3R – 430

2013 AGWMR

08 / 22 / 2014

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ConocoPhillips

Mr. Glenn von Gonten
New Mexico Oil Conservation Division
1220 South St. Francis DR
Santa Fe, NM 87505

August 22, 2014

Re: NMOCD Case No. 3R-430, 2013 Annual Groundwater Monitoring Report

Dear Mr. von Gonten:

Enclosed is the 2013 Annual Groundwater Monitoring Report for the Wilmuth No. 1 site. This report, prepared by Conestoga-Rovers & Associates (CRA), contains the results of groundwater monitoring from March, June, September, and December 2013.

Please let me know if you have any questions.

Sincerely,

David C. Hathaway, P.E.

Enc

CONESTOGA-ROVERS & ASSOCIATES

www.CRAworld.com

Final Report

2013 Annual Groundwater Monitoring Report

ConocoPhillips Wilmuth No. 1
San Juan County, New Mexico
API# 30-045-10370
NMOCD# 3R-430

Prepared for: ConocoPhillips Company

Conestoga-Rovers & Associates
6121 Indian School Road, NE Suite 200
Albuquerque, New Mexico 87110

September 2014 • 074937 • Report No. 4

Partners in Sustainability

Table of Contents

Page

List of Figures
(Following Text)

List of Tables
(Following Text)

List of Appendices

Section 1.0 Introduction

This report presents the results of quarterly groundwater monitoring events conducted during 2013 by Conestoga-Rovers & Associates, Inc. (CRA) at the ConocoPhillips Company (ConocoPhillips) Wilmuth No. 1 remediation site located north of Aztec, New Mexico (Site). The Site is located on private land leased to ConocoPhillips and is situated in Section 26, Township 31N, Range 11W, of San Juan County, New Mexico (**Figure 1**). Geographical coordinates for the Site are 36.864823° North and 107.964516° West. A Site vicinity map and Site plan are included as **Figures 1** and **2,** respectively.

1.1 Background

The Wilmuth No. 1 natural gas well was spudded in 1958 by El Paso Natural Gas Company. Meridian Oil, Inc., a subsidiary of Burlington Resources, Inc. (Burlington), took over operation of the well on November 1, 1986. ConocoPhillips acquired Burlington on March 31, 2006.

A release of approximately 22 barrels (bbls) of produced water occurred within the bermed area surrounding the produced water tank on May 17, 2001. Twenty bbls were later recovered. A release of condensate occurred on December 17, 2002 from a corrosion hole in the condensate tank. Burlington excavated a total of 85 cubic yards of impacted soil and disposed of it at JFJ landfarm, located in Aztec, NM.

ConocoPhillips personnel notified the New Mexico Oil Conservation Division (NMOCD) in December 2009 of groundwater seeping into two separate areas that were undergoing excavation to remove stained soil discovered during line tie-in procedures. Four groundwater monitor wells were subsequently installed under the supervision of Tetra Tech in April, 2010. A generalized geologic cross section was produced using boring logs from monitor well installation at the Site. The cross section is presented as **Figure 3**. Tetra Tech began quarterly sampling immediately following development of the wells by collecting a baseline round of groundwater samples on April 8, 2010.

On June 15, 2011, Site consulting responsibilities were transferred from Tetra Tech to CRA of Albuquerque, NM. The most recent sampling event took place on December 12, 2013. The December 2013 sampling event marks the 16th consecutive round of quarterly sampling at the Site. A historical timeline is presented in **Table 1**.

Section 2.0 Monitoring Summary, Sampling Methodology, and analytical Results

2.1 Monitoring Summary

Groundwater quality monitoring events were conducted on March 18, June 14, September 12, and December 12, 2013 at the Wilmuth No. 1 site.

2.2 Groundwater Sampling Methodology

Prior to collection of groundwater samples from Monitor Wells MW-1, MW-2, MW-3, and MW-4, depth to groundwater in each well was determined using an oil/water interface probe. Groundwater elevation data are summarized in **Table 2**. The casings for Site monitor wells were surveyed on April 8, 2010 using an arbitrary reference-elevation of 100 feet. The data obtained from the Site survey and groundwater elevations collected during the 2013 sampling events were used to create groundwater potentiometric surface maps for the Site (**Figures 4, 5, 6** and **7,** respectively). Using these data, it was determined that the groundwater flow direction at the Site is to the southwest.

During the 2013 quarterly groundwater monitoring events, Site monitor wells were purged of at least 3 casing volumes of groundwater using 1.5-inch diameter, polyethylene, dedicated bailers. While bailing each well, groundwater parameter data, including temperature, pH, conductivity, dissolved oxygen, and oxidation-reduction potential were collected using a YSI 556 multi-parameter Sonde and recorded on CRA Well Sampling Field Information Forms (**Appendix A**).

Groundwater samples were placed in laboratory prepared bottles, packed on ice, and shipped under chain-of-custody documentation to Pace Analytical Services, Inc. of Lenexa, KS for analysis. Samples were analyzed for total dissolved solids (TDS) by SM 2540C and dissolved manganese by EPA Method 6010.

2.3 Groundwater Analytical Results

The New Mexico Water Quality Control Commission (NMWQCC) mandates that groundwater quality in New Mexico be protected, and has issued groundwater quality standards in Title 20, Chapter 6, Part 2, Section 3103 of the New Mexico Administrative Code (20.6.2.3103 NMAC).

Results of 2013 groundwater monitoring events are discussed below.

March 2013

- **Dissolved Manganese**: The groundwater quality standard for dissolved manganese is 0.2 milligrams per liter (mg/L). Groundwater collected from all Site monitor wells was found to be above the standard for dissolved manganese during March 2013. Dissolved manganese concentrations were 1.12 mg/L, 1.56 mg/L, 1.58 mg/L, and 1.54 mg/L for wells MW-1, MW-2, MW-3, and MW-4, respectively.

- **Total Dissolved Solids**: The groundwater quality standard for TDS is 1000 mg/L. Groundwater collected from Monitor Well MW-1 was found to be above the standard for TDS during March 2013. TDS was detected at 1070 mg/L for Monitor Well MW-1.

June 2013

- **Dissolved Manganese:** Groundwater collected from all Site monitor wells was found to be above the standard for dissolved manganese during June 2013. Dissolved manganese concentrations were 0.930 mg/L, 1.38 mg/L, 1.64 mg/L, and 1.74 mg/L for wells MW-1, MW-2, MW-3, and MW-4, respectively.

September 2013

- **Dissolved Manganese:** Groundwater collected from all Site monitor wells was found to be above the standard for dissolved manganese during September 2013. Dissolved manganese concentrations were 0.921 mg/L, 1.45 mg/L, 1.65 mg/L, and 1.81 mg/L for wells MW-1, MW-2, MW-3, and MW-4, respectively.

December 2013

- **Dissolved Manganese:** Groundwater collected from all Site monitor wells was found to be above the standard for dissolved manganese during December 2013. Dissolved manganese concentrations were 1.10 mg/L, 1.30 mg/L, 1.50 mg/L, and 1.20 mg/L for wells MW-1, MW-2, MW-3, and MW-4, respectively.

Historical analytical results are summarized in **Table 3**. The corresponding laboratory analytical reports, including quality control summaries, are included in **Appendix B**.

Section 3.0 Conclusion and Recommendations

BTEX analysis was discontinued at the Site following the December 14, 2011 groundwater quality monitoring event, which represented the eighth consecutive quarterly sampling event with BTEX constituents below laboratory detection limits.

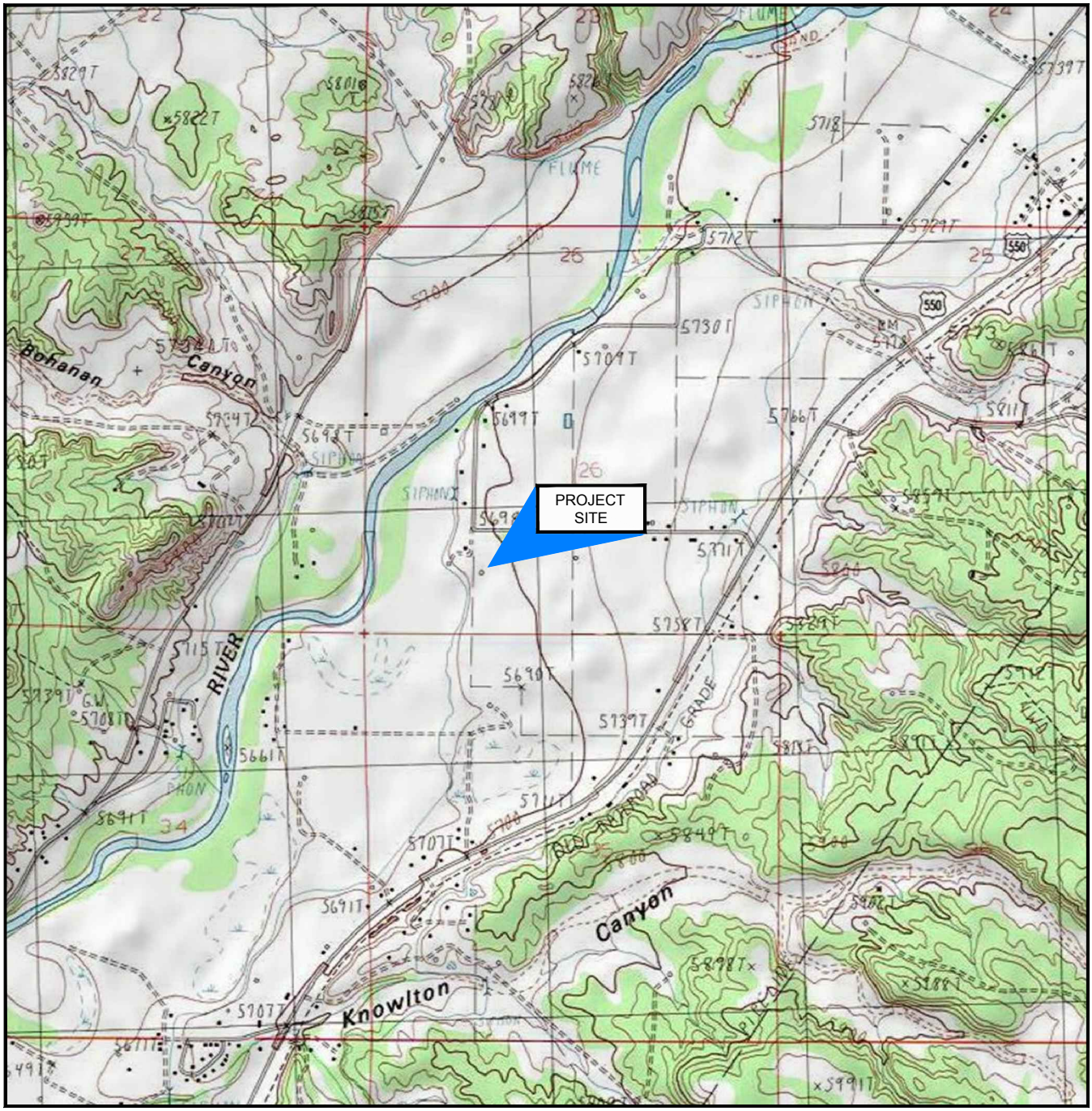
Groundwater samples from all Site monitor wells have continually exceeded the NMWQCC groundwater quality standard for dissolved manganese, which has remained stable over time in all Site monitor wells. Groundwater samples from all Site monitor wells have intermittently exceeded the standard for TDS.

Following the December 2013 sampling event, dissolved manganese analysis will be performed every two years during September. Once manganese is detected at levels below the NMWQCC standard for all Site monitor wells, quarterly sampling will resume for manganese. TDS analysis will continue to be performed quarterly. When eight consecutive quarters of data within compliance levels or at background concentrations has been achieved, remediation Site closure will be requested.

In addition to future groundwater sampling at the site, CRA recommends the installation of an upgradient monitor well to assess background groundwater conditions at the site. **Figure 8** depicts the proposed location of this up-gradient monitor well.

The next groundwater monitoring event at the Site is scheduled for March 2014.

Figures



SOURCE: USGS 7.5 MINUTE QUAD
"CEDAR HILL AND AZTEC, NEW MEXICO"

N

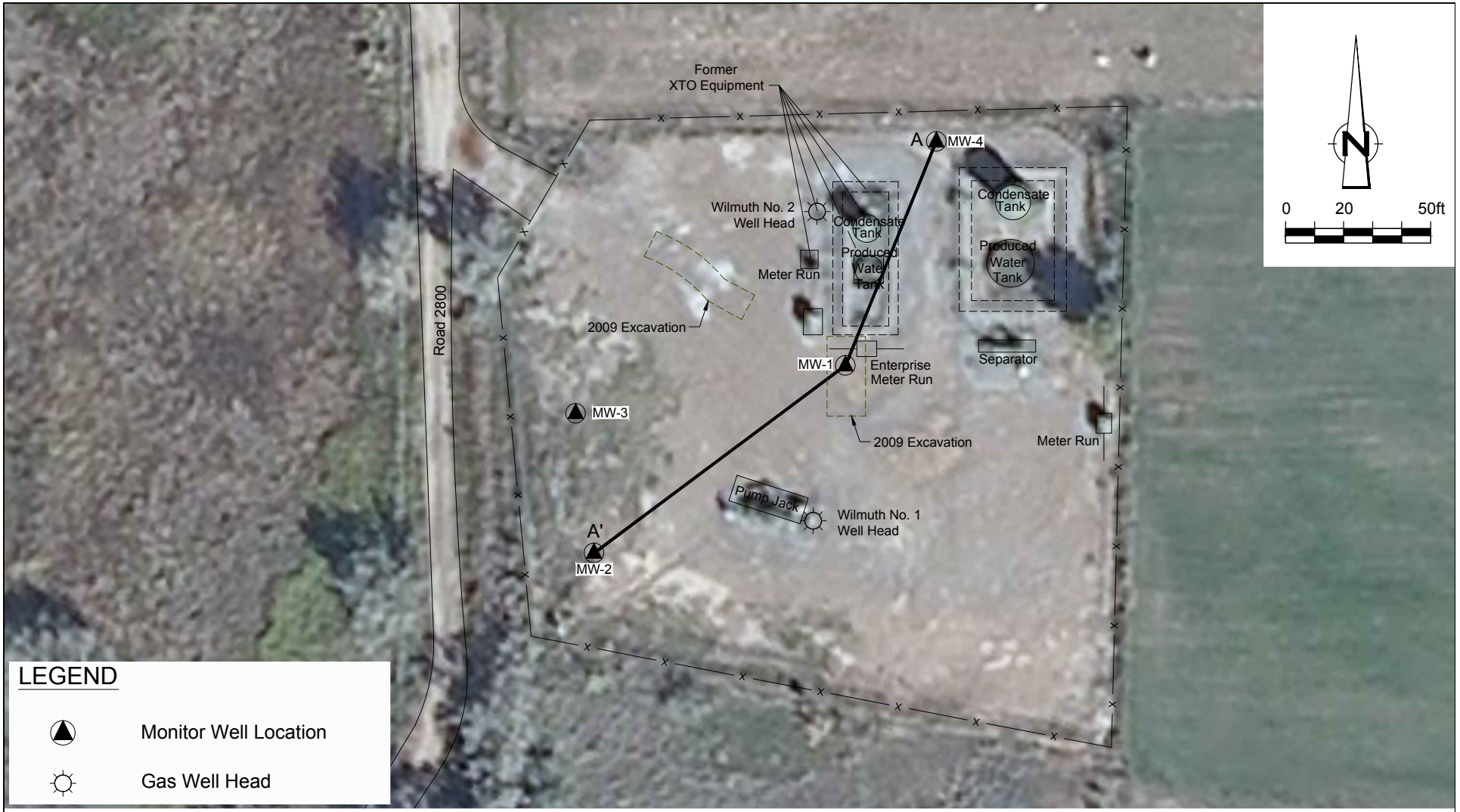
0 1000 2000ft

Figure 1

SITE VICINITY MAP
WILMUTH No. 1 NATURAL GAS WELL SITE
SECTION 26, T31N-R11W, SAN JUAN COUNDY, NEW MEXICO
ConocoPhillips Company

CRA

074937-95(004)GN-DL001_TOPO SEP 3/2013



ConocoPhillips high resolution aerial imagery 2008.

