1R – 1595

2007 - 2011 GWMR

03 / 29 / 2012

TETRA TECH

March 29, 2012

Mr. Glenn von Gonten
New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, New Mexico 87504

Re: Comprehensive Groundwater Sampling Report for the Celero Energy II, LP, Rock Queen Unit Tract 11 Tank Battery, Located in Unit Letter G, Section 26, Township 13 South, Range 31 East, Chaves County, New Mexico (NMOCD 1RP#1595).

Mr. Von Gonten:

This report details the results of the groundwater sampling events performed at the Celero Energy II, LP (Celero), Rock Queen Unit Tract 11 Tank Battery (Site) from May 2007 through December 2011. The Site is located approximately 21-1/2 miles north of Maljamar, New Mexico. The Site location is shown on Figures 1 and 2.

FACILITY BACKGROUND

Pit Closure

On September 20, 2007, Highlander (Tetra Tech) submitted an Investigation and Characterization work plan (ICP) for an open pit at the Site. The ICP was subsequently approved by the New Mexico Oil Conservation Division (NMOCD).

The Tract 11 Tank Battery pit was dewatered and the residual sludge, tank bottom materials, and liner were removed in September 2007. Removed fluids were placed into an existing SWD system or taken for disposal, while the sludge, tank bottom materials, and liner were disposed of at Gandy-Marley, Inc.'s landfill site in Lovington, New Mexico. Upon completion of the removal of the fluids, sludge, and liner, the underlying soils were visually inspected for signs of impact. Approximately 960 cubic yards of soil were excavated and transported to Gandy-Marley, Inc. for disposal. The pit was excavated to a point where the

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subsoil would support a soil boring rig.

On October 12, 2009, a report entitled *Assessment and Closure Report for the Pit located at the Rock Queen Unit Track 11 Tank Battery* was submitted to the NMOCD. The report detailed the closure of the former pit at the facility.

Groundwater Investigation

Between May 2007 and December 2010, Celero installed seven 2-inch monitor wells (MW-1 through MW-7) and one 5-inch recovery well (RW-1) to assess the groundwater quality at the Site. The lithology at the Site was relatively consistent with sandy limestone encountered to approximately 15 to 20 feet below ground surface (bgs) and very fine grain sand extending to approximately 140 to 155 feet bgs. From approximately 140 to 155 feet to the terminus of the borings (approximately 160 to 170 feet) the soils consisted of gray to red clay. See Appendix A for Boring Logs.

During the investigation, groundwater was encountered at depths of approximately 135 to 140 feet bgs. Monitor Well MW-1 was drilled into the surrounding underlying clay to 160 feet bgs and installed with 50 feet of 0.02 inch slotted screen. The remaining monitor wells were drilled to depths of 160 to 170 feet bgs and installed with 30 feet of 0.02 inch slotted screen. Recovery well RW-1 was drilled to a depth of 160 feet and installed with 30 feet of 0.035 inch slotted screen. From the top of the screens to the surface of the boring, the wells were completed with blank schedule 40 PVC casing. See Appendix B for monitor well installation diagrams.

During the investigation and subsequent sampling, the only constituent of concern detected in the groundwater above New Mexico Water Quality Control Commission (NMWQCC) standards was chlorides. No Phase Separated Hydrocarbons (PSH) or dissolved phase separated hydrocarbons have been measured or detected in any of the onsite monitor wells above NMWQCC standards. See Figure 3 detailing the monitor well locations.

Gauging and Monitor Well Sampling

On May 25, 2007, initial sampling began at the site. During 2010, additional monitor wells were installed and quarterly sampling was initiated. During the sampling events, all monitor wells were gauged and sampled with no PSH measured. Utilizing the water level elevation calculations, groundwater gradient maps were generated for all but the May 25, 2007 sampling event. The hydraulic gradient indicates a southeasterly direction. Groundwater gradient maps for the sampling events are included as Figures 4 through 10. Gauging data is summarized in Table 1.

During the sampling events, each of the wells was purged utilizing either a submersible pump or by hand bailing and subsequently sampled for BTEX utilizing method SW8021B, chlorides and sulfates utilizing method E 300.0, total dissolved solids (TDS) utilizing method SM2540C and periodically for general chemistry using methods SM2320B, SW6010B, SM4500-H+. The samples were properly preserved and submitted under proper chain-of-custody control to Trace Analysis Inc. of Lubbock, Texas. All water samples collected and analyzed were below the NMWQCC standard of 0.01 milligrams per liter (mg/L) of benzene. Chlorides for the sampling period ranged from 493 mg/L in monitor well MW-6 on July 27, 2011 to 122,000 mg/L in monitor well MW-1 on January 19, 2011. All the monitor wells during the sampling events exceeded the NMWQCC standard of 250 mg/L chlorides. The general chemistry and BTEX analyses are shown in Tables 2 and 3, respectively. Chloride concentration maps for the sampling events are included as Figures 11 through 18. Copies of the laboratory analyses are enclosed in Appendix C.

During purging activities, it was noted that all six monitor wells and one recovery well did not pump dry.

CONCLUSIONS

1. On May 25, 2007, initial sampling began at the site. In 2010, additional monitor wells were installed and quarterly sampling initiated. During the sampling events, all monitor wells were gauged, purged, and sampled. The samples were preserved and delivered to Trace Analysis, Inc. of Midland, Texas for analysis of BTEX utilizing method SW8021B, chlorides and sulfates utilizing method E 300.0, total dissolved solids (TDS) utilizing method SM2540C and periodically for general chemistry using methods SM2320B, SW6010B, SM4500-H+.

2. The hydraulic gradient indicates a southeasterly direction.

3. All wells tested below the NMQQCC standards of 0.01 mg/L for benzene.

4. Chloride concentrations exceed the NMWQCC standards of 250 mg/L in all monitor wells. The chloride concentrations at the site range from 493 mg/L in monitor well MW-6 on July 27, 2011 to 122,000 mg/L in monitor well MW-1 on January 19, 2011.

RECOMMENDATIONS

1. Quarterly groundwater monitoring and gauging will be continued throughout the year.

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2. Additional monitor wells will be installed in order to further delineate the chloride plume at the site.

3. A remediation system consisting of either a low flow solar/electric pump or windmill system will be installed in recovery well RW-1. The recovered fluids will be collected in an above ground tank and utilized for possible water flooding purposes in the surrounding oilfield.

If you have any question or comments concerning the assessment or the activities performed at the Site, please call me at (432) 682-4559.

Respectfully submitted,
Tetra Tech, Inc.

Jeffrey Kindley, P.G.
Senior Environmental Geologist

cc: Bruce Woodard – Celero Energy II, LP

FIGURES

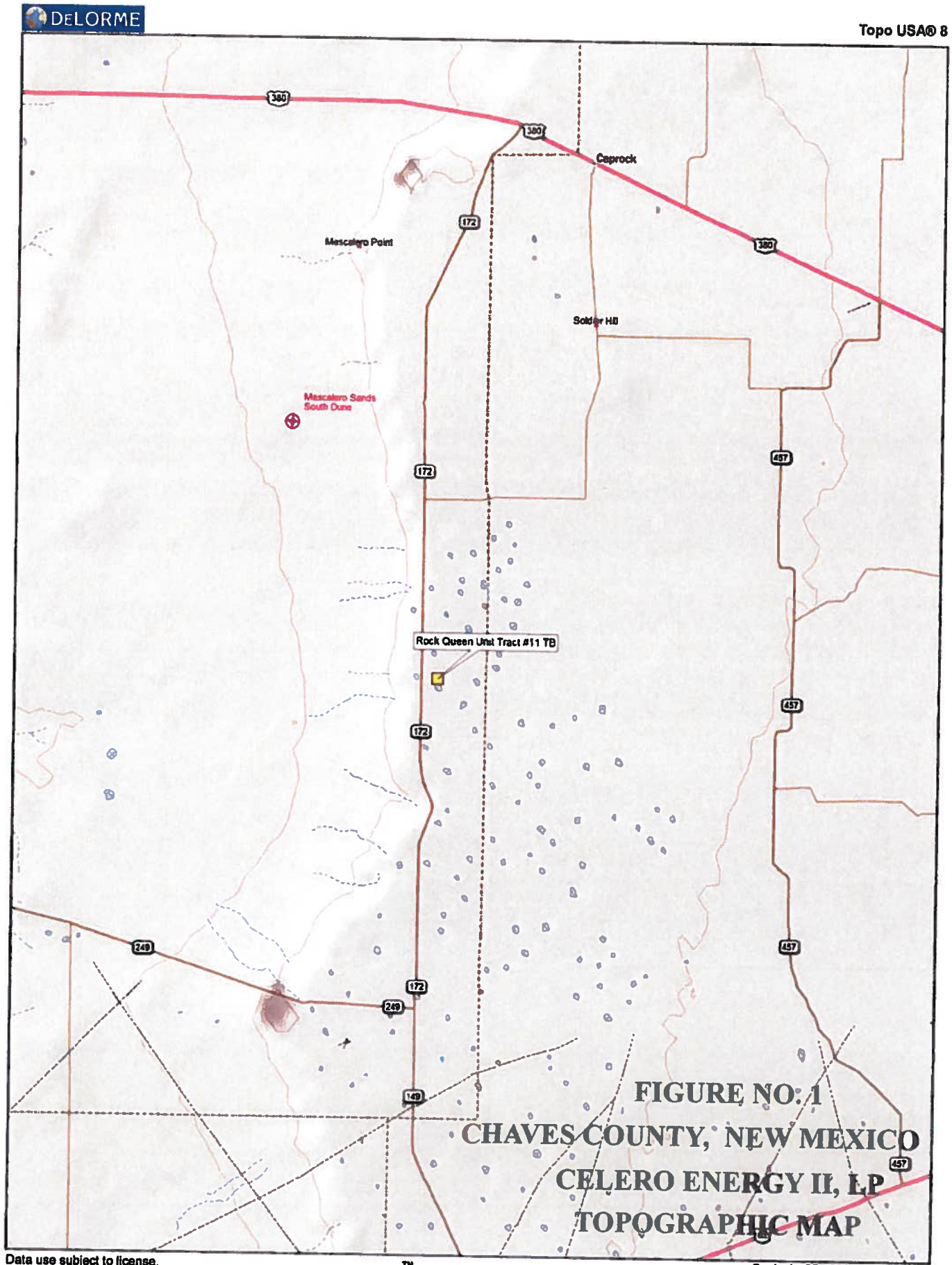


FIGURE NO. 1

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY II, LP

TOPOGRAPHIC MAP

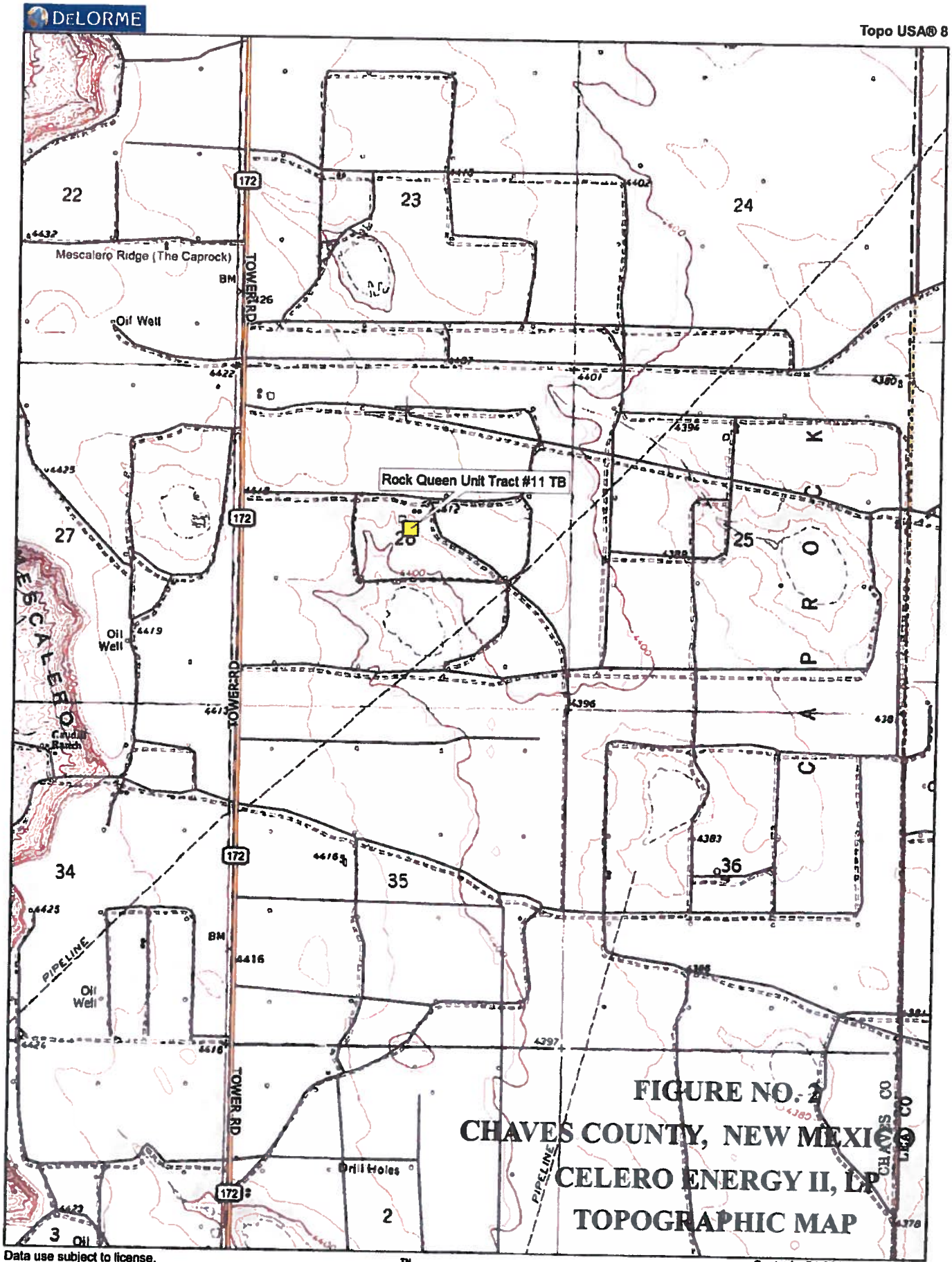
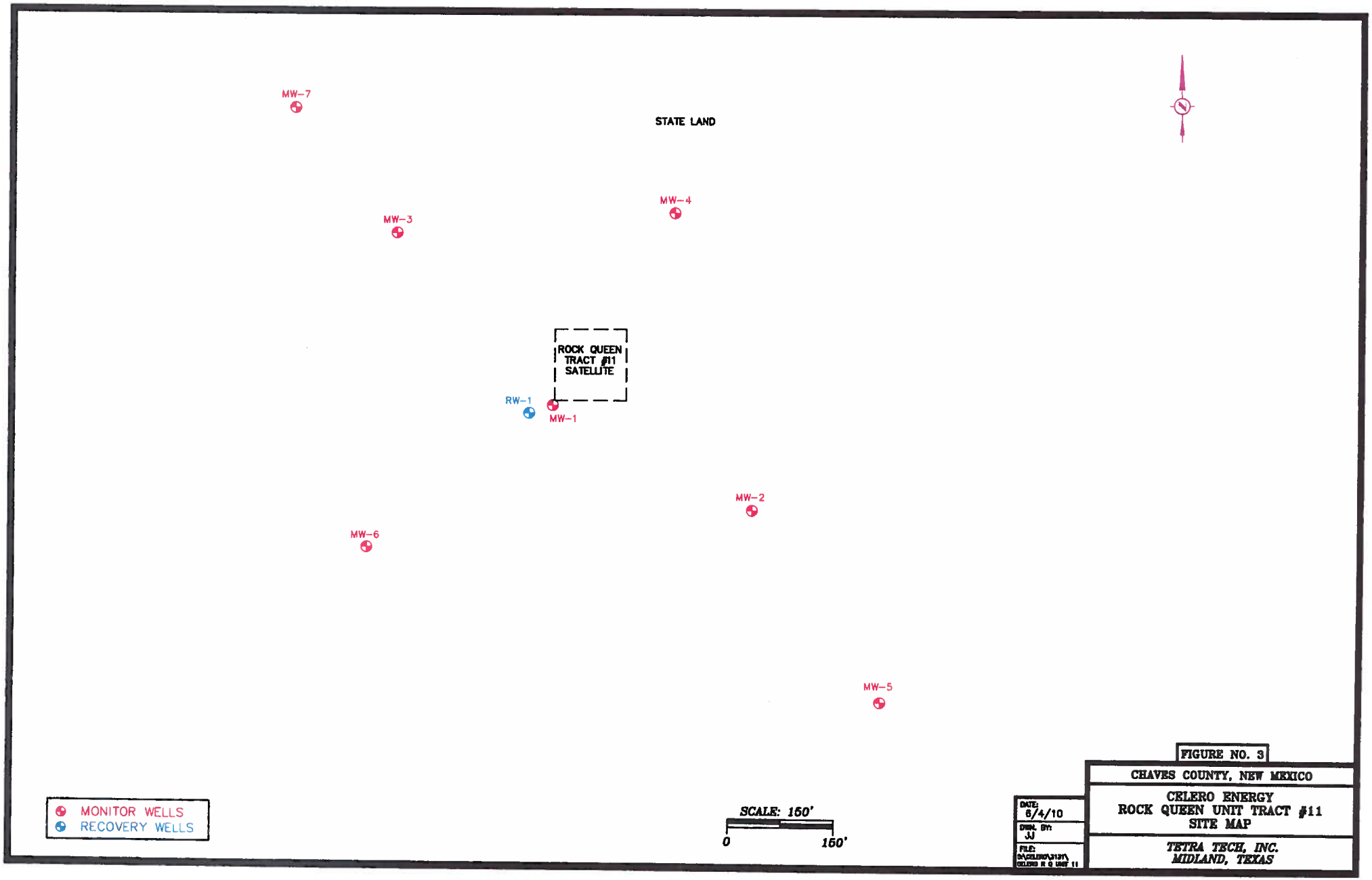


FIGURE NO. 2
CHAVES COUNTY, NEW MEXICO
CELERO ENERGY II, LP
TOPOGRAPHIC MAP


MW-7
STATE LAND
MW-4
MW-3
ROCK QUEEN
TRACT #11
SATELLITE
RW-1
MW-1
MW-2
MW-6
MW-5
MONITOR WELLS
RECOVERY WELLS
SCALE: 150'
0
150'
DATE:
6/4/10
DWN. BY:
JJ
FILE:
FIGURE NO. 3
CHAVES COUNTY, NEW MEXICO
CELERO ENERGY
ROCK QUEEN UNIT TRACT #11
SITE MAP
TETRA TECH, INC.
MIDLAND, TEXAS

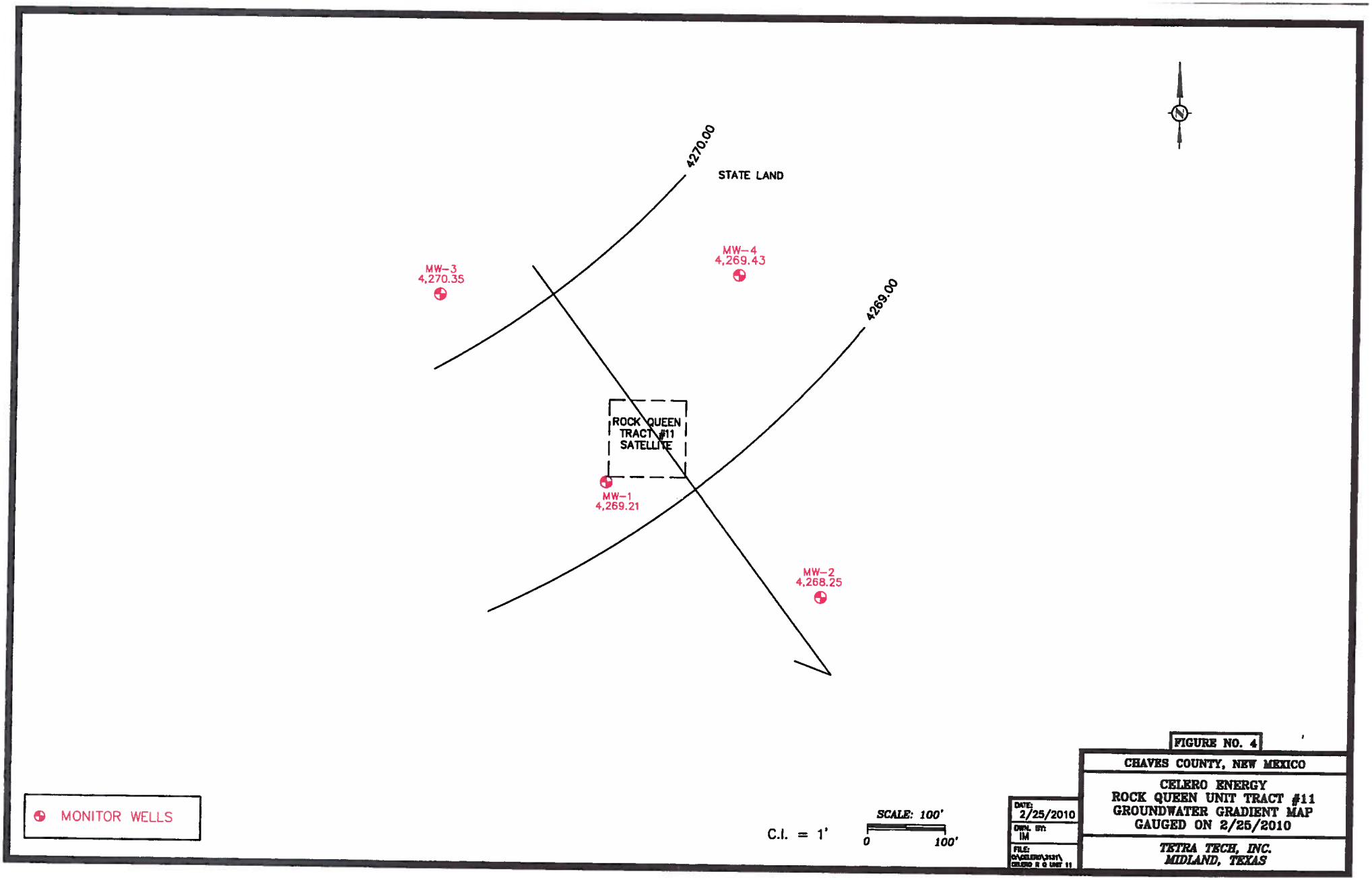
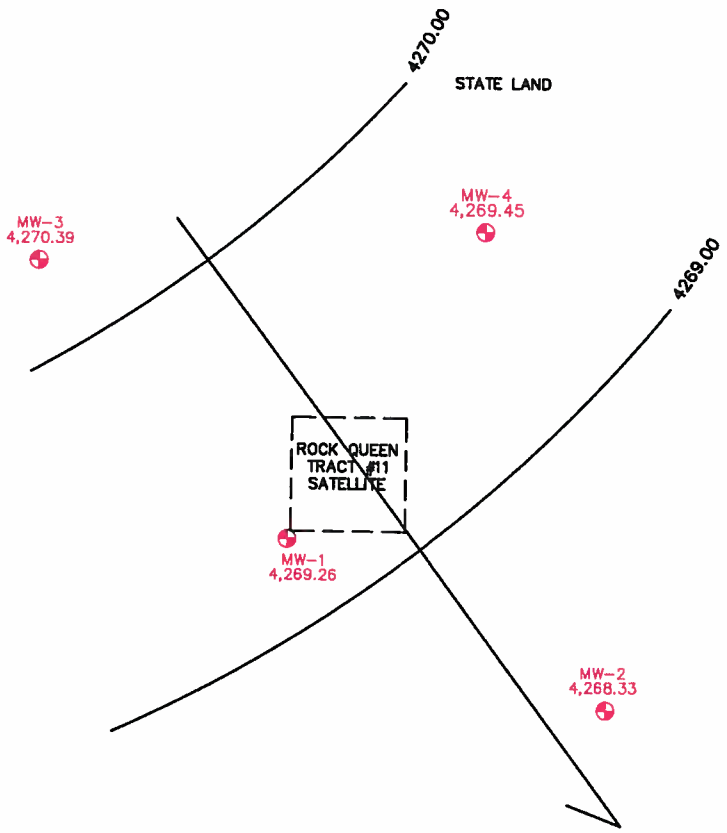


FIGURE NO. 4

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY
ROCK QUEEN UNIT TRACT #11
GROUNDWATER GRADIENT MAP
GAUGED ON 2/25/2010

TETRA TECH, INC.
MIDLAND, TEXAS



MONITOR WELLS

C.I. = 1'

SCALE: 100'

0 100'

FIGURE NO. 5

CHAVES COUNTY, NEW MEXICO

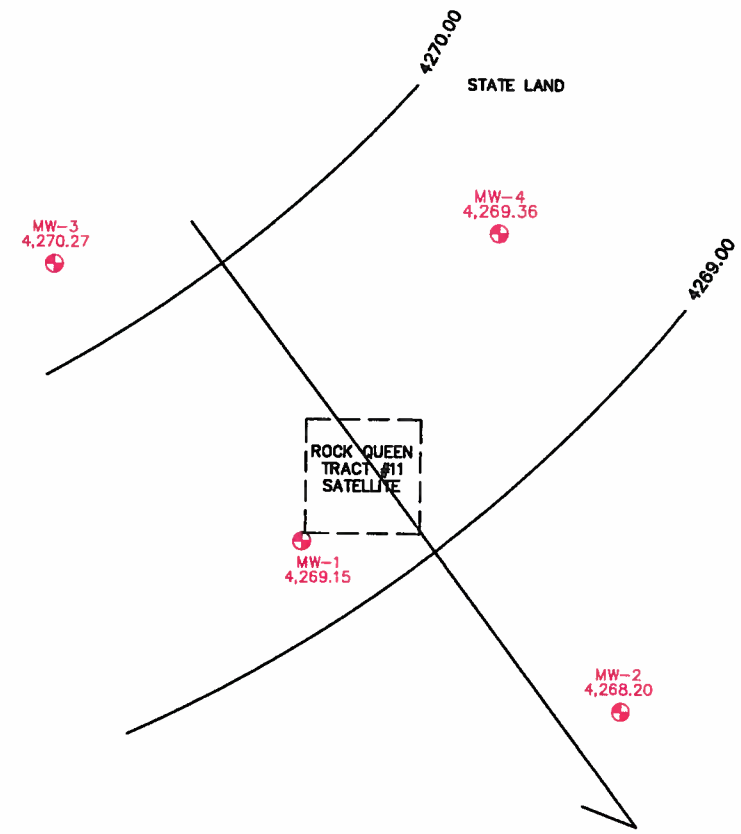
CELERO ENERGY
ROCK QUEEN UNIT TRACT #11
GROUNDWATER GRADIENT MAP
GAUGED ON 07/13/2010

TETRA TECH, INC.
MIDLAND, TEXAS

DATE: 7/13/2010

DWN. BY: IM

FILE:



MONITOR WELLS

C.I. = 1'

SCALE: 100'
0 100'

