

TABLE 1

GROUNDWATER ANALYTICAL RESULTS
MILLER SOUTH #1 SPREAD FIELD
COGCC REMEDIATION #7412
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				No Sample - Under Water					
	7/12/2013	2.57	92.39	1,360	NA	NA	448	2,800	NA	NA	NA	NA
	10/31/2013	NM	NM				No Sample - Under Water					
	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				No Sample - Under Water					
SB01R2	9/3/2015	5.62	90.28	325	2.09	156	801	2,740	NA	NA	NA	NA
	3/10/2016	4.41	91.49	259	2.26	115	1,960	3,540	NA	NA	NA	NA
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				No Sample - Under Water					
Removed from monitoring program per COGCC document #2314191												

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)
SB03	3/8/2012	6.22	NM	348	NA	NA	1,070	3,100	NA	NA	NA	NA
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					
							Removed from monitoring program per COGCC document #2314191					
SB04	3/8/2012	7.08	NM	296	NA	NA	1,220	3,100	NA	NA	NA	NA
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					
	3/27/2015	6.23	91.44	170	0.823	207	1,270	2,760	NA	NA	NA	NA
	9/3/2015	NM	NM				Monitoring well destroyed by landowner grading activity					
SB05	3/8/2012	7.94	NM	208	NA	NA	896	2,400	NA	NA	NA	NA
SB05R	9/11/2012	6.51	88.62	291	NA	NA	1,060	3,000	<1.0	<1.0	<1.0	<1.0
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

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)
SB05R2	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					
	3/27/2015	6.35	90.57	380	2.64	144	1,110	4,410	NA	NA	NA	NA
	9/3/2015	7.06	89.86	256	2.59	99	1,090	2,840	NA	NA	NA	NA
	3/10/2016	6.10	90.82	1,300	8.05	161	2,250	6,110	NA	NA	NA	NA
SB06	3/8/2012	7.82	NM	147	NA	NA	280	890	NA	NA	NA	NA
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
	3/27/2015	6.94	90.19	946	1.06	892	585	3,560	NA	NA	NA	NA
SB06R2	9/3/2015	4.12	92.40	274	0.705	389	388	1,650	NA	NA	NA	NA
	3/10/2016	3.82	92.70	199	0.939	212	318	1,150	NA	NA	NA	NA
SB07	3/8/2012	6.93	NM	1,020	NA	NA	1,620	4,700	NA	NA	NA	NA
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

TABLE 1 (Continued)

GROUNDWATER ANALYTICAL RESULTS
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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)
SB07R2	9/3/2015	6.03	90.38	816	3.40	240	950	3,670	NA	NA	NA	NA
	3/10/2016	5.50	90.91	556	3.60	154	2,020	4,440	NA	NA	NA	NA
SB08	3/8/2012	9.73	NM	182	NA	NA	395	1,100	NA	NA	NA	NA
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					
							Removed from monitoring program per COGCC document #2314191					
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
							Removed from monitoring program per COGCC document #2314191					

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)
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
	3/27/2015	6.21	92.62	566	1.31	432	756	2,710	NA	NA	NA	NA
	9/3/2015	NM	NM				No sample - unable to locate					
	3/10/2016	NM	NM				No sample - unable to locate					
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
	3/27/2015	6.10	90.63	675	1.74	388	1,490	4,130	NA	NA	NA	NA
	9/3/2015	NM	NM				No sample - unable to locate					
	3/10/2016	6.10	90.63	357	1.27	281	646	2,090	NA	NA	NA	NA
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

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	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
Removed from monitoring program per COGCC document #2314191												
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
	3/27/2015	6.13	91.02	170	0.496	343	273	939	NA	NA	NA	NA
	9/3/2015	NM	NM				No sample - unable to locate					
SB15	3/10/2016	6.10	91.05	474	1.45	327	354	1,740	NA	NA	NA	NA
	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					

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)
SB15	9/22/2014	3.15	92.62	485	4.04	120	2,340	5,320	NA	NA	NA	NA
Removed from monitoring program per COGCC document #2314191												
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
Removed from monitoring program per COGCC document #2314191												
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				
Removed from monitoring program per COGCC document #2314191												
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