Figure 2

SITE PLAN
WILMUTH No. 1 NATURAL GAS WELL SITE
SECTION 26, T31-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

CRA

074937-95(004)GN-DL002_SD SEP 3/2013

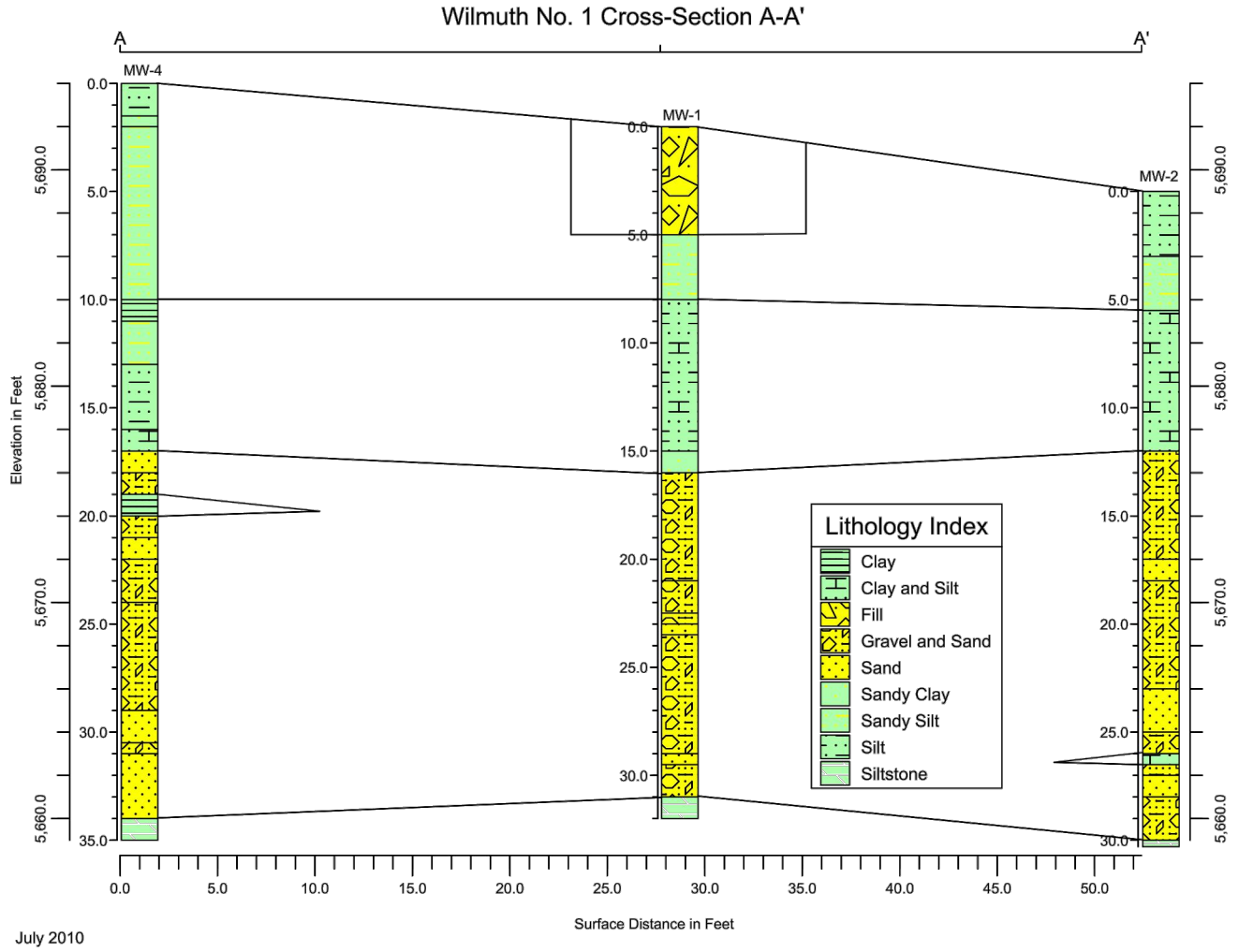


Figure 3

GEOLOGICAL CROSS SECTION
WILMUTH NO. 1 NATURAL GAS WELL SITE
SECTION 26, T31-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

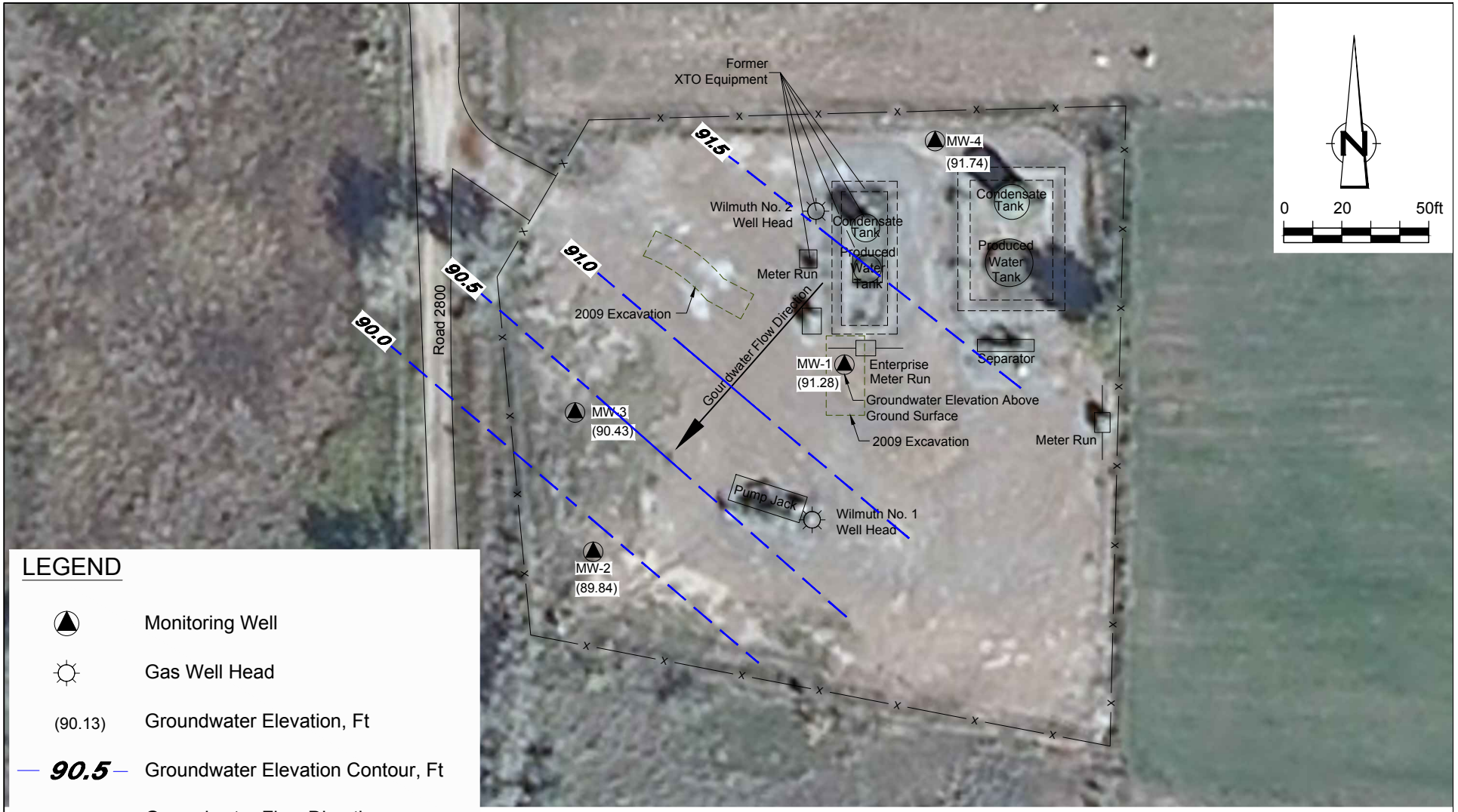


Figure 4

MARCH 2013 GROUNDWATER POTENTIOMETRIC SURFACE MAP
WILMUTH No. 1 NATURAL GAS WELL PRODUCTION SITE
SECTION 26, T31-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

074937-95(004)GN-DL004_GG SEP 3/2013

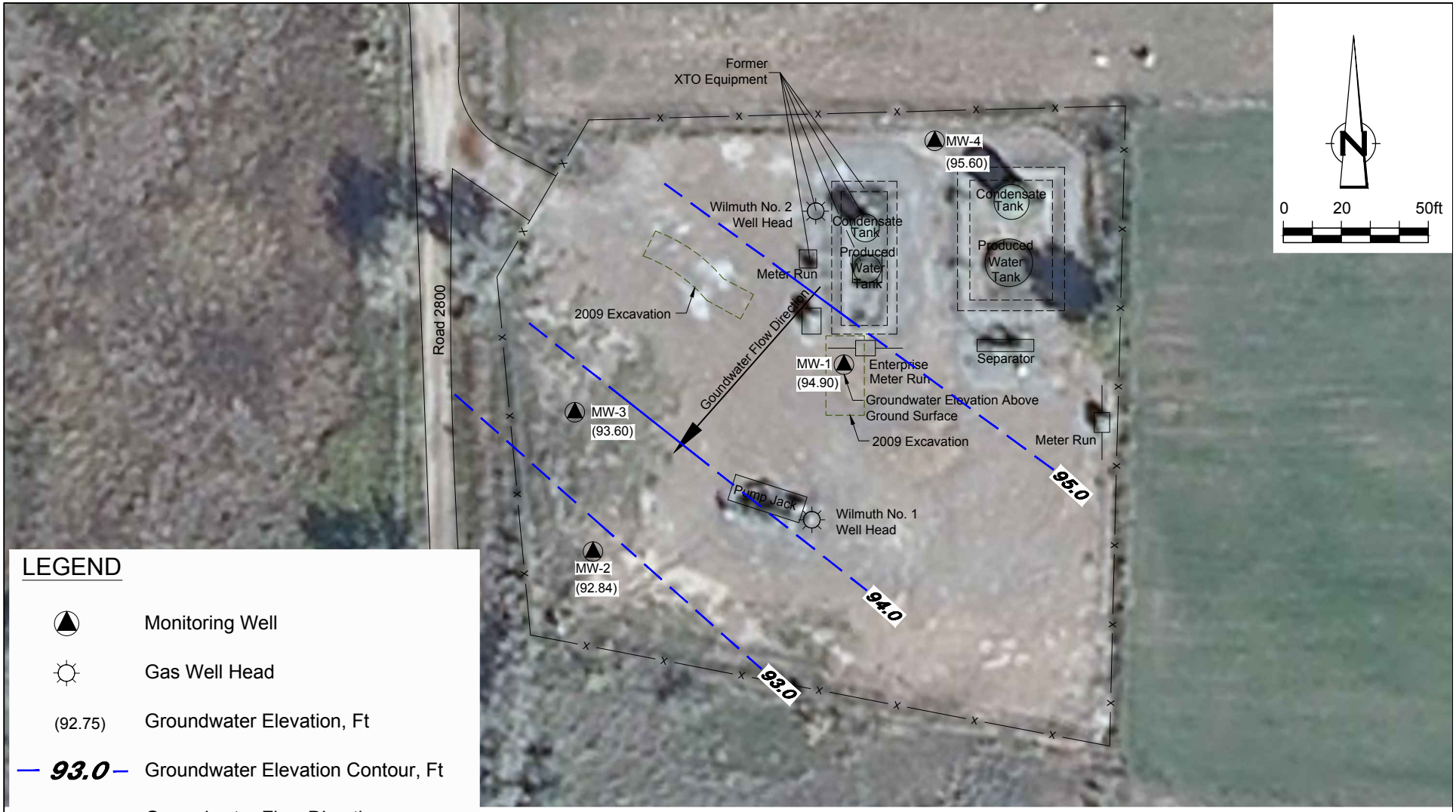


Figure 5

JUNE 2013 GROUNDWATER POTENTIOMETRIC SURFACE MAP
WILMUTH No. 1 NATURAL GAS WELL PRODUCTION SITE
SECTION 26, T31-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

074937-95(004)GN-DL004_GG MAR 17/2014

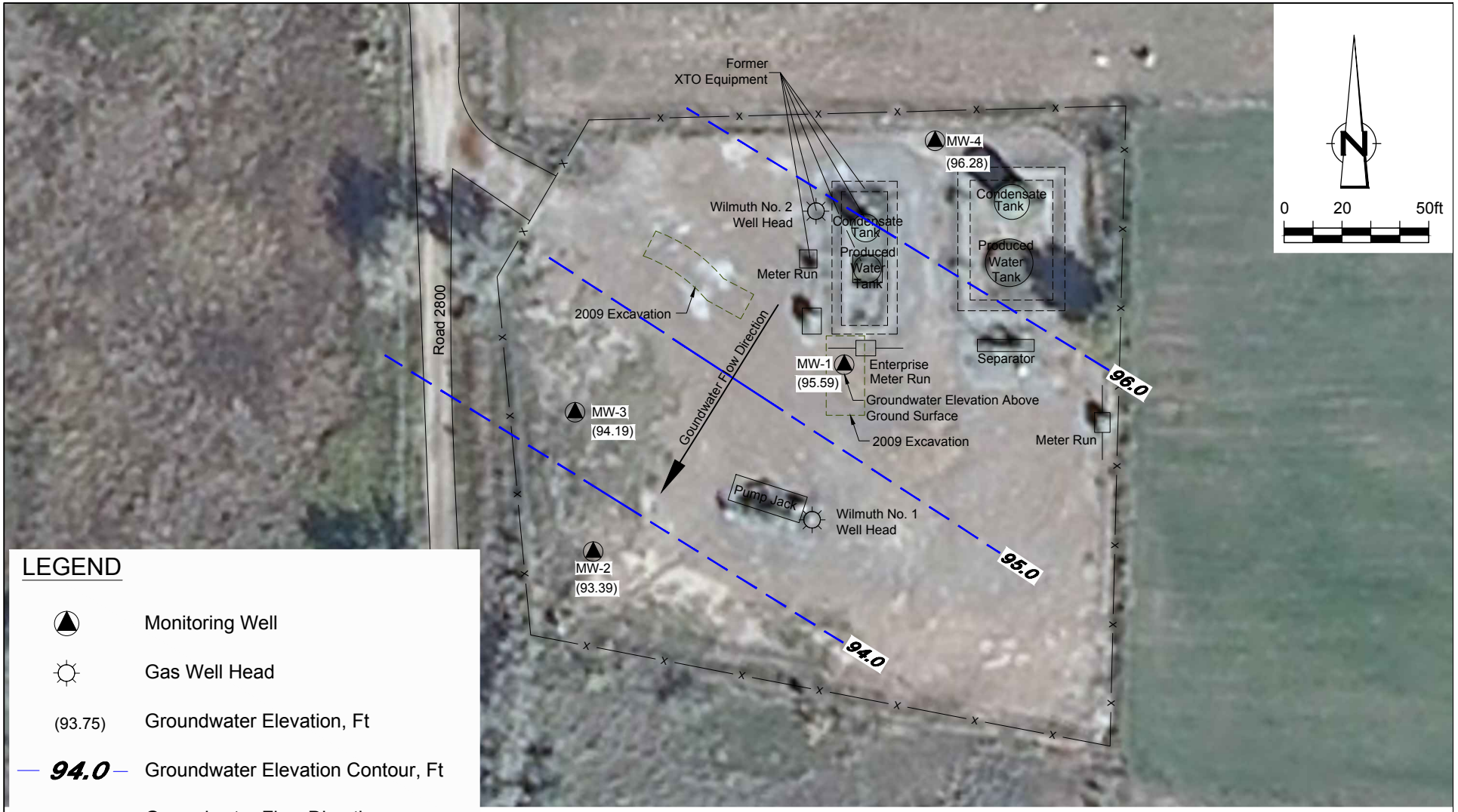


Figure 6

SEPTEMBER 2013 GROUNDWATER POTENTIOMETRIC SURFACE MAP
WILMUTH No. 1 NATURAL GAS WELL PRODUCTION SITE
SECTION 26, T31-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