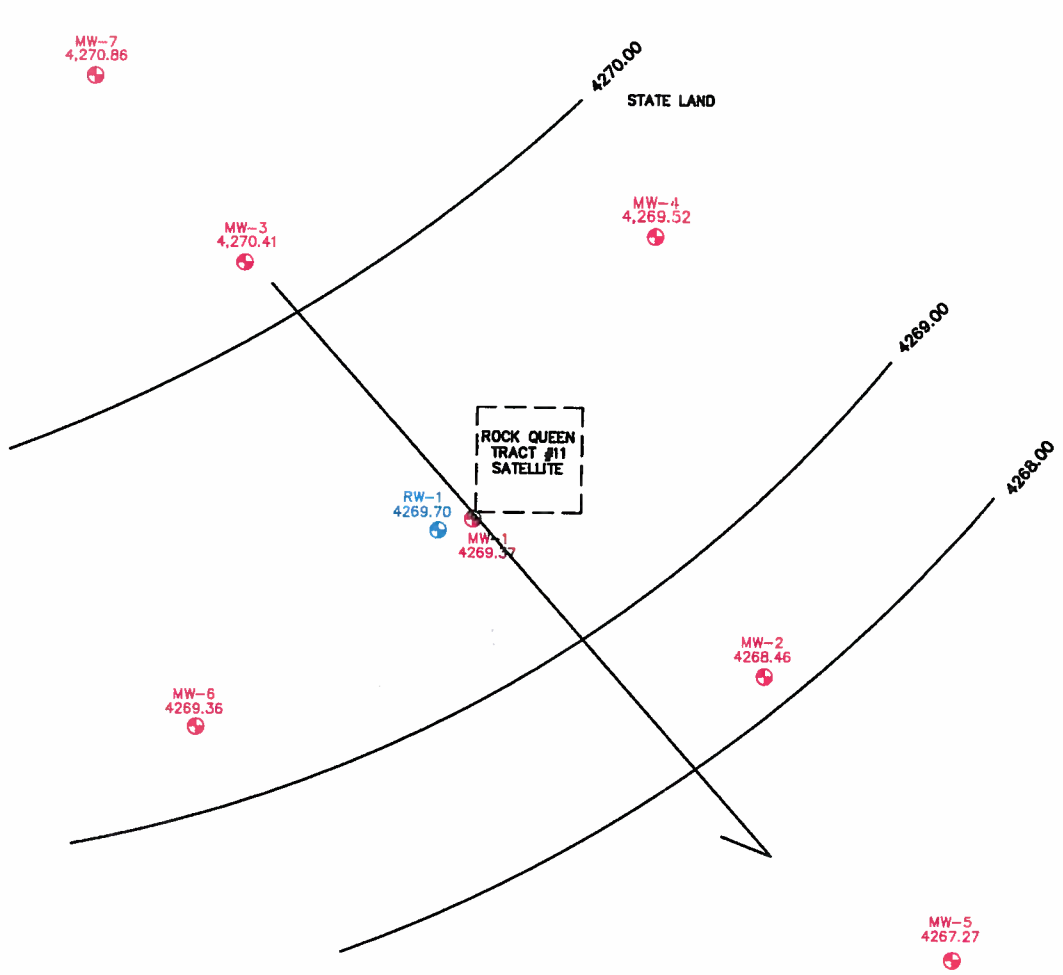
DATE: 10/11/2010
DSN. BY: IM
FILE: C:\CELERO\3131\CELERO R Q UNIT 11

FIGURE NO. 6

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY
ROCK QUEEN UNIT TRACT #11
GROUNDWATER GRADIENT MAP
GAUGED ON 10/11/2010

TETRA TECH, INC.
MIDLAND, TEXAS



MONITOR WELLS
RECOVERY WELLS

C.I. = 1'

SCALE: 150'
0 150'

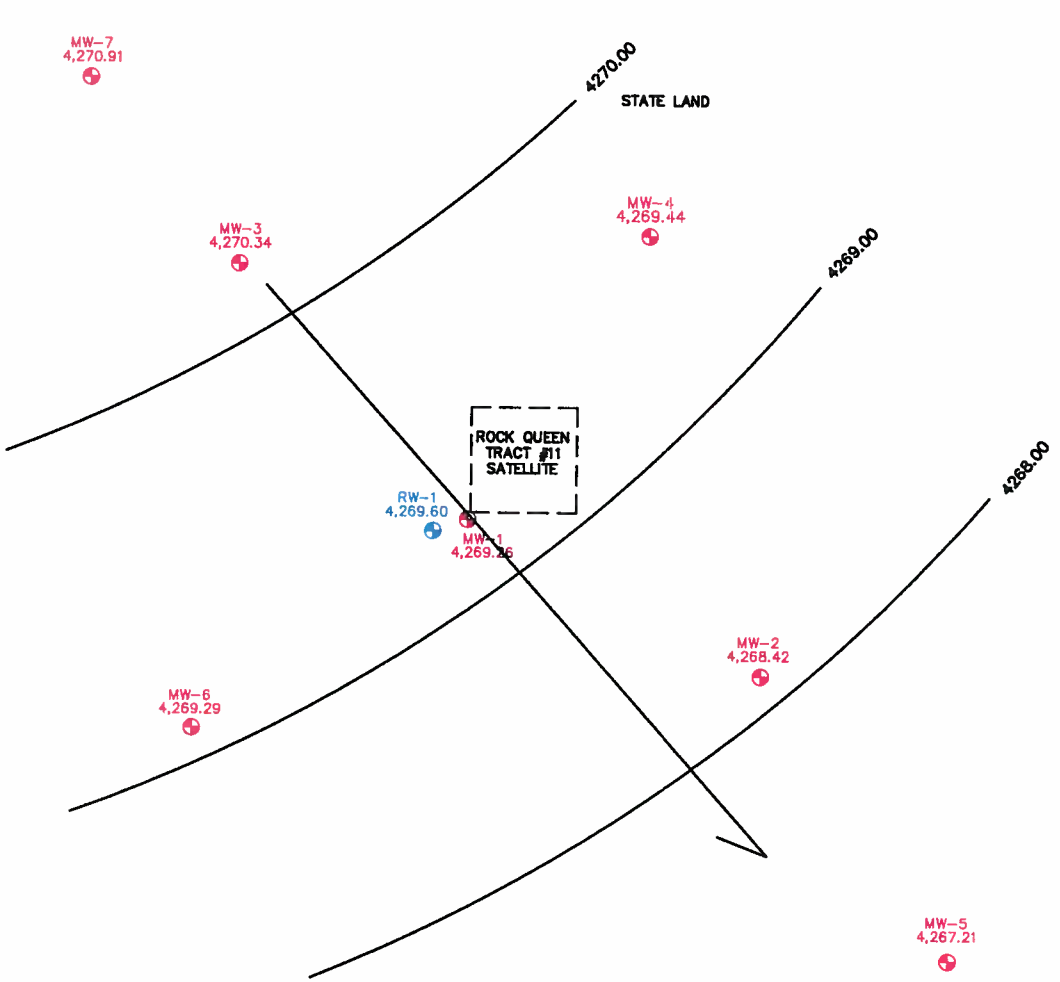
DATE: 01/17/2011
DWN. BY: IM
FILE:

FIGURE NO. 7

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY
ROCK QUEEN UNIT TRACT #11
GROUNDWATER GRADIENT MAP
GAUGED ON 01/17/2011

TETRA TECH, INC.
MIDLAND, TEXAS



MONITOR WELLS
RECOVERY WELLS

C.I. = 1'

SCALE: 150'
0 150'

DATE: 04/11/2011
DWN. BY: IM
FILE:

FIGURE NO. 8

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY
ROCK QUEEN UNIT TRACT #11
GROUNDWATER GRADIENT MAP
GAUGED ON 04/11/2011

TETRA TECH, INC.
MIDLAND, TEXAS

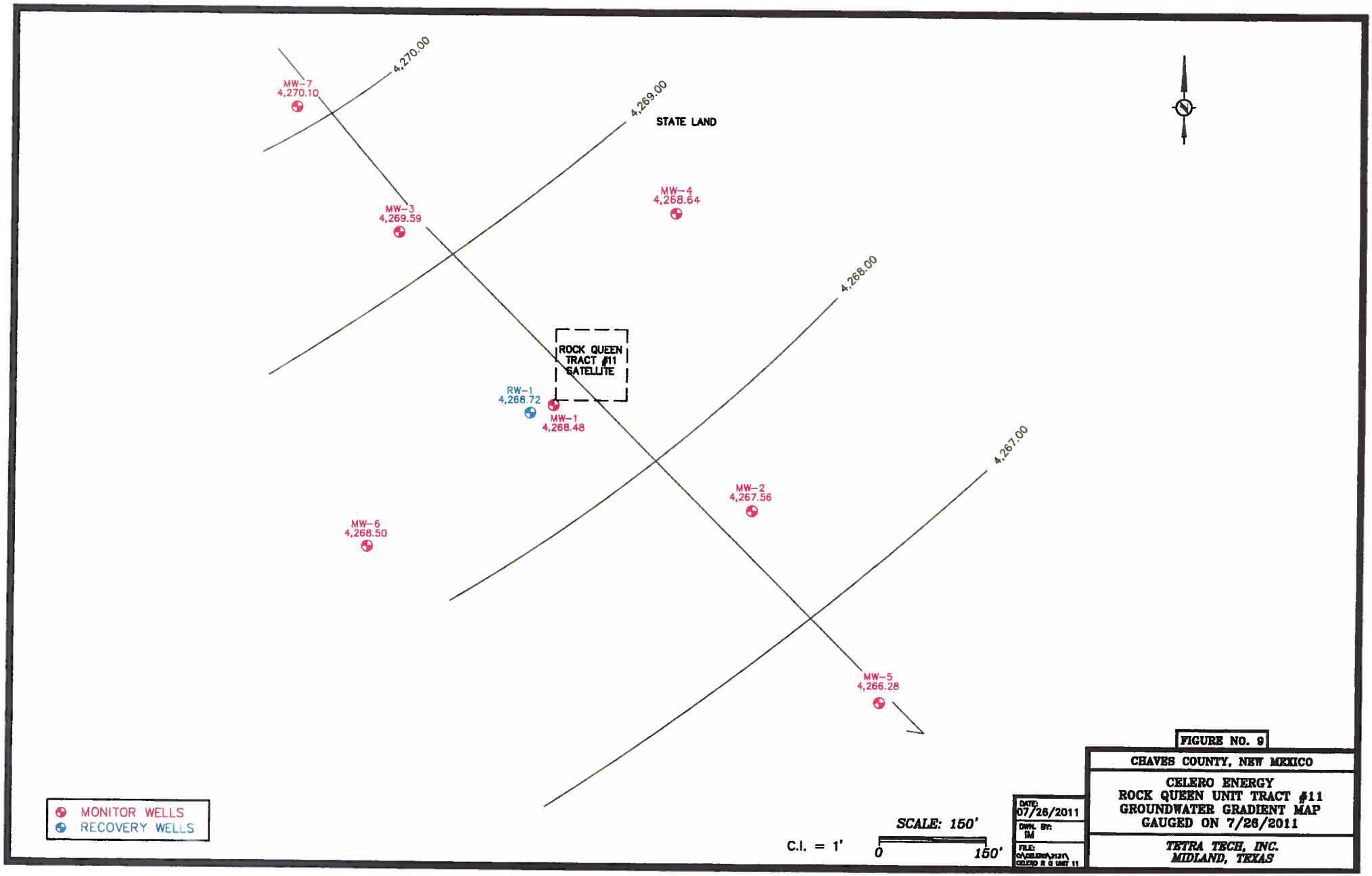


FIGURE NO. 9

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY
ROCK QUEEN UNIT TRACT #11
GROUNDWATER GRADIENT MAP
GAUGED ON 7/26/2011

TETRA TECH, INC.
MIDLAND, TEXAS

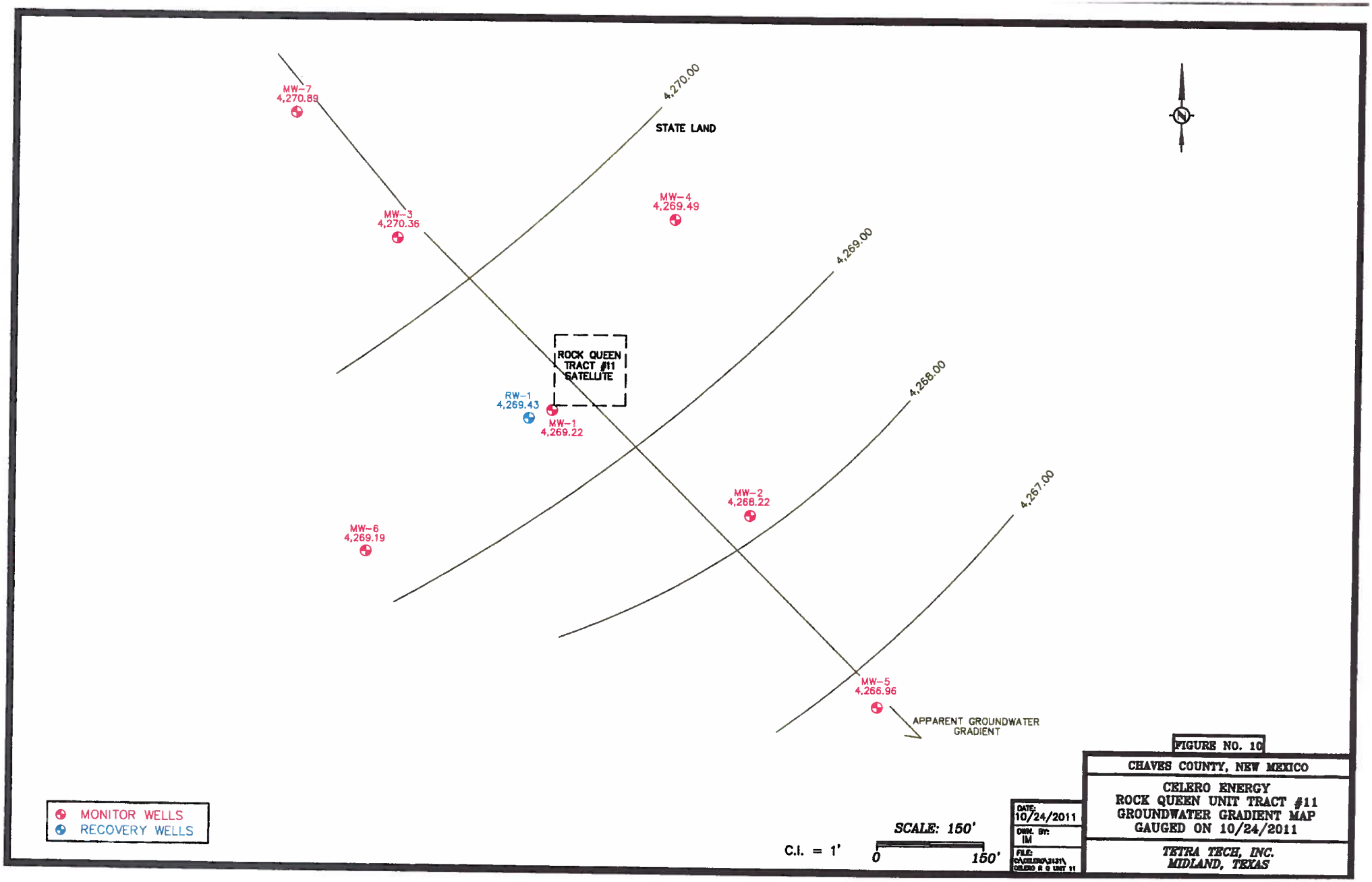


FIGURE NO. 10

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY
ROCK QUEEN UNIT TRACT #11
GROUNDWATER GRADIENT MAP
GAUGED ON 10/24/2011

TETRA TECH, INC.
MIDLAND, TEXAS

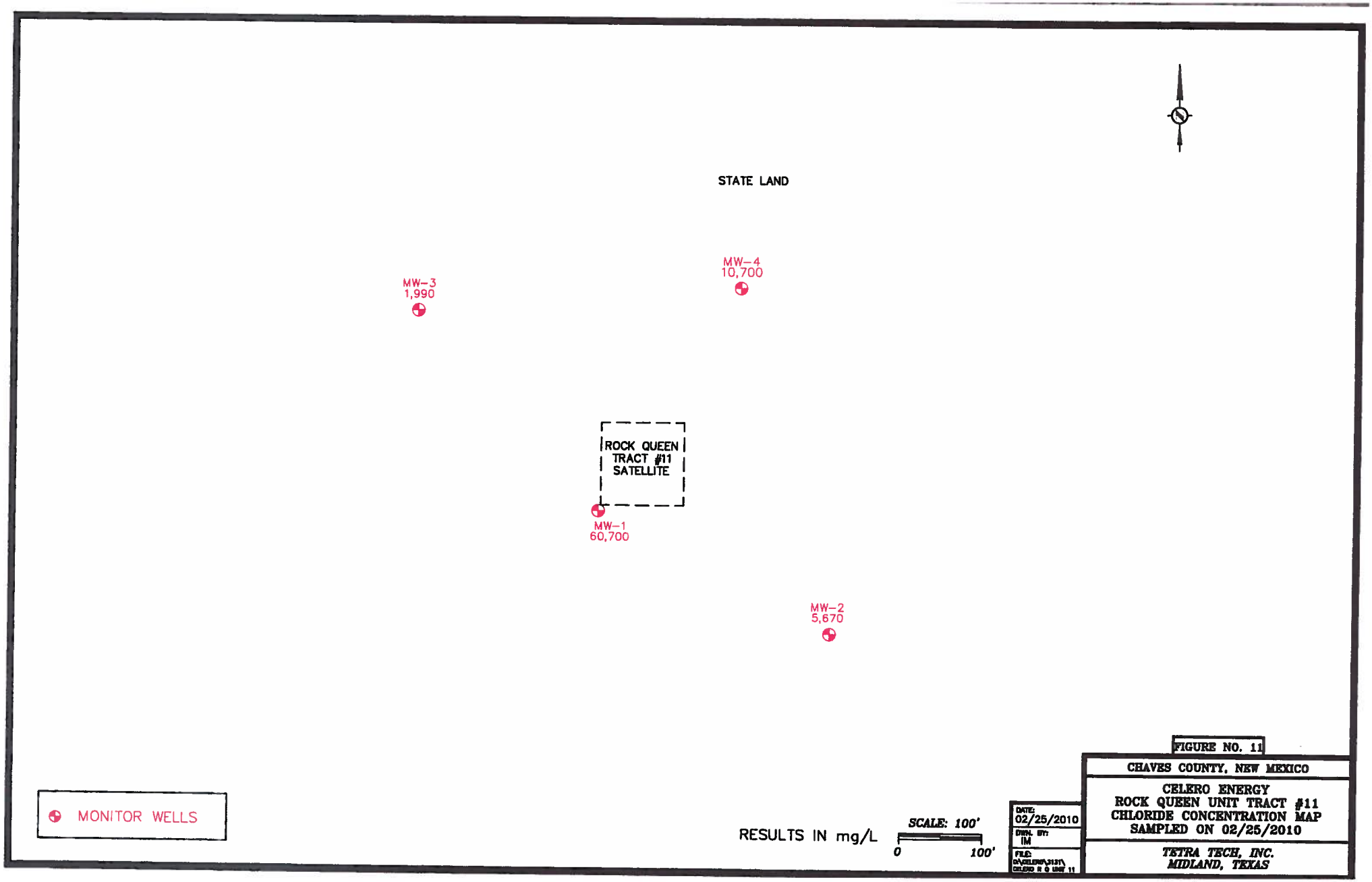
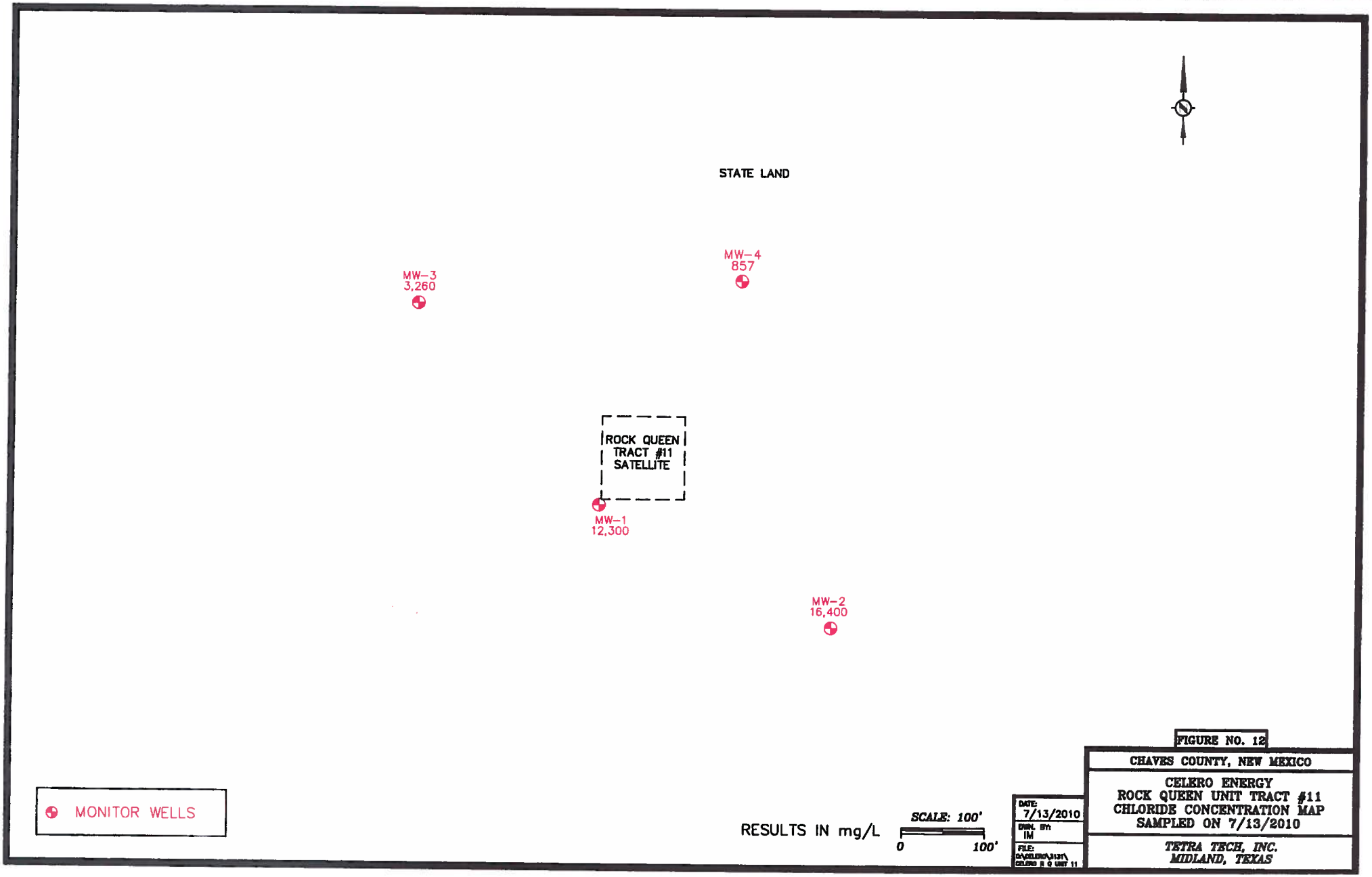


FIGURE NO. 11

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY
ROCK QUEEN UNIT TRACT #11
CHLORIDE CONCENTRATION MAP
SAMPLED ON 02/25/2010

TETRA TECH, INC.
MIDLAND, TEXAS


STATE LAND
MW-4
857
MW-3
3,260
ROCK QUEEN
TRACT #11
SATELLITE
MW-1
12,300
MW-2
16,400
MONITOR WELLS
RESULTS IN mg/L
SCALE: 100'
0
100'
DATE:
7/13/2010
DWN. BY:
IM
FILE:
FIGURE NO. 12
CHAVES COUNTY, NEW MEXICO
CELERO ENERGY
ROCK QUEEN UNIT TRACT #11
CHLORIDE CONCENTRATION MAP
SAMPLED ON 7/13/2010
TETRA TECH, INC.
MIDLAND, TEXAS

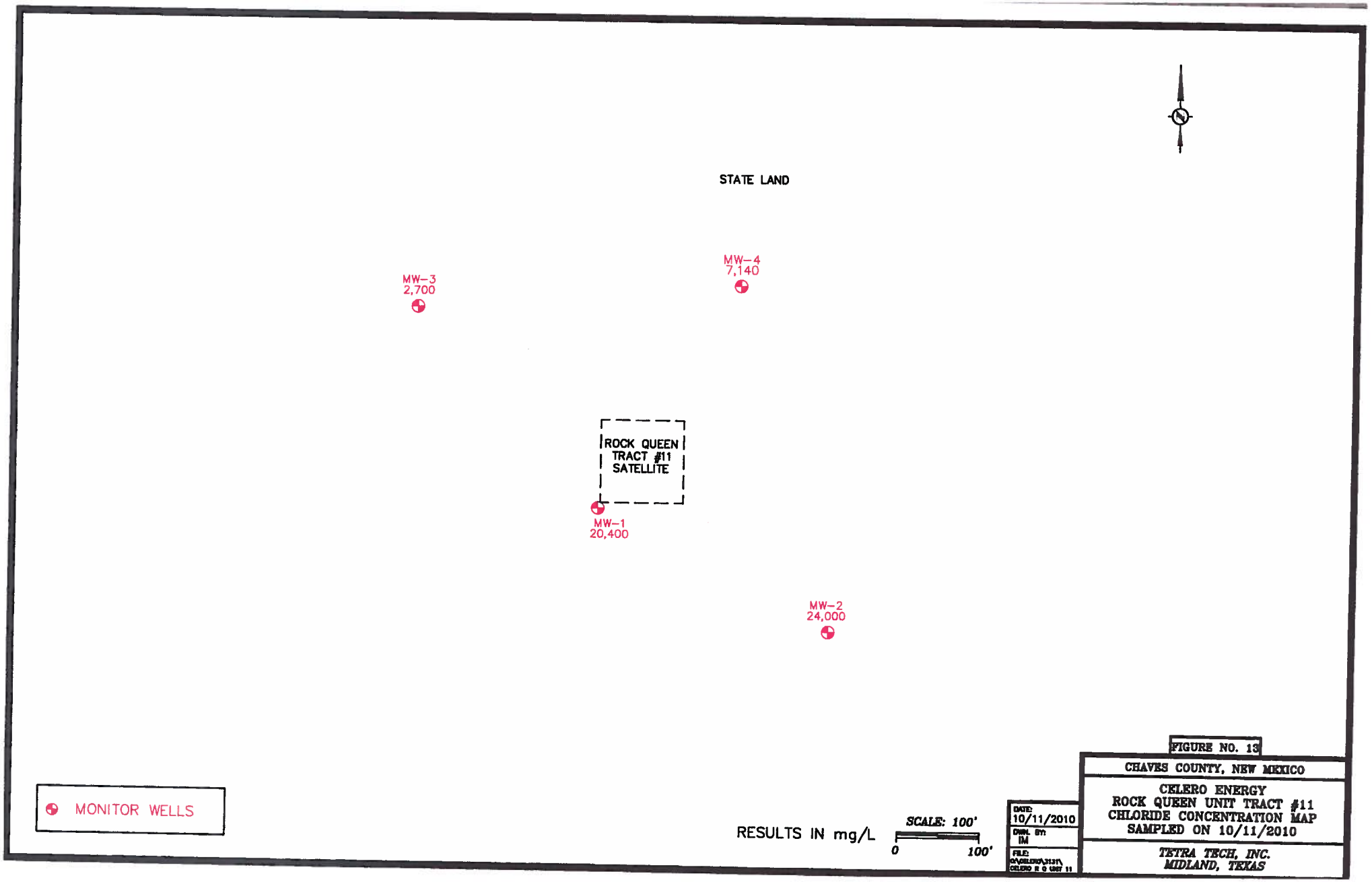


FIGURE NO. 13

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY
ROCK QUEEN UNIT TRACT #11
CHLORIDE CONCENTRATION MAP
SAMPLED ON 10/11/2010

