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ConocoPhillips

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

April 16, 2015

Re: NMOCD Case No. 3R-428, 2014 Annual Groundwater Monitoring Report

Dear Mr. von Gonten:

Enclosed is the 2014 Annual Groundwater Monitoring Report for the Sategna No. 2E site. This report, prepared by Conestoga-Rovers & Associates (CRA), contains the results of groundwater monitoring and monitoring well installation conducted during September and October, 2014, respectively, at the referenced site.

Please let me know if you have any questions.

Sincerely,

Rick Greiner

Enc

3R - 428

2014 AGWMR

04 / 16 / 2015

CONESTOGA-ROVERS & ASSOCIATES

www.CRAworld.com

2014 Annual Groundwater Monitoring Report

ConocoPhillips Sategna No. 2E
San Juan County, New Mexico
API# 30-045-24060
NMOCD# 3RP-428

Prepared for: ConocoPhillips Company

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

April 2015 • 074932 • Report No. 6

Partners in Sustainability

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Section 1.0 Introduction

This report presents the results of the 2014 annual groundwater monitoring event and up-gradient monitoring well installation and sampling conducted by Conestoga-Rovers & Associates (CRA) at the ConocoPhillips Company (ConocoPhillips) Sategna No. 2E gas well site (Site). The Site is located on private land within Unit Letter J, Section 21, Township 29N, Range 11W, Bloomfield, San Juan County, New Mexico (**Figure 1**). A Site detail map is included as **Figure 2**.

1.1 Background

A historical timeline for Site is presented in **Table 1**, and is discussed below.

On November 24, 2008, approximately 8 barrels of condensate were released from the on-Site, aboveground storage tank (AST). Notification of the release was given to the New Mexico Oil Conservation Division (NMOCD) by ConocoPhillips personnel using NMOCD Form C-141. On November 25, 2008, Envirotech Inc. of Farmington, New Mexico (Envirotech) obtained grab soil samples from just outside the affected area for analysis of organic vapors. Results of this analysis were below NMOCD recommended action levels. Envirotech also used a hand auger to complete 2 soil borings to approximately 8 feet below ground surface (bgs), where groundwater was encountered. Two groundwater samples were submitted by Envirotech to an analytical laboratory for analysis of benzene, toluene, ethylbenzene and xylenes (BTEX). Analytical results revealed BTEX in concentrations below NMOCD action levels.

On December 4, 2008, Envirotech returned to the Site and obtained grab and composite soil samples from an excavation measuring approximately 30 feet by 18 feet by 5 feet deep (**Figure 2**). Soil samples were collected from the excavation and analyzed for BTEX, total petroleum hydrocarbons (TPH), and chloride. Analytical results were below NMOCD action levels for BTEX. Two grab soil samples collected from below the above-grade and below-grade tanks exceeded the NMOCD action level for total TPH.

Groundwater samples were collected from seepage into the excavation on December 5, 2008. The groundwater sample exceeded the New Mexico Water Quality Control Commission (NMWQCC) for benzene, toluene, and xylenes. Groundwater was recovered from the bottom of the excavated area using a vacuum truck during the week of December 8, 2008. Once removed, further excavation took place and groundwater slowly seeped into the excavation; this process was repeated a total of 4 times.

The first time water was recovered from the surface of the excavation, a hydrocarbon odor and free-phase, light non-aqueous phase liquid (LNAPL) were present. By the fourth and last event, neither the hydrocarbon odor nor free-phase LNAPL were present in the groundwater seepage. Each pumping event recovered approximately 30-60 barrels of liquid from the Site.

Groundwater monitoring wells MW-1, MW-2 and MW-3 were installed at the Site in March 2009. Quarterly groundwater monitoring was initiated in April 2009.