074937-95(004)GN-DL004_GG MAR 17/2014

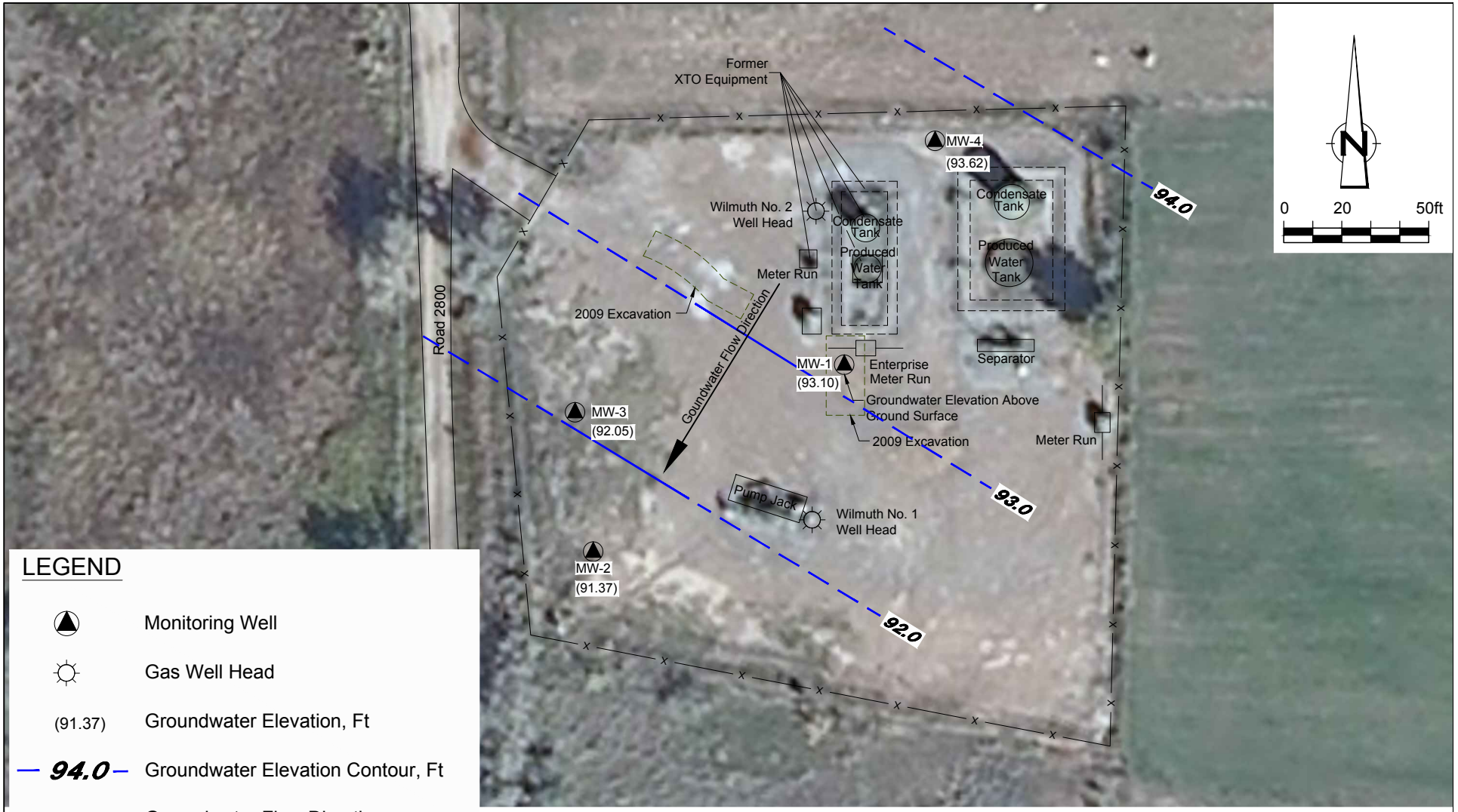


Figure 7

DECEMBER 2013 GROUNDWATER POTENTIOMETRIC SURFACE MAP
WILMUTH No. 1 NATURAL GAS WELL PRODUCTION SITE
SECTION 26, T31-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

074937-95(004)GN-DL004_GG MAR 17/2014

ConocoPhillips high resolution aerial imagery 2008.

Figure 8

PROPOSED MONITOR WELL LOCATION MAP
WILMUTH No. 1 NATURAL GAS WELL SITE
SECTION 26, T31-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

CRA

074937-95(004)GN-DL002_SD APR 17/2014

Tables

Site History Timeline
ConocoPhillips Company
Wilmuth No. 1
San Juan County, New Mexico

Date/Time Period	*Event/Action*	*Description/Comments*
July 24, 1958 to August 11, 1958	Production Well Completion	Well spudded and completed by El Paso Natural Gas Company.
November 1, 1986	Change of Operator	Operator changed from El Paso Natural Gas Company to Meridian Oil Inc. (a subsidiary of Burlington Resources, Inc.)
May 17, 2001	Release	Due to a broken dump arm, 22 barrels (bbls) of produced water were released within the bermed area around the produced water tank. 20 bbls were reported to be recovered.
December 17, 2002	Release	A corrosion hole in the bottom of a steel pit tank that collected fluids from the separator and condensate tank drain allowed an unknown volume of produced water and condensate to leak onto the ground. All fluids were contained inside the tank berm. Impacted gravel and soils were excavated and disposed of at JFJ Landfarm. Excavation dimensions were approximately 30 feet by 25 feet by 3 feet for a total of 85 cubic yards.
May 21, 2004	Workover Pit Proposal Approved	A lined workover pit was approved by Denny Faust of the NMOCD as detailed in Burlington Resources general pit construction plan dated April 26, 2004 which was also approved by the NMOCD.
March 31, 2006	Change of Operator	ConocoPhillips Company completed acquisition of Burlington Resources.
December 22 and 23, 2009	Potential for Groundwater Impacts Discovered	ConocoPhillips company notified Brandon Powell and Kelly Roberts of the NMOCD about groundwater seeping into two excavated areas on Site where discolored soils had been found during line tie-in procedures. The type, volume, and origin of the initial release was unknown. Groundwater samples were collected from the two areas and analyzed by Envirotech Inc. of Farmington, NM for benzene, toluene, ethylbenzene and total xylenes (BTEX), total petroleum hydrocarbons (TPH) and chloride. Analytical results indicated that BTEX and TPH are below NMWQCC groundwater standards; however, chloride was present at a concentration above the standard of 250 mg/L with a concentration of 2,500 mg/L in the area of the excavation and a concentration of 950 mg/L in an trench associated with line tie-in procedures. Soil samples were collected from the same trench and groundwater samples were collected from where discolored soil was present. The soil was analyzed by Envirotech for BTEX, TPH and Chloride. Analytical results for all soil samples were below NMOCD recommended soil action levels.

Site History Timeline
ConocoPhillips Company
Wilmuth No. 1
San Juan County, New Mexico

Date/Time Period	*Event/Action*	*Description/Comments*
January 7, 2010	NMOCD Correspondence	A C-141 Release Notification and Corrective Action form was submitted to the NMOCD by ConocoPhillips.
April 5, 2010 through April 7, 2010	Groundwater Monitoring Well Installation and Baseline Soil Sampling	Tetra Tech supervised the installation of 4 groundwater Monitor Wells; MW-1, MW-2, MW-3 and MW-4, by Enviro-Drill Inc. of Albuquerque, NM. Each well was installed with 25 feet of screen. MW-1, MW-2 and MW-3 were all set at 30 feet below ground surface. MW-4 was set at 35 feet below ground surface. A confining layer of gray siltstone was found at depth in each of the four boring locations. Soil samples were collected from all four soil borings and analyzed for major ions, total metals, semi-volatile organic compounds (SVOCs), volatile organic compounds (VOCs) including BTEX, diesel range organics, and gasoline range organics. Analytical results for all soil samples were below NMOCD recommended soil action levels.
April 8, 2010	Baseline Groundwater Sampling	Tetra Tech conducted the initial groundwater sampling from Site Monitor Wells, MW-1, MW-2, MW-3 and MW-4. A baseline suite was completed including major ions, NMWQCC dissolved metals, SVOCs , VOCs including BTEX, diesel range organics, and gasoline range organics. All four Site monitor wells were below NMWQCC standards for BTEX constituents. All four wells were above the standard for dissolved manganese. MW-1, MW-2 and MW-4 were above the standard for total dissolved solids (TDS). MW-1 and MW-4 were also above the standard for sulfate.
June 9, 2010	Quarterly Groundwater Monitoring Event	Quarterly groundwater sampling was conducted by Tetra Tech. Samples were collected from all Site monitor wells and analyzed for BTEX, dissolved manganese, chloride, sulfate, and TDS. All four Site monitor wells were below NMWQCC standards for BTEX constituents. Samples collected from all four Site wells were above the standard for dissolved manganese. Samples collected from MW-1, MW-2 and MW-4 were above the standard for TDS.
September 20, 2010	Quarterly Groundwater Monitoring Event	Quarterly groundwater sampling was conducted by Tetra Tech. Samples were collected from all Site monitor wells and analyzed for BTEX, dissolved manganese, chloride, sulfate, and TDS. All four Site monitor wells were below NMWQCC standards for BTEX constituents. Samples collected from all four Site wells were above the standard for dissolved manganese. Samples collected from MW-1, MW-2 and MW-4 were above the standard for TDS.

Site History Timeline
ConocoPhillips Company
Wilmuth No. 1
San Juan County, New Mexico

Date/Time Period	*Event/Action*	*Description/Comments*
December 16, 2010	Quarterly Groundwater Monitoring Event	Forth quarterly groundwater sampling was conducted by Tetra Tech. Samples were collected from all Site monitor wells and analyzed for BTEX, dissolved manganese, sulfate, and TDS. All four Site monitor wells were below NMWQCC standards for BTEX constituents. Samples collected from all four Site wells were above the standard for dissolved manganese. Samples collected from MW-1, MW-2 and MW-4 were above the standard for TDS.
March 16, 2011	Quarterly Groundwater Monitoring Event	Fifth quarterly groundwater sampling was conducted by Tetra Tech. Samples were collected from all Site monitor wells and analyzed for BTEX, dissolved manganese, chloride, sulfate, and TDS. All four Site monitor wells were below NMWQCC standards for chloride, sulfate and BTEX constituents. Samples collected from all four Site wells were above the standard for dissolved manganese. The sample collected from MW-1 was above the standard for TDS.
June 15, 2011	Transfer of Consulting Responsibilities	Site consulting responsibilities were transferred from Tetra Tech of Albuquerque, NM to Conestoga-Rovers & Associates (CRA) of Albuquerque, NM.
June 22, 2011	Quarterly Groundwater Monitoring Event	Sixth quarterly groundwater sampling was conducted by CRA. Samples were collected from all Site monitoring wells and analyzed for BTEX, dissolved manganese, chloride, sulfate, and TDS. All four Site monitoring wells were below NMWQCC standards for chloride, sulfate and BTEX constituents. Samples collected from all four Site wells were above the standard for dissolved manganese. The sample collected from MW-1 was above the standard for TDS.
October 12, 2011	Quarterly Groundwater Monitoring Event	Seventh quarterly groundwater sampling event was conducted by CRA. Samples were collected from all Site monitoring wells and analyzed for BTEX, dissolved manganese, and TDS. All four Site monitoring wells were below NMWQCC standards for TDS and BTEX constituents. Samples collected from all four Site wells were above the standard for dissolved manganese.
December 14, 2011	Quarterly Groundwater Monitoring Event	Eighth quarterly groundwater sampling event was conducted by CRA. Samples were collected from all Site monitoring wells and analyzed for BTEX, dissolved manganese, and TDS. All four Site monitoring wells were below NMWQCC standards for TDS and BTEX constituents. Samples collected from all four Site wells were above the standard for dissolved manganese.

Site History Timeline
ConocoPhillips Company
Wilmuth No. 1
San Juan County, New Mexico

Date/Time Period	*Event/Action*	*Description/Comments*
March 7, 2012	Quarterly Groundwater Monitoring Event	Ninth quarterly groundwater sampling event was conducted by CRA. BTEX analysis was discontinued following the December 2011 sampling event. Samples were collected from all Site monitoring wells and analyzed for dissolved manganese and TDS. All four Site monitoring wells were below NMWQCC standards for TDS. Samples collected from all four Site wells were above the standard for dissolved manganese.
June 6, 2012	Quarterly Groundwater Monitoring Event	Tenth quarterly groundwater sampling event was conducted by CRA. Samples were collected from all Site monitoring wells and analyzed for dissolved manganese and TDS. All four Site monitoring wells were below NMWQCC standards for TDS. Samples collected from all four Site wells were above the standard for dissolved manganese.
September 19, 2012	Quarterly Groundwater Monitoring Event	11th quarterly groundwater sampling event was conducted by CRA. Samples were collected from all Site monitoring wells and analyzed for dissolved manganese and TDS. All four Site monitoring wells were below NMWQCC standards for TDS. Samples collected from all four Site wells were above the standard for dissolved manganese.
December 12, 2012	Quarterly Groundwater Monitoring Event	12th quarterly groundwater sampling event was conducted by CRA. Samples were collected from all Site monitoring wells and analyzed for dissolved manganese and TDS. All four Site monitoring wells were below NMWQCC standards for TDS. Samples collected from all four Site wells were above the standard for dissolved manganese. TDS below standard for 6th consecutive quarterly event.
March 18, 2013	Quarterly Groundwater Monitoring Event	13th quarterly groundwater sampling event was conducted by CRA. Samples were collected from all Site monitoring wells and analyzed for dissolved manganese and TDS. MW-1 was above NMWQCC standards for TDS. Samples collected from all four Site wells were above the standard for dissolved manganese.
June 14, 2013	Quarterly Groundwater Monitoring Event	14th quarterly groundwater sampling event was conducted by CRA. Samples were collected from all Site monitoring wells and analyzed for dissolved manganese and TDS. All four Site monitoring wells were below NMWQCC standards for TDS. Samples collected from all four Site wells were above the standard for dissolved manganese.
September 12, 2013	Quarterly Groundwater Monitoring Event	15th quarterly groundwater sampling event was conducted by CRA. Samples were collected from all Site monitoring wells and analyzed for dissolved manganese and TDS. All four Site monitoring wells were below NMWQCC standards for TDS. Samples collected from all four Site wells were above the standard for dissolved manganese.
December 12, 2013	Quarterly Groundwater Monitoring Event	16th quarterly groundwater sampling event was conducted by CRA. Samples were collected from all Site monitoring wells and analyzed for dissolved manganese and TDS. All four Site monitoring wells were below NMWQCC standards for TDS. Samples collected from all four Site wells were above the standard for dissolved manganese.

Notes:
NMOCD = New Mexico Oil Conservation Division
NMWQCC = New Mexico Water Quality Control Commission

Table 2

Monitoring Well Specifications and Groundwater Elevations
ConocoPhillips Company
Wilmuth No. 1
San Juan County, New Mexico

Well ID	*Total Depth (feet bgs)*	*Top of Casing Elevation**	*Screen Interval (feet bgs)*	*Date Measured*	*Depth to Groundwater (feet below TOC)*	*Relative Water Level**
MW-1	30	95.8	4.5 - 29.5	4/8/2010	5.21	90.59
				6/9/2010	1.94	93.86
				9/20/2010	1.51	94.29
				12/16/2010	3.31	92.49
				3/16/2011	4.98	90.82
				6/22/2011	2.45	93.35
				10/12/2011	0(1)	95.80(1)
				12/14/2011	2.62	93.18
				3/7/2012	4.36	91.44
				6/6/2012	1.11	94.69
				9/19/2012	0(1)	95.80(1)
				12/12/2012	2.56	93.24
				3/18/2013	4.52	91.28
				6/14/2013	0.90	94.90
				9/12/2013	0.21	95.59
				12/12/2013	2.70	93.10
MW-2	30	95.8	4.5 - 29.5	4/8/2010	6.48	89.32
				6/9/2010	3.68	92.12
				9/20/2010	3.28	92.52
				12/16/2010	4.83	90.97
				3/16/2011	6.31	89.49
				6/22/2011	4.11	91.69
				10/12/2011	1.88	93.92
				12/14/2011	4.25	91.55
				3/7/2012	5.67	90.13
				6/6/2012	3.05	92.75
				9/19/2012	2.05	93.75
				12/12/2012	4.31	91.49
				3/18/2013	5.96	89.84
				6/14/2013	2.96	92.84
				9/12/2013	2.41	93.39
				12/12/2013	4.43	91.37
MW-3	30	96.32	4.5 - 29.5	4/8/2010	6.37	89.95
				6/9/2010	3.39	92.93
				9/20/2010	3.02	93.30
				12/16/2010	4.65	91.67
				3/16/2011	6.20	90.12
				6/22/2011	3.91	92.41
				10/12/2011	1.55	94.77
				12/14/2011	4.04	92.28
				3/7/2012	5.59	90.73
				6/6/2012	2.75	93.57
				9/19/2012	1.71	94.61
				12/12/2012	4.09	92.23
				3/18/2013	5.89	90.43
				6/14/2013	2.72	93.60
				9/12/2013	2.13	94.19
				12/12/2013	4.27	92.05
MW-4	35	98.7	9.5 - 34.5	4/8/2010	9.68(2)	89.02
				6/9/2010	4.41	94.29
				9/20/2010	3.78	94.92
				12/16/2010	5.70	93.00
				3/16/2011	7.44	91.26
				6/22/2011	4.81	93.89
				10/12/2011	2.05	96.65
				12/14/2011	5.01	93.69
				3/7/2012	6.83	91.87
				6/6/2012	3.34	95.36
				9/19/2012	2.11	96.59
				12/12/2012	4.93	93.77
				3/18/2013	6.96	91.74
				6/14/2013	3.10	95.60
				9/12/2013	2.42	96.28
				12/12/2013	5.08	93.62