TETRA TECH, INC.
MIDLAND, TEXAS

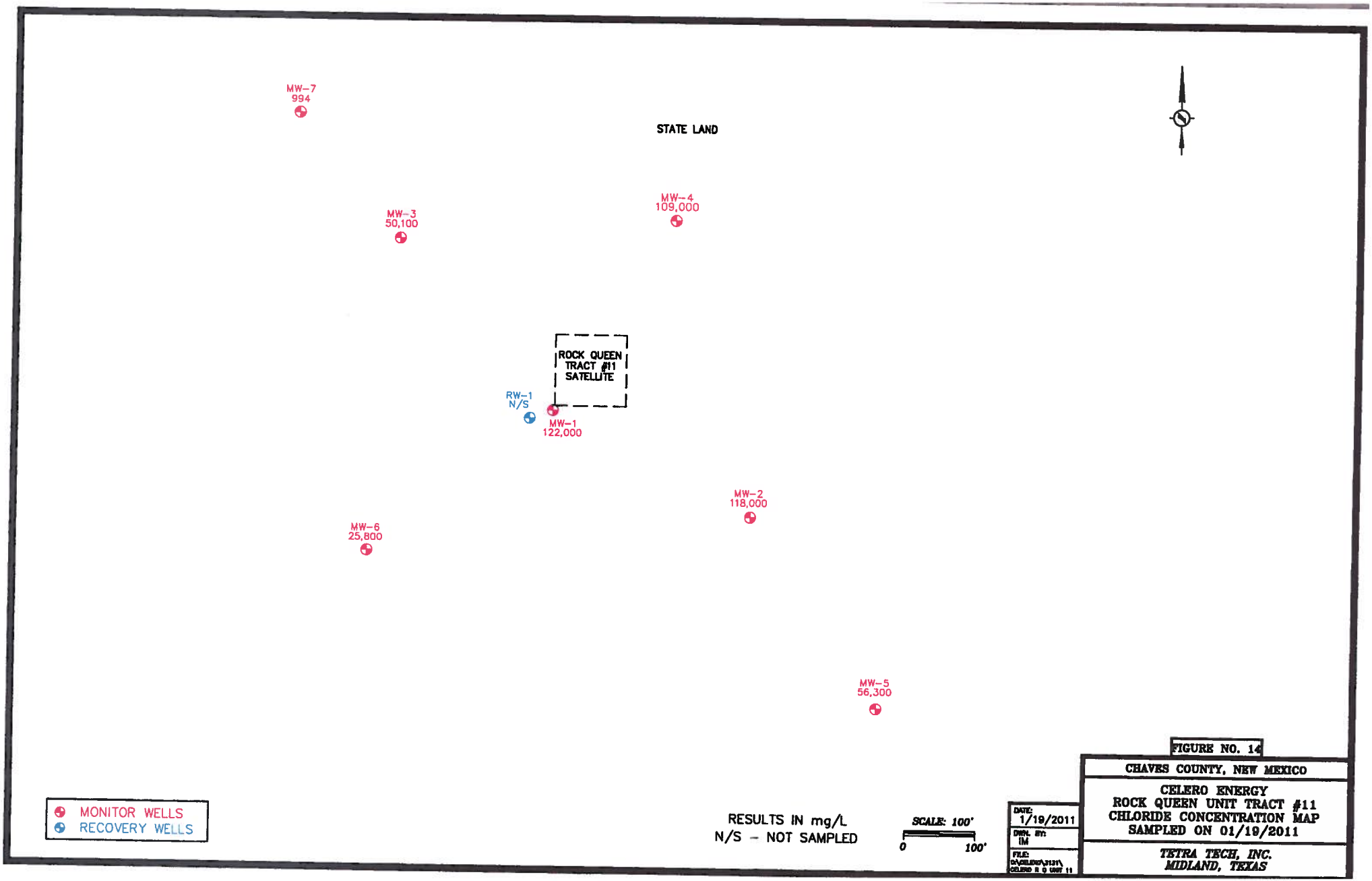


FIGURE NO. 14

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY
ROCK QUEEN UNIT TRACT #11
CHLORIDE CONCENTRATION MAP
SAMPLED ON 01/19/2011

TETRA TECH, INC.
MIDLAND, TEXAS

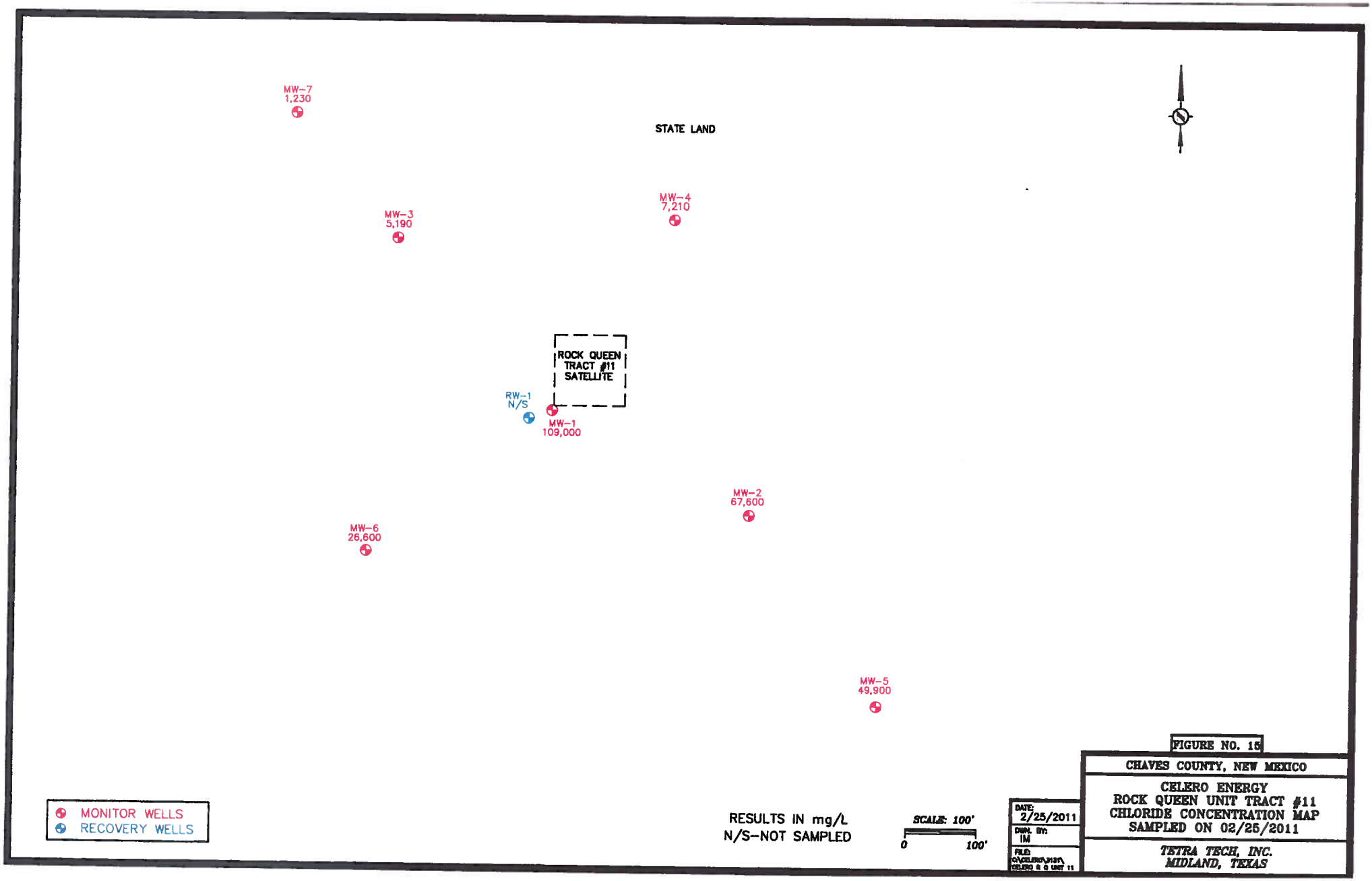
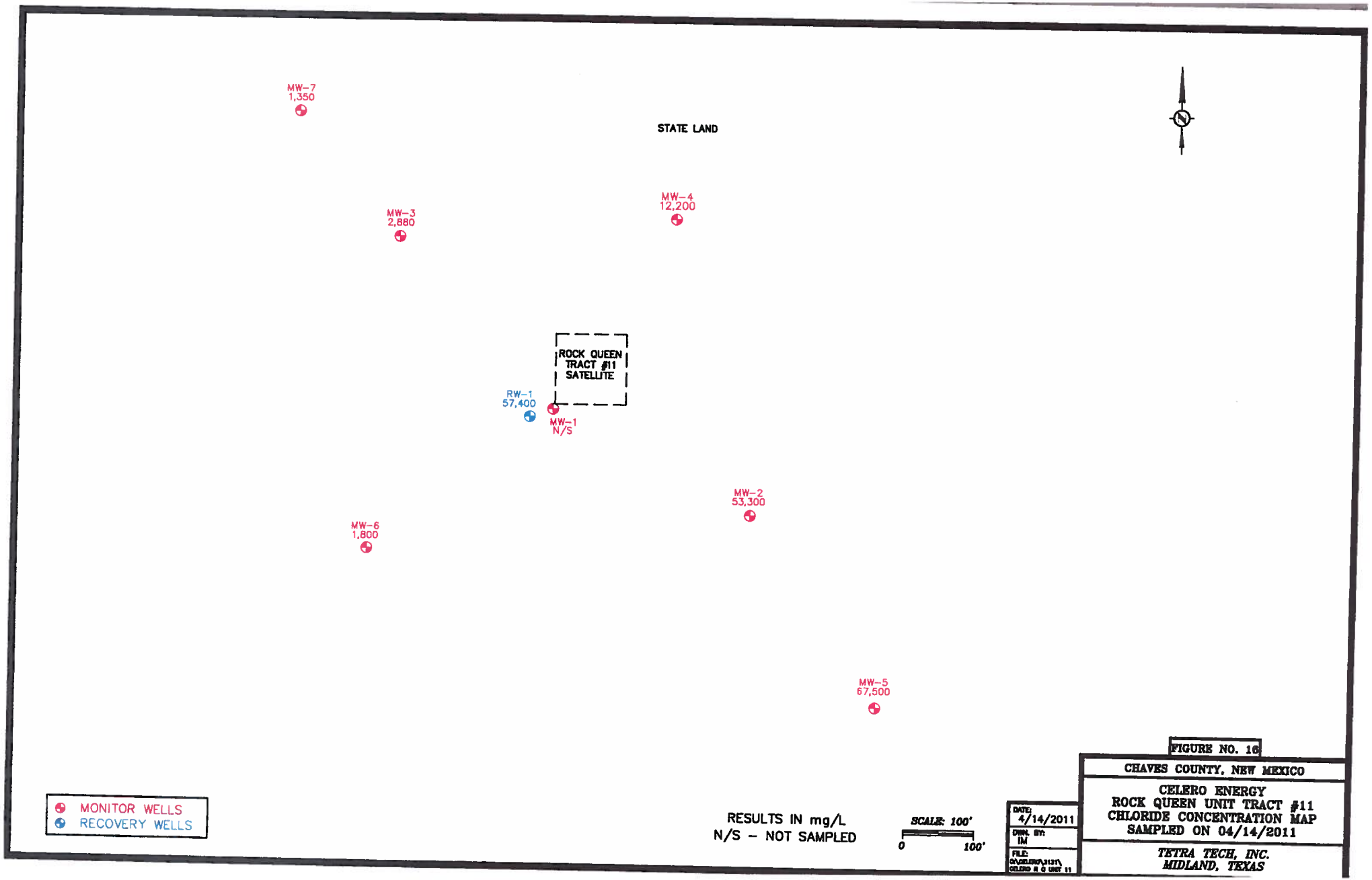


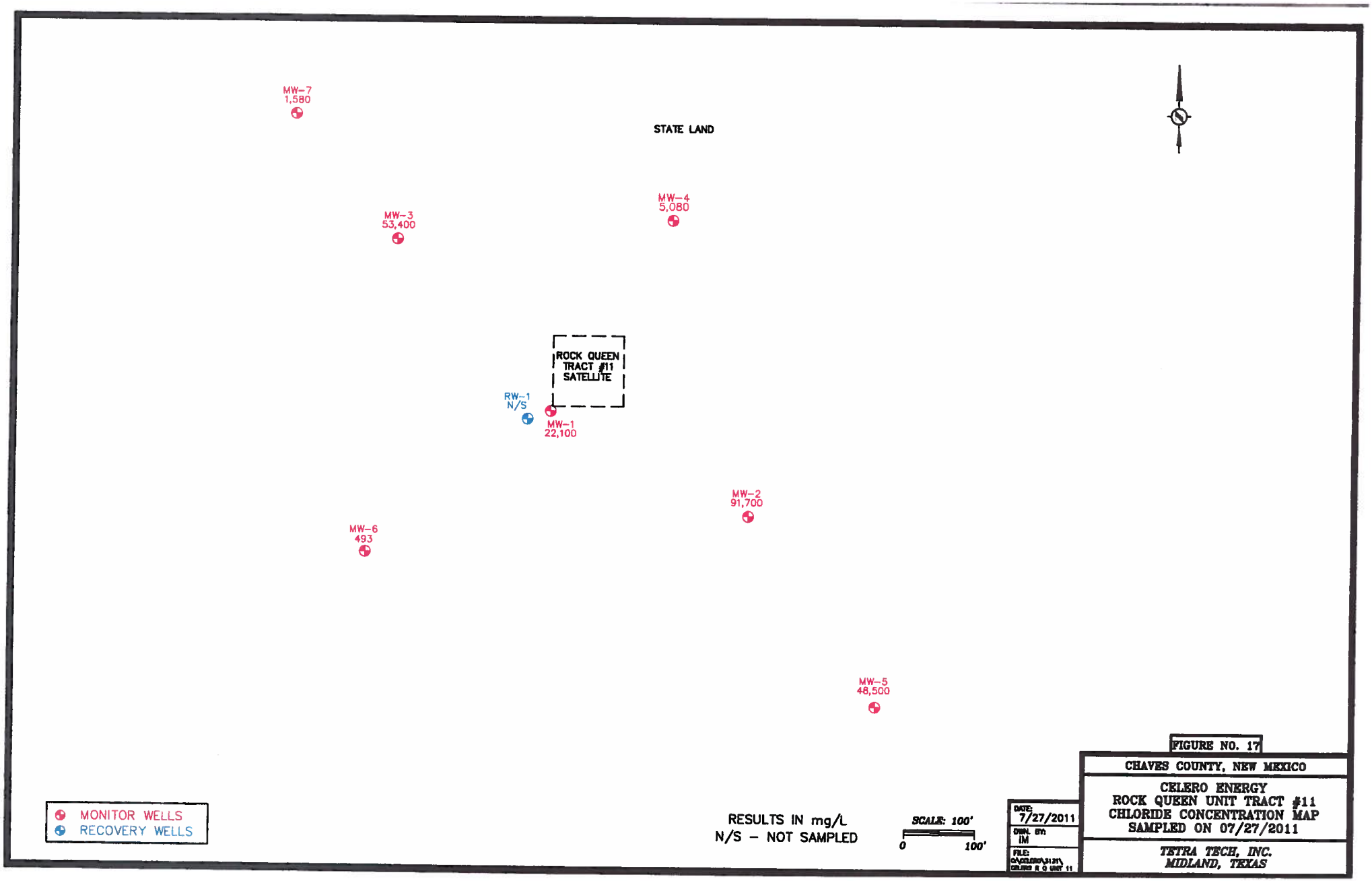
FIGURE NO. 15

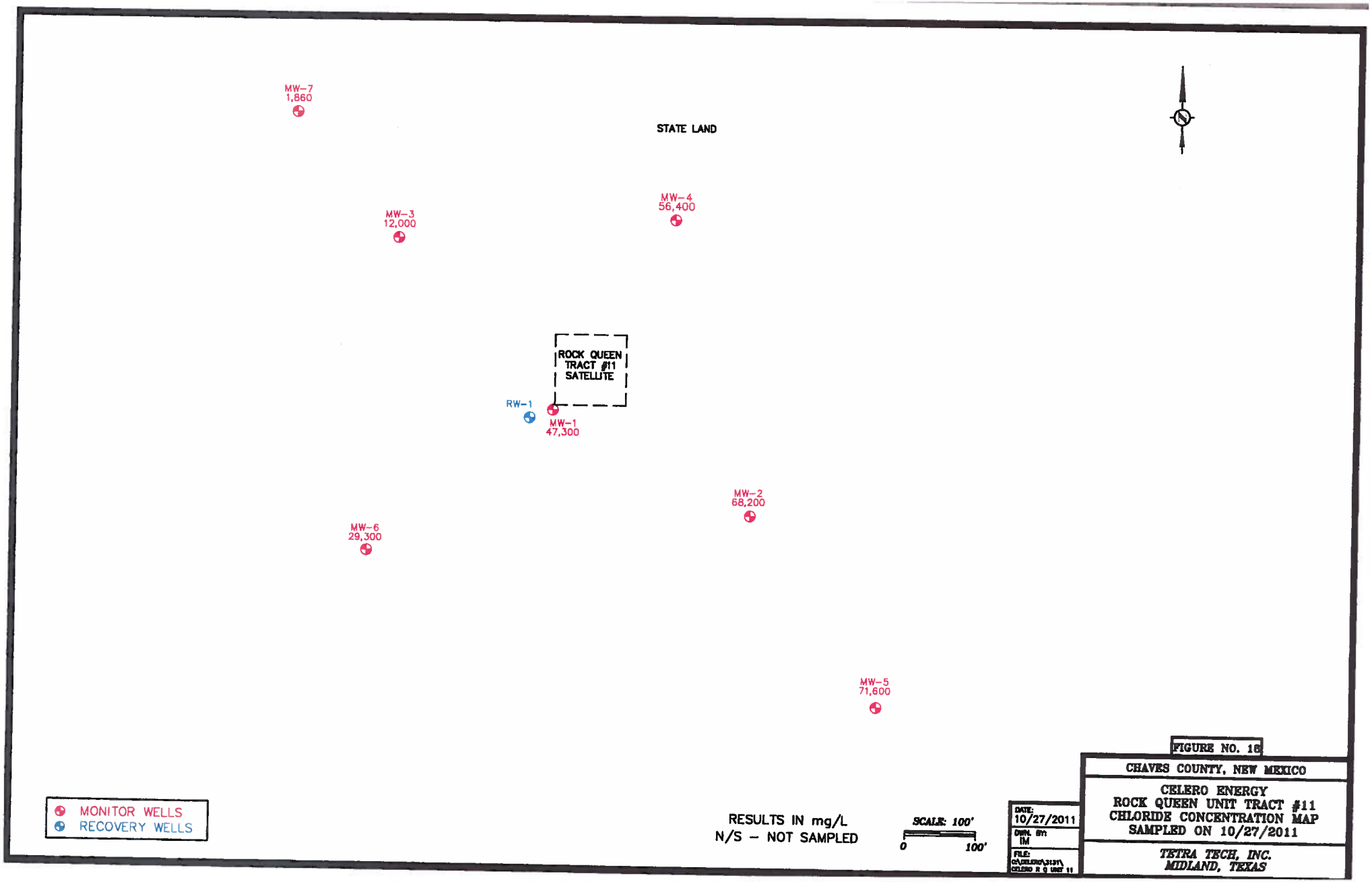
CHAVES COUNTY, NEW MEXICO

CELERO ENERGY
ROCK QUEEN UNIT TRACT #11
CHLORIDE CONCENTRATION MAP
SAMPLED ON 02/25/2011

TETRA TECH, INC.
MIDLAND, TEXAS


MW-7
1,350
STATE LAND
MW-4
12,200
MW-3
2,880
ROCK QUEEN
TRACT #11
SATELLITE
RW-1
57,400
MW-1
N/S
MW-2
53,300
MW-6
1,800
MW-5
67,500
MONITOR WELLS
RECOVERY WELLS
RESULTS IN mg/L
N/S – NOT SAMPLED
SCALE: 100'
0
100'
DATE:
4/14/2011
DWN. BY:
IM
FILE:
O:\CELERO\3131\
CELERO R O UNIT 11
FIGURE NO. 16
CHAVES COUNTY, NEW MEXICO
CELERO ENERGY
ROCK QUEEN UNIT TRACT #11
CHLORIDE CONCENTRATION MAP
SAMPLED ON 04/14/2011
TETRA TECH, INC.
MIDLAND, TEXAS


MW-7
1,580
STATE LAND
MW-4
5,080
MW-3
53,400
ROCK QUEEN
TRACT #11
SATELLITE
RW-1
N/S
MW-1
22,100
MW-2
91,700
MW-6
493
MW-5
48,500
MONITOR WELLS
RECOVERY WELLS
RESULTS IN mg/L
N/S – NOT SAMPLED
SCALE: 100'
0
100'
DATE:
7/27/2011
DWN. BY:
IM
FILE:
FIGURE NO. 17
CHAVES COUNTY, NEW MEXICO
CELERO ENERGY
ROCK QUEEN UNIT TRACT #11
CHLORIDE CONCENTRATION MAP
SAMPLED ON 07/27/2011
TETRA TECH, INC.
MIDLAND, TEXAS


MW-7
1,860
STATE LAND
MW-4
56,400
MW-3
12,000
ROCK QUEEN
TRACT #11
SATELLITE
RW-1
MW-1
47,300
MW-2
68,200
MW-6
29,300
MW-5
71,600
MONITOR WELLS
RECOVERY WELLS
RESULTS IN mg/L
N/S – NOT SAMPLED
SCALE: 100'
0
100'
DATE:
10/27/2011
DWN. BY:
IM
FILE:
FIGURE NO. 1C
CHAVES COUNTY, NEW MEXICO
CELERO ENERGY
ROCK QUEEN UNIT TRACT #11
CHLORIDE CONCENTRATION MAP
SAMPLED ON 10/27/2011
TETRA TECH, INC.
MIDLAND, TEXAS

TABLES

Table 1
Celero Energy II, LP
Groundwater Gauging Data
Rock Queen Unit Tract 11 Tank Battery
Chaves County, New Mexico

Monitor Well	Date Gauged	of Well Installation	Elevation (ft)	Depth of Well (bgs in ft)	Depth to Groundwater (ft)	Elevation (ft)
MW-1	05/25/07	05/24/07	4,407.40	161.30	138.60	4,268.80
	02/25/10				138.19	4,269.21
	07/13/10				138.14	4,269.26
	10/11/10				138.25	4,269.15
	01/17/11				138.03	4,269.37
	04/11/11				138.14	4,269.26
	07/26/11				138.92	4,268.48
	10/24/11				138.18	4,269.22
MW-2	02/25/10	02/17/10	4,408.61	166.18	140.36	4,268.25
	07/13/10				140.28	4,268.33
	10/11/10				140.41	4,268.20
	01/17/11				140.15	4,268.46
	04/11/11				140.19	4,268.42
	07/26/11				141.05	4,267.56
	10/24/11				140.39	4,268.22
MW-3	02/25/10	02/17/10	4,409.84	169.00	139.49	4,270.35
	07/13/10				139.45	4,270.39
	10/11/10				139.57	4,270.27
	01/17/11				139.43	4,270.41
	04/11/11				139.50	4,270.34
	07/26/11				140.25	4,269.59
	10/24/11				139.48	4,270.36
MW-4	02/25/10	02/17/10	4,411.68	172.90	142.25	4,269.43
	07/13/10				142.23	4,269.45
	10/11/10				142.32	4,269.36
	01/17/11				142.16	4,269.52
	04/11/11				142.24	4,269.44
	07/26/11				143.04	4,268.64
	10/24/11				142.19	4,269.49
MW-5	01/17/11	12/01/10	4,407.26	160.00	139.99	4,267.27
	04/11/11				140.05	4,267.21

Table 1
Celero Energy II, LP
Groundwater Gauging Data
Rock Queen Unit Tract 11 Tank Battery
Chaves County, New Mexico

Monitor Well	Date Gauged	of Well Installation	Elevation (ft)	Depth of Well (bgs in ft)	Depth to Groundwater (ft)	Elevation (ft)
MW-5	07/26/11				140.98	4,266.28
	10/24/11				140.30	4,266.96
MW-6	01/17/11	12/01/10	4,404.87	156.42	135.51	4,269.36
	04/11/11				135.58	4,269.29
	07/26/11				136.37	4,268.50
	10/24/11				135.68	4,269.19
MW-7	01/17/11	12/02/10	4,413.08	161.37	142.22	4,270.86
	04/11/11				142.17	4,270.91
	07/26/11				142.98	4,270.10
	10/24/11				142.19	4,270.89
RW-1	01/17/11	12/08/10	4,405.75	161.80	136.05	4,269.70
	04/11/11				136.15	4,269.60
	07/26/11				137.03	4,268.72
	10/24/11				136.32	4,269.43

Table 2
Celero Energy II, LP
Groundwater Analytical Results
Rock Queen Unit Tract 11 Tank Battery
Chaves County, New Mexico

Monitor Well	Date Sampled	Dissolved Calcium (mg/L)	Dissolved Magnesium (mg/L)	Dissolved Sodium (mg/L)	Dissolved Potassium (mg/L)	Hydroxide Alkalinity (mg/L)	Carbonate Alkalinity (mg/L)	Bicarbonate Alkalinity (mg/L)	Total Alkalinity (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	TDS (mg/L)	Hardness (mg/L)	pH
MW-1	05/31/07	1,300	1,050	19,400	416	<1.00	<1.00	110	110	1,080	37,800	59,400	7,570	7.06
	02/25/10	3,280	2,240	28,500	737	<1.00	<1.00	101	101	1,360	60,700	104,000	17,400	6.24
	07/13/10	-	-	-	-	-	-	-	-	186	12,300	11,600	-	-
	10/11/10	-	-	-	-	-	-	-	-	455	20,400	42,700	-	-
	01/19/11	-	-	-	-	-	-	-	-	2,270	122,000	210,000	-	-
	02/25/11	-	-	-	-	-	-	-	-	2,150	109,000	193,000	-	-
	04/14/11	-	-	-	-	-	-	-	-	1,620	57,400	96,800	-	-
	07/27/11	-	-	-	-	-	-	-	-	625	22,100	56,000	-	-
	10/27/11	-	-	-	-	-	-	-	-	1,740	47,300	73,900	-	-
MW-2	02/25/10	723	265	3,650	47.6	<1.00	<1.00	132	132	176	5,670	17,800	-	7.70
	07/13/10	-	-	-	-	-	-	-	-	355	16,400	31,700	-	-
	10/11/10	-	-	-	-	-	-	-	-	547	24,000	38,400	-	-
	01/19/11	-	-	-	-	-	-	-	-	2,060	118,000	220,000	-	-
	02/25/11	-	-	-	-	-	-	-	-	1,500	67,600	146,000	-	-
	04/14/11	-	-	-	-	-	-	-	-	1,170	53,300	84,500	-	-
	07/27/11	-	-	-	-	-	-	-	-	1,610	91,700	143,000	-	-
	10/27/11	-	-	-	-	-	-	-	-	1,990	68,200	102,000	-	-
MW-3	02/25/10	370	88 4	1,060	14.2	<1.00	<1.00	138	138	120	1,990	3,460	1,290	8.13
	07/13/10	-	-	-	-	-	-	-	-	52.8	3,260	4,190	-	-
	10/11/10	-	-	-	-	-	-	-	-	73.6	2,700	6,290	-	-
	01/19/11	-	-	-	-	-	-	-	-	1,170	50,100	103,000	-	-
	02/25/11	-	-	-	-	-	-	-	-	115	5,190	10,100	-	-
	04/14/11	-	-	-	-	-	-	-	-	73.2	2,880	4,440	-	-
	07/27/11	-	-	-	-	-	-	-	-	881	53,400	74,700	-	-
	10/27/11	-	-	-	-	-	-	-	-	173	12,000	22,800	-	-
MW-4	02/25/10	540	385	4,670	295	<1.00	<1.00	148	148	290	10,700	25,800	2,930	7.37
	07/13/10	-	-	-	-	-	-	-	-	47.4	857	1,610	-	-
	10/11/10	-	-	-	-	-	-	-	-	176.0	7,140	14,500	-	-