Additional hydrocarbon soil impacts were discovered during relocation and reinstallation of well equipment in April 2009. Envirotech uncovered an abandoned sewer line in the same location as hydrocarbon impacted soils while digging an exploratory trench between the wellhead and the proposed separator tank location (Figure 2). Trench work was halted and the excavated soils were stockpiled on site. Tetra Tech returned to the site on April 23 and 24, 2009 to oversee excavation of the hydrocarbon impacted soils from the vicinity of the trench (Figure 2). Photoionization detector readings in the field indicated levels below the NMOCD action level; however, lab results were above the NMOCD action level for TPH in samples collected from all four walls of the excavation. The bottom sample results were below NMOCD action levels. The excavation was backfilled and equipment was reinstalled before analytical results were available. A report detailing this activity, titled Soil Excavation and Sampling Report, was submitted to the NMOCD in July 2009.

Tetra Tech continued quarterly groundwater monitoring from April 2, 2009 to March 2011. The March 2011 Tetra Tech quarterly groundwater monitoring report recommended the discontinuation of sampling and analysis of BTEX for all Site monitoring wells.

On June 15, 2011, Site consulting responsibilities were transferred from Tetra Tech to CRA of Albuquerque, NM. Quarterly groundwater monitoring was continued by CRA on June 24, 2011. Following the October 2011 sampling event, quarterly sampling was discontinued and annual sampling for dissolved manganese, sulfate, and total dissolved solids (TDS) was initiated.

A monitoring well was installed in October 2014 up-gradient of the release area. The well installation and sampling results are detailed below.

Section 2.0 Groundwater Monitoring Summary, Methodology, and Analytical Results

2.1 Annual Groundwater Monitoring Summary

Prior to collection of groundwater samples from monitoring wells MW-1, MW-2 and MW-3, depth to groundwater was measured in each well using an oil/water interface probe. Results are displayed in **Table 2**.

Groundwater elevation data were obtained during the September 22, 2014 sampling event. These data were used to create a groundwater potentiometric surface map for the Site (**Figure 3**). The groundwater flow direction at the Site continues to be to the southwest. A generalized geologic cross section for the Site is presented as **Figure 4**.

2.2 Groundwater Monitoring Methodology

During the groundwater monitoring event Site monitoring wells were purged of at least 3 casing volumes using a disposable polyethylene bailer. While bailing each well, groundwater parameters were collected using a multi-parameter meter. Recorded field parameters are summarized in **Table 3**. Collected groundwater samples were placed in laboratory prepared bottles, packed on ice, and shipped under chain-of-custody documentation to Pace Analytical Services of Lenexa, Kansas.

Groundwater samples were analyzed for dissolved manganese by Environmental Protection Agency (EPA) Method 6010, sulfate by EPA method 300, and TDS by Standard Method (SM) 2540C. Analytical results are summarized in **Table 4** and the corresponding laboratory analytical report for the September 22, 2014 groundwater sampling event is included in **Appendix A**.

2.3 Groundwater Monitoring Analytical Results

The 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). Groundwater quality standards have been set for the protection of human health, domestic water supply, and irrigation use. Exceedances of NMWQCC groundwater quality standards in Site monitoring wells are discussed below.

- Total Dissolved Solids
  - The NMWQCC domestic water supply groundwater quality standard for TDS is 1,000 mg/L; groundwater samples collected from monitoring wells MW-1, MW-2 and MW-3 were found to contain TDS concentrations of 2,650 mg/L, 2,630 mg/L, and 2,830 mg/L, respectively. The December 17, 2014 sample collected from newly-installed and up-gradient well MW-4 had a concentration of 1,520 mg/L.

- Dissolved Manganese
  - The NMWQCC domestic water supply groundwater quality standard for dissolved manganese is 0.2 mg/L; groundwater samples collected from monitoring wells MW-1 and MW-3 were found to contain dissolved manganese concentrations of 0.42 mg/L and 0.87 mg/L, respectively. The December 17, 2014 sample collected from newly-installed and up-gradient well MW-4 had a concentration of 1.5 mg/L.

- Sulfate
  - The NMWQCC domestic water supply groundwater quality standard for sulfate is 600 mg/L; groundwater samples collected from monitoring wells MW-1, MW-2, and MW-3 were found to contain sulfate in concentrations of 1,440 mg/L, 1,550 mg/L, and 1,670 mg/L, respectively. The December 17, 2014 sample collected from newly-installed and up-gradient well MW-4 had a concentration of 1,140 mg/L.