Notes:
TOC = Top of casing
bgs = Below ground surface
* = Elevation relative to an arbitrary reference elevation of 100 feet
(1) = Water flowing up and out of well casing.
(2) = Anomalous data point

TABLE 3

GROUNDWATER LABORATORY ANALYTICAL RESULTS SUMMARY
CONOCOPHILLIPS COMPANY
WILMUTH NO. 1
SAN JUAN COUNTY, NEW MEXICO

Well ID	*Sample ID*	*Date*	*Sample Type*	***Benzene (mg/L)***	***Toluene (mg/L)***	***Ethylbenzene (mg/L)***	***Xylenes (total) (mg/L)***	***Chloride (mg/L)***	***Sulfate (mg/L)***	***Manganese (dissolved) (mg/L)***	***Total dissolved solids (TDS) (mg/L)***
MW-1	MW-1	4/8/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	143	**879**	**3.03**	**1780**
	MW-1 Duplicate	4/8/2010	(Duplicate)	< 0.001	0.0011	< 0.001	0.001	--	--	--	--
	MW-1	6/9/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	26.9	375	**1.08**	**1190**
	MW-1 Duplicate	6/9/2010	(Duplicate)	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--
	MW-1	9/20/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	30.0	425	**0.933**	**1020**
	MW-1 Duplicate	9/20/2010	(Duplicate)	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--
	MW-1	12/16/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	381	**0.896**	**1010**
	MW-1 Duplicate	12/16/2010	(Duplicate)	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--
	MW-1	3/16/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	26.0	499	**2.36**	**1200**
	MW-1 Duplicate	3/16/2011	(Duplicate)	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--
	GW-74937-062211-PG-04	6/22/2011	(orig)	< 0.0010	< 0.0010	< 0.0010	< 0.0030	21.6	585	**2.32**	**1100**
	GW-74937-062211-PG-05	6/22/2011	(Duplicate)	< 0.0010	< 0.0010	< 0.0010	< 0.0030	--	--	--	--
	GW-074937-101211-CM-009	10/12/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.04**	939
	GW-074937-101211-CM-010	10/12/2011	(Duplicate)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	--	--
	GW-074937-121411-CB-MW-1	12/14/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.972**	913
	GW-074937-121411-CB-DUP	12/14/2011	(Duplicate)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**--**	--
	GW-074937-3712-CB-MW-1	3/7/2012	(orig)	--	--	--	--	--	--	**0.955**	980
	GW-074937-060612-CB-MW-1	6/6/2012	(orig)	--	--	--	--	--	--	**0.886**	851
	GW-074937-091912-JP-MW-1	9/19/2012	(orig)	--	--	--	--	--	--	**0.915**	853
	GW-074937-091912-JP-DUP	9/19/2012	(Duplicate)	--	--	--	--	--	--	**0.939**	--
	GW-074937-121212-CM-MW-1	12/12/2012	(orig)	--	--	--	--	--	--	**0.979**	927
	GW-074937-031813-CM-MW-1	3/18/2013	(orig)	--	--	--	--	--	--	**1.120**	**1070**
	074937-061413-JK-MW1	6/14/2013	(orig)	--	--	--	--	--	--	**0.930**	831
	GW-074937-091213-CM-MW-1	9/12/2013	(orig)	--	--	--	--	--	--	**0.921**	942
	GW-074937-091213-CM-DUP	9/12/2013	(Duplicate)	--	--	--	--	--	--	**--**	870
	GW-074937-121213-CM-MW-1	12/12/2013	(orig)	--	--	--	--	--	--	**1.10**	930
MW-2	MW-2	4/8/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	27.7	533	**2.48**	**1120**
	MW-2	6/9/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	19.8	337	**1.66**	**1070**
	MW-2	9/20/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	20.4	304	**0.822**	**1130**
	MW-2	12/16/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	281	**1.37**	**1410**
	MW-2	3/16/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	20.1	280	**1.57**	858
	GW-74937-062211-PG-02	6/22/2011	(orig)	< 0.0010	< 0.0010	< 0.0010	< 0.0030	18.5	324	**1.51**	718
	GW-074937-101211-CM-007	10/12/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.49**	743
	GW-074937-121411-CB-MW-2	12/14/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.47**	812
	GW-074937-3712-CB-MW-2	3/7/2012	(orig)	--	--	--	--	--	--	**1.62**	857
	GW-074937-060612-CB-MW-2	6/6/2012	(orig)	--	--	--	--	--	--	**1.26**	688
	GW-074937-091912-JP-MW-2	9/19/2012	(orig)	--	--	--	--	--	--	**1.39**	736
	GW-074937-121212-CM-MW-2	12/12/2012	(orig)	--	--	--	--	--	--	**1.11**	709
	GW-074937-031813-CM-MW-2	3/18/2013	(orig)	--	--	--	--	--	--	**1.56**	804
	074937-061413-JK-MW2	6/14/2013	(orig)	--	--	--	--	--	--	**1.38**	699
	GW-074937-091213-CM-MW-2	9/12/2013	(orig)	--	--	--	--	--	--	**1.450**	760
	GW-074937-121213-CM-MW-2	12/12/2013	(orig)	--	--	--	--	--	--	**1.30**	747

TABLE 3

GROUNDWATER LABORATORY ANALYTICAL RESULTS SUMMARY
CONOCOPHILLIPS COMPANY
WILMUTH NO. 1
SAN JUAN COUNTY, NEW MEXICO

Well ID	*Sample ID*	*Date*	*Sample Type*	***Benzene (mg/L)***	***Toluene (mg/L)***	***Ethylbenzene (mg/L)***	***Xylenes (total) (mg/L)***	***Chloride (mg/L)***	***Sulfate (mg/L)***	***Manganese (dissolved) (mg/L)***	***Total dissolved solids (TDS) (mg/L)***
MW-3	MW-3	4/8/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	19.2	259	**1.38**	930
	MW-3	6/9/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	18.5	241	**1.43**	769
	MW-3	9/20/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	20.3	271	**0.736**	830
	MW-3	12/16/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	265	**1.33**	**1200**
	MW-3	3/16/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	18.1	263	**1.57**	896
	GW-74937-062211-PG-01	6/22/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	19.2	324	**1.71**	726
	GW-074937-101211-CM-008	10/12/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.67**	716
	GW-074937-121411-CB-MW-3	12/14/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.56**	713
	GW-074937-3712-CB-MW-3	3/7/2012	(orig)	--	--	--	--	--	--	**1.69**	739
	GW-074937-060612-CB-MW-3	6/6/2012	(orig)	--	--	--	--	--	--	**1.74**	709
	GW-074937-091912-JP-MW-3	9/19/2012	(orig)	--	--	--	--	--	--	**1.60**	723
	GW-074937-121212-CM-MW-3	12/12/2012	(orig)	--	--	--	--	--	--	**1.57**	709
	GW-074937-121212-CM-DUP	12/12/2012	(Duplicate)	--	--	--	--	--	--	**--**	717
	GW-074937-031813-CM-MW-3	3/18/2013	(orig)	--	--	--	--	--	--	**1.58**	770
	GW-074937-031813-CM-DUP	3/18/2013	(Duplicate)	--	--	--	--	--	--	--	766
	074937-061413-JK-MW3	6/14/2013	(orig)	--	--	--	--	--	--	**1.64**	711
	GW-074937-091213-CM-MW-3	9/12/2013	(orig)	--	--	--	--	--	--	**1.650**	764
	GW-074937-121213-CM-MW-3	12/12/2013	(orig)	--	--	--	--	--	--	**1.50**	756
MW-4	MW-4	4/8/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	40	**918**	**3.94**	**1900**
	MW-4	6/9/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	29.6	542	**3.44**	**1380**
	MW-4	9/20/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	22.4	445	**2.59**	**1160**
	MW-4	12/16/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	464	**2.85**	**1350**
	MW-4	3/16/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	20.6	385	**2.18**	970
	GW-74937-062211-PG-03	6/22/2011	(orig)	< 0.0010	< 0.0010	< 0.0010	< 0.0030	22.1	408	**2.31**	814
	GW-074937-101211-CM-006	10/12/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**2.13**	779
	GW-074937-121411-CB-MW-4	12/14/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.94**	776
	GW-074937-3712-CB-MW-4	3/7/2012	(orig)	--	--	--	--	--	--	**1.70**	772
	GW-074937-060612-CB-MW-4	6/6/2012	(orig)	--	--	--	--	--	--	**1.46**	662
	GW-074937-091912-JP-MW-4	9/19/2012	(orig)	--	--	--	--	--	--	**1.90**	771
	GW-074937-121212-CM-MW-4	12/12/2012	(orig)	--	--	--	--	--	--	**1.42**	731
	GW-074937-031813-CM-MW-4	3/18/2013	(orig)	--	--	--	--	--	--	**1.54**	766
	074937-061413-JK-MW4	6/14/2013	(orig)	--	--	--	--	--	--	**1.74**	676
	GW-074937-091213-CM-MW-4	9/12/2013	(orig)	--	--	--	--	--	--	**1.810**	822
	GW-074937-121213-CM-MW-4	12/12/2013	(orig)	--	--	--	--	--	--	**1.20**	776
	GW-074937-121213-CM-DUP	12/12/2013	(Duplicate)	--	--	--	--	--	--	**1.20**	795
NMWQCC Groundwater Quality Standards				**0.01**	**0.75**	**0.75**	**0.62**	**250**	**600**	**0.2**	**1000**

Notes:
MW = monitoring well
NMWQCC = New Mexico Water Quality Control Commission
Constituents in **BOLD** are in excess of NMWQCC groundwater quality standards
mg/L = milligrams per liter (parts per million)
< 1.0 = Below laboratory detection limit of 1.0 mg/L
-- = not analyzed

Appendix A

2013 Quarterly Groundwater Sampling Field Forms

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: WILMUTH No. 1 JOB# 074937

SAMPLE ID: GW-074937-031813-CM-MW-1 WELL# MW-1

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
3.18.13	3.18.13	1750	3.312	10.0

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

SAMPLING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE	G	A - SUBMERSIBLE PUMP	D - GAS LIFT PUMP	G - BAILER	X= PURGING DEVICE OTHER (SPECIFY)
		B - PERISTALTIC PUMP	E - PURGE PUMP	H - WATERRA®	
SAMPLING DEVICE	G	C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	X= SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	B	A - TEFLON	D - PVC		X= PURGING MATERIAL OTHER (SPECIFY)
		B - STAINLESS STEEL	E - POLYETHYLENE		
SAMPLING MATERIAL	B	C - POLYPROPYLENE	X - OTHER		X= SAMPLING MATERIAL OTHER (SPECIFY)
PURGE TUBING	C	A - TEFLON	D - POLYPROPYLENE	G - COMBINATION TEFLON/POLYPROPYLENE	X= PURGE TUBING OTHER (SPECIFY)
		B - TYGON	E - POLYETHYLENE		
SAMPLING TUBING	C	C - ROPE	F - SILICONE	X - OTHER	X= SAMPLING TUBING OTHER (SPECIFY)
FILTERING DEVICES 0.45	A	A - IN-LINE DISPOSABLE	B - PRESSURE	- for metals only	

FIELD MEASUREMENTS

DEPTH TO WATER: 4.52 (feet) WELL ELEVATION: (feet)

WELL DEPTH: 25.22 (feet) GROUNDWATER ELEVATION: (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
10.63 (°C)	7.06 (std)	0.782 (g/L)	872 (µS/cm)	3.30 (mg/L)	81.2 (mV)	9.0 (gal)
10.73 (°C)	7.04 (std)	0.777 (g/L)	870 (µS/cm)	3.07 (mg/L)	81.0 (mV)	9.5 (gal)
10.81 (°C)	7.03 (std)	0.774 (g/L)	868 (µS/cm)	2.90 (mg/L)	80.5 (mV)	10.0 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy/silty ODOR: none COLOR: brown SHEEN Y/N: no

WEATHER CONDITIONS: TEMPERATURE: 65° WINDY Y/N: yes PRECIPITATION Y/N (IF Y TYPE): no

SPECIFIC COMMENTS:

3.312 x 3 = 9.936

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

DATE 3/18/13 PRINT Christine Mathews SIGNATURE Christine Mathews

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: WILMUTH No. 1 JOB# 074937

SAMPLE ID: GW-074937-031813-CM-MW-2 WELL# MW-2

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
3.18.13	3.18.13	1710	4.125	12.5

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

SAMPLING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE	G	A - SUBMERSIBLE PUMP	D - GAS LIFT PUMP	G - BAILER	X= PURGING DEVICE OTHER (SPECIFY)
SAMPLING DEVICE	G	B - PERISTALTIC PUMP C - BLADDER PUMP	E - PURGE PUMP F - DIPPER BOTTLE	H - WATERRA® X - OTHER	X= SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	E	A - TEFLON	D - PVC		X= PURGING MATERIAL OTHER (SPECIFY)
SAMPLING MATERIAL	E	B - STAINLESS STEEL C - POLYPROPYLENE	E - POLYETHYLENE X - OTHER		X= SAMPLING MATERIAL OTHER (SPECIFY)
PURGE TUBING	C	A - TEFLON	D - POLYPROPYLENE	G - COMBINATION TEFLON/POLYPROPYLENE	X= PURGE TUBING OTHER (SPECIFY)
SAMPLING TUBING	C	B - TYGON C - ROPE	E - POLYETHYLENE F - SILICONE	X - OTHER	X= SAMPLING TUBING OTHER (SPECIFY)
FILTERING DEVICES 0.45	A	A - IN-LINE DISPOSABLE	B - PRESSURE	– for metals only	

FIELD MEASUREMENTS

DEPTH TO WATER: 5.96 (feet) WELL ELEVATION: (feet)

WELL DEPTH: 31.74 (feet) GROUNDWATER ELEVATION: (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
10.43 (°C)	7.02 (std)	0.611 (g/L)	679 (µS/cm)	5.15 (mg/L)	71.2 (mV)	11.5 (gal)
10.71 (°C)	7.00 (std)	0.600 (g/L)	673 (µS/cm)	4.82 (mg/L)	72.8 (mV)	12.0 (gal)
10.64 (°C)	7.01 (std)	0.606 (g/L)	677 (µS/cm)	4.73 (mg/L)	70.3 (mV)	12.5 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy/silty ODOR: none COLOR: brown SHEEN Y/N no

WEATHER CONDITIONS: TEMPERATURE 65° WINDY Y/N yes PRECIPITATION Y/N (IF Y TYPE) no

SPECIFIC COMMENTS:

4.125 x 3 = 12.374

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

DATE 3/18/13 PRINT Christine Mathews SIGNATURE Christine Mathews

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: WILMUTH No. 1 JOB# 074937

SAMPLE ID: GW-074937-031813-CM-MW-3 WELL# MW-3

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
3.18.13	3.18.13	1655	4.182	12.75

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

SAMPLING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE: G — A - SUBMERSIBLE PUMP; B - PERISTALTIC PUMP; C - BLADDER PUMP; D - GAS LIFT PUMP; E - PURGE PUMP; F - DIPPER BOTTLE; G - BAILER; H - WATERRA®; X - OTHER — X= ____ PURGING DEVICE OTHER (SPECIFY)

SAMPLING DEVICE: G — X= ____ SAMPLING DEVICE OTHER (SPECIFY)

PURGING MATERIAL: E — A - TEFLON; B - STAINLESS STEEL; C - POLYPROPYLENE; D - PVC; E - POLYETHYLENE; X - OTHER — X= ____ PURGING MATERIAL OTHER (SPECIFY)

SAMPLING MATERIAL: E — X= ____ SAMPLING MATERIAL OTHER (SPECIFY)

PURGE TUBING: C — A - TEFLON; B - TYGON; C - ROPE; D - POLYPROPYLENE; E - POLYETHYLENE; F - SILICONE; G - COMBINATION TEFLON/POLYPROPYLENE; X - OTHER — X= ____ PURGE TUBING OTHER (SPECIFY)

SAMPLING TUBING: C — X= ____ SAMPLING TUBING OTHER (SPECIFY)

FILTERING DEVICES 0.45: A — A - IN-LINE DISPOSABLE; B - PRESSURE — for metals only

FIELD MEASUREMENTS

DEPTH TO WATER: 5.89 (feet) WELL ELEVATION: ____ (feet)

WELL DEPTH: 32.03 (feet) GROUNDWATER ELEVATION: ____ (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
11.27 (°C)	7.09 (std)	0.560 (g/L)	~~6.69~~ 636 (µS/cm)	6.63 (mg/L)	71.2 (mV)	11.75 (gal)
11.26 (°C)	7.05 (std)	0.560 (g/L)	635 (µS/cm)	6.35 (mg/L)	73.0 (mV)	12.25 (gal)
11.30 (°C)	7.03 (std)	0.560 (g/L)	636 (µS/cm)	6.09 (mg/L)	73.5 (mV)	12.75 (gal)
____ (°C)	____ (std)	____ (g/L)	____ (µS/cm)	____ (mg/L)	____ (mV)	____ (gal)
____ (°C)	____ (std)	____ (g/L)	____ (µS/cm)	____ (mg/L)	____ (mV)	____ (gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy/silty ODOR: none COLOR: brown SHEEN Y/N no