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)
SB18	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					
	3/27/2015	6.68	91.92	256	0.935	274	747	2,650	NA	NA	NA	NA
	9/3/2015	NM	NM	Monitoring well destroyed by landowner grading activity								
SB19	9/11/2012	8.56	91.77	196	NA	NA	317	1,300	<1.0	<1.0	<1.0	<1.0
	1/8/2013	6.85	93.48	390	NA	NA	831	1,600	NA	NA	NA	NA
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								
							Removed from monitoring program per COGCC document #2314191					
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
	3/27/2015	NM	NM	Monitoring well destroyed by landowner grading activity								
SB20R2	9/3/2015	7.19	88.91	89.5	0.359	249	466	927	NA	NA	NA	NA
	3/10/2016	7.23	88.87	169	0.677	250	176	804	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

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)
SB21	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					
							Removed from monitoring program per COGCC document #2314191					
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					
							Removed from monitoring program per COGCC document #2314191					
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
	3/27/2015	6.38	91.08	1,150	2.64	436	2,060	5,300	NA	NA	NA	NA
	9/3/2015	NM	NM				No sample - unable to 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	3/10/2016	7.60	89.86	1,280	5.43	236	2,430	5,980	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.

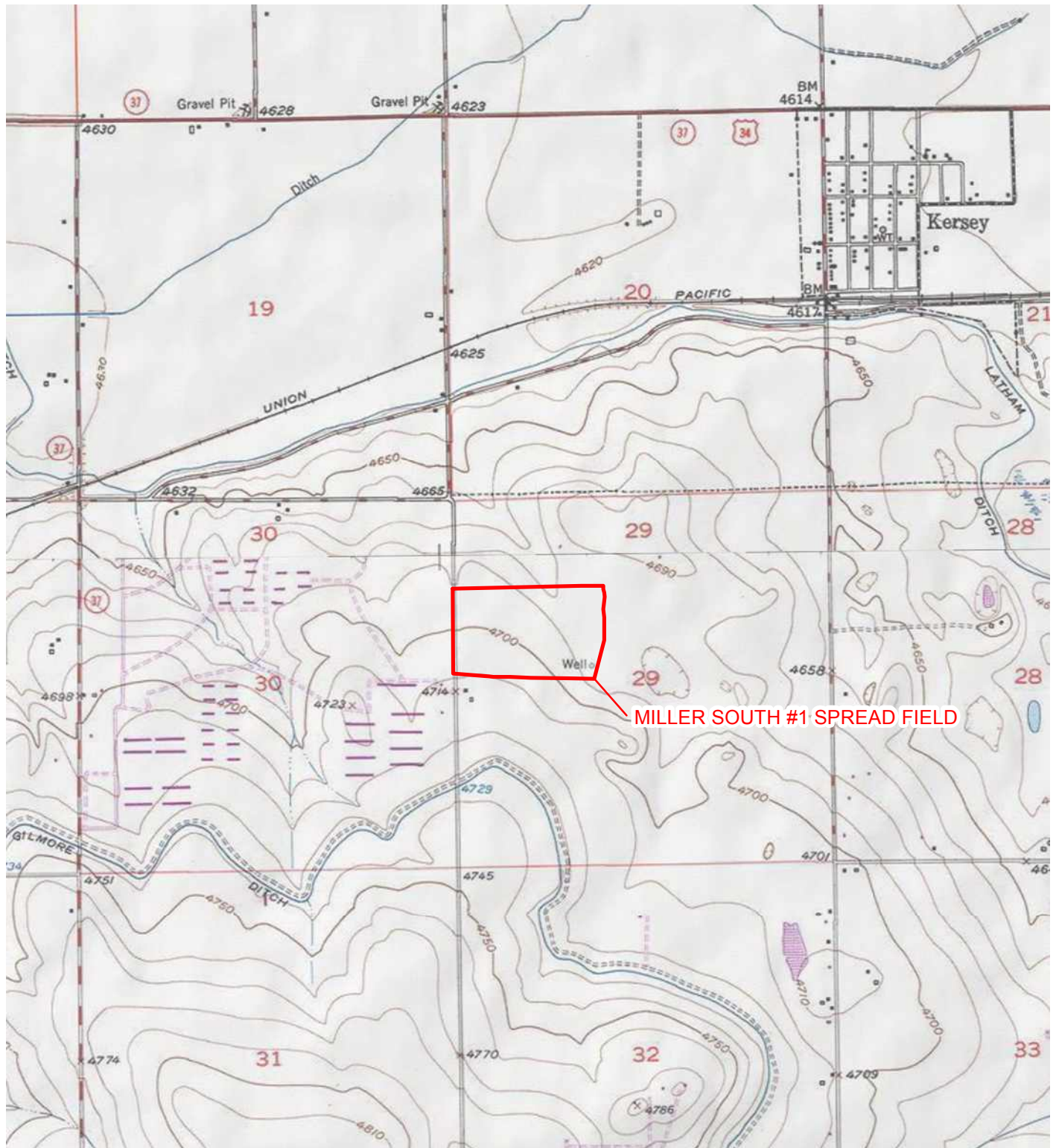


IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

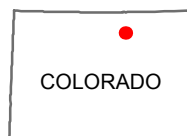
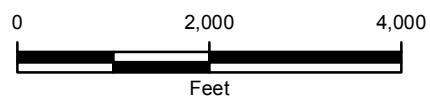
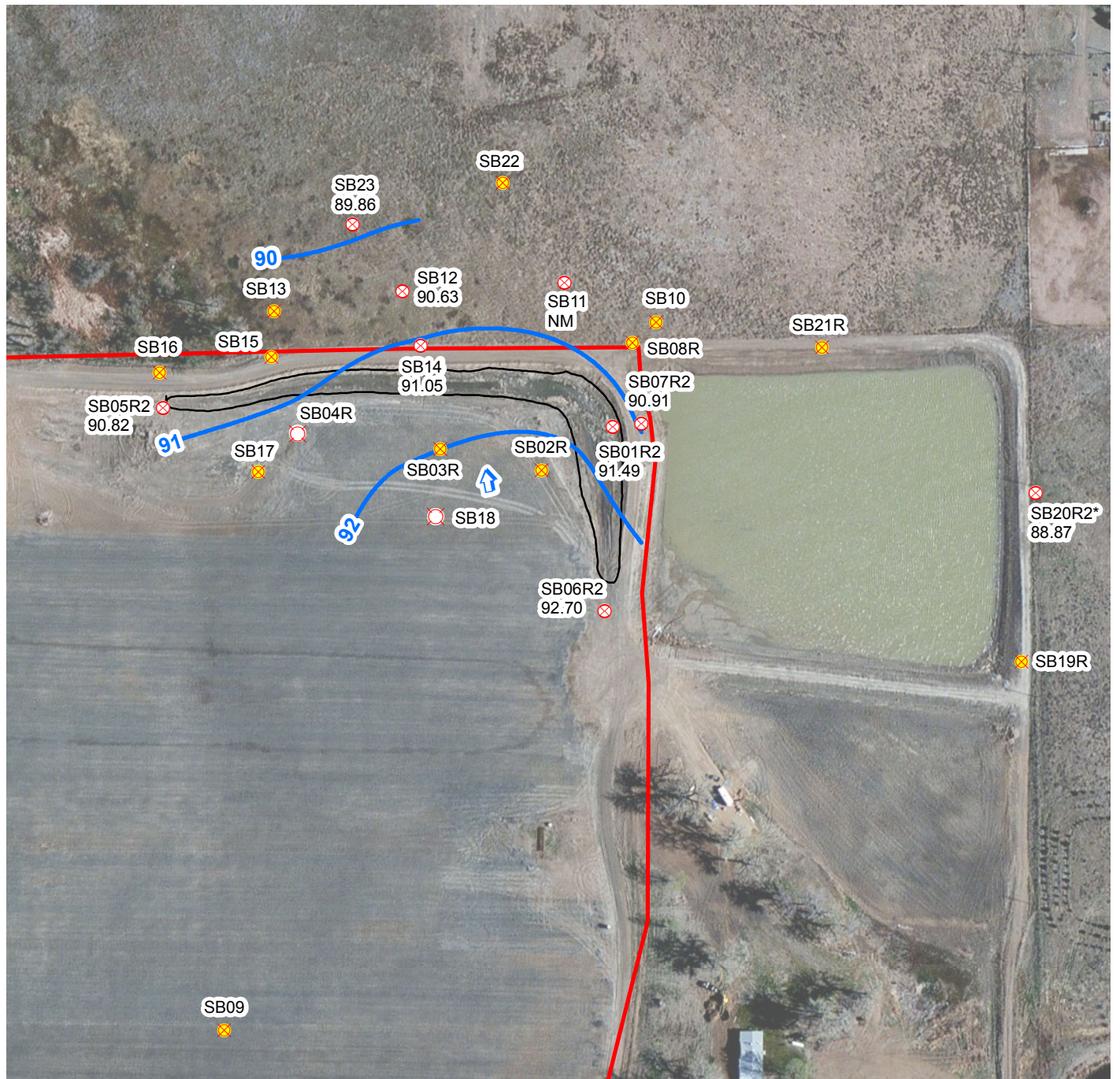