Section 3.0 Up-Gradient Monitoring Well Installation

On October 21, 2014, National Exploration, Wells, and Pumps (National EWP) installed one groundwater monitoring well, MW-4, under CRA oversight. The boring was marked and cleared for subsurface utilities using the New Mexico One Call service and pre-drilled to a depth of five feet bgs by hydroexcavation. The boring was advanced using a CME-85 drill rig equipped with hollow stem augers. MW-4 was installed in the far northeast corner of the Site, hydraulically up-gradient from the three existing monitoring wells (MW-1, MW-2, and MW-3).

Soil samples were collected in five foot increments using a 2-inch diameter by 24-inch long split spoon sampler. Samples were logged by CRA personnel according to the Unified Soil Classification System. The soils mainly consisted of a light gray, moderately stiff clay layer approximately five feet thick underlain by poorly graded sand. Saturated soils were encountered beneath the clay at approximately 10 feet bgs. The clay is believed to be functioning as a confining layer.

The well was set at approximately 17.5 feet bgs and is constructed of 2-inch diameter, schedule 40 PVC casing and screen. The monitoring well consists of a 0.5-foot long, threaded PVC bottom plug and 15 feet of slotted (0.020-inch) well screen. The annular space around the well screen was filled with 10/20 gradation silica sand to approximately one foot above the well screen, followed by approximately 1.5 feet of of 3/8-inch hydrated bentonite pellets. The well was completed with an above-ground locking well vault placed within a 24-inch by 24-inch by 4-inch thick concrete pad.

After installation, the well was developed by National EWP using a decontaminated stainless steel bailer until turbidity significantly decreased. Approximately 25 gallons of groundwater were removed during development and disposed of in the on-Site produced water tank.

3.1 Sampling of Up-Gradient Monitoring Well

On December 17, 2014, a groundwater sample was collected from MW-4 in order to assess the background concentrations of dissolved manganese, sulfate and TDS. Standard CRA groundwater monitoring methodology (Section 2.2) was utilized for this sampling event.

Results from this event indicate concentrations exceeding the NMWQCC standards for dissolved manganese, sulfate, and TDS with analytical results of 1.5 mg/L, 1,140 mg/L, and 1,520 mg/L, respectively.