WEATHER CONDITIONS: TEMPERATURE 65° WINDY Y/N yes PRECIPITATION Y/N (IF Y TYPE) no

SPECIFIC COMMENTS:

DUPLICATE COLLECTED @ 1700

4.182 x 3 = 12.547

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

DATE 3/18/13 PRINT Christine Mathews SIGNATURE Christine Mathews

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: WILMUTH No. 1 JOB# 074937

SAMPLE ID: GW-074937-031813-CM-MW-4 WELL# MW-4

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
3.18.13	3.18.13	1800	4.029	12.25

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

SAMPLING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE	G	A - SUBMERSIBLE PUMP	D - GAS LIFT PUMP	G - BAILER	X= PURGING DEVICE OTHER (SPECIFY)
		B - PERISTALTIC PUMP	E - PURGE PUMP	H - WATERRA®	
SAMPLING DEVICE	G	C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	X= SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	E	A - TEFLON	D - PVC		X= PURGING MATERIAL OTHER (SPECIFY)
		B - STAINLESS STEEL	E - POLYETHYLENE		
SAMPLING MATERIAL	E	C - POLYPROPYLENE	X - OTHER		X= SAMPLING MATERIAL OTHER (SPECIFY)
PURGE TUBING	C	A - TEFLON	D - POLYPROPYLENE	G - COMBINATION TEFLON/POLYPROPYLENE	X= PURGE TUBING OTHER (SPECIFY)
		B - TYGON	E - POLYETHYLENE		
SAMPLING TUBING	C	C - ROPE	F - SILICONE	X - OTHER	X= SAMPLING TUBING OTHER (SPECIFY)
FILTERING DEVICES 0.45	A	A - IN-LINE DISPOSABLE	B - PRESSURE		— for metals only

FIELD MEASUREMENTS

DEPTH TO WATER 6.96 (feet) WELL ELEVATION (feet)

WELL DEPTH 32.14 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	CS	DO	ORP	VOLUME
11.35 (°C)	7.01 (std)	0.561 (g/L)	638 (µS/cm)	2.28 (mg/L)	94.7 (mV)	11.25 (gal)
11.59 (°C)	7.05 (std)	0.560 (g/L)	640 (µS/cm)	2.19 (mg/L)	89.6 (mV)	11.75 (gal)
11.53 (°C)	7.08 (std)	0.560 (g/L)	640 (µS/cm)	2.16 (mg/L)	85.2 (mV)	12.25 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy/silty ODOR: none COLOR: brown SHEEN Y/N no

WEATHER CONDITIONS: TEMPERATURE 65° WINDY Y/N yes PRECIPITATION Y/N (IF Y TYPE) no

SPECIFIC COMMENTS:

4.029 X 3 = 12.086

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

DATE	PRINT	SIGNATURE
3/18/13	Christine Mathews	Christine Mathews

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Wilmuth JOB# 074937

SAMPLE ID: 074937-061413-TR-MW1 WELL# MW1

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
6.14.13	6.14.13	1340	3.61	11.0

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

SAMPLING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE	G	A - SUBMERSIBLE PUMP B - PERISTALTIC PUMP	D - GAS LIFT PUMP E - PURGE PUMP	G - BAILER H - WATERRA®	X= PURGING DEVICE OTHER (SPECIFY)
SAMPLING DEVICE	G	C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	X= SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	B	A - TEFLON B - STAINLESS STEEL	D - PVC E - POLYETHYLENE		X= PURGING MATERIAL OTHER (SPECIFY)
SAMPLING MATERIAL	C	C - POLYPROPYLENE	X - OTHER		X= SAMPLING MATERIAL OTHER (SPECIFY)
PURGE TUBING	C	A - TEFLON B - TYGON	D - POLYPROPYLENE E - POLYETHYLENE	G - COMBINATION TEFLON/POLYPROPYLENE	X= PURGE TUBING OTHER (SPECIFY)
SAMPLING TUBING		C - ROPE	F - SILICONE	X - OTHER	X= SAMPLING TUBING OTHER (SPECIFY)
FILTERING DEVICES 0.45	A	A - IN-LINE DISPOSABLE	B - PRESSURE		

FIELD MEASUREMENTS

DEPTH TO WATER 0.90 (feet) WELL ELEVATION (feet)

WELL DEPTH ~~24.96~~ 24.95 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
16.15 (°C)	6.72 (std)	0.715 (g/L)	1100 (µS/cm)	0.40 (mg/L)	58.6 (mV)	100 (gal)
15.62 (°C)	6.76 (std)	~~0.717~~ 0.716 (g/L)	1102 (µS/cm)	.33 (mg/L)	62.1 (mV)	10.5 (gal)
15.38 (°C)	6.70 (std)	0.713 (g/L)	1099 (µS/cm)	.26 (mg/L)	61.1 (mV)	11.0 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: ODOR: COLOR: SHEEN Y/N

WEATHER CONDITIONS: TEMPERATURE 87 WINDY Y/N N PRECIPITATION Y/N (IF Y TYPE) N

SPECIFIC COMMENTS:

DUP COLLECTED

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

DATE PRINT Josh Rigney SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Willamette — JOB# 074937

SAMPLE ID: 074937-061413-JK-MW2 — WELL# MW2

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
6.14.13	6.14.13	1345	4.27	13.0

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

SAMPLING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE	G	A - SUBMERSIBLE PUMP B - PERISTALTIC PUMP	D - GAS LIFT PUMP E - PURGE PUMP	G - BAILER H - WATERRA®	X= PURGING DEVICE OTHER (SPECIFY)
SAMPLING DEVICE	G	C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	X= SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	E	A - TEFLON B - STAINLESS STEEL	D - PVC E - POLYETHYLENE		X= PURGING MATERIAL OTHER (SPECIFY)
SAMPLING MATERIAL	E	C - POLYPROPYLENE	X - OTHER		X= SAMPLING MATERIAL OTHER (SPECIFY)
PURGE TUBING	L	A - TEFLON B - TYGON	D - POLYPROPYLENE E - POLYETHYLENE	G - COMBINATION TEFLON/POLYPROPYLENE	X= PURGE TUBING OTHER (SPECIFY)
SAMPLING TUBING	L	C - ROPE	F - SILICONE	X - OTHER	X= SAMPLING TUBING OTHER (SPECIFY)
FILTERING DEVICES 0.45	NA	A - IN-LINE DISPOSABLE	B - PRESSURE		

FIELD MEASUREMENTS

DEPTH TO WATER: 2.96 (feet) — WELL ELEVATION: (feet)

WELL DEPTH: 31.41 (feet) — GROUNDWATER ELEVATION: (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
14.02 (°C)	7.03 (std)	.608 (g/L)	938 (µS/cm)	.25 (mg/L)	52.3 (mV)	12.0 (gal)
13.47 (°C)	6.98 (std)	.608 (g/L)	936 (µS/cm)	.23 (mg/L)	59.0 (mV)	12.5 (gal)
13.32 (°C)	6.87 (std)	.607 (g/L)	933 (µS/cm)	.15 (mg/L)	67.0 (mV)	13.0 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: — ODOR: — COLOR: — SHEEN Y/N

WEATHER CONDITIONS: TEMPERATURE 87 — WINDY Y/N N — PRECIPITATION Y/N (IF Y TYPE) N

SPECIFIC COMMENTS:

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

DATE — PRINT Josh Ribadeneira — SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Walworth JOB# 624937

SAMPLE ID: 624937-061413-SK-MW3 WELL# MW-3

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
6.14	6.14	1355	9.38	13.25

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

SAMPLING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE	G	A - SUBMERSIBLE PUMP B - PERISTALTIC PUMP	D - GAS LIFT PUMP E - PURGE PUMP	G - BAILER H - WATERRA®
SAMPLING DEVICE	G	C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER
PURGING MATERIAL	E	A - TEFLON B - STAINLESS STEEL	D - PVC E - POLYETHYLENE	
SAMPLING MATERIAL	E	C - POLYPROPYLENE	X - OTHER	
PURGE TUBING	C	A - TEFLON B - TYGON	D - POLYPROPYLENE E - POLYETHYLENE	G - COMBINATION TEFLON/POLYPROPYLENE
SAMPLING TUBING	C	C - ROPE	F - SILICONE	X - OTHER
FILTERING DEVICES 0.45	A	A - IN-LINE DISPOSABLE	B - PRESSURE	

X= _____ PURGING DEVICE OTHER (SPECIFY)

X= _____ SAMPLING DEVICE OTHER (SPECIFY)

X= _____ PURGING MATERIAL OTHER (SPECIFY)

X= _____ SAMPLING MATERIAL OTHER (SPECIFY)

X= _____ PURGE TUBING OTHER (SPECIFY)

X= _____ SAMPLING TUBING OTHER (SPECIFY)

FIELD MEASUREMENTS

DEPTH TO WATER 2.72 (feet) WELL ELEVATION _____ (feet)

WELL DEPTH 31.92 (feet) GROUNDWATER ELEVATION _____ (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
14.05 (°C)	7.10 (std)	.684 (g/L)	928 (µS/cm)	.30 (mg/L)	61.3 (mV)	12.25 (gal)
13.86 (°C)	7.03 (std)	.602 (g/L)	927 (µS/cm)	.20 (mg/L)	63.8 (mV)	12.75 (gal)
13.17 (°C)	6.96 (std)	.603 (g/L)	927 (µS/cm)	.21 (mg/L)	68.5 (mV)	13.25 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: _____ ODOR: _____ COLOR: _____ SHEEN Y/N _____

WEATHER CONDITIONS: TEMPERATURE 57 WINDY Y/N ✓ PRECIPITATION Y/N (IF Y TYPE) ✓

SPECIFIC COMMENTS: _____

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

DATE _____ PRINT Josh Kramer SIGNATURE _____

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Wilmington JOB# 671937

SAMPLE ID: 071937-061413-SK-MW4 WELL# MW-4

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
6.14.13	6.14.13	1346	9.30	13.0

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

SAMPLING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE	G	A - SUBMERSIBLE PUMP	D - GAS LIFT PUMP	G - BAILER	X= PURGING DEVICE OTHER (SPECIFY)
		B - PERISTALTIC PUMP	E - PURGE PUMP	H - WATERRA®	
SAMPLING DEVICE	G	C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	X= SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	G	A - TEFLON	D - PVC		X= PURGING MATERIAL OTHER (SPECIFY)
		B - STAINLESS STEEL	E - POLYETHYLENE		
SAMPLING MATERIAL	G	C - POLYPROPYLENE	X - OTHER		X= SAMPLING MATERIAL OTHER (SPECIFY)
PURGE TUBING	C	A - TEFLON	D - POLYPROPYLENE	G - COMBINATION TEFLON/POLYPROPYLENE	X= PURGE TUBING OTHER (SPECIFY)
		B - TYGON	E - POLYETHYLENE		
SAMPLING TUBING	C	C - ROPE	F - SILICONE	X - OTHER	X= SAMPLING TUBING OTHER (SPECIFY)
FILTERING DEVICES 0.45	A	A - IN-LINE DISPOSABLE	B - PRESSURE		

FIELD MEASUREMENTS

DEPTH TO WATER 3.10 (feet) WELL ELEVATION (feet)

WELL DEPTH 31.15 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
17.93 (°C)	7.36 (std)	.599 (g/L)	921 (µS/cm)	.28 (mg/L)	53.0 (mV)	12.0 (gal)
17.66 (°C)	7.32 (std)	.599 (g/L)	918 (µS/cm)	.17 (mg/L)	52.2 (mV)	12.5 (gal)
15.31 (°C)	7.31 (std)	.596 (g/L)	918 (µS/cm)	.24 (mg/L)	52.5 (mV)	13.0 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: ODOR: COLOR: SHEEN Y/N

WEATHER CONDITIONS: TEMPERATURE 87 WINDY Y/N ✓ PRECIPITATION Y/N (IF Y TYPE) ✓

SPECIFIC COMMENTS:

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

DATE PRINT Josh Rhodes SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Wilmuth No.1
SAMPLE ID: GW-074937-091213-CM-MW-1
JOB# 074937
WELL# MW-1

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
9/12/13	9/12/13	1120	3,98	12,0

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)
SAMPLING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE: G	A - SUBMERSIBLE PUMP	D - GAS LIFT PUMP	G - BAILER	X= PURGING DEVICE OTHER (SPECIFY)
	B - PERISTALTIC PUMP	E - PURGE PUMP	H - WATERRA®	
SAMPLING DEVICE: G	C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	X= SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL: E	A - TEFLON	D - PVC		X= PURGING MATERIAL OTHER (SPECIFY)
	~~B~~ - STAINLESS STEEL	E - POLYETHYLENE		
SAMPLING MATERIAL: E	C - POLYPROPYLENE	X - OTHER		X= SAMPLING MATERIAL OTHER (SPECIFY)
PURGE TUBING: C	A - TEFLON	D - POLYPROPYLENE	G - COMBINATION TEFLON/POLYPROPYLENE	X= PURGE TUBING OTHER (SPECIFY)
	B - TYGON	E - POLYETHYLENE		
SAMPLING TUBING: C	C - ROPE	F - SILICONE	X - OTHER	X= SAMPLING TUBING OTHER (SPECIFY)
FILTERING DEVICES 0.45: A	A - IN-LINE DISPOSABLE	B - PRESSURE		0,45 formetab only

FIELD MEASUREMENTS

DEPTH TO WATER: 0.21 (feet)
WELL ELEVATION: (feet)
WELL DEPTH: 25.11 (feet)
GROUNDWATER ELEVATION: (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
17.27 (°C)	7.34 (std)	0.860 (g/L)	1322 (µS/cm)	1.56 (mg/L)	63.9 (mV)	11.0 (gal)
17.17 (°C)	7.12 (std)	0.853 (g/L)	1313 (µS/cm)	1.24 (mg/L)	71.6 (mV)	11.5 (gal)
16.84 (°C)	6.99 (std)	0.853 (g/L)	1313 (µS/cm)	1.13 (mg/L)	73.2 (mV)	12.0 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: CLOUDY ODOR: NONE COLOR: LIGHT BROWN SHEEN Y/N: N
WEATHER CONDITIONS: TEMPERATURE 650 WINDY Y/N NO PRECIPITATION Y/N (IF Y TYPE): ~~YES~~ - rain no
SPECIFIC COMMENTS:

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

DATE 9/12/13 PRINT Christine Mathus SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Wismuth No. 1 JOB# 074937
SAMPLE ID: BW-074937-091213-CM-MW-2 WELL# MW-2

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
9/12/13	9/12/13	1050	4.63	14.0

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

SAMPLING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE	G	A - SUBMERSIBLE PUMP B - PERISTALTIC PUMP	D - GAS LIFT PUMP E - PURGE PUMP	G - BAILER H - WATERRA®	X= PURGING DEVICE OTHER (SPECIFY)
SAMPLING DEVICE	G	C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	X= SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	B	A - TEFLON B - STAINLESS STEEL	D - PVC E - POLYETHYLENE		X= PURGING MATERIAL OTHER (SPECIFY)
SAMPLING MATERIAL	E	C - POLYPROPYLENE	X - OTHER		X= SAMPLING MATERIAL OTHER (SPECIFY)
PURGE TUBING	C	A - TEFLON	D - POLYPROPYLENE	G - COMBINATION TEFLON/POLYPROPYLENE	X= PURGE TUBING OTHER (SPECIFY)
SAMPLING TUBING	C	B - TYGON C - ROPE	E - POLYETHYLENE F - SILICONE	X - OTHER	X= SAMPLING TUBING OTHER (SPECIFY)
FILTERING DEVICES 0.45	A	A - IN-LINE DISPOSABLE	B - PRESSURE	0.45 micron for metals only	

FIELD MEASUREMENTS

DEPTH TO WATER 2.41 (feet) WELL ELEVATION (feet)

WELL DEPTH 31.36 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
14.87 (°C)	6.65 (std)	0.759 (g/L)	1167 (µS/cm)	1.55 (mg/L)	87.6 (mV)	13.0 (gal)
14.97 (°C)	6.57 (std)	0.758 (g/L)	1167 (µS/cm)	1.82 (mg/L)	85.6 (mV)	13.5 (gal)
14.98 (°C)	6.62 (std)	0.759 (g/L)	1167 (µS/cm)	1.68 (mg/L)	81.4 (mV)	14.0 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: none COLOR: brown SHEEN Y/N no