FIGURE 1
SITE LOCATION MAP
MILLER SOUTH #1 SPREAD FIELD
S/2NW Sec29 T5N R64W
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.





LEGEND

-  MONITORING WELL
 -  DESTROYED MONITORING WELL
 -  MONITORING WELL REMOVED FROM MONITORING PROGRAM
 -  CALCULATED GROUNDWATER FLOW DIRECTION
 -  SPREAD FIELD BOUNDARY
 -  SURFICIAL RELEASE EXTENT
 -  RELATIVE GROUNDWATER ELEVATION CONTOUR
- CONTOUR INTERVAL = 1 FOOT
- GRADIENT = 0.007 FEET/FOOT

*THE GROUNDWATER ELEVATION FROM MONITORING WELL SB20R2 WAS NOT USED TO GENERATE CONTOURS.

IMAGE COURTESY OF ESRI

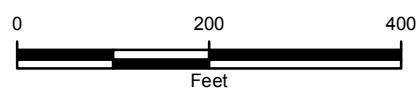


FIGURE 2
RELATIVE GROUNDWATER ELEVATION MAP
MARCH 10, 2016
MILLER SOUTH #1 SPREAD FIELD
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.



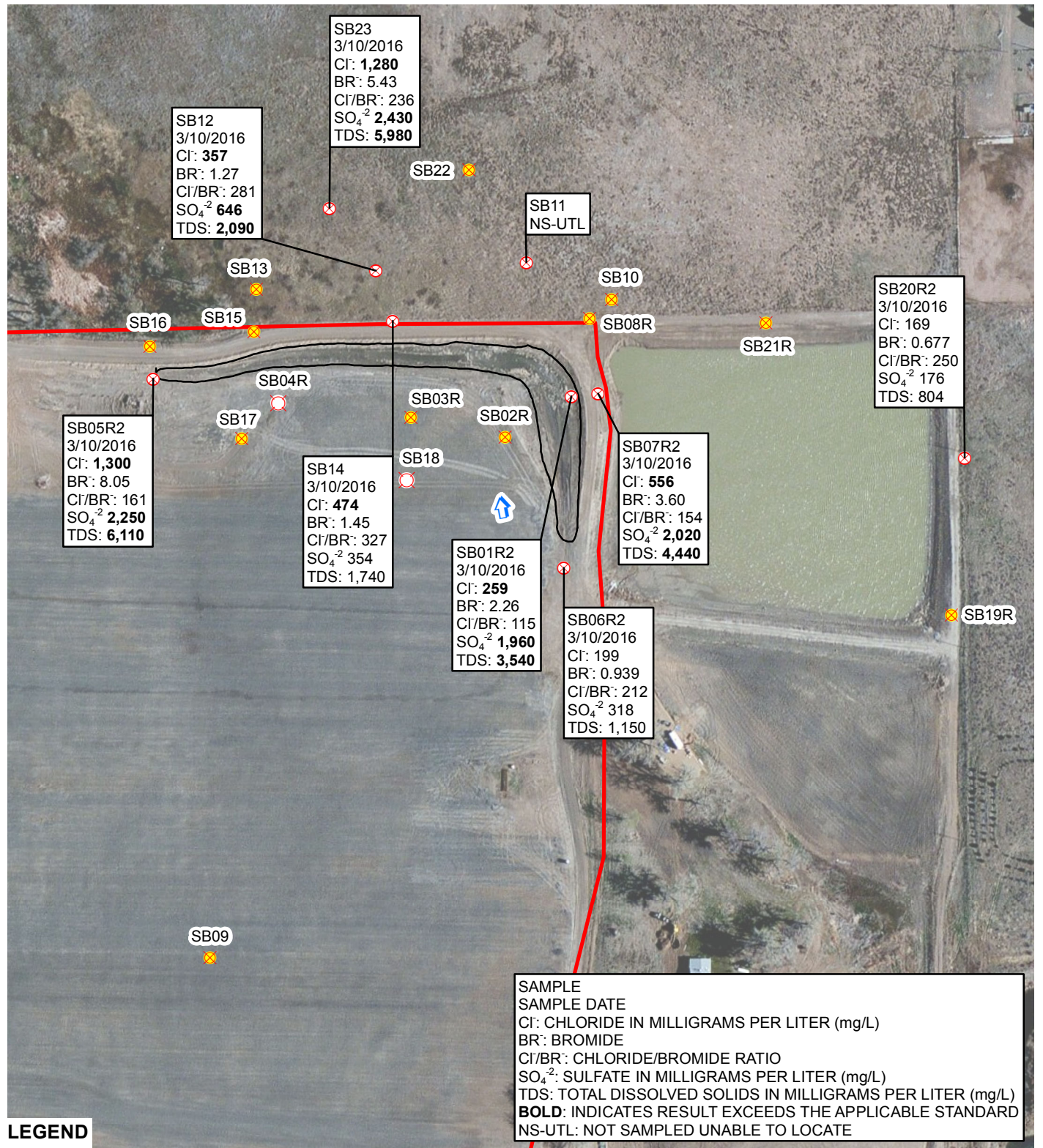


FIGURE 3
GROUNDWATER ANALYTICAL RESULTS
MARCH 10, 2016
MILLER SOUTH #1 SPREAD FIELD
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.





March 21, 2016

LT Environmental, Inc.

Charles Greeson

4600 West 60th Avenue

Arvada

CO 80003

Project Name - Noble - Miller #1 South CACL

Project Number - 008312061

Attached are your analytical results for Noble - Miller #1 South CACL received by Origins Laboratory, Inc. March 10, 2016. This project is associated with Origins project number X603158-01.

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



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

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

Charles Greeson
Project Number: 008312061
Project: Noble - Miller #1 South CACL

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB01R2	X603158-01	Water	March 10, 2016 12:20	03/10/2016 14:58
SB05R2	X603158-02	Water	March 10, 2016 10:22	03/10/2016 14:58
SB06R2	X603158-03	Water	March 10, 2016 12:50	03/10/2016 14:58
SB07R2	X603158-04	Water	March 10, 2016 13:02	03/10/2016 14:58
SB12	X603158-05	Water	March 10, 2016 11:35	03/10/2016 14:58
SB14	X603158-06	Water	March 10, 2016 10:50	03/10/2016 14:58
SB20R2	X603158-07	Water	March 10, 2016 13:20	03/10/2016 14:58
SB23	X603158-08	Water	March 10, 2016 11:50	03/10/2016 14:58



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.