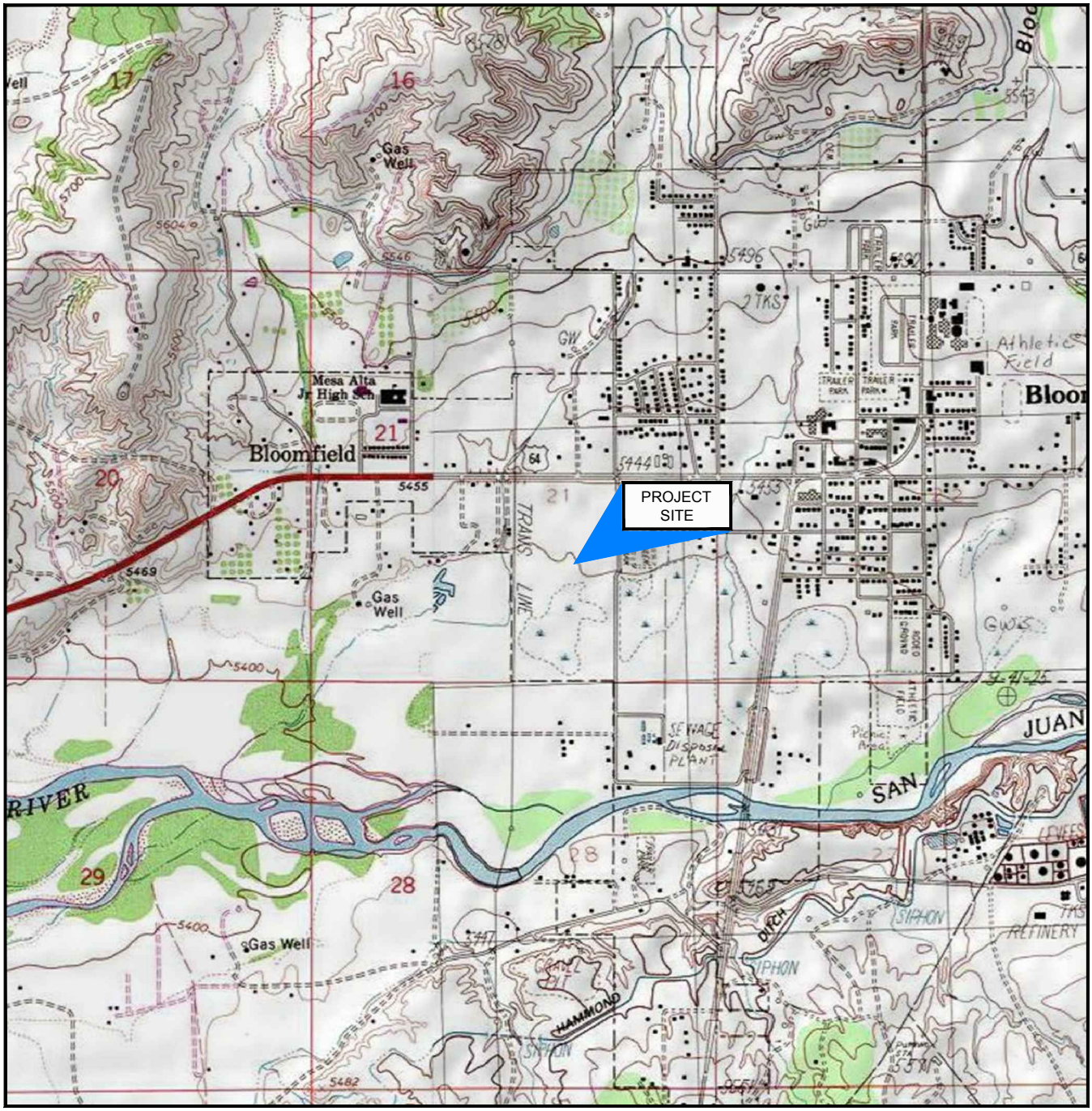
Section 4.0 Conclusions and Recommendations

Monitoring wells MW-1, MW-2, and MW-3 were found to have concentrations of sulfate and TDS exceeding the NMWQCC standards. Monitoring wells MW-1 and MW-3 were found to have concentration of dissolved manganese exceeding the NMWQCC standard.

Dissolved manganese, sulfate, and TDS levels were also detected above the NMWQCC standard in the up-gradient monitoring well MW-4. Data review of historical documents suggests that the groundwater gradient has been primarily in the south southwest direction since monitoring began in 2009 and that MW-4 is located hydraulically up-gradient of the known impact areas. This suggests that elevated contaminant concentrations are consistent with background groundwater quality conditions at the Site.

There is no evidence to indicate that the dissolved manganese, sulfate, or TDS concentrations have resulted from the historical release. Due to this, CRA recommends that no further action status be granted to the Site.

Figures



SOURCE: USGS 7.5 MINUTE QUAD
"HORN CANYON AND BLOOMFIELD, NEW MEXICO"