Table 2

Celero Energy II, LP

Groundwater Analytical Results

Rock Queen Unit Tract 11 Tank Battery

Chaves County, New Mexico

Monitor Well	Date Sampled	Dissolved Calcium (mg/L)	Dissolved Magnesium (mg/L)	Dissolved Sodium (mg/L)	Dissolved Potassium (mg/L)	Hydroxide Alkalinity (mg/L)	Carbonate Alkalinity (mg/L)	Bicarbonate Alkalinity (mg/L)	Total Alkalinity (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	TDS (mg/L)	Hardness (mg/L)	pH
MW-4	01/19/11	-	-	-	-	-	-	-	-	1,850.0	109,000	194,000	-	-
	02/25/11	-	-	-	-	-	-	-	-	182.0	7,210	14,100	-	-
	04/14/11	-	-	-	-	-	-	-	-	347.0	12,200	26,400	-	-
	07/27/11	-	-	-	-	-	-	-	-	134	5,080	7,980	-	-
	10/26/11	-	-	-	-	-	-	-	-	967	56,400	97,300	-	-
MW-5	01/19/11	-	-	-	-	-	-	-	-	939	56,300	109,000	-	-
	02/25/11	-	-	-	-	-	-	-	-	764	49,900	93,000	-	-
	04/14/11	-	-	-	-	-	-	-	-	1,100	67,500	109,000	-	-
	07/27/11	-	-	-	-	-	-	-	-	422	48,500	60,900	-	-
	10/27/11	-	-	-	-	-	-	-	-	1,020	71,600	106,000	-	-
MW-6	01/19/11	-	-	-	-	-	-	-	-	378	25,800	56,700	-	-
	02/25/11	-	-	-	-	-	-	-	-	422	26,600	56,700	-	-
	04/14/11	-	-	-	-	-	-	-	-	77.6	1,800	3,320	-	-
	07/27/11	-	-	-	-	-	-	-	-	80	493	934	-	-
	10/26/11	-	-	-	-	-	-	-	-	378	29,300	73,100	-	-
MW-7	01/19/11	-	-	-	-	-	-	-	-	77	994	2,110	-	-
	02/25/11	-	-	-	-	-	-	-	-	79.4	1,230	2,580	-	-
	04/14/11	-	-	-	-	-	-	-	-	92.2	1,350	2,700	-	-
	07/27/11	-	-	-	-	-	-	-	-	84.1	1,580	2,440	-	-
	10/26/11	-	-	-	-	-	-	-	-	139	1,860	2,910	-	-
RW-1	01/19/11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	02/25/11	-	-	-	-	-	-	-	-	1,690	94,000	174,000	-	-
	04/14/11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	07/27/11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/26/11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

NS - Not sampled

(-) Not Analyzed

Table 3
Celero Energy II, LP
Groundwater Analytical Results
Rock Queen Unit Tract #11
Chaves County, New Mexico

Monitor Well	Date Sampled	Benzene in (mg/L)	Toluene in (mg/L)	Ethyl-Benzene (mg/L)	Xylene in (mg/L)	Total BTEX (mg/L)
MW-1	02/25/10	<0.001	<0.001	<0.001	<0.001	<0.001
	07/13/10	<0.001	<0.001	<0.001	<0.001	<0.001
	10/11/10	<0.001	<0.001	<0.001	<0.001	<0.001
	01/19/11	<0.001	<0.001	<0.001	<0.001	<0.001
	04/14/11	<0.001	<0.001	<0.001	<0.001	<0.001
	07/27/11	<0.001	<0.001	<0.001	0.0185	0.0185
	10/27/11	<0.001	<0.001	<0.001	0.0014	0.0014
MW-2	02/25/10	<0.001	<0.001	<0.001	<0.001	<0.001
	07/13/10	<0.001	<0.001	<0.001	<0.001	<0.001
	10/11/10	<0.001	<0.001	<0.001	<0.001	<0.001
	01/19/11	<0.001	<0.001	<0.001	<0.001	<0.001
	04/14/11	<0.001	<0.001	<0.001	<0.001	<0.001
	07/27/11	<0.001	<0.001	<0.001	<0.001	<0.001
	10/27/11	<0.001	<0.001	<0.001	<0.001	<0.001
MW-3	02/25/10	<0.001	<0.001	<0.001	<0.001	<0.001
	07/13/10	<0.001	<0.001	<0.001	<0.001	<0.001
	10/11/10	<0.001	<0.001	<0.001	<0.001	<0.001
	01/19/11	<0.001	<0.001	<0.001	<0.001	<0.001
	04/14/11	<0.001	<0.001	<0.001	<0.001	<0.001
	07/27/11	<0.001	<0.001	<0.001	<0.001	<0.001
	10/27/11	<0.001	<0.001	<0.001	<0.001	<0.001
MW-4	02/25/10	<0.001	<0.001	<0.001	<0.001	<0.001
	07/13/10	<0.001	<0.001	<0.001	<0.001	<0.001
	10/11/10	<0.001	<0.001	<0.001	<0.001	<0.001
	01/19/11	<0.001	<0.001	<0.001	<0.001	<0.001
	04/14/11	<0.001	<0.001	<0.001	<0.001	<0.001
	07/27/11	<0.001	<0.001	<0.001	<0.001	<0.001
	10/26/11	<0.001	<0.001	<0.001	0.0066	0.0066
MW-5	01/19/11	<0.001	<0.001	<0.001	<0.001	<0.001
	04/14/11	0.0065	<0.001	<0.001	<0.001	0.0065
	07/27/11	<0.001	<0.001	<0.001	<0.001	<0.001
	10/27/11	<0.001	<0.001	<0.001	0.0010	0.0010
MW-6	01/19/11	<0.001	<0.001	<0.001	<0.001	<0.001
	04/14/11	<0.001	<0.001	<0.001	<0.001	<0.001
	07/27/11	<0.001	<0.001	<0.001	<0.001	<0.001
	10/26/11	<0.001	<0.001	<0.001	<0.001	<0.001
MW-7	01/19/11	<0.001	<0.001	<0.001	<0.001	<0.001
	04/14/11	<0.001	<0.001	<0.001	<0.001	<0.001
	07/27/11	<0.001	<0.001	<0.001	<0.001	<0.001
	10/26/11	<0.001	<0.001	<0.001	<0.001	<0.001

Table 3
Celero Energy II, LP
Groundwater Analytical Results
Rock Queen Unit Tract #11
Chaves County, New Mexico

Monitor Well	Date Sampled	Benzene in (mg/L)	Toluene in (mg/L)	Ethyl-Benzene (mg/L)	Xylene in (mg/L)	Total BTEX (mg/L)
RW-1	01/19/11	NS	NS	NS	NS	NS
	04/14/11	NS	NS	NS	NS	NS
	07/27/11	NS	NS	NS	NS	NS
	10/27/11	NS	NS	NS	NS	NS

NS - Not sampled

APPENDIX A
BORING LOGS

SAMPLE LOG

Boring/Well MW-1
GPS N33.161589° W103.79205°
Project Number 115-6403131A
Client Celero Energy II, LP
Site Name Rock Queen Unit Tract #11 Tank Battery
Site Location Chaves County, New Mexico
Letter F, Section 26, Township 13 South, Range 31 East
Total Depth 160
Date Installed 05/24/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
0-5	NA	Buff fine grain sandy limestone
5-10	NA	Buff/tan fine grain calcareous sand
10-15	NA	Tan fine grain calcareous sand
15-20	NA	Tan fine grain well sorted sand
25-30	NA	Tan fine grain well sorted sand
35-40	NA	Tan fine grain wells orted sand
45-50	NA	Tan fine grain well sorted sand
55-60	NA	Tan fine grain well sorted sand
65-70	NA	Tan fine grain well sorted sand
75-80	NA	Tan fine grain well sorted sand
85-90	NA	Tan fine grain well sorted sand
95-100	NA	Tan fine grain well sorted sand
108-110	NA	Tan fine grain well sorted sand
118-120	NA	Tan fine grain well sorted sand
128-130	NA	Tan fine grain well sorted sand
138-140	NA	Tan fine grain well sorted sand
148-150	NA	Red sandy clay
158-160	NA	Red sandy clay
Total Depth:	160'	Groundwater encountered at approximately 138 feet below ground surface

SAMPLE LOG

Boring/Well MW-2
GPS N33.161183° W103.791136°
Project Number 114-6403131A
Client Celero Energy II, LP
Site Name Rock Queen Unit Tract #11 Tank Battery
Site Location Chavez County, New Mexico
Letter G, Section 26, Township 13 South, Range 31 East
Total Depth 165
Date Installed 02/17/10

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
0-5	NA	Hard limestone
5-10	NA	Hard limestone
10-15	NA	Hard limestone
15-20	NA	Calcareous sand fine grain well sorted
25-30	NA	Tan fine grain sand
35-40	NA	Tan fine grain sand
45-50	NA	Tan fine grain sand
55-60	NA	Tan fine grain sand
65-70	NA	Tan fine grain sand
75-80	NA	Tan fine grain sand
85-90	NA	Tan fine grain sand
95-100	NA	Tan fine grain sand
100-105	NA	Tan fine grain sand
105-110	NA	Tan fine grain sand
110-115	NA	Tan fine grain sand
115-120	NA	Tan fine grain sand
120-125	NA	Tan fine grain sand
125-130	NA	Tan fine grain sand
130-135	NA	Tan fine grain sand
135-140	NA	Tan fine grain sand
140-145	NA	Tan fine grain sand
145-150	NA	Tan fine grain sand
150-155	NA	Red Clay
155-160	NA	Red Clay
160-165	NA	Red Clay

Total Depth: 165'

SAMPLE LOG

Boring/Well MW-3
GPS N33.162258° W103.792764°
Project Number 114-6403131A
Client Celero Energy II, LP
Site Location Rock Queen Unit Tract #11 Tank Battery
Location Chavez County, New Mexico
Letter F, Section 26, Township 13 South, Range 31 East
Total Depth 165
Date Installed 02/17/10

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
0-5	NA	Hard limestone
5-10	NA	Hard limestone
10-15	NA	Hard limestone
15-20	NA	Hard limestone
20-25	NA	Calcareous sand fine grain well sorted
25-30	NA	Tan fine grain sand
35-40	NA	Tan fine grain sand
45-50	NA	Tan fine grain sand
55-60	NA	Tan fine grain sand
65-70	NA	Tan fine grain sand
75-80	NA	Tan fine grain sand
85-90	NA	Tan fine grain sand
95-100	NA	Tan fine grain sand
100-105	NA	Tan fine grain sand
105-110	NA	Tan fine grain sand
110-115	NA	Tan fine grain sand
115-120	NA	Tan fine grain sand
120-125	NA	Tan fine grain sand
125-130	NA	Tan fine grain sand
130-135	NA	Tan fine grain sand
135-140	NA	Tan fine grain sand
140-145	NA	Tan fine grain sand
145-150	NA	Tan fine grain sand
150-155	NA	Red Clay
155-160	NA	Red Clay

SAMPLE LOG

Boring/Well MW-3
GPS N33.162258° W103.792764°
Project Number 114-6403131A
Client Celero Energy II, LP
Site Location Rock Queen Unit Tract #11 Tank Battery
Location Chavez County, New Mexico
Letter F, Section 26, Township 13 South, Range 31 East
Total Depth 165
Date Installed 02/17/10

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
160-165	NA	Red Clay

Total Depth: 165'

SAMPLE LOG

Boring/Well MW-4
GPS N33.16233° W103.791492°
Project Number 114-6403131A
Client Celero Energy II, LP
Site Name Rock Queen Unit Tract #11 Tank Battery
Site Location Chavez County, New Mexico
Letter G, Section 26, Township 13 South, Range 31 East
Total Depth 170
Date Installed 02/17/10

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
0-5	NA	Hard limestone
5-10	NA	Hard limestone
10-15	NA	Hard limestone
15-20	NA	Calcareous sand fine grain well sorted
25-30	NA	Tan fine grain sand
35-40	NA	Tan fine grain sand
45-50	NA	Tan fine grain sand
55-60	NA	Tan fine grain sand
65-70	NA	Tan fine grain sand
75-80	NA	Tan fine grain sand
85-90	NA	Tan fine grain sand
95-100	NA	Tan fine grain sand
100-105	NA	Tan fine grain sand
105-110	NA	Tan fine grain sand
110-115	NA	Tan fine grain sand
115-120	NA	Tan fine grain sand
120-125	NA	Tan fine grain sand
125-130	NA	Tan fine grain sand
130-135	NA	Tan fine grain sand
135-140	NA	Tan fine grain sand
140-145	NA	Tan fine grain sand
145-150	NA	Tan fine grain sand
150-155	NA	Tan fine grain sand
155-160	NA	Red Clay
160-165	NA	Red Clay

SAMPLE LOG

Boring/Well MW-4
GPS N33.16233° W103.791492°
Project Number 114-6403131A
Client Celero Energy II, LP
Site Name Rock Queen Unit Tract #11 Tank Battery
Site Location Chavez County, New Mexico
Letter G, Section 26, Township 13 South, Range 31 East
Total Depth 170
Date Installed 02/17/10

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
165-170	NA	Red Clay

Total Depth: 170'

SAMPLE LOG

Boring/ Well MW-5
GPS N33.16058° W103.79098°
Project Number 115-6403131A
Client Celero Energy II, LP
Site Name Rock Queen Unit Tract 11 Tank Battery
Site Location Chaves, New Mexico
Letter J, Section 26, Township 13 South, Range 31 East
Total Depth 160'
Date Installed 12/01/10

Depth (Ft)	OVM	Sample Description
5-6'	--	Caliche and 20% Chert
10-11'	--	Caliche and 30% Chert
15-16'	--	Caliche and 40% Chert
20-21'	--	Caliche and 15% Chert
25-26'	--	Buff Tan Fine Grained Well Sorted Sand
30-31'	--	Buff Tan Fine Grained Well Sorted Sand
35-36'	--	Buff Tan Fine Grained Well Sorted Sand
40-41'	--	Buff Tan Fine Grained Well Sorted Sand
45-46'	--	Buff Tan Fine Grained Well Sorted Sand
50-51'	--	Buff Tan Fine Grained Well Sorted Sand
55-56'	--	Light Brown Fine Grain Well Sorted Sand
60-61'	--	Light Brown Fine Grain Well Sorted Sand
65-66'	--	Light Brown Fine Grain Well Sorted Sand
70-71'	--	Light Brown Fine Grain Well Sorted Sand
75-76'	--	Light Brown Fine Grain Well Sorted Sand
80-81'	--	Light Brown Fine Grain Well Sorted Sand
85-86'	--	Light Brown Fine Grain Well Sorted Sand
90-91'	--	Light Brown Fine Grain Well Sorted Sand
95-96'	--	Light Brown Fine Grain Well Sorted Sand
100-101'	--	Light Brown Fine Grain Well Sorted Sand
105-106'	--	Light Brown Fine Grain Well Sorted Sand
110-111'	--	Light Brown Fine Grain Well Sorted Sand
115-116'	--	Light Brown Fine Grain Well Sorted Sand
120-121'	--	Light Brown Fine Grain Well Sorted Sand
125-126'	--	Light Brown Fine Grain Well Sorted Sand

SAMPLE LOG

Boring/ Well MW-5
GPS N33.16058° W103.79098°
Project Number 115-6403131A
Client Celero Energy II, LP
Site Name Rock Queen Unit Tract 11 Tank Battery
Site Location Chaves, New Mexico
Letter J, Section 26, Township 13 South, Range 31 East
Total Depth 160'
Date Installed 12/01/10

Depth (Ft)	OVM	Sample Description
130-131'	--	Light Brown Fine Grain Well Sorted Sand
135-136'	--	Light Brown Fine Grain Well Sorted Sand
140-141'	--	Light Brown Fine Grain Well Sorted Sand
145-146'	--	Light Brown Sand with 15% Red Bed
150-151'	--	Red Bed with 50% Light Brown Sand
155-156'	--	Red Bed
160'	--	Red Bed
Total Depth:	160'	Ground water depth not encountered while drilling.

SAMPLE LOG

Boring/ Well MW-6
GPS N33.16290° W103.79356°
Project Number 115-6403131A
Client Celero Energy II, LP
Site Name Rock Queen Unit Tract 11 Tank Battery
Site Location Chaves, New Mexico
Letter F, Section 26, Township 13 South, Range 31 East
Total Depth 160'
Date Installed 12/01/10

Depth (Ft)	OVM	Sample Description
5-6'	--	Caliche and 40% Chert
10-11'	--	Caliche and 50% Chert
15-16'	--	Caliche and 40% Chert
20-21'	--	Buff Tan Fine Grained Well Sorted Sand
25-26'	--	Buff Tan Fine Grained Well Sorted Sand
30-31'	--	Buff Tan Fine Grained Well Sorted Sand
35-36'	--	Buff Tan Fine Grained Well Sorted Sand
40-41'	--	Buff Tan Fine Grained Well Sorted Sand
45-46'	--	Buff Tan Fine Grained Well Sorted Sand
50-51'	--	Buff Tan Fine Grained Well Sorted Sand
55-56'	--	Light Brown Fine Grain Well Sorted Sand
60-61'	--	Light Brown Fine Grain Well Sorted Sand
65-66'	--	Light Brown Fine Grain Well Sorted Sand
70-71'	--	Light Brown Fine Grain Well Sorted Sand
75-76'	--	Light Brown Fine Grain Well Sorted Sand
80-81'	--	Light Brown Fine Grain Well Sorted Sand
85-86'	--	Light Brown Fine Grain Well Sorted Sand
90-91'	--	Light Brown Fine Grain Well Sorted Sand
95-96'	--	Light Brown Fine Grain Well Sorted Sand
100-101'	--	Light Brown Fine Grain Well Sorted Sand
105-106'	--	Light Brown Fine Grain Well Sorted Sand
110-111'	--	Light Brown Fine Grain Well Sorted Sand
115-116'	--	Light Brown Fine Grain Well Sorted Sand
120-121'	--	Light Brown Fine Grain Well Sorted Sand
125-126'	--	Light Brown Fine Grain Well Sorted Sand

SAMPLE LOG

Boring/ Well MW-6
GPS N33.16290° W103.79356°
Project Number 115-6403131A
Client Celero Energy II, LP
Site Name Rock Queen Unit Tract 11 Tank Battery
Site Location Chaves, New Mexico
Letter F, Section 26, Township 13 South, Range 31 East
Total Depth 160'
Date Installed 12/01/10

Depth (Ft)	OVM	Sample Description
130-131'	--	Light Brown Fine Grain Well Sorted Sand
135-136'	--	Light Brown Fine Grain Well Sorted Sand
140-141'	--	Light Brown Fine Grain Well Sorted Sand
145-146'	--	Light Brown Sand with Red Bed
150-151'	--	Red Bed
155-156'	--	Red Bed
160'	--	Red Bed
Total Depth:	160'	Ground water depth not encountered while drilling.

SAMPLE LOG

Boring/ Well MW-7
GPS N33.162942° W103.793233°
Project Number 115-6403131A
Client Celero Energy II, LP
Site Name Rock Queen Unit Tract 11 Tank Battery
Site Location Chaves, New Mexico
Letter F, Section 26, Township 13 South, Range 31 East
Total Depth 160'
Date Installed 12/02/10

Depth (Ft)	OVM	Sample Description
5-6'	--	Caliche and 15% Chert
10-11'	--	Caliche and 10% Chert
15-16'	--	Caliche and 10% Chert
20-21'	--	Buff Tan Fine Grained Well Sorted Sand
25-26'	--	Buff Tan Fine Grained Well Sorted Sand
30-31'	--	Buff Tan Fine Grained Well Sorted Sand
35-36'	--	Buff Tan Fine Grained Well Sorted Sand
40-41'	--	Buff Tan Fine Grained Well Sorted Sand
45-46'	--	Buff Tan Fine Grained Well Sorted Sand
50-51'	--	Light Brown Fine Grain Well Sorted Sand
55-56'	--	Light Brown Fine Grain Well Sorted Sand
60-61'	--	Light Brown Fine Grain Well Sorted Sand
65-66'	--	Light Brown Fine Grain Well Sorted Sand
70-71'	--	Light Brown Fine Grain Well Sorted Sand
75-76'	--	Light Brown Fine Grain Well Sorted Sand
80-81'	--	Light Brown Fine Grain Well Sorted Sand
85-86'	--	Light Brown Fine Grain Well Sorted Sand
90-91'	--	Light Brown Fine Grain Well Sorted Sand
95-96'	--	Light Brown Fine Grain Well Sorted Sand
100-101'	--	Light Brown Fine Grain Well Sorted Sand
105-106'	--	Light Brown Fine Grain Well Sorted Sand
110-111'	--	Light Brown Fine Grain Well Sorted Sand
115-116'	--	Light Brown Fine Grain Well Sorted Sand
120-121'	--	Light Brown Fine Grain Well Sorted Sand
125-126'	--	Light Brown Fine Grain Well Sorted Sand

SAMPLE LOG

Boring/ Well MW-7
GPS N33.162942° W103.793233°
Project Number 115-6403131A
Client Celero Energy II, LP
Site Name Rock Queen Unit Tract 11 Tank Battery
Site Location Chaves, New Mexico
Letter F, Section 26, Township 13 South, Range 31 East
Total Depth 160'
Date Installed 12/02/10

Depth (Ft)	OVM	Sample Description
130-131'	--	Light Brown Sand with 5% Grey Blue Clay
135-136'	--	Light Brown Sand with Buff Tan Sandstone
140-141'	--	Light Brown Sand with Buff Tan Sandstone
145-146'	--	Light Brown Sand with Buff Tan Sandstone and 5% Red Bed
150-151'	--	Grey Blue Clay with 25% Red Bed
155-156'	--	Grey Blue Clay with 45% Red Bed
160'	--	Red Bed
Total Depth:	160'	Ground water depth not encountered while drilling.

SAMPLE LOG

Boring/ Well RW-1
GPS N33.161561° W103.792158°
Project Number 115-6403131A
Client Celero Energy II, LP
Site Name Rock Queen Unit Tract 11 Tank Battery
Site Location Chaves, New Mexico
Letter G, Section 26, Township 13 South, Range 31 East
Total Depth 160'
Date Installed 12/08/10 to 12/09/10

Depth (Ft)	OVM	Sample Description
5-6'	--	Buff to tan fine grain sandy limestone
10-11'	--	Tan clay with limestone intermixed
15-16'	--	Buff to tan fine grain sandy limestone
20-21'	--	Buff to tan fine grain sandy limestone
25-26'	--	Buff to tan fine grain sandy limestone
30-31'	--	Tan fine grain calcareous sand
35-36'	--	Tan fine grain sand
40-41'	--	Tan fine grain sand
45-46'	--	Tan fine grain sand
50-51'	--	Tan fine grain sand
55-56'	--	Tan fine grain sand
60-61'	--	Tan fine grain sand
65-66'	--	Tan fine grain sand
70-71'	--	Tan fine grain sand
75-76'	--	Tan fine grain sand
80-81'	--	Tan fine grain sand
85-86'	--	Tan fine grain sand
90-91'	--	Tan fine grain sand
95-96'	--	Tan fine grain sand
100-101'	--	Tan fine grain sand
105-106'	--	Tan fine grain sand with gravel
110-111'	--	Tan fine grain sand with gravel
115-116'	--	Tan fine grain sand with gravel
120-121'	--	Tan fine grain sand
125-126'	--	Tan fine grain sand

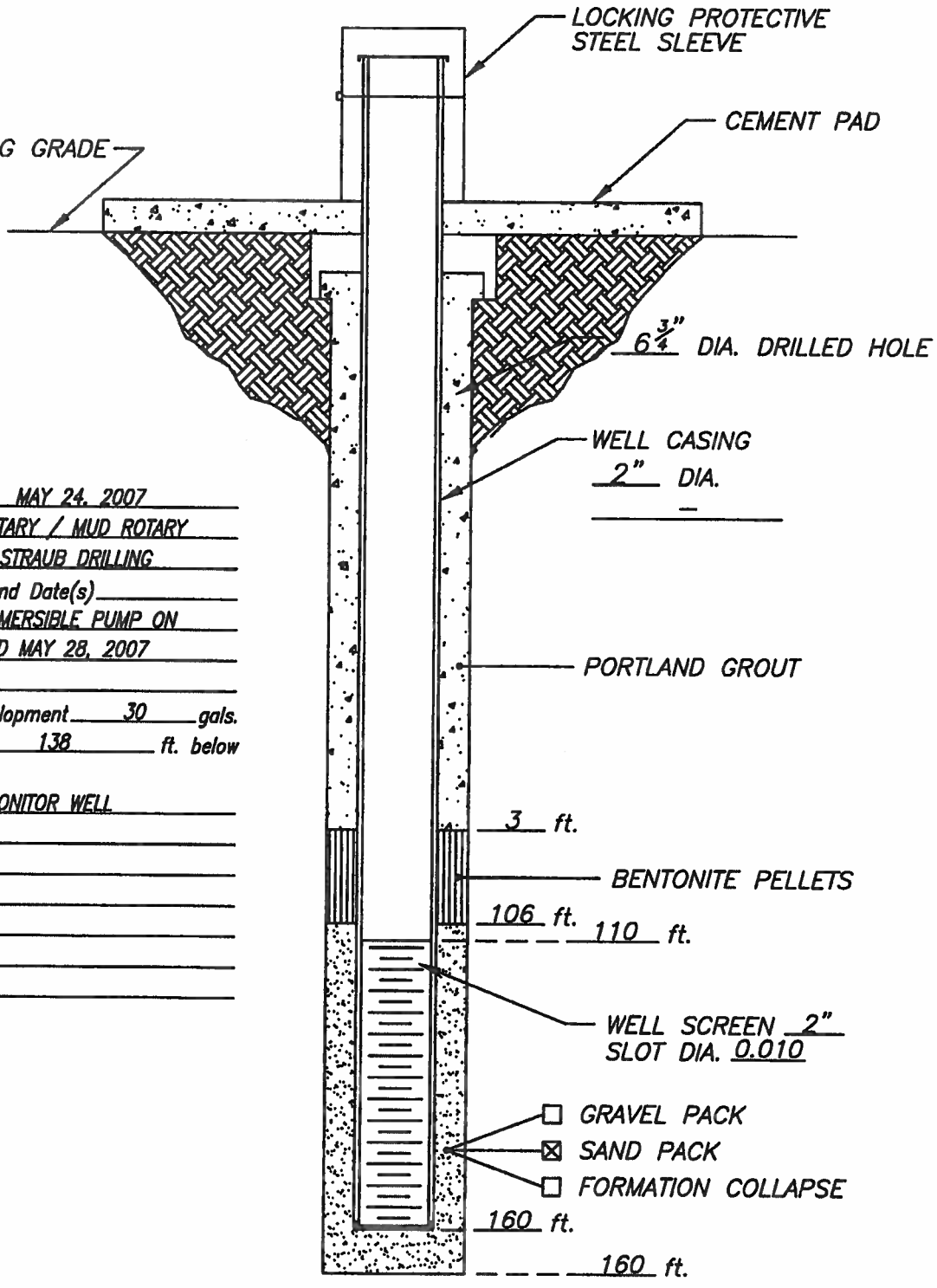
SAMPLE LOG

Boring/ Well RW-1
GPS N33.161561° W103.792158°
Project Number 115-6403131A
Client Celero Energy II, LP
Site Name Rock Queen Unit Tract 11 Tank Battery
Site Location Chaves, New Mexico
Letter G, Section 26, Township 13 South, Range 31 East
Total Depth 160'
Date Installed 12/08/10 to 12/09/10

Depth (Ft)	OVM	Sample Description
130-131'	--	Tan fine grain sand
135-136'	--	Tan fine grain sand
140-141'	--	Tan fine grain sand
145-146'	--	Tan fine grain sand
150-151'	--	Tan fine grain sand
155-156'	--	Tan fine grain sand
160'	--	Red Bed
Total Depth:	160'	Groundwater encountered at approximately 140 feet below ground surface.