WEATHER CONDITIONS: TEMPERATURE 65° WINDY Y/N no PRECIPITATION Y/N (IF Y TYPE) no

SPECIFIC COMMENTS:

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

DATE 9/12/13 PRINT Cristine Mathews SIGNATURE Cristine Mathews

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Wilmuth No. 1 JOB# 074937
SAMPLE ID: GW-074937-091213-CM-MW-3 WELL# MW-3

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
9/12/13	9/12/13	1040	4.75	14.25

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

SAMPLING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE	G	A - SUBMERSIBLE PUMP B - PERISTALTIC PUMP	D - GAS LIFT PUMP E - PURGE PUMP	G - BAILER H - WATERRA®	X= PURGING DEVICE OTHER (SPECIFY)
SAMPLING DEVICE	G	C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	X= SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	E	A - TEFLON B - STAINLESS STEEL	D - PVC E - POLYETHYLENE		X= PURGING MATERIAL OTHER (SPECIFY)
SAMPLING MATERIAL	E	C - POLYPROPYLENE	X - OTHER		X= SAMPLING MATERIAL OTHER (SPECIFY)
PURGE TUBING	C	A - TEFLON B - TYGON	D - POLYPROPYLENE E - POLYETHYLENE	G - COMBINATION TEFLON/POLYPROPYLENE	X= PURGE TUBING OTHER (SPECIFY)
SAMPLING TUBING	C	C - ROPE	F - SILICONE	X - OTHER	X= SAMPLING TUBING OTHER (SPECIFY)
FILTERING DEVICES 0.45	A	A - IN-LINE DISPOSABLE	B - PRESSURE		0.45 for metals only

FIELD MEASUREMENTS

DEPTH TO WATER 2.13 (feet) WELL ELEVATION (feet)

WELL DEPTH 31.80 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
14.64 (°C)	6.85 (std)	0.746 (g/L)	1148 (µS/cm)	4.41 (mg/L)	77.2 (mV)	13.25 (gal)
14.56 (°C)	6.54 (std)	0.750 (g/L)	1154 (µS/cm)	3.07 (mg/L)	89.9 (mV)	13.75 (gal)
14.44 (°C)	6.34 (std)	0.750 (g/L)	1154 (µS/cm)	2.26 (mg/L)	98.5 (mV)	14.25 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: CLOUDY ODOR: ~~BROWN~~ NONE COLOR: BROWN SHEEN Y/N N

WEATHER CONDITIONS: TEMPERATURE 90s WINDY Y/N N PRECIPITATION Y/N (IF Y TYPE) N

SPECIFIC COMMENTS:

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

DATE 9/12/13 PRINT Christen Mathews SIGNATURE Christen Mathews

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Wilmuth No. 1 JOB# 074937

SAMPLE ID: GW-074937-091213-CM-MW-4 WELL# MW-4

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
9/12/13	9/12/13	1135	4.67	14.25

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

SAMPLING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE	B	A - SUBMERSIBLE PUMP B - PERISTALTIC PUMP	D - GAS LIFT PUMP E - PURGE PUMP	G - BAILER H - WATERRA®	X= PURGING DEVICE OTHER (SPECIFY)
SAMPLING DEVICE	G	C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	X= SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	E	A - TEFLON B - STAINLESS STEEL	D - PVC E - POLYETHYLENE		X= PURGING MATERIAL OTHER (SPECIFY)
SAMPLING MATERIAL	E	C - POLYPROPYLENE	X - OTHER		X= SAMPLING MATERIAL OTHER (SPECIFY)
PURGE TUBING	C	A - TEFLON B - TYGON	D - POLYPROPYLENE E - POLYETHYLENE	G - COMBINATION TEFLON/POLYPROPYLENE	X= PURGE TUBING OTHER (SPECIFY)
SAMPLING TUBING	C	C - ROPE	F - SILICONE	X - OTHER	X= SAMPLING TUBING OTHER (SPECIFY)
FILTERING DEVICES 0.45	A	A - IN-LINE DISPOSABLE	B - PRESSURE		0.45 for metals only

FIELD MEASUREMENTS

DEPTH TO WATER	2.42	(feet)		WELL ELEVATION		(feet)	
WELL DEPTH	31.63	(feet)		GROUNDWATER ELEVATION		(feet)	

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
16.74 (°C)	7.21 (std)	0.762 (g/L)	1172 (µS/cm)	2.62 (mg/L)	74.2 (mV)	13.25 (gal)
16.76 (°C)	7.08 (std)	0.761 (g/L)	1171 (µS/cm)	2.22 (mg/L)	76.8 (mV)	13.75 (gal)
16.39 (°C)	7.03 (std)	0.761 (g/L)	1171 (µS/cm)	2.14 (mg/L)	72.3 (mV)	14.25 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: CLOUDY ODOR: NONE COLOR: BROWN SHEEN Y/N N

WEATHER CONDITIONS: TEMPERATURE 90s WINDY Y/N N PRECIPITATION Y/N (IF Y TYPE) N

SPECIFIC COMMENTS:

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

DATE 9/12/13 PRINT Chris Mathews SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Wilmuth No.1 JOB# 074937

SAMPLE ID: GW-074937-121213-CM-MW-1 WELL# MW-1

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
12/12/13	12/12/13	1050	3.55	10.75

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

SAMPLING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE	G	A - SUBMERSIBLE PUMP	D - GAS LIFT PUMP	G - BAILER	X= PURGING DEVICE OTHER (SPECIFY)
		B - PERISTALTIC PUMP	E - PURGE PUMP	H - WATERRA®	
SAMPLING DEVICE	G	C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	X= SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	E	A - TEFLON	D - PVC		X= PURGING MATERIAL OTHER (SPECIFY)
		B - STAINLESS STEEL	E - POLYETHYLENE		
SAMPLING MATERIAL	E	C - POLYPROPYLENE	X - OTHER		X= SAMPLING MATERIAL OTHER (SPECIFY)
PURGE TUBING	C	A - TEFLON	D - POLYPROPYLENE	G - COMBINATION TEFLON/POLYPROPYLENE	X= PURGE TUBING OTHER (SPECIFY)
		B - TYGON	E - POLYETHYLENE		
SAMPLING TUBING	C	C - ROPE	F - SILICONE	X - OTHER	X= SAMPLING TUBING OTHER (SPECIFY)
FILTERING DEVICES 0.45	A	A - IN-LINE DISPOSABLE	B - PRESSURE	for metals only	

FIELD MEASUREMENTS

DEPTH TO WATER 2.70 (feet) WELL ELEVATION (feet)

WELL DEPTH 24.91 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
14.35 (°C)	6.86 (std)	0.894 (g/L)	1375 (µS/cm)	1.77 (mg/L)	-26.4 (mV)	9.75 (gal)
14.24 (°C)	6.83 (std)	0.898 (g/L)	1381 (µS/cm)	1.48 (mg/L)	-31.9 (mV)	10.25 (gal)
14.26 (°C)	6.81 (std)	0.897 (g/L)	1380 (µS/cm)	1.41 (mg/L)	-38.8 (mV)	10.75 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy/silty ODOR: none COLOR: lt. brown SHEEN Y/N no

WEATHER CONDITIONS: TEMPERATURE 30° WINDY Y/N no PRECIPITATION Y/N (IF Y TYPE) no

SPECIFIC COMMENTS:

3.55 x 3 = 10.66

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE EPA PROTOCOLS

DATE 12/12/13 PRINT Christine Mathews SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Wilmuth No. 1 JOB# 074937

SAMPLE ID: GW-074937-121213-CM-MW-2 WELL# MW-2

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
12/12/13	12/12/13	0950	4.25	12.75

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

SAMPLING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE	G	A - SUBMERSIBLE PUMP	D - GAS LIFT PUMP	G - BAILER	X= PURGING DEVICE OTHER (SPECIFY)
		B - PERISTALTIC PUMP	E - PURGE PUMP	H - WATERRA®	
SAMPLING DEVICE	G	C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	X= SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	B	A - TEFLON	D - PVC		X= PURGING MATERIAL OTHER (SPECIFY)
		B - STAINLESS STEEL	E - POLYETHYLENE		
SAMPLING MATERIAL	B	C - POLYPROPYLENE	X - OTHER		X= SAMPLING MATERIAL OTHER (SPECIFY)
PURGE TUBING	C	A - TEFLON	D - POLYPROPYLENE	G - COMBINATION TEFLON/POLYPROPYLENE	X= PURGE TUBING OTHER (SPECIFY)
		B - TYGON	E - POLYETHYLENE		
SAMPLING TUBING	C	C - ROPE	F - SILICONE	X - OTHER	X= SAMPLING TUBING OTHER (SPECIFY)
FILTERING DEVICES 0.45	A	A - IN-LINE DISPOSABLE	B - PRESSURE	for metals only	

FIELD MEASUREMENTS

DEPTH TO WATER: 4.43 (feet) WELL ELEVATION: (feet)

WELL DEPTH: 30.99 (feet) GROUNDWATER ELEVATION: (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
12.15 (°C)	6.48 (std)	0.775 (g/L)	1193 (µS/cm)	2.76 (mg/L)	108.6 (mV)	11.75 (gal)
12.51 (°C)	6.62 (std)	0.769 (g/L)	1183 (µS/cm)	1.43 (mg/L)	87.4 (mV)	12.25 (gal)
12.92 (°C)	6.64 (std)	0.769 (g/L)	1183 (µS/cm)	1.34 (mg/L)	74.5 (mV)	12.75 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy/silty ODOR: no COLOR: H. Brown SHEEN Y/N: no

WEATHER CONDITIONS: TEMPERATURE: 25° WINDY Y/N: no PRECIPITATION Y/N (IF Y TYPE): no

SPECIFIC COMMENTS:

4.25 X 3 = 12.75

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CSA PROTOCOLS

DATE: 12/12/13 PRINT: Christine Mathews SIGNATURE: Christine Mathews

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Wilmuth No. 1 JOB# 074937

SAMPLE ID: GW-074937-121213-CM-MW-3 WELL# MW-3

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
12/12/13	12/12/13	1005	4.37	13.25

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

SAMPLING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE	G	A - SUBMERSIBLE PUMP	D - GAS LIFT PUMP	G - BAILER	X= PURGING DEVICE OTHER (SPECIFY)
		B - PERISTALTIC PUMP	E - PURGE PUMP	H - WATERRA®	
SAMPLING DEVICE	G	C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	X= SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	E	A - TEFLON	D - PVC		X= PURGING MATERIAL OTHER (SPECIFY)
		B - STAINLESS STEEL	E - POLYETHYLENE		
SAMPLING MATERIAL	E	C - POLYPROPYLENE	X - OTHER		X= SAMPLING MATERIAL OTHER (SPECIFY)
PURGE TUBING	C	A - TEFLON	D - POLYPROPYLENE	G - COMBINATION TEFLON/POLYPROPYLENE	X= PURGE TUBING OTHER (SPECIFY)
		B - TYGON	E - POLYETHYLENE		
SAMPLING TUBING	C	C - ROPE	F - SILICONE	X - OTHER	X= SAMPLING TUBING OTHER (SPECIFY)
FILTERING DEVICES 0.45	A	A - IN-LINE DISPOSABLE	B - PRESSURE	for metals only	

FIELD MEASUREMENTS

DEPTH TO WATER 4.27 (feet) WELL ELEVATION (feet)

WELL DEPTH 31.58 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
13.13 (°C)	6.75 (std)	.760 (g/L)	1168 (µS/cm)	1.99 (mg/L)	23.6 (mV)	12.25 (gal)
12.98 (°C)	6.76 (std)	.761 (g/L)	1171 (µS/cm)	1.65 (mg/L)	10.2 (mV)	12.75 (gal)
12.87 (°C)	6.75 (std)	.760 (g/L)	1169 (µS/cm)	1.47 (mg/L)	-2.7 (mV)	13.25 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy/silty ODOR: No odor COLOR: Brown SHEEN Y/N N

WEATHER CONDITIONS: TEMPERATURE 20 WINDY Y/N N PRECIPITATION Y/N (IF Y TYPE) N

SPECIFIC COMMENTS:

4.37 x 3 = 13.11

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS.

DATE 12/12/13 PRINT Christine Mathews SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Wilmuth No.1 JOB# 074937

SAMPLE ID: GW-074937-121213-CM-MW-4 WELL# MW-4

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
12/12/13	12/12/13	1110	4.20	12.75

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

SAMPLING EQUIPMENT.....DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE	G	A - SUBMERSIBLE PUMP	D - GAS LIFT PUMP	G - BAILER	X= PURGING DEVICE OTHER (SPECIFY)
		B - PERISTALTIC PUMP	E - PURGE PUMP	H - WATERRA®	
SAMPLING DEVICE	G	C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	X= SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	E	A - TEFLON	D - PVC		X= PURGING MATERIAL OTHER (SPECIFY)
		B - STAINLESS STEEL	E - POLYETHYLENE		
SAMPLING MATERIAL	E	C - POLYPROPYLENE	X - OTHER		X= SAMPLING MATERIAL OTHER (SPECIFY)
PURGE TUBING	C	A - TEFLON	D - POLYPROPYLENE	G - COMBINATION TEFLON/POLYPROPYLENE	X= PURGE TUBING OTHER (SPECIFY)
		B - TYGON	E - POLYETHYLENE		
SAMPLING TUBING	C	C - ROPE	F - SILICONE	X - OTHER	X= SAMPLING TUBING OTHER (SPECIFY)
FILTERING DEVICES 0.45	A	A - IN-LINE DISPOSABLE	B - PRESSURE	for metals only	

FIELD MEASUREMENTS

DEPTH TO WATER 5.08 (feet) WELL ELEVATION (feet)

WELL DEPTH 31.33 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
12.44 (°C)	6.84 (std)	.767 (g/L)	1181 (µS/cm)	1.80 (mg/L)	-40.5 (mV)	11.75 (gal)
12.25 (°C)	6.79 (std)	.766 (g/L)	1179 (µS/cm)	1.44 (mg/L)	-58.9 (mV)	12.25 (gal)
12.54 (°C)	6.80 (std)	.767 (g/L)	1180 (µS/cm)	1.24 (mg/L)	-60.3 (mV)	12.75 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy/silty ODOR: none COLOR: brown SHEEN Y/N no

WEATHER CONDITIONS: TEMPERATURE 30° WINDY Y/N no PRECIPITATION Y/N (IF Y TYPE) no

SPECIFIC COMMENTS:

4.20 x 3 = 12.6

Duplicate collected @ 1116

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE QAPP PROTOCOLS

DATE 12/12/13 PRINT Christine Mathews SIGNATURE

Appendix B

2013 Quarterly Groundwater Laboratory Analytical Report

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

March 29, 2013

Christine Matthews
CRA
6121 Indian School Rd NE
Suite 200
Albuquerque, NM 87110

RE: Project: 074937 WILMUTH NO 1
Pace Project No.: 60140770

Dear Christine Matthews:
Enclosed are the analytical results for sample(s) received by the laboratory on March 20, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Alice Flanagan

alice.flanagan@pacelabs.com
Project Manager

Enclosures

cc: Kelly Blanchard, COP Conestoga-Rovers & Associa
Angela Bown, COP Conestoga-Rovers & Associa
Cassie Brown, COP Conestoga-Rovers & Associa
Jason Ploss, COP Conestoga-Rovers & Associa

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CERTIFICATIONS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60140770

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
A2LA Certification #: 2456.01
Arkansas Certification #: 12-019-0
Illinois Certification #: 002885
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407-12-3
Utah Certification #: KS000212012-2
Illinois Certification #: 003097

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SAMPLE SUMMARY

Project: 074937 WILMUTH NO 1
Pace Project No.: 60140770

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60140770001	**GW-074937-031813-CM-MW-1**	Water	03/18/13 12:50	03/20/13 08:30
60140770002	**GW-074937-031813-CM-MW-2**	Water	03/18/13 17:10	03/20/13 08:30
60140770003	**GW-074937-031813-CM-MW-3**	Water	03/18/13 16:55	03/20/13 08:30
60140770004	**GW-074937-031813-CM-MW-4**	Water	03/18/13 18:00	03/20/13 08:30
60140770005	**GW-074937-031813-CM-DUP**	Water	03/18/13 17:00	03/20/13 08:30

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SAMPLE ANALYTE COUNT

Project: 074937 WILMUTH NO 1
Pace Project No.: 60140770

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60140770001	**GW-074937-031813-CM-MW-1**	EPA 6010	JGP	1
		SM 2540C	DJR	1
60140770002	**GW-074937-031813-CM-MW-2**	EPA 6010	JGP	1
		SM 2540C	DJR	1
60140770003	**GW-074937-031813-CM-MW-3**	EPA 6010	JGP	1
		SM 2540C	DJR	1
60140770004	**GW-074937-031813-CM-MW-4**	EPA 6010	JGP	1
		SM 2540C	DJR	1
60140770005	**GW-074937-031813-CM-DUP**	SM 2540C	DJR	1