Charles Greeson
Project Number: 008312061
Project: Noble - Miller #1 South CACL

ORIGINS LABORATORY, INC		X603158		www.originslaboratory.com	
Client: LT Environmental, Inc.		Project Manager: Charles Greeson		page / of /	
Address: 4600 West 60th Ave, Arvada, CO		Project Name: Miller South #1 CaCl			
Telephone Number: 303-433-9788		Project Number: 008312061			
Email Address: Noble Remediation Team		Samples Collected By: G Thompson			

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative						Matrix				Analysis	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #	Other					
SB01022	3/10/16	1220	2	X					X				BTEX	GLANVILLE MACHINE SILICATE, TDS	Lab filter all	1
SB05022	3/10/16	1022	2	X					X							2
SB06022	3/10/16	1250	2	X					X							3
SB07022	3/10/16	1302	2	X					X							4
SB12	3/10/16	1135	2	X					X							5
SB14	3/10/16	1050	2	X					X							6
SB2022	3/10/16	1320	2	X					X							7
SB23	3/10/16	1150	2	X					X							8
																9
																10
Relinquished By: 	Date: 3/10/16	Time: 1458	Received By: 	Date: 3/10/16	Time: 1458	Turnaround Time: Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> Standard <input checked="" type="checkbox"/>										
Relinquished By:	Date:	Time:	Received By:	Date: 3/10/16	Time: 1458											

Data Availability Statement

Origins Laboratory, Inc.

Jeff Pellipini

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: 008312061
Project: Noble - Miller #1 South CACL

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X603158

Client: LTE

Client Project ID: Miller South #1 CACL

Checklist Completed by: Jeff Smith

Shipped Via: HTD

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

Date/time completed: 3/10/14

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 5.6 °C 1 °C 1 °C (Describe) 1 °C

Thermometer ID: T003

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

Reviewed by: [Signature] Project Manager

3/11/14
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: 008312061
Project: Noble - Miller #1 South CACL

SB01R2

3/10/2016 12:20:00PM

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

GEL Laboratories, LLC
X603158-01 (Water)

Anions by EPA 300.0

Bromide	2.26	0.200	mg/L	1	1551780		03/11/2016	
Chloride	259	40.0	"	200	"	"	03/14/2016	
Sulfate	1960	80.0	"	"	"	"	"	

TDS by SM2540C

Total Dissolved Solids	3540	14.3	mg/L	1	1551585	"	03/14/2016	
------------------------	------	------	------	---	---------	---	------------	--

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: 008312061
Project: Noble - Miller #1 South CACL

SB05R2

3/10/2016 10:22:00AM

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

GEL Laboratories, LLC
X603158-02 (Water)

Anions by EPA 300.0

Bromide	8.05	2.00	mg/L	10	1551780		03/14/2016	
Chloride	1300	50.0	"	250	"	"	"	
Sulfate	2250	100	"	"	"	"	"	

TDS by SM2540C

Total Dissolved Solids	6110	14.3	mg/L	1	1551585	"	03/14/2016	
------------------------	------	------	------	---	---------	---	------------	--

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: 008312061
Project: Noble - Miller #1 South CACL

SB06R2

3/10/2016 12:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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GEL Laboratories, LLC
X603158-03 (Water)

Anions by EPA 300.0

Bromide	0.939	0.200	mg/L	1	1551780		03/12/2016	
Chloride	199	10.0	"	50	"	"	03/14/2016	
Sulfate	318	20.0	"	"	"	"	"	

TDS by SM2540C

Total Dissolved Solids	1150	14.3	mg/L	1	1551585	"	03/14/2016	
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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: 008312061
Project: Noble - Miller #1 South CACL

SB07R2

3/10/2016 1:02:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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GEL Laboratories, LLC
X603158-04 (Water)

Anions by EPA 300.0

Bromide	3.60	1.00	mg/L	5	1551780		03/14/2016	
Chloride	556	40.0	"	200	"	"	"	"
Sulfate	2020	80.0	"	"	"	"	"	"

TDS by SM2540C

Total Dissolved Solids	4440	14.3	mg/L	1	1551585	"	03/14/2016	
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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: 008312061
Project: Noble - Miller #1 South CACL