APPENDIX B
MONITOR WELL INSTALLATION DIAGRAMS

WELL CONSTRUCTION LOG



Installation Date(s) MAY 24, 2007
Drilling Method AIR ROTARY / MUD ROTARY
Drilling Contractor STRAUB DRILLING
Development Technique(s) and Date(s) HAND BAILING / SUBMERSIBLE PUMP ON MAY 24, 2007 AND MAY 28, 2007

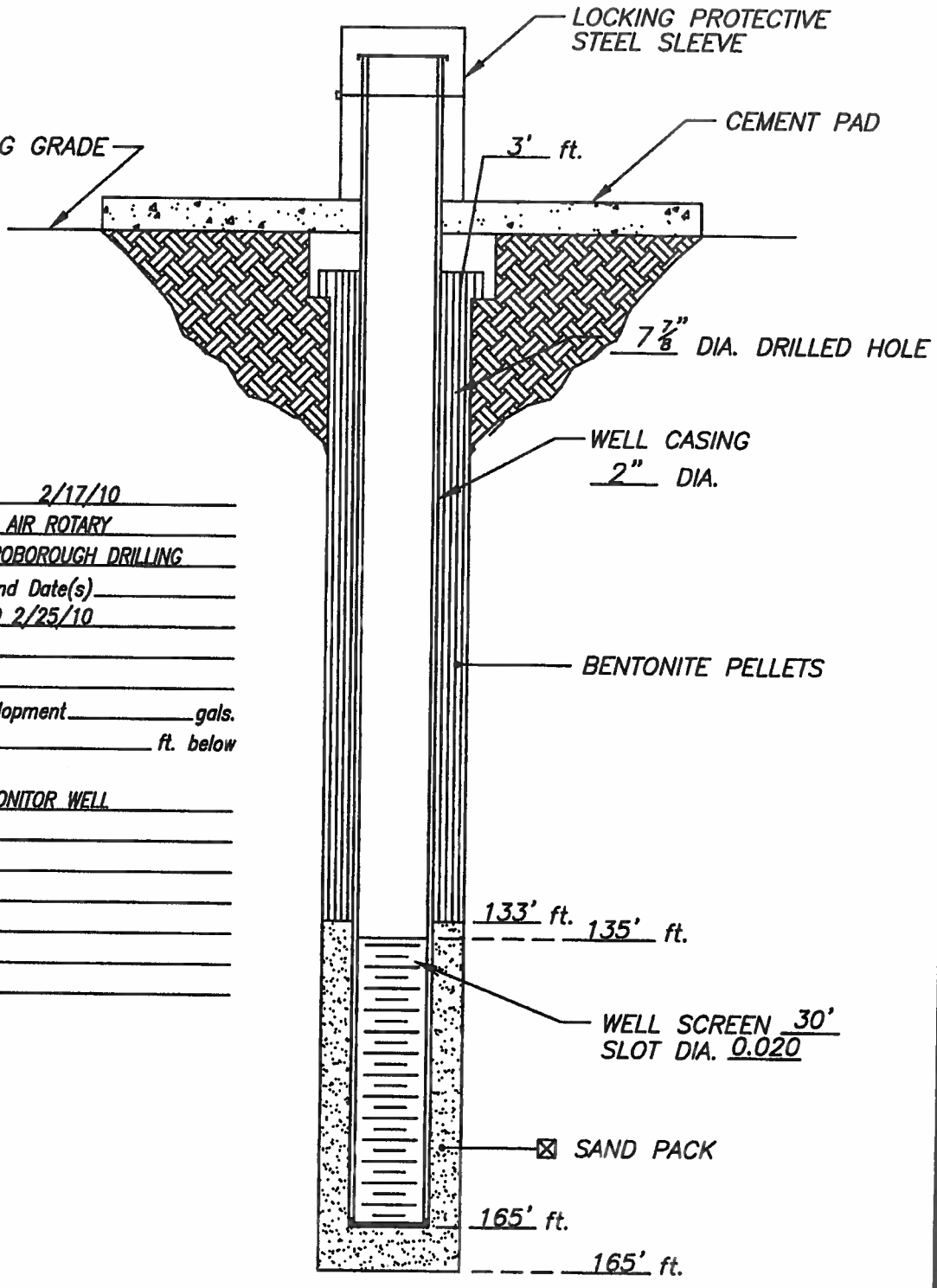
Water Removed During Development 30 gals.
Static Depth to Water 138 ft. below Ground Level
Well Purpose MONITOR WELL

Remarks

DATE: 5/24/07	CLIENT: CELERO ENERGY II, LLC	WELL NO.
TETRA TECH, INC. MIDLAND, TEXAS	PROJECT: ROCK QUEEN UNIT TRACT 11 TB	MW-1
	LOCATION: CHAVES COUNTY, NM	

115-6403131

WELL CONSTRUCTION LOG



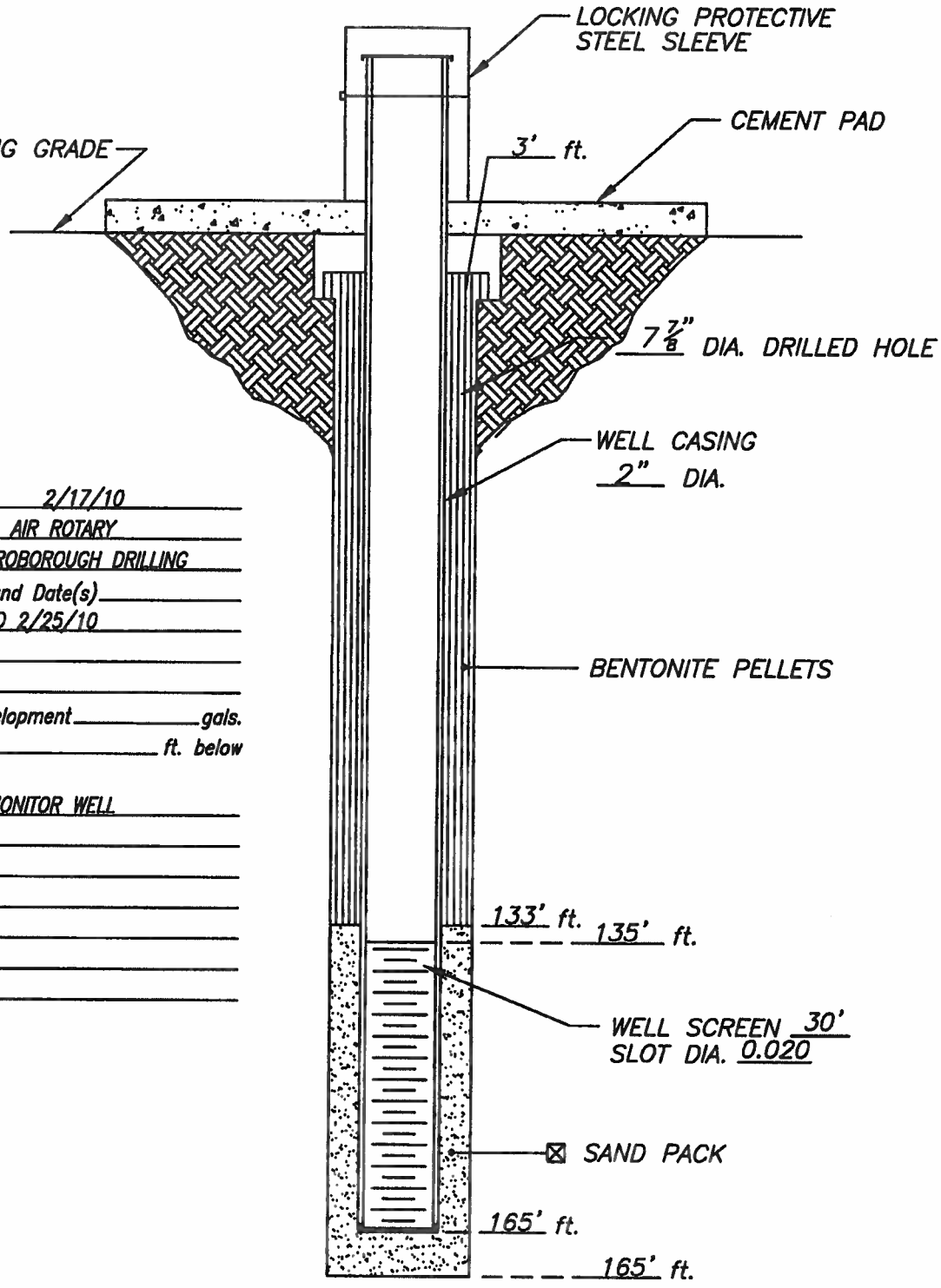
Installation Date(s) 2/17/10
Drilling Method AIR ROTARY
Drilling Contractor SCROBOROUGH DRILLING
Development Technique(s) and Date(s)
HAND BAILED 2/25/10

Water Removed During Development _____ gals.
Static Depth to Water _____ ft. below Ground Level
Well Purpose MONITOR WELL

Remarks

DATE: 2/19/10	CLIENT: CELERO ENERGY II, LLC	WELL NO.
TETRA TECH, INC. MIDLAND, TEXAS	PROJECT: ROCK QUEEN TRACT 11 TB	MW-2
	LOCATION: CHAVES COUNTY, NEW MEXICO	
	115-8403131	

WELL CONSTRUCTION LOG



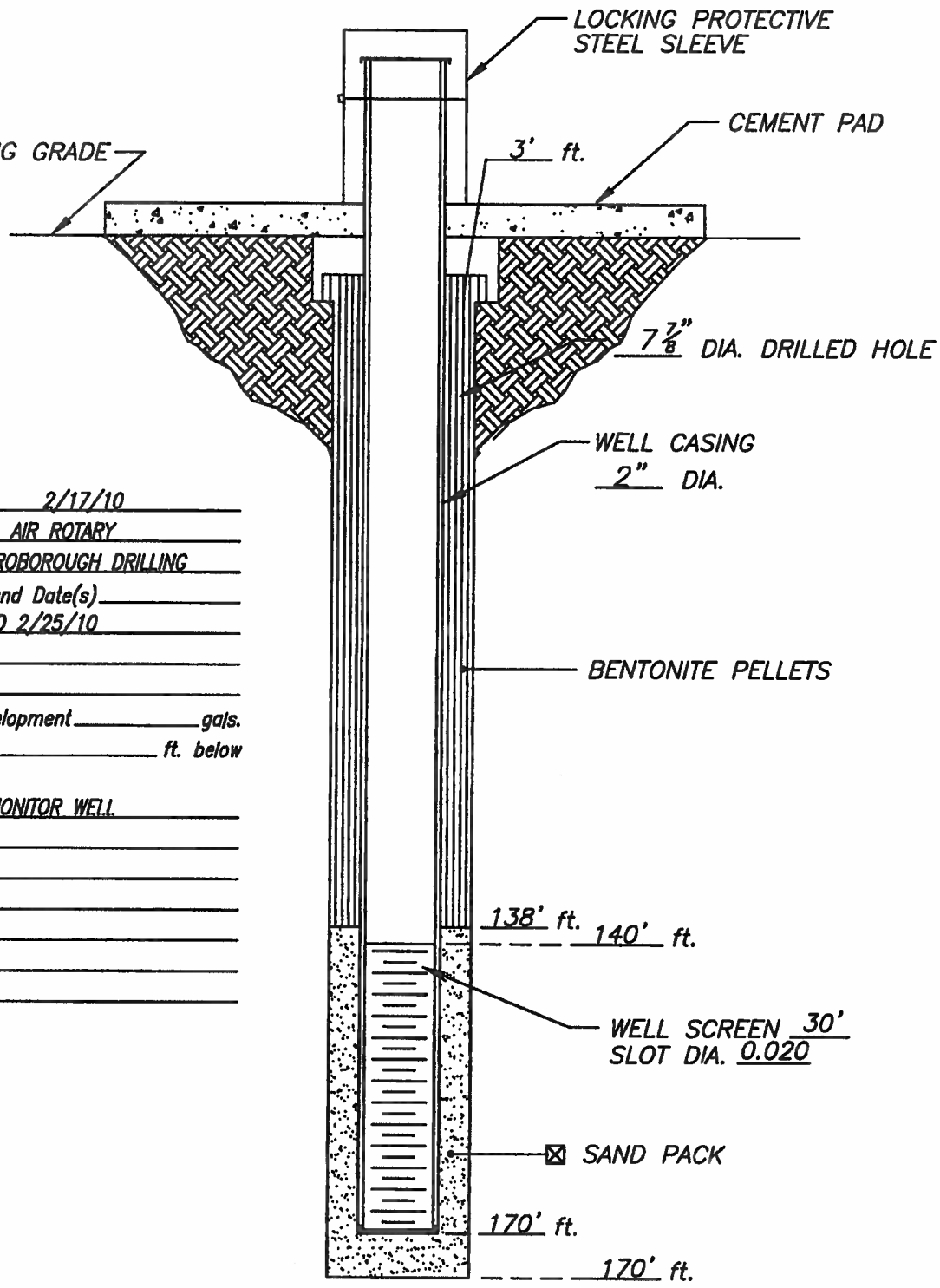
Installation Date(s) 2/17/10
Drilling Method AIR ROTARY
Drilling Contractor SCROBOROUGH DRILLING
Development Technique(s) and Date(s)
HAND BAILED 2/25/10

Water Removed During Development _____ gals.
Static Depth to Water _____ ft. below Ground Level
Well Purpose MONITOR WELL

Remarks

DATE: 2/19/10	CLIENT: CELERO ENERGY II, LLC	WELL NO.
TETRA TECH, INC. MIDLAND, TEXAS	PROJECT: ROCK QUEEN TRACT 11 TB	MW-3
	LOCATION: CHAVES COUNTY, NEW MEXICO	
	115-6403131	

WELL CONSTRUCTION LOG



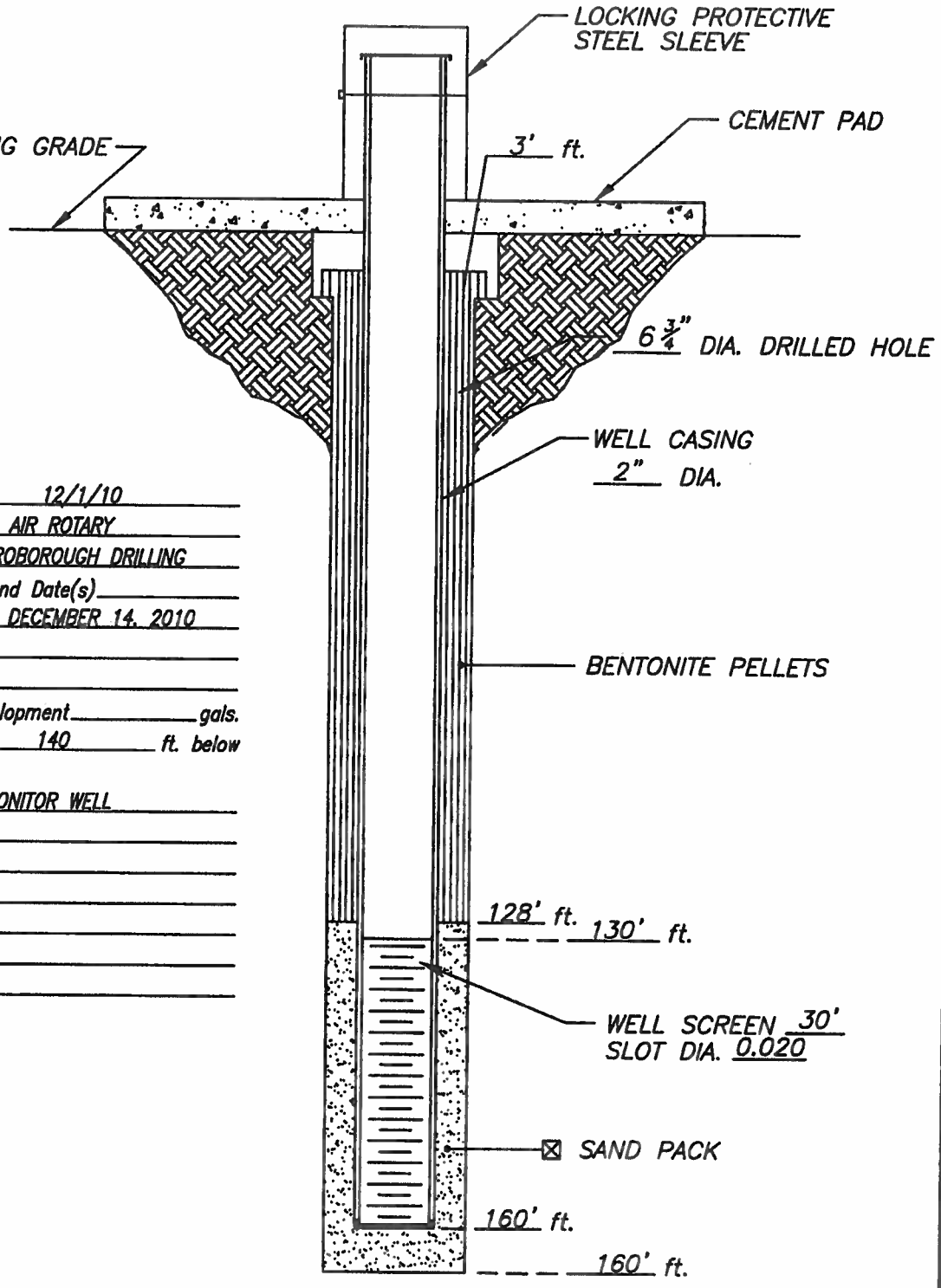
Installation Date(s) 2/17/10
Drilling Method AIR ROTARY
Drilling Contractor SCROBOROUGH DRILLING
Development Technique(s) and Date(s)
HAND BAILED 2/25/10

Water Removed During Development _____ gals.
Static Depth to Water _____ ft. below Ground Level
Well Purpose MONITOR WELL

Remarks

DATE: 2/19/10	CLIENT: CELERO ENERGY II, LLC	WELL NO.
TETRA TECH, INC. MIDLAND, TEXAS	PROJECT: ROCK QUEEN TRACT 11 TB	MW-4
	LOCATION: CHAVES COUNTY, NEW MEXICO	
	115-8403131	

WELL CONSTRUCTION LOG



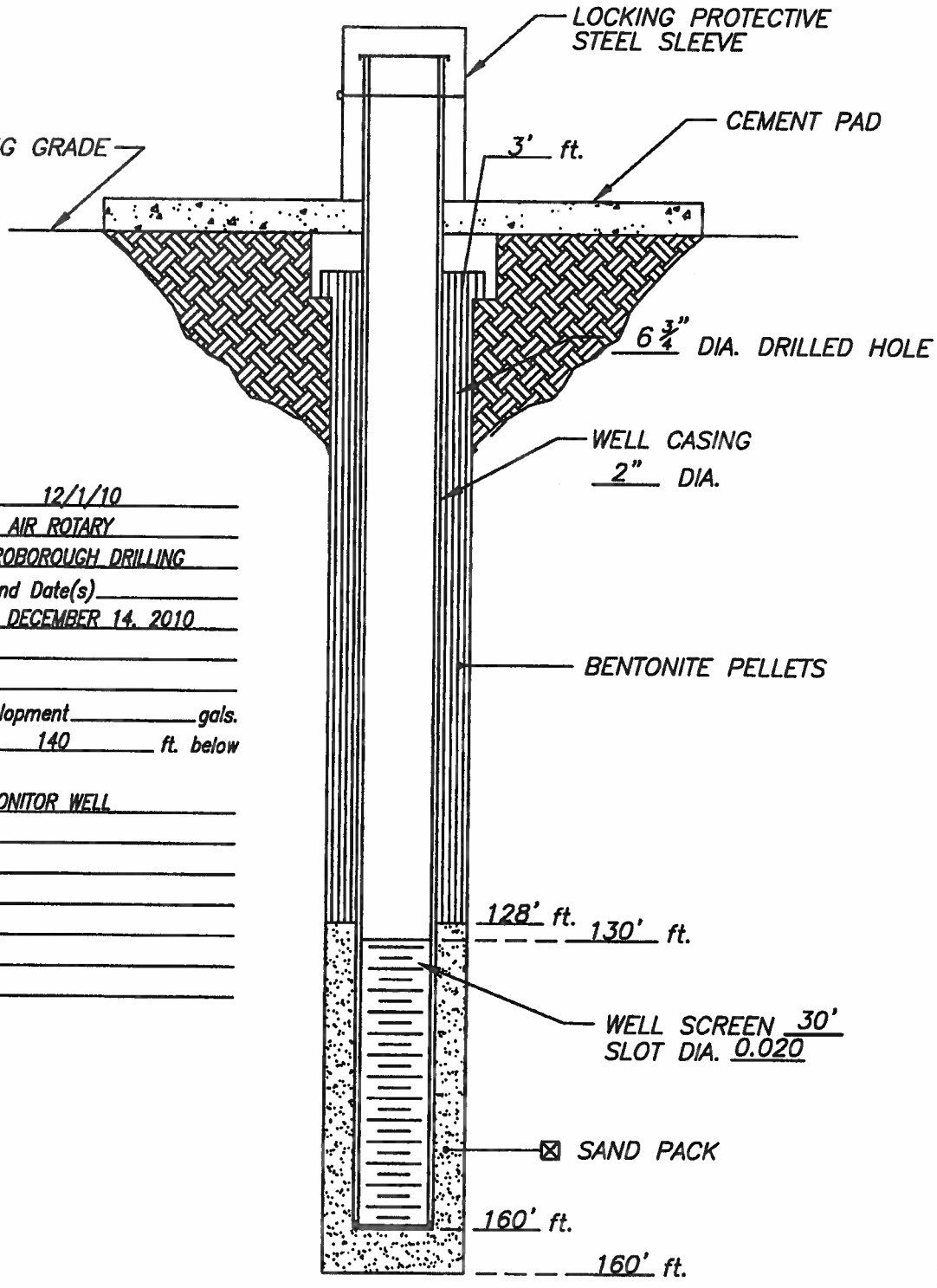
Installation Date(s) 12/1/10
Drilling Method AIR ROTARY
Drilling Contractor SCROBOROUGH DRILLING
Development Technique(s) and Date(s)
HANDBAILED ON DECEMBER 14, 2010

Water Removed During Development _____ gals.
Static Depth to Water 140 ft. below Ground Level
Well Purpose MONITOR WELL

Remarks

DATE: 12/1/10	CLIENT: CELERO ENERGY II, LLC	WELL NO.
TETRA TECH, INC. MIDLAND, TEXAS	PROJECT: ROCK QUEEN TRACT 11 TB	MW-5
	LOCATION: CHAVES COUNTY, NEW MEXICO	
	115-6403131	

WELL CONSTRUCTION LOG



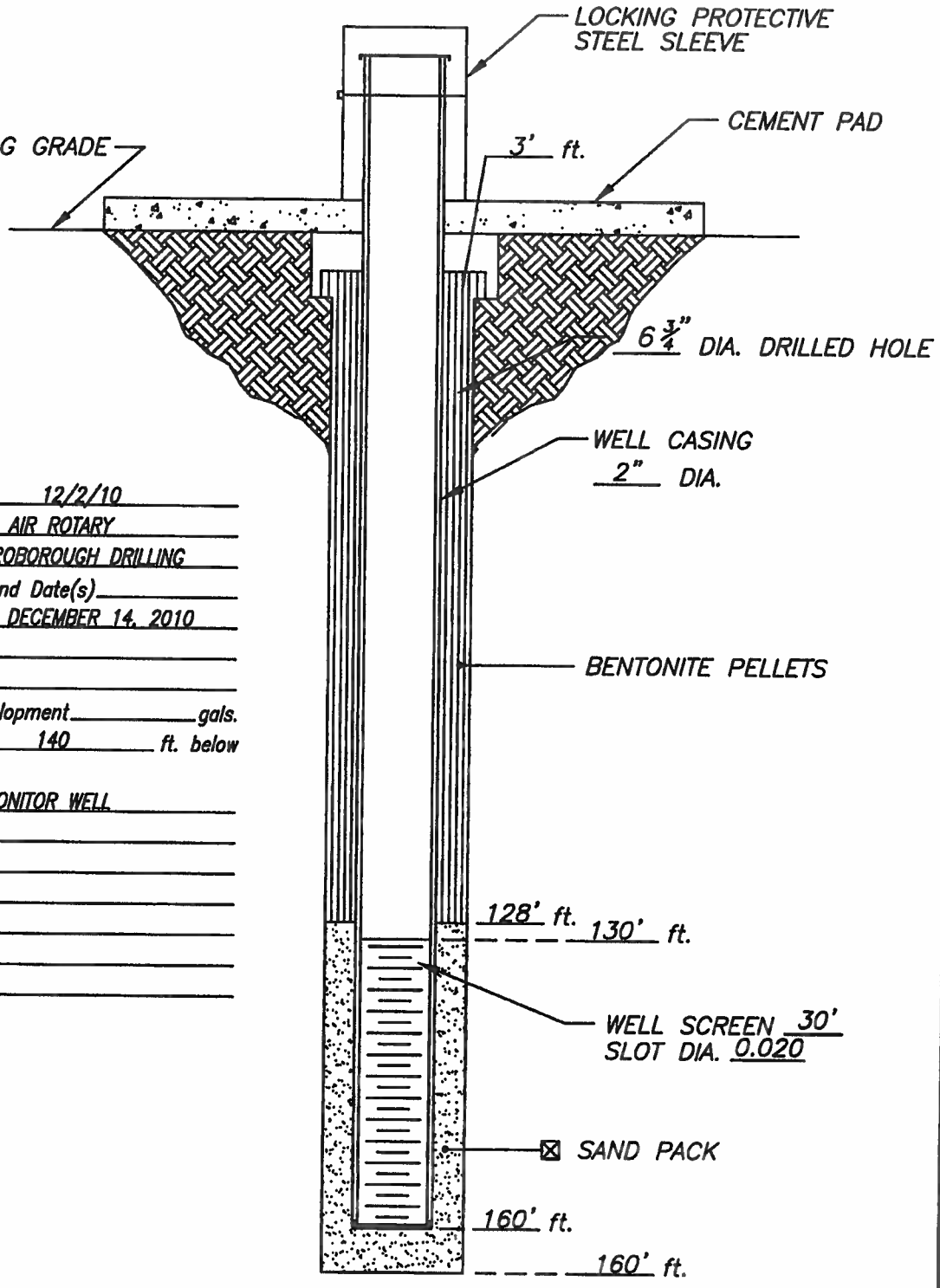
Installation Date(s) 12/1/10
Drilling Method AIR ROTARY
Drilling Contractor SCROBOROUGH DRILLING
Development Technique(s) and Date(s)
HANDBAILED ON DECEMBER 14, 2010

Water Removed During Development ____ gals.
Static Depth to Water 140 ft. below Ground Level
Well Purpose MONITOR WELL

Remarks

DATE: 12/1/10	CLIENT: CELERO ENERGY II, LLC	WELL NO.
TETRA TECH, INC. MIDLAND, TEXAS	PROJECT: ROCK QUEEN TRACT 11 TB	MW-6
	LOCATION: CHAVES COUNTY, NEW MEXICO	
	115-8403131	

WELL CONSTRUCTION LOG



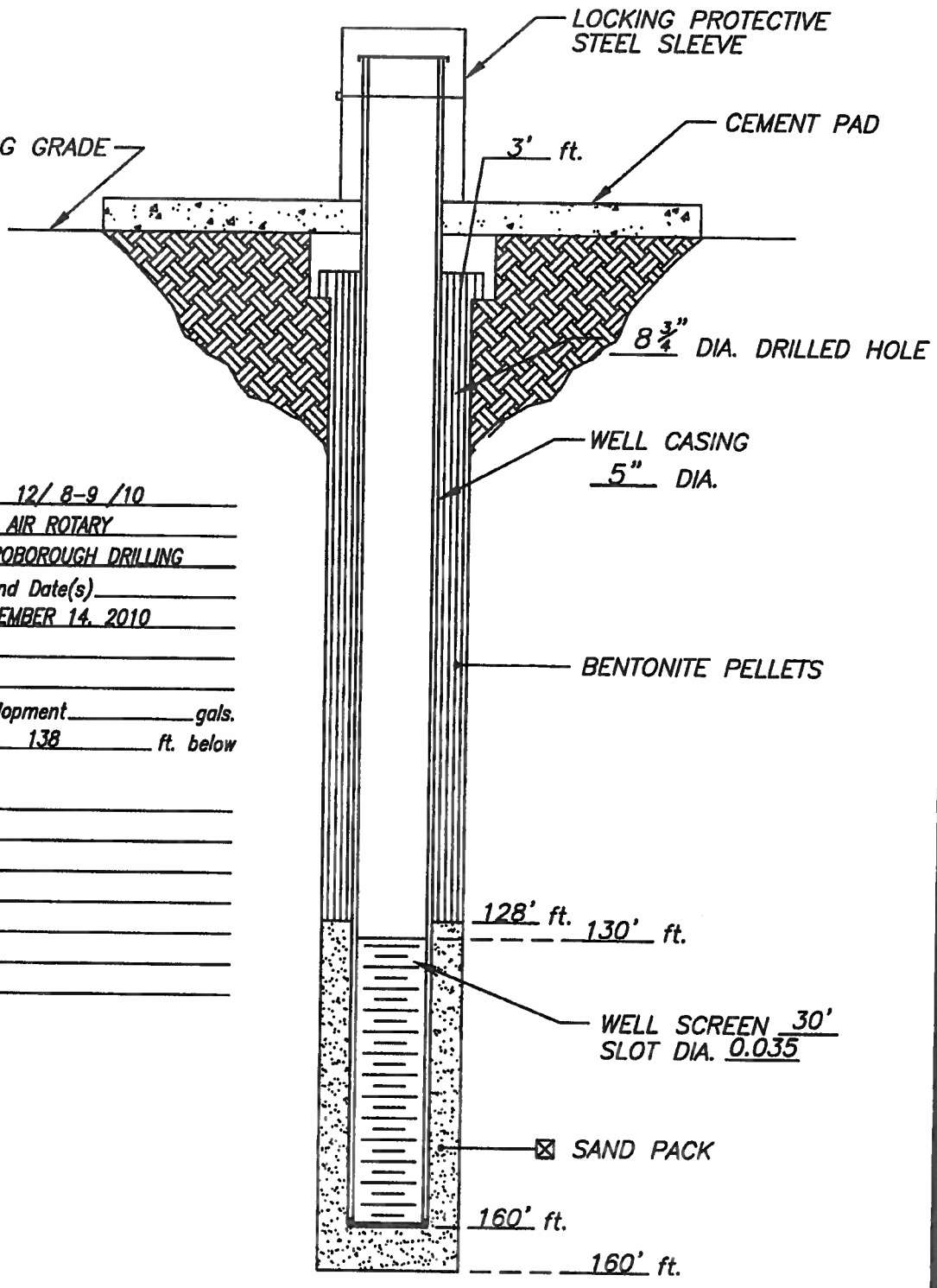
Installation Date(s) 12/2/10
Drilling Method AIR ROTARY
Drilling Contractor SCROBOROUGH DRILLING
Development Technique(s) and Date(s)
HANDBAILED ON DECEMBER 14, 2010