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PROJECT NARRATIVE

Project: 074937 WILMUTH NO 1
Pace Project No.: 60140770

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: March 29, 2013

General Information:
4 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 074937 WILMUTH NO 1
Pace Project No.: 60140770

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: March 29, 2013

General Information:
5 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60140770

Sample: GW-074937-031813-CM-MW-1 **Lab ID: 60140770001** Collected: 03/18/13 12:50 Received: 03/20/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Manganese, Dissolved	**1120**	ug/L	5.0	0.49	1	03/21/13 15:30	03/26/13 13:32	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1070**	mg/L	5.0	5.0	1		03/23/13 07:56		

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ANALYTICAL RESULTS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60140770

Sample: GW-074937-031813-CM-MW-2 **Lab ID: 60140770002** Collected: 03/18/13 17:10 Received: 03/20/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Manganese, Dissolved	**1560**	ug/L	5.0	0.49	1	03/21/13 15:30	03/26/13 13:36	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**804**	mg/L	5.0	5.0	1		03/23/13 07:57		

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ANALYTICAL RESULTS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60140770

Sample: GW-074937-031813-CM-MW-3 **Lab ID: 60140770003** Collected: 03/18/13 16:55 Received: 03/20/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Manganese, Dissolved	**1580**	ug/L	5.0	0.49	1	03/21/13 15:30	03/26/13 13:38	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**770**	mg/L	5.0	5.0	1		03/23/13 07:57		

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ANALYTICAL RESULTS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60140770

Sample: GW-074937-031813-CM-MW-4 **Lab ID: 60140770004** Collected: 03/18/13 18:00 Received: 03/20/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Manganese, Dissolved	**1540**	ug/L	5.0	0.49	1	03/21/13 15:30	03/26/13 13:44	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**766**	mg/L	5.0	5.0	1		03/23/13 07:57		

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ANALYTICAL RESULTS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60140770

Sample: GW-074937-031813-CM-DUP **Lab ID: 60140770005** Collected: 03/18/13 17:00 Received: 03/20/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**766**	mg/L	5.0	5.0	1		03/23/13 07:57		

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QUALITY CONTROL DATA

Project: 074937 WILMUTH NO 1
Pace Project No.: 60140770

QC Batch: MPRP/21957 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60140770001, 60140770002, 60140770003, 60140770004

METHOD BLANK: 1157434 Matrix: Water
Associated Lab Samples: 60140770001, 60140770002, 60140770003, 60140770004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Manganese, Dissolved	ug/L	ND	5.0	03/26/13 13:24	

LABORATORY CONTROL SAMPLE: 1157435

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Manganese, Dissolved	ug/L	1000	990	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1157436 1157437

Parameter	Units	60140751001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Manganese, Dissolved	ug/L	256	1000	1000	1230	1220	97	96	75-125	1	20	

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QUALITY CONTROL DATA

Project: 074937 WILMUTH NO 1
Pace Project No.: 60140770

QC Batch: WET/40352 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 60140770001, 60140770002, 60140770003, 60140770004, 60140770005

METHOD BLANK: 1158722 Matrix: Water
Associated Lab Samples: 60140770001, 60140770002, 60140770003, 60140770004, 60140770005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	03/23/13 07:55	

SAMPLE DUPLICATE: 1158723

Parameter	Units	60140665001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	487	472	3	17	

SAMPLE DUPLICATE: 1158724

Parameter	Units	60140770005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	766	782	2	17	

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QUALIFIERS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60140770

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 074937 WILMUTH NO 1
Pace Project No.: 60140770

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60140770001	**GW-074937-031813-CM-MW-1**	EPA 3010	MPRP/21957	EPA 6010	ICP/17547
60140770002	**GW-074937-031813-CM-MW-2**	EPA 3010	MPRP/21957	EPA 6010	ICP/17547
60140770003	**GW-074937-031813-CM-MW-3**	EPA 3010	MPRP/21957	EPA 6010	ICP/17547
60140770004	**GW-074937-031813-CM-MW-4**	EPA 3010	MPRP/21957	EPA 6010	ICP/17547
60140770001	**GW-074937-031813-CM-MW-1**	SM 2540C	WET/40352		
60140770002	**GW-074937-031813-CM-MW-2**	SM 2540C	WET/40352		
60140770003	**GW-074937-031813-CM-MW-3**	SM 2540C	WET/40352		
60140770004	**GW-074937-031813-CM-MW-4**	SM 2540C	WET/40352		
60140770005	**GW-074937-031813-CM-DUP**	SM 2540C	WET/40352		

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Sample Condition Upon Receipt
ESI Tech Spec Client

WO#: 60140770

60140770

Client Name: COP- CRA NW

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex ☑ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☐

Tracking #: 8023 6946 6397 Pace Shipping Label Used? Yes ☑ No ☐

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☐ Other ☑ Zplc

Thermometer Used: T-112 / T-194 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 0.4

Temperature should be above freezing to 6°C

Date and initials of person examining contents: 3/20/13 SB

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	12.
Sample labels match COC:	☑Yes ☐No ☐N/A	
Includes date/time/ID/analyses Matrix: WT		13.
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☐Yes ☑No	Initial when completed / Lot # of added preservative
Trip Blank present:	☐Yes ☐No ☑N/A	
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☑N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / (N) Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: MF Date: 3/21/13

Temp Log: Record start and finish times when unpacking cooler, if >20 min, recheck sample temps.

Start: 1048	Start:
End: 1055	End:
Temp:	Temp:

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A
Required Client Information:

Company:	COP CRA NM
Address:	6121 Indian School Rd NE, Ste 200
	Albequerque, NM 87110
Email To:	cmathews@craworld.com
Phone:	(505)884-0672
Fax:	(505)884-4932
Requested Due Date/TAT:	standard

Section B
Required Project Information:

Report To:	Christine Mathews
Copy To:	Kelly Blanchard, Angela Bown, Cassie Brown
Purchase Order No.:	45176302
Project Name:	Wilmuth No 1
Project Number:	074937

Section C
Invoice Information:

Attention:	ePayables
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Alice Flanagan
Pace Profile #:	5514, 21

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER ______

Site Location STATE: NM

Requested Analysis Filtered (Y/N)

Section D
Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test	EPA 6010 Dissolved Mn	SM 2540C TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60140770
1	GW-074937-031813-CM-MW-1	WT	G			3/18/13	1250		2	1		1							X	X		1BP3U, 1BP3F 2-0 01
2	GW-074937-031813-CM-MW-2	WT	G			3/18/13	1710		2	1		1							X	X		02
3	GW-074937-031813-CM-MW-3	WT	G			3/18/13	1655		2	1		1							X	X		03
4	GW-074937-031813-CM-MW-4	WT	G			3/18/13	1800		2	1		1							X	X		04
5	GW-074937-031813-CM-DUP	WT	G			3/18/13	1700		1	1										X		05
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	[signature] CRA	3/19/13	1600	E Brockett	3/20	0830	0.4	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: CALE KANACK

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 3/19/13

F-ALL-O-020rev.08, 12-Oct-2007

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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July 01, 2013

Christine Matthews
CRA
6121 Indian School Rd NE
Suite 200
Albuquerque, NM 87110

RE: Project: 074937 WILMUTH NO 1
Pace Project No.: 60147042

Dear Christine Matthews:
Enclosed are the analytical results for sample(s) received by the laboratory on June 15, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Alice Flanagan

alice.flanagan@pacelabs.com
Project Manager

Enclosures

cc: Kelly Blanchard, COP Conestoga-Rovers & Associa
Angela Bown, COP Conestoga-Rovers & Associa
Cassie Brown, COP Conestoga-Rovers & Associa
Jason Ploss, COP Conestoga-Rovers & Associa

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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CERTIFICATIONS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60147042

Kansas Certification IDs
9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 13-012-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407-13-4
Utah Certification #: KS000212013-3
Illinois Certification #: 003097

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SAMPLE SUMMARY

Project: 074937 WILMUTH NO 1
Pace Project No.: 60147042

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60147042001	**074937-061413-JK-MW1**	Water	06/14/13 13:40	06/15/13 11:40
60147042002	**074937-061413-JK-MW2**	Water	06/14/13 13:45	06/15/13 11:40
60147042003	**074937-061413-JK-MW3**	Water	06/14/13 13:55	06/15/13 11:40
60147042004	**074937-061413-JK-MW4**	Water	06/14/13 13:46	06/15/13 11:40

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 074937 WILMUTH NO 1
Pace Project No.: 60147042

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60147042001	**074937-061413-JK-MW1**	EPA 6010	TJT	1
		SM 2540C	JML	1
60147042002	**074937-061413-JK-MW2**	EPA 6010	TJT	1
		SM 2540C	JML	1
60147042003	**074937-061413-JK-MW3**	EPA 6010	TJT	1
		SM 2540C	JML	1
60147042004	**074937-061413-JK-MW4**	EPA 6010	TJT	1
		SM 2540C	JML	1

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PROJECT NARRATIVE

Project: 074937 WILMUTH NO 1
Pace Project No.: 60147042

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: July 01, 2013

General Information:
4 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 074937 WILMUTH NO 1
Pace Project No.: 60147042

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: July 01, 2013

General Information:
4 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60147042

Sample: 074937-061413-JK-MW1 **Lab ID: 60147042001** Collected: 06/14/13 13:40 Received: 06/15/13 11:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Manganese, Dissolved	**930**	ug/L	5.0	0.49	1	06/18/13 14:00	06/20/13 13:54	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**831**	mg/L	5.0	5.0	1		06/21/13 16:27		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60147042

Sample: 074937-061413-JK-MW2 **Lab ID: 60147042002** Collected: 06/14/13 13:45 Received: 06/15/13 11:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Manganese, Dissolved	**1380**	ug/L	5.0	0.49	1	06/18/13 14:00	06/20/13 14:01	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**699**	mg/L	5.0	5.0	1		06/21/13 16:27		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60147042

Sample: 074937-061413-JK-MW3 **Lab ID: 60147042003** Collected: 06/14/13 13:55 Received: 06/15/13 11:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Manganese, Dissolved	**1640**	ug/L	5.0	0.49	1	06/18/13 14:00	06/20/13 14:03	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**711**	mg/L	5.0	5.0	1		06/21/13 16:27		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60147042

Sample: 074937-061413-JK-MW4 **Lab ID: 60147042004** Collected: 06/14/13 13:46 Received: 06/15/13 11:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Manganese, Dissolved	**1740**	ug/L	5.0	0.49	1	06/18/13 14:00	06/20/13 14:06	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**676**	mg/L	5.0	5.0	1		06/21/13 16:27		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 074937 WILMUTH NO 1
Pace Project No.: 60147042

QC Batch: MPRP/23127 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60147042001, 60147042002, 60147042003, 60147042004

METHOD BLANK: 1206781 Matrix: Water
Associated Lab Samples: 60147042001, 60147042002, 60147042003, 60147042004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Manganese, Dissolved	ug/L	ND	5.0	06/20/13 12:56	

LABORATORY CONTROL SAMPLE: 1206782

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Manganese, Dissolved	ug/L	1000	1040	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1206783 1206784

Parameter	Units	60146960001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Manganese, Dissolved	ug/L	1840	1000	1000	2630	2640	78	80	75-125	1	20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 074937 WILMUTH NO 1
Pace Project No.: 60147042

QC Batch: WET/41976 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 60147042001, 60147042002, 60147042003, 60147042004

METHOD BLANK: 1209054 Matrix: Water
Associated Lab Samples: 60147042001, 60147042002, 60147042003, 60147042004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	06/21/13 16:26	

LABORATORY CONTROL SAMPLE: 1209055

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	998	100	80-120	

SAMPLE DUPLICATE: 1209056

Parameter	Units	60147042001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	831	854	3	17	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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QUALIFIERS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60147042

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 074937 WILMUTH NO 1
Pace Project No.: 60147042

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60147042001	**074937-061413-JK-MW1**	EPA 3010	MPRP/23127	EPA 6010	ICP/18251
60147042002	**074937-061413-JK-MW2**	EPA 3010	MPRP/23127	EPA 6010	ICP/18251
60147042003	**074937-061413-JK-MW3**	EPA 3010	MPRP/23127	EPA 6010	ICP/18251
60147042004	**074937-061413-JK-MW4**	EPA 3010	MPRP/23127	EPA 6010	ICP/18251
60147042001	**074937-061413-JK-MW1**	SM 2540C	WET/41976		
60147042002	**074937-061413-JK-MW2**	SM 2540C	WET/41976		
60147042003	**074937-061413-JK-MW3**	SM 2540C	WET/41976		
60147042004	**074937-061413-JK-MW4**	SM 2540C	WET/41976		

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Sample Condition Upon Receipt
ESI Tech Spec Client

WO# : 60147042

60147042

Client Name: COP- CRA

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex ☑ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☐

Tracking #: 8011 3631 7370 Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☐ No ☑ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☐ Other ☑ Zip

Thermometer Used: T-112 / T-194 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 0.4

Temperature should be above freezing to 6°C

Date and initials of person examining contents: 6/15/13

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☑Yes ☐No ☐N/A	13.
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☐Yes ☑No	Initial when completed / Lot # of added preservative
Trip Blank present: Pace Trip Blank lot # (if purchased):	☐Yes ☐No ☑N/A	15. NO TRIP BLANK VOLUME RECEIVED
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☑N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: DAF Date: 6/17/13

Temp Log: Record start and finish times when unpacking cooler, if >20 min, recheck sample temps.

Start: 1208	Start:
End: 1212	End:
Temp:	Temp:

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: of

Section A — **Required** Client Information:

Company:	COP CRA NM
Address:	6121 Indian School Rd NE, Ste 200
	Albequerque, NM 87110
Email To:	cmathews@craworld.com
Phone: (505)884-0672	Fax: (505)884-4932
Requested Due Date/TAT:	standard

Section B — **Required** Project Information:

Report To:	Christine Mathews
Copy To:	Kelly Blanchard, Angela Bown, Cassie Brown
Purchase Order No.:	45176302
Project Name:	Wilmuth No 1
Project Number:	074937

Section C — Invoice Information:

Attention:	ePayables
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Alice Flanagan
Pace Profile #:	5514, 21

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: NM

Section D — **Required** Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: EPA 6010 Dissolved Mn	SM 2540C TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	074937-C61413-JK-MW1	WT	G			6-14-13	1310		2	1		1						X	X		60147042
2	074937-C61413-JK-MW2	WT	G			6/14/13	1345		2	1		1						X	X		
3	074937-C61413-JK-MW3	WT	G			6/14/13	1355		2	1		1						X	X		
4	074937-C61413-JK-MW4	WT	C			6/14/13	1316		2	1		1						X	X		
5	TRIP BLANK	WT					(1040)														
6																					
7																					
8																					
9																					
10																					
11																					
12																					

1BP3U, 1BP3F-5

Pace Project No./ Lab I.D.