SB12

3/10/2016 11:35:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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GEL Laboratories, LLC
X603158-05 (Water)

Anions by EPA 300.0

Bromide	1.27	1.00	mg/L	5	1551780		03/14/2016	
Chloride	357	20.0	"	100	"	"	"	"
Sulfate	646	40.0	"	"	"	"	"	"

TDS by SM2540C

Total Dissolved Solids	2090	14.3	mg/L	1	1551585	"	03/14/2016	
------------------------	------	------	------	---	---------	---	------------	--

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: 008312061
Project: Noble - Miller #1 South CACL

SB14

3/10/2016 10:50:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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GEL Laboratories, LLC
X603158-06 (Water)

Anions by EPA 300.0

Bromide	1.45	1.00	mg/L	5	1551780		03/14/2016	
Chloride	474	20.0	"	100	"	"	"	"
Sulfate	354	40.0	"	"	"	"	"	"

TDS by SM2540C

Total Dissolved Solids	1740	14.3	mg/L	1	1551585	"	03/14/2016	
------------------------	------	------	------	---	---------	---	------------	--

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: 008312061
Project: Noble - Miller #1 South CACL

SB20R2

3/10/2016 1:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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GEL Laboratories, LLC
X603158-07 (Water)

Anions by EPA 300.0

Bromide	0.677	0.400	mg/L	2	1551780		03/14/2016	
Chloride	169	10.0	"	50	"	"	"	"
Sulfate	176	20.0	"	"	"	"	"	"

TDS by SM2540C

Total Dissolved Solids	804	14.3	mg/L	1	1551585	"	03/14/2016	
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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: 008312061
Project: Noble - Miller #1 South CACL

SB23

3/10/2016 11:50:00AM

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

GEL Laboratories, LLC
X603158-08 (Water)

Anions by EPA 300.0

Bromide	5.43	2.00	mg/L	10	1551780		03/14/2016	
Chloride	1280	40.0	"	200	"	"	"	"
Sulfate	2430	80.0	"	"	"	"	"	"

TDS by SM2540C

Total Dissolved Solids	5980	14.3	mg/L	1	1551585	"	03/14/2016	
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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: 008312061
Project: Noble - Miller #1 South CACL

Anions by EPA 300.0 - Quality Control GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1551780 -										
BLANK (1203507089-BLK)					Prepared: Analyzed: 03/11/2016					
Sulfate	ND	0.400	mg/L				-			U
Chloride	ND	0.200	"				-			U
Bromide	ND	0.200	"				-			U
LCS (1203507090-BKS)					Prepared: Analyzed: 03/11/2016					
Sulfate	9.79	0.400	mg/L	10.0		97.9	90-110			
Chloride	4.72	0.200	"	5.00		94.4	90-110			
Bromide	1.29	0.200	"	1.25		103	90-110			
DUP (1203507091 D)					Source: X603158-01		Prepared: Analyzed: 03/14/2016			
Sulfate	1960	80.0	mg/L		1960		0-20	0.436	20	
Chloride	259	40.0	"		259		0-20	0.108	20	
Bromide	2.27	0.200	"		2.26		0-20	0.605	20	
PS (1203507092 S)					Source: X603158-01		Prepared: Analyzed: 03/14/2016			
Sulfate	4010	80.0	mg/L	10.0		103	90-110			
Chloride	1190	40.0	"	5.00		93	90-110			
Bromide	3.55	0.200	"	1.25		103	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

Charles Greeson
Project Number: 008312061
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 1551585 -										
BLANK (1203506542-BLK)					Prepared: Analyzed: 03/14/2016					
Total Dissolved Solids	ND	14.3	mg/L				-			U
LCS (1203506543-BKS)					Prepared: Analyzed: 03/14/2016					
Total Dissolved Solids	314	14.3	mg/L	300		105	95-105			
DUP (1203506544 D)					Prepared: Analyzed: 03/14/2016					
Source: X603158-01										
Total Dissolved Solids	3740	14.3	mg/L		3540		0-5	5.3	5	

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: 008312061
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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