Water Removed During Development ____ gals.
Static Depth to Water 140 ft. below Ground Level
Well Purpose MONITOR WELL

Remarks

DATE: 12/2/10	CLIENT: CELERO ENERGY II, LLC	WELL NO.
TETRA TECH, INC. MIDLAND, TEXAS	PROJECT: ROCK QUEEN TRACT 11 TB	MW-7
	LOCATION: CHAVES COUNTY, NEW MEXICO	
	115-8403131	

WELL CONSTRUCTION LOG



Installation Date(s) 12/ 8-9 /10
Drilling Method AIR ROTARY
Drilling Contractor SCROBOROUGH DRILLING
Development Technique(s) and Date(s)
HANDBAILED ON DECEMBER 14, 2010

Water Removed During Development ____ gals.
Static Depth to Water 138 ft. below Ground Level
Well Purpose

Remarks

DATE: 12/10/10 TETRA TECH, INC. MIDLAND, TEXAS	CLIENT: CELERO ENERGY II, LLC PROJECT: ROCK QUEEN TRACT 11 TB LOCATION: CHAVES COUNTY, NEW MEXICO 115-8403131	WELL NO. RW-1

APPENDIX C
LABORATORY ANALYSIS

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBENC: 237019 **HUB:** 1752439743100-86536 **DBE:** VN 20657
NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX LELAP-02003 Kansas E-10317 **El Paso:** T104704221-08-TX LELAP-02002 **Midland:** T104704392-08-TX

Analytical and Quality Control Report

Jeff Kindley
Tetra Tech
1910 N. Big Spring Street
Midland, TX, 79705

Report Date: February 7, 2011

Work Order: 11012132

Project Location: Chavez County, NM
Project Name: Celero/Rock Queen #11
Project Number: 115-6403131A

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
255912	MW-1	water	2011-01-20	17:35	2011-01-21
255913	MW-2	water	2011-01-20	17:40	2011-01-21
255914	MW-3	water	2011-01-20	17:20	2011-01-21
255915	MW-4	water	2011-01-20	17:00	2011-01-21
255916	MW-5	water	2011-01-20	17:50	2011-01-21
255917	MW-6	water	2011-01-20	17:28	2011-01-21
255918	MW-7	water	2011-01-20	17:10	2011-01-21

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 22 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Samples for project Celero/Rock Queen #11 were received by TraceAnalysis, Inc. on 2011-01-21 and assigned to work order 11012132. Samples for work order 11012132 were received intact without headspace and at a temperature of 12.3 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	66157	2011-01-24 at 11:00	77124	2011-01-24 at 13:17
Chloride (IC)	E 300.0	66366	2011-02-01 at 11:03	77369	2011-02-01 at 17:36
Chloride (IC)	E 300.0	66367	2011-02-01 at 11:10	77370	2011-02-01 at 22:23
Chloride (IC)	E 300.0	66370	2011-02-02 at 13:00	77371	2011-02-02 at 17:19
SO4 (IC)	E 300.0	66370	2011-02-02 at 13:00	77371	2011-02-02 at 17:19
SO4 (IC)	E 300.0	66413	2011-02-06 at 10:00	77426	2011-02-06 at 12:17
TDS	SM 2540C	66142	2011-01-24 at 11:30	77255	2011-01-31 at 10:09

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 11012132 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 255912 - MW-1

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	77124	Date Analyzed:	2011-01-24	Analyzed By:	AG
Prep Batch:	66157	Sample Preparation:	2011-01-24	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.111	mg/L	1	0.100	111	67.8 - 126
4-Bromofluorobenzene (4-BFB)		0.103	mg/L	1	0.100	103	51.1 - 128

Sample: 255912 - MW-1

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	77369	Date Analyzed:	2011-02-01	Analyzed By:	PG
Prep Batch:	66366	Sample Preparation:	2011-02-01	Prepared By:	PG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**122000**	mg/L	10000	2.50

Sample: 255912 - MW-1

Laboratory:	Lubbock				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	77371	Date Analyzed:	2011-02-02	Analyzed By:	PG
Prep Batch:	66370	Sample Preparation:	2011-02-02	Prepared By:	PG

Parameter	Flag	RL Result	Units	Dilution	RL
Sulfate		**2270**	mg/L	100	2.50

Sample: 255912 - MW-1

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	77255	Date Analyzed:	2011-01-31	Analyzed By:	AR
Prep Batch:	66142	Sample Preparation:	2011-01-25	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Total Dissolved Solids		**210000**		mg/L	100	10.0

Sample: 255913 - MW-2

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	77124	Date Analyzed:	2011-01-24	Analyzed By:	AG
Prep Batch:	66157	Sample Preparation:	2011-01-24	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
Benzene		<0.00100		mg/L	1	0.00100
Toluene		<0.00100		mg/L	1	0.00100
Ethylbenzene		<0.00100		mg/L	1	0.00100
Xylene		<0.00100		mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.113	mg/L	1	0.100	113	67.8 - 126
4-Bromofluorobenzene (4-BFB)		0.100	mg/L	1	0.100	100	51.1 - 128

Sample: 255913 - MW-2

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	77369	Date Analyzed:	2011-02-01	Analyzed By:	PG
Prep Batch:	66366	Sample Preparation:	2011-02-01	Prepared By:	PG

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**118000**		mg/L	10000	2.50

Sample: 255913 - MW-2

Laboratory:	Lubbock				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	77371	Date Analyzed:	2011-02-02	Analyzed By:	PG
Prep Batch:	66370	Sample Preparation:	2011-02-02	Prepared By:	PG

Parameter	Flag	RL Result	Units	Dilution	RL
Sulfate		**2060**	mg/L	100	2.50

Sample: 255913 - MW-2

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	77255	Date Analyzed:	2011-01-31	Analyzed By:	AR
Prep Batch:	66142	Sample Preparation:	2011-01-25	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		**220000**	mg/L	100	10.0

Sample: 255914 - MW-3

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	77124	Date Analyzed:	2011-01-24	Analyzed By:	AG
Prep Batch:	66157	Sample Preparation:	2011-01-24	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.109	mg/L	1	0.100	109	67.8 - 126
4-Bromofluorobenzene (4-BFB)		0.0986	mg/L	1	0.100	99	51.1 - 128

Sample: 255914 - MW-3

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	77369	Date Analyzed:	2011-02-01	Analyzed By:	PG
Prep Batch:	66366	Sample Preparation:	2011-02-01	Prepared By:	PG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**50100**	mg/L	10000	2.50

Sample: 255914 - MW-3

Laboratory:	Lubbock				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	77371	Date Analyzed:	2011-02-02	Analyzed By:	PG
Prep Batch:	66370	Sample Preparation:	2011-02-02	Prepared By:	PG

Parameter	Flag	RL Result	Units	Dilution	RL
Sulfate		**1170**	mg/L	100	2.50

Sample: 255914 - MW-3

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	77255	Date Analyzed:	2011-01-31	Analyzed By:	AR
Prep Batch:	66142	Sample Preparation:	2011-01-25	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		**103000**	mg/L	100	10.0

Sample: 255915 - MW-4

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	77124	Date Analyzed:	2011-01-24	Analyzed By:	AG
Prep Batch:	66157	Sample Preparation:	2011-01-24	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100

continued ...

sample 255915 continued ...

Parameter	Flag	Result	RL	Units	Dilution	RL
Ethylbenzene		<0.00100		mg/L	1	0.00100
Xylene		<0.00100		mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.114	mg/L	1	0.100	114	67.8 - 126
4-Bromofluorobenzene (4-BFB)		0.102	mg/L	1	0.100	102	51.1 - 128

Sample: 255915 - MW-4

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	77369	Date Analyzed:	2011-02-01	Analyzed By:	PG
Prep Batch:	66366	Sample Preparation:	2011-02-01	Prepared By:	PG

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**109000**		mg/L	10000	2.50

Sample: 255915 - MW-4

Laboratory:	Lubbock				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	77371	Date Analyzed:	2011-02-02	Analyzed By:	PG
Prep Batch:	66370	Sample Preparation:	2011-02-02	Prepared By:	PG

Parameter	Flag	Result	RL	Units	Dilution	RL
Sulfate		**1850**		mg/L	100	2.50

Sample: 255915 - MW-4

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	77255	Date Analyzed:	2011-01-31	Analyzed By:	AR
Prep Batch:	66142	Sample Preparation:	2011-01-25	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Total Dissolved Solids		**194000**		mg/L	100	10.0

Sample: 255916 - MW-5

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	77124	Date Analyzed:	2011-01-24	Analyzed By:	AG
Prep Batch:	66157	Sample Preparation:	2011-01-24	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.107	mg/L	1	0.100	107	67.8 - 126
4-Bromofluorobenzene (4-BFB)		0.0986	mg/L	1	0.100	99	51.1 - 128

Sample: 255916 - MW-5

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	77370	Date Analyzed:	2011-02-01	Analyzed By:	PG
Prep Batch:	66367	Sample Preparation:	2011-02-01	Prepared By:	PG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**56300**	mg/L	10000	2.50

Sample: 255916 - MW-5

Laboratory:	Lubbock				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	77371	Date Analyzed:	2011-02-02	Analyzed By:	PG
Prep Batch:	66370	Sample Preparation:	2011-02-02	Prepared By:	PG

Parameter	Flag	RL Result	Units	Dilution	RL
Sulfate		**939**	mg/L	100	2.50

Sample: 255916 - MW-5

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	77255	Date Analyzed:	2011-01-31	Analyzed By:	AR
Prep Batch:	66142	Sample Preparation:	2011-01-25	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		**109000**	mg/L	100	10.0

Sample: 255917 - MW-6

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	77124	Date Analyzed:	2011-01-24	Analyzed By:	AG
Prep Batch:	66157	Sample Preparation:	2011-01-24	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.112	mg/L	1	0.100	112	67.8 - 126
4-Bromofluorobenzene (4-BFB)		0.0999	mg/L	1	0.100	100	51.1 - 128

Sample: 255917 - MW-6

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	77371	Date Analyzed:	2011-02-02	Analyzed By:	PG
Prep Batch:	66370	Sample Preparation:	2011-02-02	Prepared By:	PG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**25800**	mg/L	10000	2.50

Sample: 255917 - MW-6

Laboratory:	Lubbock				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	77426	Date Analyzed:	2011-02-06	Analyzed By:	PG
Prep Batch:	66413	Sample Preparation:	2011-02-06	Prepared By:	PG

Parameter	Flag	RL Result	Units	Dilution	RL
Sulfate		**378**	mg/L	50	2.50

Sample: 255917 - MW-6

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	77255	Date Analyzed:	2011-01-31	Analyzed By:	AR
Prep Batch:	66142	Sample Preparation:	2011-01-25	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		**56700**	mg/L	100	10.0

Sample: 255918 - MW-7

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	77124	Date Analyzed:	2011-01-24	Analyzed By:	AG
Prep Batch:	66157	Sample Preparation:	2011-01-24	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.114	mg/L	1	0.100	114	67.8 - 126
4-Bromofluorobenzene (4-BFB)		0.104	mg/L	1	0.100	104	51.1 - 128

Sample: 255918 - MW-7

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	77370	Date Analyzed:	2011-02-01	Analyzed By:	PG
Prep Batch:	66367	Sample Preparation:	2011-02-01	Prepared By:	PG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**994**	mg/L	100	2.50

Sample: 255918 - MW-7

Laboratory:	Lubbock				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	77371	Date Analyzed:	2011-02-02	Analyzed By:	PG
Prep Batch:	66370	Sample Preparation:	2011-02-02	Prepared By:	PG

Parameter	Flag	RL Result	Units	Dilution	RL
Sulfate		**77.0**	mg/L	5	2.50

Sample: 255918 - MW-7

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	77255	Date Analyzed:	2011-01-31	Analyzed By:	AR
Prep Batch:	66142	Sample Preparation:	2011-01-25	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		**2110**	mg/L	5	10.0

Method Blank (1) QC Batch: 77124

QC Batch:	77124	Date Analyzed:	2011-01-24	Analyzed By:	AG
Prep Batch:	66157	QC Preparation:	2011-01-24	Prepared By:	AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000600	mg/L	0.001
Toluene		<0.000600	mg/L	0.001
Ethylbenzene		<0.000800	mg/L	0.001

continued ...

method blank continued ...

Parameter	Flag	MDL Result	Units	RL
Xylene		<0.000767	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.115	mg/L	1	0.100	115	70.2 - 118
4-Bromofluorobenzene (4-BFB)		0.111	mg/L	1	0.100	111	47.3 - 116

Method Blank (1) QC Batch: 77255

QC Batch: 77255 Date Analyzed: 2011-01-31 Analyzed By: AR
Prep Batch: 66142 QC Preparation: 2011-01-24 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Total Dissolved Solids		10.0	mg/L	10

Method Blank (1) QC Batch: 77369

QC Batch: 77369 Date Analyzed: 2011-02-01 Analyzed By: PG
Prep Batch: 66366 QC Preparation: 2011-02-01 Prepared By: PG

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.0142	mg/L	2.5

Method Blank (1) QC Batch: 77370

QC Batch: 77370 Date Analyzed: 2011-02-01 Analyzed By: PG
Prep Batch: 66367 QC Preparation: 2011-02-01 Prepared By: PG

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.0142	mg/L	2.5

Method Blank (1) QC Batch: 77371

QC Batch: 77371 Date Analyzed: 2011-02-02 Analyzed By: PG
Prep Batch: 66370 QC Preparation: 2011-02-02 Prepared By: PG

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.0142	mg/L	2.5

Method Blank (1) QC Batch: 77371

QC Batch: 77371 Date Analyzed: 2011-02-02 Analyzed By: PG
Prep Batch: 66370 QC Preparation: 2011-02-02 Prepared By: PG

Parameter	Flag	MDL Result	Units	RL
Sulfate		<0.126	mg/L	2.5

Method Blank (1) QC Batch: 77426

QC Batch: 77426 Date Analyzed: 2011-02-06 Analyzed By: PG
Prep Batch: 66413 QC Preparation: 2011-02-06 Prepared By: PG

Parameter	Flag	MDL Result	Units	RL
Sulfate		<0.126	mg/L	2.5

Duplicates (1) Duplicated Sample: 255921

QC Batch: 77255 Date Analyzed: 2011-01-31 Analyzed By: AR
Prep Batch: 66142 QC Preparation: 2011-01-24 Prepared By: AR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	147000	134000	mg/L	100	9	10

Laboratory Control Spike (LCS-1)

QC Batch: 77124 Date Analyzed: 2011-01-24 Analyzed By: AG
Prep Batch: 66157 QC Preparation: 2011-01-24 Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0885	mg/L	1	0.100	<0.000600	88	82.9 - 118
Toluene	0.0989	mg/L	1	0.100	<0.000600	99	82.7 - 117
Ethylbenzene	0.102	mg/L	1	0.100	<0.000800	102	78.8 - 116

continued ...

control spikes continued ...

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Xylene	0.308	mg/L	1	0.300	<0.000767	103	79.3 - 116

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.0906	mg/L	1	0.100	<0.000600	91	82.9 - 118	2	20
Toluene	0.102	mg/L	1	0.100	<0.000600	102	82.7 - 117	3	20
Ethylbenzene	0.106	mg/L	1	0.100	<0.000800	106	78.8 - 116	4	20
Xylene	0.320	mg/L	1	0.300	<0.000767	107	79.3 - 116	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.110	0.111	mg/L	1	0.100	110	111	67.3 - 113
4-Bromofluorobenzene (4-BFB)	0.110	0.113	mg/L	1	0.100	110	113	68.2 - 134

Laboratory Control Spike (LCS-1)

QC Batch: 77255 | Date Analyzed: 2011-01-31 | Analyzed By: AR
Prep Batch: 66142 | QC Preparation: 2011-01-24 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Dissolved Solids	1020	mg/L	1	1000	<9.75	102	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Dissolved Solids	1020	mg/L	1	1000	<9.75	102	90 - 110	0	10

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 77369 | Date Analyzed: 2011-02-01 | Analyzed By: PG
Prep Batch: 66366 | QC Preparation: 2011-02-01 | Prepared By: PG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	24.3	mg/L	1	25.0	<0.0142	97	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	24.1	mg/L	1	25.0	<0.0142	96	90 - 110	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 77370 Date Analyzed: 2011-02-01 Analyzed By: PG
Prep Batch: 66367 QC Preparation: 2011-02-01 Prepared By: PG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	23.5	mg/L	1	25.0	<0.0142	94	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	23.6	mg/L	1	25.0	<0.0142	94	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 77371 Date Analyzed: 2011-02-02 Analyzed By: PG
Prep Batch: 66370 QC Preparation: 2011-02-02 Prepared By: PG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	24.1	mg/L	1	25.0	<0.0142	96	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	24.1	mg/L	1	25.0	<0.0142	96	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 77371 Date Analyzed: 2011-02-02 Analyzed By: PG
Prep Batch: 66370 QC Preparation: 2011-02-02 Prepared By: PG

continued ...

control spikes continued ...

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate	24.5	mg/L	1	25.0	<0.126	98	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate	24.7	mg/L	1	25.0	<0.126	99	90 - 110	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 77426 | Date Analyzed: 2011-02-06 | Analyzed By: PG
Prep Batch: 66413 | QC Preparation: 2011-02-06 | Prepared By: PG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate	24.7	mg/L	1	25.0	<0.126	99	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate	24.7	mg/L	1	25.0	<0.126	99	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 255921

QC Batch: 77124 | Date Analyzed: 2011-01-24 | Analyzed By: AG
Prep Batch: 66157 | QC Preparation: 2011-01-24 | Prepared By: AG

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	[1]	0.0669	mg/L	1	0.100	0.0121	55	77.9 - 114
Toluene	[2]	0.0633	mg/L	1	0.100	0.0066	57	78.3 - 111
Ethylbenzene	[3]	0.0573	mg/L	1	0.100	<0.000800	57	75.3 - 110
Xylene	[4]	0.145	mg/L	1	0.300	<0.000767	48	75.7 - 109

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

[1]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[2]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[3]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[4]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	[5]	0.0811	mg/L	1	0.100	0.0121	69	77.9 - 114	19	20
Toluene	[6]	0.0774	mg/L	1	0.100	0.0066	71	78.3 - 111	20	20
Ethylbenzene	[7]	0.0693	mg/L	1	0.100	<0.000800	69	75.3 - 110	19	20
Xylene	[8]	0.180	mg/L	1	0.300	<0.000767	60	75.7 - 109	22	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	[9]	0.0705	0.0437	mg/L	1	0.1	70	44	68.3 - 107
4-Bromofluorobenzene (4-BFB)	[10]	0.0736	0.0449	mg/L	1	0.1	74	45	60.1 - 135

Matrix Spike (MS-1) Spiked Sample: 255915

QC Batch: 77369 | Date Analyzed: 2011-02-01 | Analyzed By: PG
Prep Batch: 66366 | QC Preparation: 2011-02-01 | Prepared By: PG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	369000	mg/L	10000	250000	109000	104	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	370000	mg/L	10000	250000	109000	104	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 255918

QC Batch: 77370 | Date Analyzed: 2011-02-01 | Analyzed By: PG
Prep Batch: 66367 | QC Preparation: 2011-02-01 | Prepared By: PG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	3610	mg/L	100	2500	994	105	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

[5]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[6]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[7]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[8]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[9]Surrogate out due to peak interference.
[10]Surrogate out due to peak interference.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	3620	mg/L	100	2500	994	105	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 255921

QC Batch: 77371 Date Analyzed: 2011-02-02 Analyzed By: PG
Prep Batch: 66370 QC Preparation: 2011-02-02 Prepared By: PG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	341000	mg/L	10000	250000	81200	104	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	341000	mg/L	10000	250000	81200	104	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 255921

QC Batch: 77371 Date Analyzed: 2011-02-02 Analyzed By: PG
Prep Batch: 66370 QC Preparation: 2011-02-02 Prepared By: PG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate	246000	mg/L	10000	250000	<1260	98	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate	244000	mg/L	10000	250000	<1260	98	90 - 110	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 255931

QC Batch: 77426 Date Analyzed: 2011-02-06 Analyzed By: PG
Prep Batch: 66413 QC Preparation: 2011-02-06 Prepared By: PG

continued ...

matrix spikes continued ...

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate	1780	mg/L	50	1250	478	104	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate	1790	mg/L	50	1250	478	105	90 - 110	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Standard (CCV-2)

QC Batch: 77124 Date Analyzed: 2011-01-24 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0858	86	80 - 120	2011-01-24
Toluene		mg/L	0.100	0.0989	99	80 - 120	2011-01-24
Ethylbenzene		mg/L	0.100	0.103	103	80 - 120	2011-01-24
Xylene		mg/L	0.300	0.308	103	80 - 120	2011-01-24

Standard (CCV-3)

QC Batch: 77124 Date Analyzed: 2011-01-24 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0820	82	80 - 120	2011-01-24
Toluene		mg/L	0.100	0.0952	95	80 - 120	2011-01-24
Ethylbenzene		mg/L	0.100	0.0976	98	80 - 120	2011-01-24
Xylene		mg/L	0.300	0.294	98	80 - 120	2011-01-24

Standard (CCV-1)

QC Batch: 77369 Date Analyzed: 2011-02-01 Analyzed By: PG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	25.0	23.6	94	90 - 110	2011-02-01

Standard (CCV-2)

QC Batch: 77369 Date Analyzed: 2011-02-01 Analyzed By: PG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	25.0	23.5	94	90 - 110	2011-02-01

Standard (CCV-1)

QC Batch: 77370 Date Analyzed: 2011-02-01 Analyzed By: PG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	25.0	23.5	94	90 - 110	2011-02-01

Standard (CCV-2)

QC Batch: 77370 Date Analyzed: 2011-02-01 Analyzed By: PG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	25.0	23.6	94	90 - 110	2011-02-01

Standard (CCV-1)

QC Batch: 77371 Date Analyzed: 2011-02-02 Analyzed By: PG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	25.0	24.5	98	90 - 110	2011-02-02

Standard (CCV-1)

QC Batch: 77371 Date Analyzed: 2011-02-02 Analyzed By: PG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		mg/L	25.0	25.0	100	90 - 110	2011-02-02

Standard (CCV-2)

QC Batch: 77371 Date Analyzed: 2011-02-02 Analyzed By: PG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	25.0	24.0	96	90 - 110	2011-02-02

Standard (CCV-2)

QC Batch: 77371 Date Analyzed: 2011-02-02 Analyzed By: PG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		mg/L	25.0	24.5	98	90 - 110	2011-02-02

Standard (CCV-1)

QC Batch: 77426 Date Analyzed: 2011-02-06 Analyzed By: PG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		mg/L	25.0	25.2	101	90 - 110	2011-02-06

Standard (CCV-2)

QC Batch: 77426 Date Analyzed: 2011-02-06 Analyzed By: PG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		mg/L	25.0	24.7	99	90 - 110	2011-02-06

xWO #: 11012132

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 1

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: [illegible]

SITE MANAGER: [illegible]

PROJECT NO.: 115-6403131

PROJECT NAME: [illegible]

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE	TIME	MATRIX	COM	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations pH D	
255	1/20	1735	W		X	MW-1		N	X		X	X	X												X				X	X
913		1740																												
914		[illegible]				MW-3																								
915		1720				MW-4																								
916		[illegible]																												
917		1728																												
918		1710				MW-7																								

RELINQUISHED (Signature) [signature] Date: 1/24/11 Time: [illegible]

RECEIVED (Signature) [signature] Date: 1/21/11 Time: 1315

RELINQUISHED (Signature)

RECEIVED (Signature) Brenda Ward LSK 951497 1/25/11 TIME: 10 10

Results by:

RUSH Charges Authorized: Yes No

12.3 c intact   x Midland - BTEX & TDS   x Lubbock - Chlorides

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
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5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Jeff Kindley
Tetra Tech
1910 N. Big Spring Street
Midland, TX, 79705

Report Date: April 27, 2011

Work Order: 11041524

Project Location: Chavez Co., NM
Project Name: Celero/Rock Queen Unit Tract #11
Project Number: 115-6403131

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
263884	MW-1	water	2011-04-14	13:40	2011-04-15
263885	MW-2	water	2011-04-14	13:25	2011-04-15
263886	MW-3	water	2011-04-14	12:30	2011-04-15
263887	MW-4	water	2011-04-14	13:55	2011-04-15
263888	MW-5	water	2011-04-14	13:10	2011-04-15
263889	MW-6	water	2011-04-14	12:50	2011-04-15
263890	MW-7	water	2011-04-14	12:15	2011-04-15

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Michael Abel

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Report Contents

Case Narrative

Samples for project Celero/Rock Queen Unit Tract #11 were received by TraceAnalysis, Inc. on 2011-04-15 and assigned to work order 11041524. Samples for work order 11041524 were received intact without headspace and at a temperature of 0.6 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	68257	2011-04-18 at 08:51	80419	2011-04-18 at 08:51
Chloride (IC)	E 300.0	68355	2011-04-19 at 15:06	80546	2011-04-21 at 15:10
Chloride (IC)	E 300.0	68378	2011-04-21 at 11:03	80572	2011-04-22 at 11:04
SO4 (IC)	E 300.0	68355	2011-04-19 at 15:06	80546	2011-04-21 at 15:10
SO4 (IC)	E 300.0	68378	2011-04-21 at 11:03	80572	2011-04-22 at 11:04
TDS	SM 2540C	68386	2011-04-19 at 11:50	80661	2011-04-25 at 15:08
TDS	SM 2540C	68387	2011-04-20 at 11:51	80715	2011-04-26 at 13:47

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 11041524 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 263884 - MW-1

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	80419	Date Analyzed:	2011-04-18	Analyzed By:	ME
Prep Batch:	68257	Sample Preparation:	2011-04-18	Prepared By:	ME

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene		1	<0.00100	mg/L	1	0.00100
Toluene		1	<0.00100	mg/L	1	0.00100
Ethylbenzene		1	<0.00100	mg/L	1	0.00100
Xylene		1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1	0.0804	mg/L	1	0.100	80	67.8 - 129
4-Bromofluorobenzene (4-BFB)		1	0.0881	mg/L	1	0.100	88	51.1 - 128

Sample: 263884 - MW-1

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	80546	Date Analyzed:	2011-04-21	Analyzed By:	AR
Prep Batch:	68355	Sample Preparation:	2011-04-19	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		1	**57400**	mg/L	5000	2.50