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Kelly Williams / CRA	6-14-13	1508	E Brackett / Pace	6/15	1140	0.4	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kelly Williams / Josh Kirchner

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 06/14/13

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

September 27, 2013

Christine Matthews
CRA
6121 Indian School Rd NE
Suite 200
Albuquerque, NM 87110

RE: Project: 074937 WILMUTH NO 1
Pace Project No.: 60153081

Dear Christine Matthews:
Enclosed are the analytical results for sample(s) received by the laboratory on September 13, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Alice Flanagan

alice.flanagan@pacelabs.com
Project Manager

Enclosures

cc: Kelly Blanchard, COP Conestoga-Rovers & Associa
Angela Bown, COP Conestoga-Rovers & Associa
Jeff Walker, COP Conestoga-Rovers & Associa

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Lenexa, KS 66219
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CERTIFICATIONS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60153081

Kansas Certification IDs
9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 13-012-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407-13-4
Utah Certification #: KS000212013-3
Illinois Certification #: 003097

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: 074937 WILMUTH NO 1
Pace Project No.: 60153081

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60153081001	**GW-074937-091213-CM-MW-1**	Water	09/12/13 11:20	09/13/13 08:30
60153081002	**GW-074937-091213-CM-MW-2**	Water	09/12/13 10:50	09/13/13 08:30
60153081003	**GW-074937-091213-CM-MW-3**	Water	09/12/13 10:40	09/13/13 08:30
60153081004	**GW-074937-091213-CM-MW-4**	Water	09/12/13 11:35	09/13/13 08:30
60153081005	**GW-074937-091213-CM-DUP**	Water	09/12/13 11:25	09/13/13 08:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 074937 WILMUTH NO 1
Pace Project No.: 60153081

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60153081001	**GW-074937-091213-CM-MW-1**	EPA 6010	NDJ	1
		SM 2540C	RAH	1
60153081002	**GW-074937-091213-CM-MW-2**	EPA 6010	NDJ	1
		SM 2540C	RAH	1
60153081003	**GW-074937-091213-CM-MW-3**	EPA 6010	NDJ	1
		SM 2540C	RAH	1
60153081004	**GW-074937-091213-CM-MW-4**	EPA 6010	NDJ	1
		SM 2540C	RAH	1
60153081005	**GW-074937-091213-CM-DUP**	SM 2540C	RAH	1

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PROJECT NARRATIVE

Project: 074937 WILMUTH NO 1
Pace Project No.: 60153081

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: September 27, 2013

General Information:
4 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 074937 WILMUTH NO 1
Pace Project No.: 60153081

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: September 27, 2013

General Information:
5 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60153081

Sample: GW-074937-091213-CM-MW-1 **Lab ID: 60153081001** Collected: 09/12/13 11:20 Received: 09/13/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Manganese, Dissolved	**921**	ug/L	5.0	0.49	1	09/19/13 00:00	09/20/13 12:51	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**942**	mg/L	5.0	5.0	1		09/18/13 15:49		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60153081

Sample: GW-074937-091213-CM-MW-2 **Lab ID: 60153081002** Collected: 09/12/13 10:50 Received: 09/13/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Manganese, Dissolved	**1450**	ug/L	5.0	0.49	1	09/19/13 00:00	09/20/13 12:53	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**760**	mg/L	5.0	5.0	1		09/18/13 15:49		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60153081

Sample: GW-074937-091213-CM-MW-3 **Lab ID: 60153081003** Collected: 09/12/13 10:40 Received: 09/13/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Manganese, Dissolved	**1650**	ug/L	5.0	0.49	1	09/19/13 00:00	09/20/13 12:55	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**764**	mg/L	5.0	5.0	1		09/18/13 15:49		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60153081

Sample: GW-074937-091213-CM-MW-4 **Lab ID: 60153081004** Collected: 09/12/13 11:35 Received: 09/13/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Manganese, Dissolved	**1810**	ug/L	5.0	0.49	1	09/19/13 00:00	09/20/13 12:57	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**822**	mg/L	5.0	5.0	1		09/18/13 15:50		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60153081

Sample: GW-074937-091213-CM-DUP **Lab ID: 60153081005** Collected: 09/12/13 11:25 Received: 09/13/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**870**	mg/L	5.0	5.0	1		09/18/13 15:50		

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: 074937 WILMUTH NO 1
Pace Project No.: 60153081

QC Batch: MPRP/24349 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60153081001, 60153081002, 60153081003, 60153081004

METHOD BLANK: 1256522 Matrix: Water
Associated Lab Samples: 60153081001, 60153081002, 60153081003, 60153081004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Manganese, Dissolved	ug/L	ND	5.0	09/20/13 12:26	

LABORATORY CONTROL SAMPLE: 1256523

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Manganese, Dissolved	ug/L	1000	973	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1256524 1256525

Parameter	Units	60153083001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Manganese, Dissolved	ug/L	1050	1000	1000	2010	1990	96	94	75-125	1	20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 074937 WILMUTH NO 1
Pace Project No.: 60153081

QC Batch: WET/43476 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 60153081001, 60153081002, 60153081003, 60153081004, 60153081005

METHOD BLANK: 1255501 Matrix: Water
Associated Lab Samples: 60153081001, 60153081002, 60153081003, 60153081004, 60153081005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	09/18/13 15:47	

LABORATORY CONTROL SAMPLE: 1255502

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	952	95	80-120	

SAMPLE DUPLICATE: 1255503

Parameter	Units	60152910002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	375	391	4	17	

SAMPLE DUPLICATE: 1255504

Parameter	Units	60153050006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	85400	97200	13	17	

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60153081

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

Pace Analytical Services, Inc.
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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 074937 WILMUTH NO 1
Pace Project No.: 60153081

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60153081001	**GW-074937-091213-CM-MW-1**	EPA 3010	MPRP/24349	EPA 6010	ICP/18990
60153081002	**GW-074937-091213-CM-MW-2**	EPA 3010	MPRP/24349	EPA 6010	ICP/18990
60153081003	**GW-074937-091213-CM-MW-3**	EPA 3010	MPRP/24349	EPA 6010	ICP/18990
60153081004	**GW-074937-091213-CM-MW-4**	EPA 3010	MPRP/24349	EPA 6010	ICP/18990
60153081001	**GW-074937-091213-CM-MW-1**	SM 2540C	WET/43476		
60153081002	**GW-074937-091213-CM-MW-2**	SM 2540C	WET/43476		
60153081003	**GW-074937-091213-CM-MW-3**	SM 2540C	WET/43476		
60153081004	**GW-074937-091213-CM-MW-4**	SM 2540C	WET/43476		
60153081005	**GW-074937-091213-CM-DUP**	SM 2540C	WET/43476		

Pace Analytical
www.pacelabs.com

Sample Condition Upon Receipt
ESI Tech Spec Client

WO# : 60153081

60153081

Client Name: CoP CRA NM

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex ☒ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☐

Tracking #: 802368279400 Pace Shipping Label Used? Yes ☑ No ☐

Custody Seal on Cooler/Box Present: Yes ☒ No ☐ Seals intact: Yes ☒ No ☐

Packing Material: Bubble Wrap ☒ Bubble Bags ☐ Foam ☐ None ☐ Other ☐

Thermometer Used: T-112 / T-194 **Type of Ice:** (Wet) Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 1.7

Date and initials of person examining contents: DAS 9/13/13 1130

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.
Filtered volume received for dissolved tests?	☑Yes ☐No ☐N/A	12.
Sample labels match COC:	☑Yes ☐No ☐N/A	
Includes date/time/ID/analyses Matrix: water		13.
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes ☐No	Initial when completed JM / Lot # of added preservative
Trip Blank present:	☐Yes ☐No ☑N/A	
Pace Trip Blank lot # (if purchased): n/a		15.
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☑N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: MAF Date: 9/13/13

Temp Log: Record start and finish times when unpacking cooler, if >20 min, recheck sample temps

Start: 1125	Start:
End: 1130	End:
Temp:	Temp:

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Pace Analytical
www.pacelabs.com

Page: 1 of 1

Section A Required Client Information:

Company:	COP CRA NM
Address:	6121 Indian School Rd NE, Ste 200
	Albequerque, NM 87110
Email To:	cmathews@craworld.com
Phone: (505)884-0672	Fax: (505)884-4932
Requested Due Date/TAT:	standard

Section B Required Project Information:

Report To:	Christine Mathews
Copy To:	Jeff Walker, Angela Bown
Purchase Order No.:	4517664593
Project Name:	Wilmuth No 1
Project Number:	074937

Section C Invoice Information:

Attention:	ePayables
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Alice Flanagan
Pace Profile #:	5514, 21

REGULATORY AGENCY

☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: NM

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: EPA 6010 Dissolved Mn	SM 2540C TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	GW-074937-091213-CM-MW-1	WT	G			9-12-13	1120		2	1		1					X	X		60153081 (BPSM) 60153081 (BPSF) aq
2	GW-074937-091213-CM-MW-2	WT	G			9-12-13	1050		2	1		1					X	X		cq
3	GW-074937-091213-CM-MW-3	WT	G			9-12-13	1040		2	1		1					X	X		cq
4	GW-074937-091213-CM-MW-4	WT	G			9-12-13	1135		2	1		1					X	X		cq
5	GW-074937-091213-CM-DUP	WT	G			9-12-13	1125		1	1								X		60153081 (BPSM) aq
6	~~TB-074937-0912~~																				
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals field filtered	[signature] CRA	9/12/13	1300	[signature] Pace	9/13/13	830	1.7	Y	Y	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Christine Mathews
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 9/12/13

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days

F-ALL-Q-020rev.08, 12-Oct-2007

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

December 27, 2013

Jeff Walker
COP Conestoga-Rovers & Associa
6121 Indian School Rd. NE
Ste 200
Albuquerque, NM 87110

RE: Project: 074937 WILMUTH NO 1
Pace Project No.: 60159735

Dear Jeff Walker:
Enclosed are the analytical results for sample(s) received by the laboratory on December 17, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Alice Flanagan

alice.flanagan@pacelabs.com
Project Manager

Enclosures

cc: Angela Bown, COP Conestoga-Rovers & Associa
Christine Matthews, CRA

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60159735

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 13-012-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407-13-4
Utah Certification #: KS000212013-3
Illinois Certification #: 003097

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SAMPLE SUMMARY

Project: 074937 WILMUTH NO 1
Pace Project No.: 60159735

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60159735001	**GW-074937-121213-CM-MW-1**	Water	12/12/13 10:50	12/17/13 09:00
60159735002	**GW-074937-121213-CM-MW-2**	Water	12/12/13 09:50	12/17/13 09:00
60159735003	**GW-074937-121213-CM-MW-3**	Water	12/12/13 10:05	12/17/13 09:00
60159735004	**GW-074937-121213-CM-MW-4**	Water	12/12/13 11:10	12/17/13 09:00
60159735005	**GW-074937-121213-CM-DUP**	Water	12/12/13 11:15	12/17/13 09:00

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SAMPLE ANALYTE COUNT

Project: 074937 WILMUTH NO 1
Pace Project No.: 60159735

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60159735001	**GW-074937-121213-CM-MW-1**	EPA 6010	TDS	1
		SM 2540C	RAH	1
60159735002	**GW-074937-121213-CM-MW-2**	EPA 6010	TDS	1
		SM 2540C	RAH	1
60159735003	**GW-074937-121213-CM-MW-3**	EPA 6010	TDS	1
		SM 2540C	RAH	1
60159735004	**GW-074937-121213-CM-MW-4**	EPA 6010	TDS	1
		SM 2540C	RAH	1
60159735005	**GW-074937-121213-CM-DUP**	EPA 6010	TDS	1
		SM 2540C	RAH	1

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 074937 WILMUTH NO 1
Pace Project No.: 60159735

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: December 27, 2013

General Information:
5 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 074937 WILMUTH NO 1
Pace Project No.: 60159735

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: December 27, 2013

General Information:
5 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60159735

Sample: GW-074937-121213-CM-MW-1 **Lab ID: 60159735001** Collected: 12/12/13 10:50 Received: 12/17/13 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**1.1**	mg/L	0.0050	1	12/18/13 13:30	12/27/13 13:53	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**930**	mg/L	5.0	1		12/18/13 15:05		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60159735

Sample: GW-074937-121213-CM-MW-2 **Lab ID: 60159735002** Collected: 12/12/13 09:50 Received: 12/17/13 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**1.3**	mg/L	0.0050	1	12/18/13 13:30	12/27/13 14:00	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**747**	mg/L	5.0	1		12/18/13 15:06		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60159735

Sample: GW-074937-121213-CM-MW-3 **Lab ID: 60159735003** Collected: 12/12/13 10:05 Received: 12/17/13 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**1.5**	mg/L	0.0050	1	12/18/13 13:30	12/27/13 14:02	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**756**	mg/L	5.0	1		12/18/13 15:06		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60159735

Sample: GW-074937-121213-CM-MW-4 **Lab ID: 60159735004** Collected: 12/12/13 11:10 Received: 12/17/13 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**1.2**	mg/L	0.0050	1	12/18/13 13:30	12/27/13 14:04	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**776**	mg/L	5.0	1		12/18/13 15:07		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60159735

Sample: GW-074937-121213-CM-DUP **Lab ID: 60159735005** Collected: 12/12/13 11:15 Received: 12/17/13 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**1.2**	mg/L	0.0050	1	12/18/13 13:30	12/27/13 14:07	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**795**	mg/L	5.0	1		12/18/13 15:07		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 074937 WILMUTH NO 1
Pace Project No.: 60159735

QC Batch: MPRP/25648 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60159735001, 60159735002, 60159735003, 60159735004, 60159735005

METHOD BLANK: 1307870 Matrix: Water
Associated Lab Samples: 60159735001, 60159735002, 60159735003, 60159735004, 60159735005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Manganese, Dissolved	mg/L	ND	0.0050	12/27/13 13:33	

LABORATORY CONTROL SAMPLE: 1307871

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Manganese, Dissolved	mg/L	1	0.94	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1307872 1307873

Parameter	Units	60159732001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Manganese, Dissolved	mg/L	0.88	1	1	1.8	1.8	89	92	75-125	2	20	

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QUALITY CONTROL DATA

Project: 074937 WILMUTH NO 1
Pace Project No.: 60159735

QC Batch: WET/45205 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 60159735001, 60159735002, 60159735003, 60159735004, 60159735005

METHOD BLANK: 1307730 Matrix: Water
Associated Lab Samples: 60159735001, 60159735002, 60159735003, 60159735004, 60159735005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	12/18/13 15:05	

LABORATORY CONTROL SAMPLE: 1307731

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	960	96	80-120	

SAMPLE DUPLICATE: 1307732

Parameter	Units	60159735001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	930	941	1	17	

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 074937 WILMUTH NO 1
Pace Project No.: 60159735

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 074937 WILMUTH NO 1
Pace Project No.: 60159735

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60159735001	**GW-074937-121213-CM-MW-1**	EPA 3010	MPRP/25648	EPA 6010	ICP/19687
60159735002	**GW-074937-121213-CM-MW-2**	EPA 3010	MPRP/25648	EPA 6010	ICP/19687
60159735003	**GW-074937-121213-CM-MW-3**	EPA 3010	MPRP/25648	EPA 6010	ICP/19687
60159735004	**GW-074937-121213-CM-MW-4**	EPA 3010	MPRP/25648	EPA 6010	ICP/19687
60159735005	**GW-074937-121213-CM-DUP**	EPA 3010	MPRP/25648	EPA 6010	ICP/19687
60159735001	**GW-074937-121213-CM-MW-1**	SM 2540C	WET/45205		
60159735002	**GW-074937-121213-CM-MW-2**	SM 2540C	WET/45205		
60159735003	**GW-074937-121213-CM-MW-3**	SM 2540C	WET/45205		
60159735004	**GW-074937-121213-CM-MW-4**	SM 2540C	WET/45205		
60159735005	**GW-074937-121213-CM-DUP**	SM 2540C	WET/45205		

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Sample Condition Upon Receipt
ESI Tech Spec Client

WO#: 60159735

60159735

Client Name: CoP CRA

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex ☒ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☐

Tracking #: 803974916674 Pace Shipping Label Used? Yes ☐ No ☐

Custody Seal on Cooler/Box Present: Yes ☐ No ☐ Seals intact: Yes ☐ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☐ Other ☐ Zip

Thermometer Used: T-239 / T-194 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 1.6

Date and initials of person examining contents: TOT 12/17/13

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	12.
Sample labels match COC:	☑Yes ☐No ☐N/A	
Includes date/time/ID/analyses Matrix: WT		13.
All containers needing preservation have been checked.	☐Yes ☐No ☐N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☐Yes ☑No	Initial when completed / Lot # of added preservative
Trip Blank present:	☐Yes ☐No ☑N/A	
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☑N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: RAK Date: 12/17/13

Temp Log: Record start and finish times when unpacking cooler, if >20 min, recheck sample temps.

Start: 1105	Start:
End: 1108	End:
Temp:	Temp:

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A Required Client Information:

Company:	COP CRA NM
Address:	6121 Indian School Rd NE, Ste 200
	Albequerque, NM 87110
Email To:	cmathews@craworld.com
Phone: (505)884-0672	Fax: (505)884-4932
Requested Due Date/TAT:	standard

Section B Required Project Information:

Report To:	Christine Mathews
Copy To:	Jeff Walker, Angela Bown
Purchase Order No.:	4517664593
Project Name:	Wilmuth No 1
Project Number:	074937

Section C Invoice Information:

Attention:	ePayables
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Alice Flanagan
Pace Profile #:	5514, 21

REGULATORY AGENCY

☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: NM

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: EPA 6010 Dissolved Mn	SM 2540C TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	GW-074937-121213-CM-MW-1	WT	G			12/12/13	1050		2			X						X	X		60159735
2	GW-074937-121213-CM-MW-2	WT	G			12/12/13	0950		2			X						X	X		1BP3U 1BP3N1-5 GW
3	GW-074932-121213-CM-MW-3	WT	G			12/12/13	1005		2			X						X	X		GW
4	GW-074937-121213-CM-MW-4	WT	G			12/12/13	1110		2			X						X	X		GW
5	GW-074937-121213-CM-DUP	WT	G			12/12/13	1115		2			X						X	X		GW
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Christine Mathews / CRA	12/16/13	0930	PASE	12/17/13	0900	1.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Christine Mathews

SIGNATURE of SAMPLER: Christine Mathews DATE Signed (MM/DD/YY): 12/16/13

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.