N

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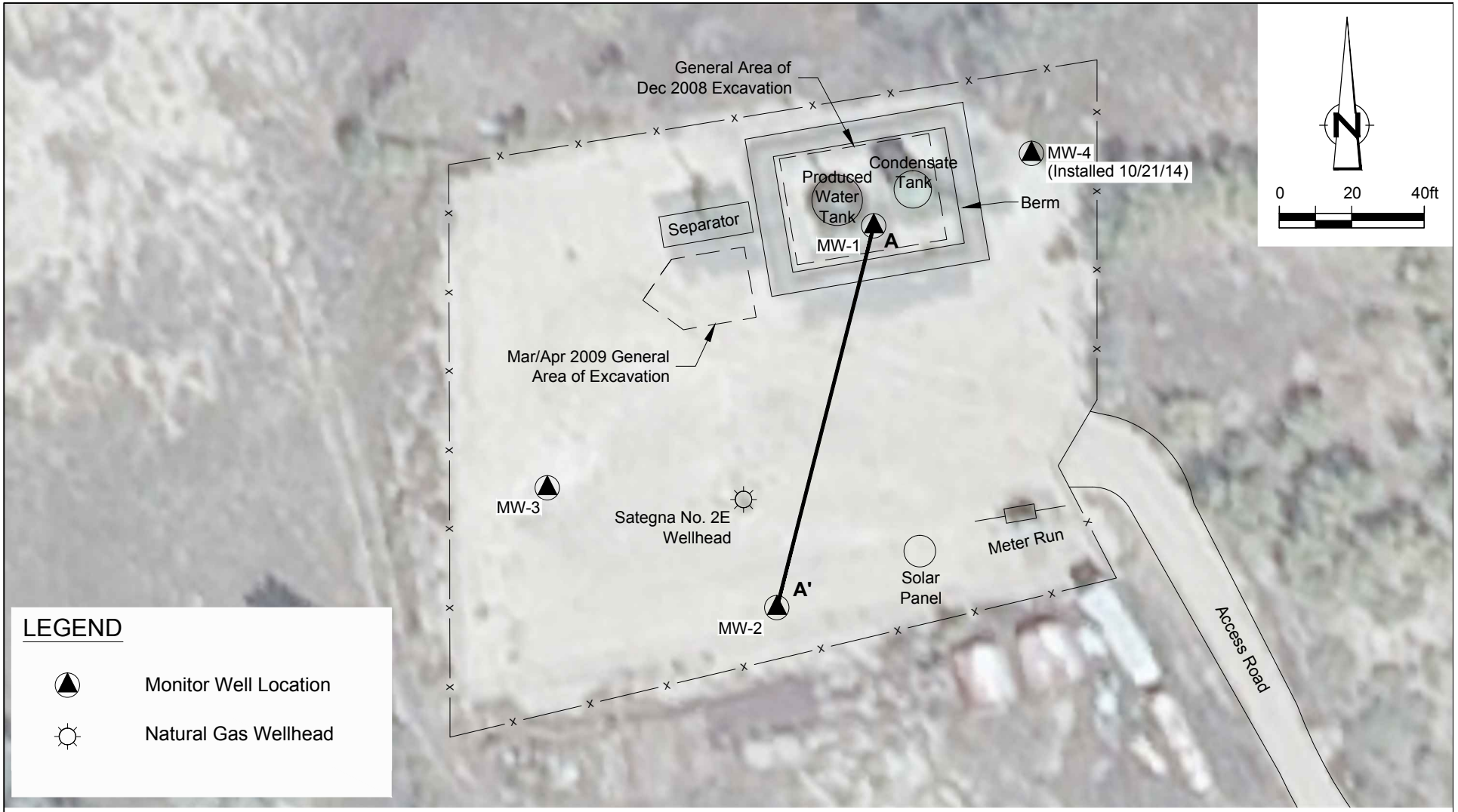
Figure 1

SITE VICINITY MAP
SATEGNA No. 2E NATURAL GAS WELL SITE
SECTION 21, T29N-R11W, BLOOMFIELD, NEW MEXICO
ConocoPhillips Company