Sample: 263884 - MW-1

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	80546	Date Analyzed:	2011-04-21	Analyzed By:	AR
Prep Batch:	68355	Sample Preparation:	2011-04-19	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Sulfate		1	**1620**	mg/L	50	2.50

Sample: 263884 - MW-1

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	80661	Date Analyzed:	2011-04-25	Analyzed By:	AR
Prep Batch:	68386	Sample Preparation:	2011-04-19	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Total Dissolved Solids		1	**96800**	mg/L	100	10.0

Sample: 263885 - MW-2

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	80419	Date Analyzed:	2011-04-18	Analyzed By:	ME
Prep Batch:	68257	Sample Preparation:	2011-04-18	Prepared By:	ME

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene		1	<0.00100	mg/L	1	0.00100
Toluene		1	<0.00100	mg/L	1	0.00100
Ethylbenzene		1	<0.00100	mg/L	1	0.00100
Xylene		1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1	0.0809	mg/L	1	0.100	81	67.8 - 129
4-Bromofluorobenzene (4-BFB)		1	0.0914	mg/L	1	0.100	91	51.1 - 128

Sample: 263885 - MW-2

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	80546	Date Analyzed:	2011-04-21	Analyzed By:	AR
Prep Batch:	68355	Sample Preparation:	2011-04-19	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		1	**53300**	mg/L	5000	2.50

Sample: 263885 - MW-2

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	80546	Date Analyzed:	2011-04-21	Analyzed By:	AR
Prep Batch:	68355	Sample Preparation:	2011-04-19	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Sulfate		1	**1170**	mg/L	50	2.50

Sample: 263885 - MW-2

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	80661	Date Analyzed:	2011-04-25	Analyzed By:	AR
Prep Batch:	68386	Sample Preparation:	2011-04-19	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**84500**	mg/L	100	10.0

Sample: 263886 - MW-3

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	80419	Date Analyzed:	2011-04-18	Analyzed By:	ME
Prep Batch:	68257	Sample Preparation:	2011-04-18	Prepared By:	ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	<0.00100	mg/L	1	0.00100
Toluene		1	<0.00100	mg/L	1	0.00100
Ethylbenzene		1	<0.00100	mg/L	1	0.00100
Xylene		1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1	0.0907	mg/L	1	0.100	91	67.8 - 129
4-Bromofluorobenzene (4-BFB)		1	0.0963	mg/L	1	0.100	96	51.1 - 128

Sample: 263886 - MW-3

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	80546	Date Analyzed:	2011-04-21	Analyzed By:	AR
Prep Batch:	68355	Sample Preparation:	2011-04-19	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		1	**2880**	mg/L	100	2.50

Sample: 263886 - MW-3

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	80546	Date Analyzed:	2011-04-21	Analyzed By:	AR
Prep Batch:	68355	Sample Preparation:	2011-04-19	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Sulfate		1	**73.2**	mg/L	5	2.50

Sample: 263886 - MW-3

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	80715	Date Analyzed:	2011-04-26	Analyzed By:	AR
Prep Batch:	68387	Sample Preparation:	2011-04-20	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Total Dissolved Solids		1	**4440**	mg/L	5	10.0

Sample: 263887 - MW-4

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	80419	Date Analyzed:	2011-04-18	Analyzed By:	ME
Prep Batch:	68257	Sample Preparation:	2011-04-18	Prepared By:	ME

continued ...

sample 263887 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	<0.00100	mg/L	1	0.00100
Toluene		1	<0.00100	mg/L	1	0.00100
Ethylbenzene		1	<0.00100	mg/L	1	0.00100
Xylene		1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1	0.0868	mg/L	1	0.100	87	67.8 - 129
4-Bromofluorobenzene (4-BFB)		1	0.0990	mg/L	1	0.100	99	51.1 - 128

Sample: 263887 - MW-4

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	80572	Date Analyzed:	2011-04-22	Analyzed By:	AR
Prep Batch:	68378	Sample Preparation:	2011-04-21	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1	**12200**	mg/L	1000	2.50

Sample: 263887 - MW-4

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	80572	Date Analyzed:	2011-04-22	Analyzed By:	AR
Prep Batch:	68378	Sample Preparation:	2011-04-21	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Sulfate		1	**347**	mg/L	100	2.50

Sample: 263887 - MW-4

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	80715	Date Analyzed:	2011-04-26	Analyzed By:	AR
Prep Batch:	68387	Sample Preparation:	2011-04-20	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Total Dissolved Solids		1	**26400**	mg/L	100	10.0

Sample: 263888 - MW-5

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	80419	Date Analyzed:	2011-04-18	Analyzed By:	ME
Prep Batch:	68257	Sample Preparation:	2011-04-18	Prepared By:	ME

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene		1	**0.00650**	mg/L	1	0.00100
Toluene		1	**0.00680**	mg/L	1	0.00100
Ethylbenzene		1	<0.00100	mg/L	1	0.00100
Xylene		1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1	0.0730	mg/L	1	0.100	73	67.8 - 129
4-Bromofluorobenzene (4-BFB)		1	0.0831	mg/L	1	0.100	83	51.1 - 128

Sample: 263888 - MW-5

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	80572	Date Analyzed:	2011-04-22	Analyzed By:	AR
Prep Batch:	68378	Sample Preparation:	2011-04-21	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		1	**67500**	mg/L	5000	2.50

Sample: 263888 - MW-5

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	80572	Date Analyzed:	2011-04-22	Analyzed By:	AR
Prep Batch:	68378	Sample Preparation:	2011-04-21	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Sulfate		1	**1100**	mg/L	50	2.50

Sample: 263888 - MW-5

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	80715	Date Analyzed:	2011-04-26	Analyzed By:	AR
Prep Batch:	68387	Sample Preparation:	2011-04-20	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Total Dissolved Solids		1	**109000**	mg/L	100	10.0

Sample: 263889 - MW-6

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	80419	Date Analyzed:	2011-04-18	Analyzed By:	ME
Prep Batch:	68257	Sample Preparation:	2011-04-18	Prepared By:	ME

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene		1	<0.00100	mg/L	1	0.00100
Toluene		1	<0.00100	mg/L	1	0.00100
Ethylbenzene		1	<0.00100	mg/L	1	0.00100
Xylene		1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1	0.0937	mg/L	1	0.100	94	67.8 - 129
4-Bromofluorobenzene (4-BFB)		1	0.0953	mg/L	1	0.100	95	51.1 - 128

Sample: 263889 - MW-6

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	80572	Date Analyzed:	2011-04-22	Analyzed By:	AR
Prep Batch:	68378	Sample Preparation:	2011-04-21	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1	**1800**	mg/L	100	2.50

Sample: 263889 - MW-6

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	80572	Date Analyzed:	2011-04-22	Analyzed By:	AR
Prep Batch:	68378	Sample Preparation:	2011-04-21	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Sulfate		1	**77.6**	mg/L	5	2.50

Sample: 263889 - MW-6

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	80715	Date Analyzed:	2011-04-26	Analyzed By:	AR
Prep Batch:	68387	Sample Preparation:	2011-04-20	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**3320**	mg/L	5	10.0

Sample: 263890 - MW-7

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	80419	Date Analyzed:	2011-04-18	Analyzed By:	ME
Prep Batch:	68257	Sample Preparation:	2011-04-18	Prepared By:	ME

continued ...

sample 263890 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	<0.00100	mg/L	1	0.00100
Toluene		1	<0.00100	mg/L	1	0.00100
Ethylbenzene		1	<0.00100	mg/L	1	0.00100
Xylene		1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1	0.0971	mg/L	1	0.100	97	67.8 - 129
4-Bromofluorobenzene (4-BFB)		1	0.0974	mg/L	1	0.100	97	51.1 - 128

Sample: 263890 - MW-7

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	80572	Date Analyzed:	2011-04-22	Analyzed By:	AR
Prep Batch:	68378	Sample Preparation:	2011-04-21	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1	**1350**	mg/L	100	2.50

Sample: 263890 - MW-7

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	80572	Date Analyzed:	2011-04-22	Analyzed By:	AR
Prep Batch:	68378	Sample Preparation:	2011-04-21	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Sulfate		1	**92.2**	mg/L	5	2.50

Sample: 263890 - MW-7

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	80715	Date Analyzed:	2011-04-26	Analyzed By:	AR
Prep Batch:	68387	Sample Preparation:	2011-04-20	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**2700**	mg/L	5	10.0

Method Blanks

Method Blank (1) QC Batch: 80419

QC Batch:	80419	Date Analyzed:	2011-04-18	Analyzed By:	ME
Prep Batch:	68257	QC Preparation:	2011-04-18	Prepared By:	ME

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000400	mg/L	0.001
Toluene		1	<0.000300	mg/L	0.001
Ethylbenzene		1	<0.000300	mg/L	0.001
Xylene		1	<0.000333	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1	0.0911	mg/L	1	0.100	91	70.2 - 118
4-Bromofluorobenzene (4-BFB)		1	0.104	mg/L	1	0.100	104	47.3 - 116

Method Blank (1) QC Batch: 80546

QC Batch:	80546	Date Analyzed:	2011-04-21	Analyzed By:	AR
Prep Batch:	68355	QC Preparation:	2011-04-19	Prepared By:	AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1	0.593	mg/L	2.5

Method Blank (1) QC Batch: 80546

QC Batch:	80546	Date Analyzed:	2011-04-21	Analyzed By:	AR
Prep Batch:	68355	QC Preparation:	2011-04-19	Prepared By:	AR

Parameter	Flag	Cert	MDL Result	Units	RL
Sulfate		1	<0.177	mg/L	2.5

Method Blank (1) QC Batch: 80572

QC Batch:	80572	Date Analyzed:	2011-04-22	Analyzed By:	AR
Prep Batch:	68378	QC Preparation:	2011-04-21	Prepared By:	AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1	0.555	mg/L	2.5

Method Blank (1) QC Batch: 80572

QC Batch:	80572	Date Analyzed:	2011-04-22	Analyzed By:	AR
Prep Batch:	68378	QC Preparation:	2011-04-21	Prepared By:	AR

Parameter	Flag	Cert	MDL Result	Units	RL
Sulfate		1	<0.177	mg/L	2.5

Method Blank (1) QC Batch: 80661

QC Batch:	80661	Date Analyzed:	2011-04-25	Analyzed By:	AR
Prep Batch:	68386	QC Preparation:	2011-04-19	Prepared By:	AR

Parameter	Flag	Cert	MDL Result	Units	RL
Total Dissolved Solids		1	<9.75	mg/L	10

Method Blank (1) QC Batch: 80715

QC Batch:	80715	Date Analyzed:	2011-04-26	Analyzed By:	AR
Prep Batch:	68387	QC Preparation:	2011-04-20	Prepared By:	AR

Parameter	Flag	Cert	MDL Result	Units	RL
Total Dissolved Solids		1	<9.75	mg/L	10

Duplicates (1) Duplicated Sample: 263885

QC Batch: 80661 | Date Analyzed: 2011-04-25 | Analyzed By: AR
Prep Batch: 68386 | QC Preparation: 2011-04-19 | Prepared By: AR

Param		Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1	90500	84500	mg/L	100	7	10

Duplicates (1) Duplicated Sample: 263895

QC Batch: 80715 | Date Analyzed: 2011-04-26 | Analyzed By: AR
Prep Batch: 68387 | QC Preparation: 2011-04-20 | Prepared By: AR

Param		Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1	3480	3330	mg/L	5	4	10

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 80419 | Date Analyzed: 2011-04-18 | Analyzed By: ME
Prep Batch: 68257 | QC Preparation: 2011-04-18 | Prepared By: ME

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.0882	mg/L	1	0.100	<0.000400	88	76.8 - 110
Toluene		1	0.0944	mg/L	1	0.100	<0.000300	94	81 - 108
Ethylbenzene		1	0.0965	mg/L	1	0.100	<0.000300	96	78.8 - 118
Xylene		1	0.291	mg/L	1	0.300	<0.000333	97	80.3 - 119

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.0948	mg/L	1	0.100	<0.000400	95	76.8 - 110	7	20
Toluene		1	0.102	mg/L	1	0.100	<0.000300	102	81 - 108	8	20
Ethylbenzene		1	0.104	mg/L	1	0.100	<0.000300	104	78.8 - 118	8	20
Xylene		1	0.314	mg/L	1	0.300	<0.000333	105	80.3 - 119	8	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1	0.0994	0.0964	mg/L	1	0.100	99	96	66.6 - 114
4-Bromofluorobenzene (4-BFB)	1	0.119	0.116	mg/L	1	0.100	119	116	68.2 - 124

Laboratory Control Spike (LCS-1)

QC Batch: 80546 | Date Analyzed: 2011-04-21 | Analyzed By: AR
Prep Batch: 68355 | QC Preparation: 2011-04-19 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	25.6	mg/L	1	25.0	<0.265	102	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

continued ...

control spikes continued ...

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	25.7	mg/L	1	25.0	<0.265	103	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 80546 | Date Analyzed: 2011-04-21 | Analyzed By: AR
Prep Batch: 68355 | QC Preparation: 2011-04-19 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate		1	24.3	mg/L	1	25.0	<0.177	97	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate		1	24.4	mg/L	1	25.0	<0.177	98	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 80572 | Date Analyzed: 2011-04-22 | Analyzed By: AR
Prep Batch: 68378 | QC Preparation: 2011-04-21 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	26.4	mg/L	1	25.0	<0.265	106	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	26.4	mg/L	1	25.0	<0.265	106	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 80572 | Date Analyzed: 2011-04-22 | Analyzed By: AR
Prep Batch: 68378 | QC Preparation: 2011-04-21 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate		1	24.0	mg/L	1	25.0	<0.177	96	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate		1	23.9	mg/L	1	25.0	<0.177	96	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 80661 | Date Analyzed: 2011-04-25 | Analyzed By: AR
Prep Batch: 68386 | QC Preparation: 2011-04-19 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Dissolved Solids		1	997	mg/L	1	1000	<9.75	100	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Dissolved Solids		1	988	mg/L	1	1000	<9.75	99	90 - 110	1	10

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 80715 | Date Analyzed: 2011-04-26 | Analyzed By: AR
Prep Batch: 68387 | QC Preparation: 2011-04-20 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Dissolved Solids		1	966	mg/L	1	1000	<9.75	97	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Dissolved Solids		1	992	mg/L	1	1000	<9.75	99	90 - 110	3	10

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 263885

QC Batch: 80546 | Date Analyzed: 2011-04-21 | Analyzed By: AR
Prep Batch: 68355 | QC Preparation: 2011-04-19 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	55300	mg/L	50	1380	53000	167	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	55300	mg/L	50	1380	53000	167	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 263885

QC Batch: 80546 | Date Analyzed: 2011-04-21 | Analyzed By: AR
Prep Batch: 68355 | QC Preparation: 2011-04-19 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate		1	2360	mg/L	50	1380	1170	86	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate		1	2370	mg/L	50	1380	1170	87	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 263890

QC Batch: 80572 | Date Analyzed: 2011-04-22 | Analyzed By: AR
Prep Batch: 68378 | QC Preparation: 2011-04-21 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	3810	mg/L	100	2750	1350	89	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	3800	mg/L	100	2750	1350	89	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 263890

QC Batch: 80572 | Date Analyzed: 2011-04-22 | Analyzed By: AR
Prep Batch: 68378 | QC Preparation: 2011-04-21 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate		1	2510	mg/L	100	2750	125	87	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate		1	2510	mg/L	100	2750	125	87	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Calibration Standards

Standard (CCV-1)

QC Batch: 80419 | Date Analyzed: 2011-04-18 | Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0932	93	80 - 120	2011-04-18
Toluene		1	mg/L	0.100	0.0973	97	80 - 120	2011-04-18
Ethylbenzene		1	mg/L	0.100	0.0962	96	80 - 120	2011-04-18
Xylene		1	mg/L	0.300	0.292	97	80 - 120	2011-04-18

Standard (CCV-2)

QC Batch: 80419 | Date Analyzed: 2011-04-18 | Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0964	96	80 - 120	2011-04-18
Toluene		1	mg/L	0.100	0.100	100	80 - 120	2011-04-18
Ethylbenzene		1	mg/L	0.100	0.0997	100	80 - 120	2011-04-18
Xylene		1	mg/L	0.300	0.298	99	80 - 120	2011-04-18

Standard (CCV-3)

QC Batch: 80419 | Date Analyzed: 2011-04-18 | Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0957	96	80 - 120	2011-04-18
Toluene		1	mg/L	0.100	0.0994	99	80 - 120	2011-04-18
Ethylbenzene		1	mg/L	0.100	0.0987	99	80 - 120	2011-04-18
Xylene		1	mg/L	0.300	0.294	98	80 - 120	2011-04-18

Standard (ICV-1)

QC Batch: 80546 Date Analyzed: 2011-04-21 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	24.2	97	90 - 110	2011-04-21

Standard (ICV-1)

QC Batch: 80546 Date Analyzed: 2011-04-21 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		1	mg/L	25.0	25.1	100	90 - 110	2011-04-21

Standard (CCV-1)

QC Batch: 80546 Date Analyzed: 2011-04-21 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	25.0	100	90 - 110	2011-04-21

Standard (CCV-1)

QC Batch: 80546 Date Analyzed: 2011-04-21 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		1	mg/L	25.0	24.2	97	90 - 110	2011-04-21

Standard (ICV-1)

QC Batch: 80572 Date Analyzed: 2011-04-22 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	24.0	96	90 - 110	2011-04-22

Standard (ICV-1)

QC Batch: 80572 Date Analyzed: 2011-04-22 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		1	mg/L	25.0	24.9	100	90 - 110	2011-04-22

Standard (CCV-1)

QC Batch: 80572 Date Analyzed: 2011-04-22 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	24.1	96	90 - 110	2011-04-22

Standard (CCV-1)

QC Batch: 80572 Date Analyzed: 2011-04-22 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		1	mg/L	25.0	24.1	96	90 - 110	2011-04-22

Appendix

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-10-TX	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

ESW0 #: 1104524

Analysis Request of Chain of Custody Record

PAGE: | OF: 1

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: Celero
SITE MANAGER: Jeff Kindley
PROJECT NO.: 115-6403131
PROJECT NAME: Rock Queen Tract #11

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS	Sulfates
263884	4/14	1340	W		X	mw-1	4	N	X		X	X	X											X				X	X
885		1325				mw-2																							
886		1230				mw-3																							
887		1355				mw-4																							
888		1310				mw-5																							
889		1250				mw-6																							
890	4/14	1215	W		X	mw-7	4	N	X		X	X	X											X				X	X

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) — Date: 4-15-11 Time:
RECEIVED BY: (Signature) — Date: 4/15/11 Time: 13:30
RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:
RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:

SAMPLED BY: (Print & Initial) James Kennedy JPK — Date: 4-14-11 Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: OTHER:
TETRA TECH CONTACT PERSON: Jeff Kindley — Results by:
RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: ZIP:
CONTACT: PHONE: DATE: TIME:
RECEIVED BY: (Signature)

SAMPLE CONDITION WHEN RECEIVED: 0.6 c intact
REMARKS: All tests Midland

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report
(Corrected Report)

Jeff Kindley
Tetra Tech
1910 N. Big Spring Street
Midland, TX, 79705

Report Date: August 24, 2011

Work Order: 11080105

Project Location: Chavez Co., NM
Project Name: Celero/Rock Queen Unit Tract #11
Project Number: 115-6403131

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
273201	MW-1	water	2011-07-27	17:30	2011-07-29
273202	MW-2	water	2011-07-27	17:10	2011-07-29
273203	MW-3	water	2011-07-27	17:50	2011-07-29
273204	MW-4	water	2011-07-27	17:00	2011-07-29
273205	MW-5	water	2011-07-27	17:20	2011-07-29
273206	MW-6	water	2011-07-27	17:40	2011-07-29
273207	MW-7	water	2011-07-27	18:00	2011-07-29

Report Corrections (Work Order 11080105)

- TDS was run out of hold time. Comments were added to the report. 8/23/11

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

TraceAnalysis, Inc.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Report Contents

Case Narrative

Samples for project Celero/Rock Queen Unit Tract #11 were received by TraceAnalysis, Inc. on 2011-07-29 and assigned to work order 11080105. Samples for work order 11080105 were received intact without headspace and at a temperature of 10.8 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	70921	2011-08-02 at 09:42	83491	2011-08-02 at 09:42
BTEX	S 8021B	70958	2011-08-03 at 09:47	83538	2011-08-03 at 09:47
Chloride (IC)	E 300.0	70898	2011-08-02 at 10:08	83580	2011-08-03 at 15:05
Chloride (IC)	E 300.0	70899	2011-08-02 at 10:09	83581	2011-08-03 at 15:06
SO4 (IC)	E 300.0	70898	2011-08-02 at 10:08	83580	2011-08-03 at 15:05
SO4 (IC)	E 300.0	70899	2011-08-02 at 10:09	83581	2011-08-03 at 15:06
TDS	SM 2540C	70948	2011-08-03 at 14:50	83789	2011-08-11 at 10:15
TDS	SM 2540C	71017	2011-08-05 at 12:42	83880	2011-08-15 at 15:06

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 11080105 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

Samples were received on ice.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 273201 - MW-1

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	83491	Date Analyzed:	2011-08-02	Analyzed By:	ME
Prep Batch:	70921	Sample Preparation:	2011-08-02	Prepared By:	ME

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1	<0.00100	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene		1	**0.0185**	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.103	mg/L	1	0.100	103	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0974	mg/L	1	0.100	97	67.5 - 140.8

Sample: 273201 - MW-1

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	83580	Date Analyzed:	2011-08-03	Analyzed By:	AR
Prep Batch:	70898	Sample Preparation:	2011-08-02	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		1	**22100**	mg/L	1000	2.50

Sample: 273201 - MW-1

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	83580	Date Analyzed:	2011-08-03	Analyzed By:	AR
Prep Batch:	70898	Sample Preparation:	2011-08-02	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Sulfate		1	**625**	mg/L	100	2.50

Sample: 273201 - MW-1

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	83789	Date Analyzed:	2011-08-11	Analyzed By:	AR
Prep Batch:	70948	Sample Preparation:	2011-08-05	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Total Dissolved Solids	H	1	**56000**	mg/L	100	10.0

Sample: 273202 - MW-2

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	83491	Date Analyzed:	2011-08-02	Analyzed By:	ME
Prep Batch:	70921	Sample Preparation:	2011-08-02	Prepared By:	ME

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1	<0.00100	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0866	mg/L	1	0.100	87	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0875	mg/L	1	0.100	88	67.5 - 140.8

Sample: 273202 - MW-2

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	83580	Date Analyzed:	2011-08-03	Analyzed By:	AR
Prep Batch:	70898	Sample Preparation:	2011-08-02	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		1	**91700**	mg/L	5000	2.50

Sample: 273202 - MW-2

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	83580	Date Analyzed:	2011-08-03	Analyzed By:	AR
Prep Batch:	70898	Sample Preparation:	2011-08-02	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Sulfate		1	**1610**	mg/L	50	2.50

Sample: 273202 - MW-2

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	83789	Date Analyzed:	2011-08-11	Analyzed By:	AR
Prep Batch:	70948	Sample Preparation:	2011-08-05	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids	H	1	**143000**	mg/L	100	10.0

Sample: 273203 - MW-3

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	83491	Date Analyzed:	2011-08-02	Analyzed By:	ME
Prep Batch:	70921	Sample Preparation:	2011-08-02	Prepared By:	ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.00100	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.100	mg/L	1	0.100	100	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0974	mg/L	1	0.100	97	67.5 - 140.8

Sample: 273203 - MW-3

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	83580	Date Analyzed:	2011-08-03	Analyzed By:	AR
Prep Batch:	70898	Sample Preparation:	2011-08-02	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1	**53400**	mg/L	5000	2.50

Sample: 273203 - MW-3

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	83580	Date Analyzed:	2011-08-03	Analyzed By:	AR
Prep Batch:	70898	Sample Preparation:	2011-08-02	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Sulfate		1	**881**	mg/L	50	2.50

Sample: 273203 - MW-3

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	83789	Date Analyzed:	2011-08-11	Analyzed By:	AR
Prep Batch:	70948	Sample Preparation:	2011-08-05	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids	H	1	**74700**	mg/L	100	10.0

Sample: 273204 - MW-4

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	83491	Date Analyzed:	2011-08-02	Analyzed By:	ME
Prep Batch:	70921	Sample Preparation:	2011-08-02	Prepared By:	ME

continued ...

sample 273204 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.00100	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0995	mg/L	1	0.100	100	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0931	mg/L	1	0.100	93	67.5 - 140.8

Sample: 273204 - MW-4

Laboratory: Midland
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 83581 | Date Analyzed: 2011-08-03 | Analyzed By: AR
Prep Batch: 70899 | Sample Preparation: 2011-08-02 | Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1	**5080**	mg/L	500	2.50

Sample: 273204 - MW-4

Laboratory: Midland
Analysis: SO4 (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 83581 | Date Analyzed: 2011-08-03 | Analyzed By: AR
Prep Batch: 70899 | Sample Preparation: 2011-08-02 | Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Sulfate		1	**134**	mg/L	5	2.50

Sample: 273204 - MW-4

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	83789	Date Analyzed:	2011-08-11	Analyzed By:	AR
Prep Batch:	70948	Sample Preparation:	2011-08-05	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids	H	1	**7980**	mg/L	10	10.0

Sample: 273205 - MW-5

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	83491	Date Analyzed:	2011-08-02	Analyzed By:	ME
Prep Batch:	70921	Sample Preparation:	2011-08-02	Prepared By:	ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.00100	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0894	mg/L	1	0.100	89	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0889	mg/L	1	0.100	89	67.5 - 140.8

Sample: 273205 - MW-5

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	83581	Date Analyzed:	2011-08-03	Analyzed By:	AR
Prep Batch:	70899	Sample Preparation:	2011-08-02	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1	**48500**	mg/L	5000	2.50

Sample: 273205 - MW-5

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	83581	Date Analyzed:	2011-08-03	Analyzed By:	AR
Prep Batch:	70899	Sample Preparation:	2011-08-02	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Sulfate		1	**422**	mg/L	50	2.50

Sample: 273205 - MW-5

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	83789	Date Analyzed:	2011-08-11	Analyzed By:	AR
Prep Batch:	70948	Sample Preparation:	2011-08-05	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Total Dissolved Solids	H	1	**60900**	mg/L	100	10.0

Sample: 273206 - MW-6

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	83538	Date Analyzed:	2011-08-03	Analyzed By:	ME
Prep Batch:	70958	Sample Preparation:	2011-08-03	Prepared By:	ME

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1	<0.00100	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.107	mg/L	1	0.100	107	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.101	mg/L	1	0.100	101	67.5 - 140.8

Sample: 273206 - MW-6

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	83581	Date Analyzed:	2011-08-03	Analyzed By:	AR
Prep Batch:	70899	Sample Preparation:	2011-08-02	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1	**493**	mg/L	50	2.50

Sample: 273206 - MW-6

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	83581	Date Analyzed:	2011-08-03	Analyzed By:	AR
Prep Batch:	70899	Sample Preparation:	2011-08-02	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Sulfate		1	**80.0**	mg/L	5	2.50

Sample: 273206 - MW-6

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	83789	Date Analyzed:	2011-08-11	Analyzed By:	AR
Prep Batch:	70948	Sample Preparation:	2011-08-05	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids	H	1	**934**	mg/L	2	10.0

Sample: 273207 - MW-7

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	83538	Date Analyzed:	2011-08-03	Analyzed By:	ME
Prep Batch:	70958	Sample Preparation:	2011-08-03	Prepared By:	ME

continued ...

sample 273207 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.00100	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.104	mg/L	1	0.100	104	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0962	mg/L	1	0.100	96	67.5 - 140.8

Sample: 273207 - MW-7

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	83581	Date Analyzed:	2011-08-03	Analyzed By:	AR
Prep Batch:	70899	Sample Preparation:	2011-08-02	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1	**1580**	mg/L	100	2.50

Sample: 273207 - MW-7

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	83581	Date Analyzed:	2011-08-03	Analyzed By:	AR
Prep Batch:	70899	Sample Preparation:	2011-08-02	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Sulfate		1	**84.1**	mg/L	5	2.50

