	

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.



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

SB12
R304024-10 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **04/01/13 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	366	10.0	mg/L	10	3040403	04/04/13	04/05/13	EPA 300.0	

Date Sampled: **04/01/13 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	1650	100	"	100	"	"	"	"	

Miscellaneous Physical/Conventional Chemistry Parameters

Date Sampled: **04/01/13 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	2200	1.0	mg/L	1	3040408	04/04/13	04/04/13	TDS Meter	

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.



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

SB13
R304024-11 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **04/01/13 16:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	1800	100	mg/L	100	3040403	04/04/13	04/05/13	EPA 300.0	

Date Sampled: **04/01/13 16:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	3500	100	"	"	"	"	"	"	

Miscellaneous Physical/Conventional Chemistry Parameters

Date Sampled: **04/01/13 16:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	5400	1.0	mg/L	1	3040408	04/04/13	04/04/13	TDS Meter	

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.



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

SB14
R304024-12 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **04/01/13 15:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	1060	10.0	mg/L	10	3040403	04/04/13	04/05/13	EPA 300.0	

Date Sampled: **04/01/13 15:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	862	10.0	"	"	"	"	"	"	

Miscellaneous Physical/Conventional Chemistry Parameters

Date Sampled: **04/01/13 15:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	2600	1.0	mg/L	1	3040408	04/04/13	04/04/13	TDS Meter	

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.



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

SB15
R304024-13 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **04/01/13 16:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	588	10.0	mg/L	10	3040403	04/04/13	04/05/13	EPA 300.0	

Date Sampled: **04/01/13 16:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	2720	100	"	100	"	"	"	"	

Miscellaneous Physical/Conventional Chemistry Parameters

Date Sampled: **04/01/13 16:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	4400	1.0	mg/L	1	3040408	04/04/13	04/04/13	TDS Meter	

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.



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

SB17
R304024-15 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **04/01/13 17:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	253	10.0	mg/L	10	3040403	04/04/13	04/05/13	EPA 300.0	

Date Sampled: **04/01/13 17:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	635	10.0	"	"	"	"	"	"	

Miscellaneous Physical/Conventional Chemistry Parameters

Date Sampled: **04/01/13 17:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	1500	1.0	mg/L	1	3040408	04/04/13	04/04/13	TDS Meter	

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.



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

SB18
R304024-16 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **04/01/13 16:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	284	10.0	mg/L	10	3040403	04/04/13	04/05/13	EPA 300.0	

Date Sampled: **04/01/13 16:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	772	10.0	"	"	"	"	"	"	

Miscellaneous Physical/Conventional Chemistry Parameters

Date Sampled: **04/01/13 16:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	1800	1.0	mg/L	1	3040408	04/04/13	04/04/13	TDS Meter	

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.



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061

Project Manager: Liz Houle

Reported:
04/08/13 10:50

SB19R
R304024-17 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **04/01/13 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	190	10.0	mg/L	10	3040403	04/04/13	04/05/13	EPA 300.0	

Date Sampled: **04/01/13 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	324	10.0	"	"	"	"	"	"	

Miscellaneous Physical/Conventional Chemistry Parameters

Date Sampled: **04/01/13 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	680	1.0	mg/L	1	3040408	04/04/13	04/04/13	TDS Meter	

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.



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

SB20R
R304024-18 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **04/01/13 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	234	10.0	mg/L	10	3040403	04/04/13	04/05/13	EPA 300.0	

Date Sampled: **04/01/13 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	301	10.0	"	"	"	"	"	"	

Miscellaneous Physical/Conventional Chemistry Parameters

Date Sampled: **04/01/13 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	750	1.0	mg/L	1	3040408	04/04/13	04/04/13	TDS Meter	

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.



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

SB21R
R304024-19 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **04/01/13 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	190	10.0	mg/L	10	3040403	04/04/13	04/05/13	EPA 300.0	

Date Sampled: **04/01/13 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	163	10.0	"	"	"	"	"	"	

Miscellaneous Physical/Conventional Chemistry Parameters

Date Sampled: **04/01/13 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	650	1.0	mg/L	1	3040408	04/04/13	04/04/13	TDS Meter	

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.



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

SB22
R304024-20 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **04/01/13 15:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	337	10.0	mg/L	10	3040403	04/04/13	04/05/13	EPA 300.0	

Date Sampled: **04/01/13 15:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	815	10.0	"	"	"	"	"	"	

Miscellaneous Physical/Conventional Chemistry Parameters

Date Sampled: **04/01/13 15:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	1500	1.0	mg/L	1	3040408	04/04/13	04/04/13	TDS Meter	

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.



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

SB23
R304024-21 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **04/01/13 15:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	354	10.0	mg/L	10	3040403	04/04/13	04/05/13	EPA 300.0	

Date Sampled: **04/01/13 15:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	1100	10.0	"	"	"	"	"	"	

Miscellaneous Physical/Conventional Chemistry Parameters

Date Sampled: **04/01/13 15:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	1600	1.0	mg/L	1	3040408	04/04/13	04/04/13	TDS Meter	

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.



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

Project: NEP - Miller S #1 CaCl
Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

Anions by EPA Method 300.0 - Quality Control
Summit Scientific

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

Batch 3040403 - General Prep

Blank (3040403-BLK1)

Prepared: 04/04/13 Analyzed: 04/05/13

Sulfate	ND	1.00	mg/L
Chloride	ND	1.00	"

LCS (3040403-BS1)

Prepared: 04/04/13 Analyzed: 04/05/13

Sulfate	10.1	1.00	mg/L	11.1	91.1	90-110
Chloride	10.7	1.00	"	11.1	96.5	90-110

LCS Dup (3040403-BSD1)

Prepared: 04/04/13 Analyzed: 04/05/13

Sulfate	10.4	1.00	mg/L	11.1	93.2	90-110	2.26	10
Chloride	10.8	1.00	"	11.1	97.4	90-110	0.929	10

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.



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

Project: NEP - Miller S #1 CaCl
Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

Miscellaneous Physical/Conventional Chemistry Parameters - Quality Control
Summit Scientific

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

Batch 3040408 - General Preparation

Blank (3040408-BLK1)

Prepared & Analyzed: 04/04/13

Total Dissolved Solids ND 1.0 mg/L

Duplicate (3040408-DUP1)

Source: R304024-01

Prepared & Analyzed: 04/04/13

Total Dissolved Solids 880 1.0 mg/L 880 0.114 20

Summit Scientific

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



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/08/13 10:50

Notes and Definitions

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

A handwritten signature in black ink, appearing to read 'Liz Houle IV'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 19, 2013

Liz Houle

LT Environmental, Inc.

4600 West 60th Avenue

Arvada, CO 80003

RE: NEP - Miller S #1 CaCl

Enclosed are the results of analyses for samples received by Summit Scientific on 04/04/13 17:05. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'BS' or 'Shrewsbury', with a long, sweeping horizontal line extending to the right.

Ben Shrewsbury

President / Laboratory Manager



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/19/13 09:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB16	R304060-01	Water	04/04/13 14:35	04/04/13 17:05
SB12	R304060-02	Water	04/04/13 14:55	04/04/13 17:05

Summit Scientific

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

A handwritten signature in black ink, appearing to be 'JMH'.



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/19/13 09:06

SB16
R304060-01 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **04/04/13 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	305	10.0	mg/L	10	3040505	04/05/13	04/05/13	EPA 300.0	

Date Sampled: **04/04/13 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	720	100	"	100	3041221	04/12/13	04/15/13	"	

Miscellaneous Physical/Conventional Chemistry Parameters

Date Sampled: **04/04/13 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	1600	1.0	mg/L	1	3041006	04/10/13	04/10/13	TDS Meter	

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.



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

Project: NEP - Miller S #1 CaCl
Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/19/13 09:06

SB12
R304060-02 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **04/04/13 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	371	10.0	mg/L	10	3040505	04/05/13	04/05/13	EPA 300.0	

Date Sampled: **04/04/13 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	1650	100	"	100	3041221	04/12/13	04/15/13	"	

Miscellaneous Physical/Conventional Chemistry Parameters

Date Sampled: **04/04/13 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	2200	1.0	mg/L	1	3041006	04/10/13	04/10/13	TDS Meter	

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.



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

Project: NEP - Miller S #1 CaCl
Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/19/13 09:06

Anions by EPA Method 300.0 - Quality Control

Summit Scientific

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

Batch 3040505 - General Prep

Blank (3040505-BLK1)				Prepared & Analyzed: 04/05/13						
Chloride	ND	1.00	mg/L							
LCS (3040505-BS1)				Prepared & Analyzed: 04/05/13						
Chloride	10.5	1.00	mg/L	11.1		94.3	90-110			
LCS Dup (3040505-BSD1)				Prepared & Analyzed: 04/05/13						
Chloride	10.2	1.00	mg/L	11.1		92.1	90-110	2.33	10	
Matrix Spike (3040505-MS1)				Source: R304060-01		Prepared & Analyzed: 04/05/13				
Chloride	283	10.0	mg/L	11.1	305	NR	80-120			QM-4X
Matrix Spike Dup (3040505-MSD1)				Source: R304060-01		Prepared & Analyzed: 04/05/13				
Chloride	286	10.0	mg/L	11.1	305	NR	80-120	1.32	20	QM-4X

Batch 3041221 - General Prep

Blank (3041221-BLK1)				Prepared: 04/12/13 Analyzed: 04/15/13						
Sulfate	ND	1.00	mg/L							
LCS (3041221-BS1)				Prepared: 04/12/13 Analyzed: 04/15/13						
Sulfate	10.7	1.00	mg/L	11.1		96.1	90-110			
LCS Dup (3041221-BSD1)				Prepared: 04/12/13 Analyzed: 04/15/13						
Sulfate	10.6	1.00	mg/L	11.1		95.5	90-110	0.689	10	
Matrix Spike (3041221-MS1)				Source: R304060-01		Prepared: 04/12/13 Analyzed: 04/15/13				
Sulfate	587	100	mg/L	11.1	720	NR	80-120			QM-4X

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.



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/19/13 09:06

Anions by EPA Method 300.0 - Quality Control
Summit Scientific

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

Batch 3041221 - General Prep

Matrix Spike Dup (3041221-MSD1)

Source: R304060-01

Prepared: 04/12/13 Analyzed: 04/15/13

Sulfate	602	100	mg/L	11.1	720	NR	80-120	2.37	20	QM-4X
---------	-----	-----	------	------	-----	----	--------	------	----	-------

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.



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/19/13 09:06

Miscellaneous Physical/Conventional Chemistry Parameters - Quality Control
Summit Scientific

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

Batch 3041006 - General Preparation

Blank (3041006-BLK1)

Prepared & Analyzed: 04/10/13

Total Dissolved Solids ND 1.0 mg/L

Duplicate (3041006-DUP1)

Source: R304060-01

Prepared & Analyzed: 04/10/13

Total Dissolved Solids 1600 1.0 mg/L 1600 0.251 20

Summit Scientific

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



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

Project: NEP - Miller S #1 CaCl

Project Number: 0083-12061
Project Manager: Liz Houle

Reported:
04/19/13 09:06

Notes and Definitions

QM-4X The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

Summit Scientific

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.