Sample: 273207 - MW-7

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	83880	Date Analyzed:	2011-08-15	Analyzed By:	AR
Prep Batch:	71017	Sample Preparation:	2011-08-08	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids	H	1	**2440**	mg/L	5	10.0

Method Blanks

Method Blank (1) QC Batch: 83491

QC Batch:	83491	Date Analyzed:	2011-08-02	Analyzed By:	ME
Prep Batch:	70921	QC Preparation:	2011-08-02	Prepared By:	ME

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000400	mg/L	0.001
Toluene		1	<0.000300	mg/L	0.001
Ethylbenzene		1	<0.000300	mg/L	0.001
Xylene		1	<0.000333	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0926	mg/L	1	0.100	93	61.1 - 118.4
4-Bromofluorobenzene (4-BFB)			0.0850	mg/L	1	0.100	85	45.9 - 126.4

Method Blank (1) QC Batch: 83538

QC Batch:	83538	Date Analyzed:	2011-08-03	Analyzed By:	ME
Prep Batch:	70958	QC Preparation:	2011-08-03	Prepared By:	ME

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000400	mg/L	0.001
Toluene		1	<0.000300	mg/L	0.001
Ethylbenzene		1	<0.000300	mg/L	0.001
Xylene		1	<0.000333	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.103	mg/L	1	0.100	103	61.1 - 118.4
4-Bromofluorobenzene (4-BFB)			0.0946	mg/L	1	0.100	95	45.9 - 126.4

Method Blank (1) QC Batch: 83580

QC Batch:	83580	Date Analyzed:	2011-08-03	Analyzed By:	AR
Prep Batch:	70898	QC Preparation:	2011-08-02	Prepared By:	AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1	2.77	mg/L	2.5

Method Blank (1) QC Batch: 83580

QC Batch:	83580	Date Analyzed:	2011-08-03	Analyzed By:	AR
Prep Batch:	70898	QC Preparation:	2011-08-02	Prepared By:	AR

Parameter	Flag	Cert	MDL Result	Units	RL
Sulfate		1	<0.177	mg/L	2.5

Method Blank (1) QC Batch: 83581

QC Batch:	83581	Date Analyzed:	2011-08-03	Analyzed By:	AR
Prep Batch:	70899	QC Preparation:	2011-08-02	Prepared By:	AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1	2.80	mg/L	2.5

Method Blank (1) QC Batch: 83581

QC Batch:	83581	Date Analyzed:	2011-08-03	Analyzed By:	AR
Prep Batch:	70899	QC Preparation:	2011-08-02	Prepared By:	AR

Parameter	Flag	Cert	MDL Result	Units	RL
Sulfate		1	<0.177	mg/L	2.5

Method Blank (1) QC Batch: 83789

QC Batch: 83789 | Date Analyzed: 2011-08-11 | Analyzed By: AR
Prep Batch: 70948 | QC Preparation: 2011-08-03 | Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Total Dissolved Solids		1	<9.75	mg/L	10

Method Blank (1) QC Batch: 83880

QC Batch: 83880 | Date Analyzed: 2011-08-15 | Analyzed By: AR
Prep Batch: 71017 | QC Preparation: 2011-08-05 | Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Total Dissolved Solids		1	<9.75	mg/L	10

Duplicates (1) Duplicated Sample: 273206

QC Batch: 83789 | Date Analyzed: 2011-08-11 | Analyzed By: AR
Prep Batch: 70948 | QC Preparation: 2011-08-03 | Prepared By: AR

Param		Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1	940	934	mg/L	2	1	10

Duplicates (1) Duplicated Sample: 273246

QC Batch: 83880 | Date Analyzed: 2011-08-15 | Analyzed By: AR
Prep Batch: 71017 | QC Preparation: 2011-08-05 | Prepared By: AR

Param		Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1	614	648	mg/L	2	5	10

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 83491 | Date Analyzed: 2011-08-02 | Analyzed By: ME
Prep Batch: 70921 | QC Preparation: 2011-08-02 | Prepared By: ME

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.104	mg/L	1	0.100	<0.000400	104	76.8 - 110.3
Toluene		1	0.101	mg/L	1	0.100	<0.000300	101	90.9 - 122.2
Ethylbenzene		1	0.0945	mg/L	1	0.100	<0.000300	94	72.7 - 120.2
Xylene		1	0.284	mg/L	1	0.300	<0.000333	95	72.1 - 121.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.104	mg/L	1	0.100	<0.000400	104	76.8 - 110.3	0	20
Toluene		1	0.101	mg/L	1	0.100	<0.000300	101	90.9 - 122.2	0	20
Ethylbenzene		1	0.0952	mg/L	1	0.100	<0.000300	95	72.7 - 120.2	1	20
Xylene		1	0.286	mg/L	1	0.300	<0.000333	95	72.1 - 121.5	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0993	0.0992	mg/L	1	0.100	99	99	61.9 - 119.2
4-Bromofluorobenzene (4-BFB)	0.0973	0.0980	mg/L	1	0.100	97	98	56.4 - 127.9

Laboratory Control Spike (LCS-1)

QC Batch: 83538 | Date Analyzed: 2011-08-03 | Analyzed By: ME
Prep Batch: 70958 | QC Preparation: 2011-08-03 | Prepared By: ME

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.101	mg/L	1	0.100	<0.000400	101	76.8 - 110.3
Toluene		1	0.0979	mg/L	1	0.100	<0.000300	98	90.9 - 122.2
Ethylbenzene		1	0.0919	mg/L	1	0.100	<0.000300	92	72.7 - 120.2
Xylene		1	0.276	mg/L	1	0.300	<0.000333	92	72.1 - 121.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.103	mg/L	1	0.100	<0.000400	103	76.8 - 110.3	2	20
Toluene		1	0.0996	mg/L	1	0.100	<0.000300	100	90.9 - 122.2	2	20
Ethylbenzene		1	0.0942	mg/L	1	0.100	<0.000300	94	72.7 - 120.2	2	20
Xylene		1	0.282	mg/L	1	0.300	<0.000333	94	72.1 - 121.5	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0992	0.0894	mg/L	1	0.100	99	89	61.9 - 119.2
4-Bromofluorobenzene (4-BFB)	0.0986	0.0880	mg/L	1	0.100	99	88	56.4 - 127.9

Laboratory Control Spike (LCS-1)

QC Batch: 83580
Prep Batch: 70898

Date Analyzed: 2011-08-03
QC Preparation: 2011-08-02

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	26.1	mg/L	1	25.0	<0.265	104	90.9 - 113.9

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	26.3	mg/L	1	25.0	<0.265	105	90.9 - 113.9	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 83580
Prep Batch: 70898

Date Analyzed: 2011-08-03
QC Preparation: 2011-08-02

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate		1	25.7	mg/L	1	25.0	<0.177	103	99 - 113.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate		1	25.4	mg/L	1	25.0	<0.177	102	99 - 113.6	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 83581 | Date Analyzed: 2011-08-03 | Analyzed By: AR
Prep Batch: 70899 | QC Preparation: 2011-08-02 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	26.2	mg/L	1	25.0	<0.265	105	90.9 - 113.9

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	26.6	mg/L	1	25.0	<0.265	106	90.9 - 113.9	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 83581 | Date Analyzed: 2011-08-03 | Analyzed By: AR
Prep Batch: 70899 | QC Preparation: 2011-08-02 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate		1	25.6	mg/L	1	25.0	<0.177	102	99 - 113.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate		1	25.4	mg/L	1	25.0	<0.177	102	99 - 113.6	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 83789 | Date Analyzed: 2011-08-11 | Analyzed By: AR
Prep Batch: 70948 | QC Preparation: 2011-08-03 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Dissolved Solids		1	981	mg/L	1	1000	<9.75	98	85.5 - 112.7

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Dissolved Solids		1	1030	mg/L	1	1000	<9.75	103	85.5 - 112.7	5	10

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 83880 | Date Analyzed: 2011-08-15 | Analyzed By: AR
Prep Batch: 71017 | QC Preparation: 2011-08-05 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Dissolved Solids		1	1020	mg/L	1	1000	<9.75	102	85.5 - 112.7

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Dissolved Solids		1	1040	mg/L	1	1000	<9.75	104	85.5 - 112.7	2	10

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 273205

QC Batch: 83491 | Date Analyzed: 2011-08-02 | Analyzed By: ME
Prep Batch: 70921 | QC Preparation: 2011-08-02 | Prepared By: ME

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.0992	mg/L	1	0.100	<0.000400	99	66.9 - 128.2
Toluene		1	0.0931	mg/L	1	0.100	<0.000300	93	81.6 - 122.9
Ethylbenzene		1	0.0805	mg/L	1	0.100	<0.000300	80	62.7 - 117.9
Xylene		1	0.241	mg/L	1	0.300	<0.000333	80	62.9 - 118.2

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

continued ...

matrix spikes continued ...

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.107	mg/L	1	0.100	<0.000400	107	66.9 - 128.2	8	20
Toluene		1	0.0999	mg/L	1	0.100	<0.000300	100	81.6 - 122.9	7	20
Ethylbenzene		1	0.0868	mg/L	1	0.100	<0.000300	87	62.7 - 117.9	8	20
Xylene		1	0.259	mg/L	1	0.300	<0.000333	86	62.9 - 118.2	7	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0945	0.0975	mg/L	1	0.1	94	98	58.6 - 119.7
4-Bromofluorobenzene (4-BFB)	0.0964	0.0997	mg/L	1	0.1	96	100	52.2 - 135.8

Matrix Spike (MS-1) Spiked Sample: 273037

QC Batch: 83538 | Date Analyzed: 2011-08-03 | Analyzed By: ME
Prep Batch: 70958 | QC Preparation: 2011-08-03 | Prepared By: ME

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.587	mg/L	5	0.500	0.127	92	66.9 - 128.2
Toluene		1	0.544	mg/L	5	0.500	0.1205	85	81.6 - 122.9
Ethylbenzene		1	0.421	mg/L	5	0.500	<0.00150	84	62.7 - 117.9
Xylene		1	1.29	mg/L	5	1.50	0.1543	76	62.9 - 118.2

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.607	mg/L	5	0.500	0.127	96	66.9 - 128.2	3	20
Toluene		1	0.563	mg/L	5	0.500	0.1205	88	81.6 - 122.9	3	20
Ethylbenzene		1	0.438	mg/L	5	0.500	<0.00150	88	62.7 - 117.9	4	20
Xylene		1	1.34	mg/L	5	1.50	0.1543	79	62.9 - 118.2	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.511	0.468	mg/L	5	0.5	102	94	58.6 - 119.7
4-Bromofluorobenzene (4-BFB)	0.502	0.461	mg/L	5	0.5	100	92	52.2 - 135.8

Matrix Spike (MS-1) Spiked Sample: 273201

QC Batch: 83580 | Date Analyzed: 2011-08-03 | Analyzed By: AR
Prep Batch: 70898 | QC Preparation: 2011-08-02 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	21800	mg/L	100	2750	21600	7	48.4 - 143.2

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	21800	mg/L	100	2750	21600	7	48.4 - 143.2	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 273201

QC Batch: 83580 | Date Analyzed: 2011-08-03 | Analyzed By: AR
Prep Batch: 70898 | QC Preparation: 2011-08-02 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate		1	3000	mg/L	100	2750	625	86	59.7 - 115.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate		1	3020	mg/L	100	2750	625	87	59.7 - 115.4	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 273206

QC Batch: 83581 | Date Analyzed: 2011-08-03 | Analyzed By: AR
Prep Batch: 70899 | QC Preparation: 2011-08-02 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	1770	mg/L	50	1380	493	93	48.4 - 143.2

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	1790	mg/L	50	1380	493	94	48.4 - 143.2	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 273206

QC Batch: 83581 | Date Analyzed: 2011-08-03 | Analyzed By: AR
Prep Batch: 70899 | QC Preparation: 2011-08-02 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate		1	1360	mg/L	50	1380	111	91	59.7 - 115.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate		1	1360	mg/L	50	1380	111	91	59.7 - 115.4	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Calibration Standards

Standard (CCV-2)

QC Batch: 83491 | Date Analyzed: 2011-08-02 | Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.104	104	80 - 120	2011-08-02
Toluene		1	mg/L	0.100	0.0994	99	80 - 120	2011-08-02
Ethylbenzene		1	mg/L	0.100	0.0933	93	80 - 120	2011-08-02
Xylene		1	mg/L	0.300	0.279	93	80 - 120	2011-08-02

Standard (CCV-3)

QC Batch: 83491 | Date Analyzed: 2011-08-02 | Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.101	101	80 - 120	2011-08-02
Toluene		1	mg/L	0.100	0.0976	98	80 - 120	2011-08-02
Ethylbenzene		1	mg/L	0.100	0.0913	91	80 - 120	2011-08-02
Xylene		1	mg/L	0.300	0.274	91	80 - 120	2011-08-02

Standard (CCV-1)

QC Batch: 83538 | Date Analyzed: 2011-08-03 | Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0989	99	80 - 120	2011-08-03
Toluene		1	mg/L	0.100	0.0948	95	80 - 120	2011-08-03
Ethylbenzene		1	mg/L	0.100	0.0892	89	80 - 120	2011-08-03
Xylene		1	mg/L	0.300	0.271	90	80 - 120	2011-08-03

Standard (CCV-2)

QC Batch: 83538 | Date Analyzed: 2011-08-03 | Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.102	102	80 - 120	2011-08-03
Toluene		1	mg/L	0.100	0.0980	98	80 - 120	2011-08-03
Ethylbenzene		1	mg/L	0.100	0.0920	92	80 - 120	2011-08-03
Xylene		1	mg/L	0.300	0.276	92	80 - 120	2011-08-03

Standard (ICV-1)

QC Batch: 83580 | Date Analyzed: 2011-08-03 | Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	26.5	106	90 - 110	2011-08-03

Standard (ICV-1)

QC Batch: 83580 | Date Analyzed: 2011-08-03 | Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		1	mg/L	25.0	25.5	102	90 - 110	2011-08-03

Standard (CCV-1)

QC Batch: 83580 | Date Analyzed: 2011-08-03 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	26.2	105	90 - 110	2011-08-03

Standard (CCV-1)

QC Batch: 83580 Date Analyzed: 2011-08-03 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		1	mg/L	25.0	25.0	100	90 - 110	2011-08-03

Standard (ICV-1)

QC Batch: 83581 Date Analyzed: 2011-08-03 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	26.2	105	90 - 110	2011-08-03

Standard (ICV-1)

QC Batch: 83581 Date Analyzed: 2011-08-03 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		1	mg/L	25.0	25.0	100	90 - 110	2011-08-03

Standard (CCV-1)

QC Batch: 83581 Date Analyzed: 2011-08-03 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	26.0	104	90 - 110	2011-08-03

Standard (CCV-1)

QC Batch: 83581 Date Analyzed: 2011-08-03 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		1	mg/L	25.0	25.5	102	90 - 110	2011-08-03

Appendix

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-10-TX	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

PAGE: 1 OF: 1

CLIENT NAME: Cetero

SITE MANAGER: Jeff Kindley

PROJECT NO.: 115-4403131

PROJECT NAME: Cetero / Rock Queen #11
Chaves Co, NM

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
273201	7/27	1730	W		X	MW-1	4	N	X		X	
202		1710				MW-2						
203		1750				MW-3						
204		1700				MW-4						
205		1720				MW-5						
206		1740				MW-6						
207	↓	1800	↓		↓	MW-7	↓	↓	↓		↓	

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS	TDS	Sulfates
X												X					X	X
↓												↓						

RELINQUISHED BY: (Signature) — Date: 7/29/11 Time: 15:35
RECEIVED BY: (Signature) — Date: 7/29/11 Time: 15:35

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:

SAMPLED BY: (Print & Initial) JT 7/25 — Date: Time:

SAMPLE SHIPPED BY: (Circle)
FEDEX BUS
HAND DELIVERED UPS
AIRBILL #:
OTHER:

TETRA TECH CONTACT PERSON: Jeff Kindley

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 10.8°C intact

REMARKS: * All tests to Midland

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

WO#: 1108015

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Jeff Kindley
Tetra Tech
1910 N. Big Spring Street
Midland, TX, 79705

Report Date: November 30, 2011

Work Order: 11103123

Project Location: Chavez Co., NM
Project Name: Celero/Rock Queen Unit Tract #11
Project Number: 115-6403131

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
281132	MW-6	water	2011-10-26	16:40	2011-10-31
281133	MW-7	water	2011-10-26	17:39	2011-10-31
281134	MW-4	water	2011-10-26	18:30	2011-10-31
281135	MW-1	water	2011-10-27	09:20	2011-10-31
281136	MW-5	water	2011-10-27	10:07	2011-10-31
281137	MW-3	water	2011-10-27	10:47	2011-10-31
281138	MW-2	water	2011-10-27	11:30	2011-10-31

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Notes:
For inorganic analyses, the term MQL should actually read PQL.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Report Contents

Case Narrative

Samples for project Celero/Rock Queen Unit Tract #11 were received by TraceAnalysis, Inc. on 2011-10-31 and assigned to work order 11103123. Samples for work order 11103123 were received intact without headspace and at a temperature of 3.9 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
SO4 (IC)	E 300.0	73346	2011-11-01 at 10:24	86370	2011-11-02 at 10:28
SO4 (IC)	E 300.0	73346	2011-11-01 at 10:24	86371	2011-11-02 at 10:30
TDS	SM 2540C	73423	2011-11-15 at 13:54	86753	2011-11-18 at 15:13

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 11103123 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 281132 - MW-6

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	86370	Date Analyzed:	2011-11-02	Analyzed By:	AR
Prep Batch:	73346	Sample Preparation:	2011-11-03	Prepared By:	AR

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Sulfate	J,Qs	1	**378**	<1250	<88.5	mg/L	500	88.5	2.5	0.177

Sample: 281132 - MW-6

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	86753	Date Analyzed:	2011-11-18	Analyzed By:	AR
Prep Batch:	73423	Sample Preparation:	2011-11-15	Prepared By:	AR

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Dissolved Solids		1	**73100**	**73100**	<975	mg/L	100	975	10	9.75

Sample: 281133 - MW-7

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	86370	Date Analyzed:	2011-11-02	Analyzed By:	AR
Prep Batch:	73346	Sample Preparation:	2011-11-03	Prepared By:	AR

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Sulfate	J,Qs	1	**139**	<250	<17.7	mg/L	100	17.7	2.5	0.177

Sample: 281133 - MW-7

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A

QC Batch: 86753 | Date Analyzed: 2011-11-18 | Analyzed By: AR
Prep Batch: 73423 | Sample Preparation: 2011-11-15 | Prepared By: AR

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Dissolved Solids		1	**2910**	**2910**	<48.8	mg/L	5	48.8	10	9.75

Sample: 281134 - MW-4

Laboratory: Midland
Analysis: SO4 (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 86370 | Date Analyzed: 2011-11-02 | Analyzed By: AR
Prep Batch: 73346 | Sample Preparation: 2011-11-03 | Prepared By: AR

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Sulfate	J,Qs	1	**967**	<1250	<88.5	mg/L	500	88.5	2.5	0.177

Sample: 281134 - MW-4

Laboratory: Midland
Analysis: TDS | Analytical Method: SM 2540C | Prep Method: N/A
QC Batch: 86753 | Date Analyzed: 2011-11-18 | Analyzed By: AR
Prep Batch: 73423 | Sample Preparation: 2011-11-15 | Prepared By: AR

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Dissolved Solids		1	**97300**	**97300**	<975	mg/L	100	975	10	9.75

Sample: 281135 - MW-1

Laboratory: Midland
Analysis: SO4 (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 86371 | Date Analyzed: 2011-11-02 | Analyzed By: AR
Prep Batch: 73346 | Sample Preparation: 2011-11-03 | Prepared By: AR

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Sulfate	Qs	1	**1740**	**1740**	<88.5	mg/L	500	88.5	2.5	0.177

Sample: 281135 - MW-1

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	86753	Date Analyzed:	2011-11-18	Analyzed By:	AR
Prep Batch:	73423	Sample Preparation:	2011-11-15	Prepared By:	AR

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Dissolved Solids		1	**73900**	**73900**	<975	mg/L	100	975	10	9.75

Sample: 281136 - MW-5

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	86371	Date Analyzed:	2011-11-02	Analyzed By:	AR
Prep Batch:	73346	Sample Preparation:	2011-11-03	Prepared By:	AR

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Sulfate	J,Qs	1	**1020**	<1250	<88.5	mg/L	500	88.5	2.5	0.177

Sample: 281136 - MW-5

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	86753	Date Analyzed:	2011-11-18	Analyzed By:	AR
Prep Batch:	73423	Sample Preparation:	2011-11-15	Prepared By:	AR

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Dissolved Solids		1	**106000**	**106000**	<975	mg/L	100	975	10	9.75

Sample: 281137 - MW-3

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	86371	Date Analyzed:	2011-11-02	Analyzed By:	AR
Prep Batch:	73346	Sample Preparation:	2011-11-03	Prepared By:	AR

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Sulfate	J,Qs	1	**173**	<250	<17.7	mg/L	100	17.7	2.5	0.177

Sample: 281137 - MW-3

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	86753	Date Analyzed:	2011-11-18	Analyzed By:	AR
Prep Batch:	73423	Sample Preparation:	2011-11-15	Prepared By:	AR

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Dissolved Solids		1	**22800**	**22800**	<975	mg/L	100	975	10	9.75

Sample: 281138 - MW-2

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	86371	Date Analyzed:	2011-11-02	Analyzed By:	AR
Prep Batch:	73346	Sample Preparation:	2011-11-03	Prepared By:	AR

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Sulfate	Qs	1	**1990**	**1990**	<88.5	mg/L	500	88.5	2.5	0.177

Sample: 281138 - MW-2

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	86753	Date Analyzed:	2011-11-18	Analyzed By:	AR
Prep Batch:	73423	Sample Preparation:	2011-11-15	Prepared By:	AR

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Dissolved Solids		1	**102000**	**102000**	<975	mg/L	100	975	10	9.75

Method Blanks

Method Blank (1)

QC Batch: 86370 | Date Analyzed: 2011-11-02 | Analyzed By: AR
Prep Batch: 73346 | QC Preparation: 2011-11-01 | Prepared By: AR

Parameter	F	C	Result	Units	Reporting Limits
Sulfate		1	<0.177	mg/L	0.177

Method Blank (1)

QC Batch: 86371 | Date Analyzed: 2011-11-02 | Analyzed By: AR
Prep Batch: 73346 | QC Preparation: 2011-11-01 | Prepared By: AR

Parameter	F	C	Result	Units	Reporting Limits
Sulfate		1	<0.177	mg/L	0.177

Method Blank (1)

QC Batch: 86753 | Date Analyzed: 2011-11-18 | Analyzed By: AR
Prep Batch: 73423 | QC Preparation: 2011-11-15 | Prepared By: AR

Parameter	F	C	Result	Units	Reporting Limits
Total Dissolved Solids		1	<9.75	mg/L	9.75

Duplicate (1) Duplicated Sample: 281141

QC Batch: 86753 | Date Analyzed: 2011-11-18 | Analyzed By: AR
Prep Batch: 73423 | QC Preparation: 2011-11-15 | Prepared By: AR

Param	F	C	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids		1	22400	23200	mg/L	100	4	10

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 86370 | Date Analyzed: 2011-11-02 | Analyzed By: AR
Prep Batch: 73346 | QC Preparation: 2011-11-01 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate		1	25.4	mg/L	1	25.0	<0.177	102	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate		1	25.5	mg/L	1	25.0	<0.177	102	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 86371 | Date Analyzed: 2011-11-02 | Analyzed By: AR
Prep Batch: 73346 | QC Preparation: 2011-11-01 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate		1	25.2	mg/L	1	25.0	<0.177	101	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate		1	25.1	mg/L	1	25.0	<0.177	100	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 86753 | Date Analyzed: 2011-11-18 | Analyzed By: AR
Prep Batch: 73423 | QC Preparation: 2011-11-15 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Dissolved Solids		1	961	mg/L	1	1000	<9.75	96	85.5 - 112.7

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Dissolved Solids		1	987	mg/L	1	1000	<9.75	99	85.5 - 112.7	3	10

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 281133

QC Batch: 86370 | Date Analyzed: 2011-11-02 | Analyzed By: AR
Prep Batch: 73346 | QC Preparation: 2011-11-01 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate	Qs	1	2360	mg/L	100	2750	139	81	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate	Qs	1	2360	mg/L	100	2750	139	81	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 281137

QC Batch: 86371 | Date Analyzed: 2011-11-02 | Analyzed By: AR
Prep Batch: 73346 | QC Preparation: 2011-11-01 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate	Qs	1	2450	mg/L	100	2750	173	83	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate	Qs	1	2460	mg/L	100	2750	173	83	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Calibration Standards

Standard (ICV-1)

QC Batch: 86370 Date Analyzed: 2011-11-02 Analyzed By: AR

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		1	mg/L	25.0	25.2	101	90 - 110	2011-11-02

Standard (CCV-1)

QC Batch: 86370 Date Analyzed: 2011-11-02 Analyzed By: AR

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		1	mg/L	25.0	25.6	102	90 - 110	2011-11-02

Standard (ICV-1)

QC Batch: 86371 Date Analyzed: 2011-11-02 Analyzed By: AR

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		1	mg/L	25.0	25.6	102	90 - 110	2011-11-02

Standard (CCV-1)

QC Batch: 86371 Date Analyzed: 2011-11-02 Analyzed By: AR

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		1	mg/L	25.0	25.2	101	90 - 110	2011-11-02

Limits of Detection (LOD)

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-10-TX	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

WO #11103123

Analysis Request of Chain of Custody Record

PAGE: 1 of 1

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: Celero
SITE MANAGER: Jeff Kindley
PROJECT NO.: 115-G403131
PROJECT NAME: Celero / Rock Queen #11

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
281132	10/26	1640	W		X	MW-6	4	N	X		X		X												X				
133		1739				MW-7																							
134		1830				MW-4																							
135	10/27	0820				MW-1																							
136		1007				MW-5																							
137		1047				MW-3																							
138		1130				MW-2																							

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature)	Date: 10/31/11 Time: 1140	RECEIVED BY: (Signature)	Date: 10/31/11 Time: 1140
RELINQUISHED BY: (Signature)	Date: 10/31/11 Time: 1606	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY: (Print & Initial) JT/SA Date: 10/27/11 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS AIRBILL #: OTHER:

TETRA TECH CONTACT PERSON: Jeff Kindley

Results by:

RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature) Brenda Ward
DATE: 11/1/11 TIME: 8:40

SAMPLE CONDITION WHEN RECEIVED: Intact 39°C

REMARKS: Midland-Chloride Lubbock-BTEX LS 29/3.1° ZN00.3973 3.9°

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

KB

WO #11103123

Analysis Request of Chain of Custody Record

PAGE: 1 OF

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: [illegible]
SITE MANAGER: [illegible]
PROJECT NO.: [illegible]
PROJECT NAME: [illegible] / Rock Queen #11

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS	SO4, TDS
281132	10/26				X	MW-6	4	N	X				X												X					X
33		1739				MW-7																								X
134						MW-4																								X
135	10/27					MW-1																								X
3						MW-5																								X
137		1047				[illegible]																								X
138		1130				MW-2																								X

RELINQUISHED BY: (Signature) [signature] Date: 10/31/11 Time: 1140
RECEIVED BY: (Signature) [signature] Date: 10/31/11 Time: 1140
RELINQUISHED BY: (Signature) [signature] Date: 10/31/11 Time: 1606
RECEIVED BY: (Signature) Date: Time:
RELINQUISHED BY: (Signature) Date: Time
RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Initial) JT/SA Date: 10/[illegible]/11 Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS
AIRBILL #:
OTHER:
TETRA TECH CONTACT PERSON: Jeff Kindley
Results by:
RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Trace
RECEIVED BY: (Signature) [signature]
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE: DATE: 11/4 TIME:

SAMPLE CONDITION WHEN RECEIVED: In 3
REMARKS: [illegible] N0039

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy

NOV - 4 2011 [initials] 11/30 FP