CRA

074932-95(006)GN-DL005 OCT 22/2014

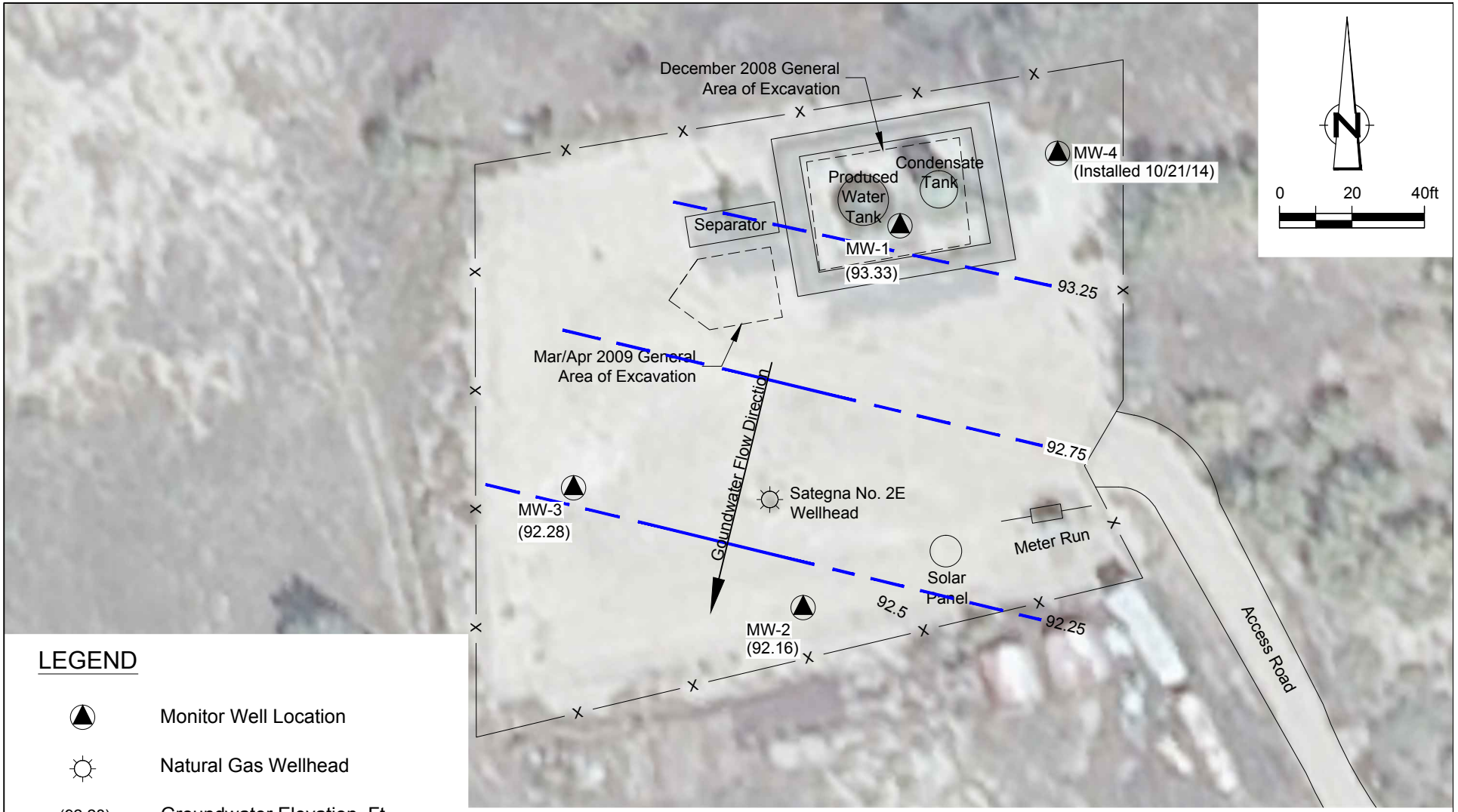


ConocoPhillips high resolution aerial imagery 2008.

Figure 2

SITE PLAN
SATEGNA No. 2E NATURAL GAS WELL SITE
SECTION 21, T29N-R11W, BLOOMFIELD, NEW MEXICO
ConocoPhillips Company

074932-95(006)GN-DL001 JAN 5/2015



LEGEND

- Monitor Well Location
- Natural Gas Wellhead
- (92.28) Groundwater Elevation, Ft
- 92.25 Groundwater Elevation Contour, Ft
- Groundwater Flow Direction

Figure 3

SEPTEMBER 2014 GROUNDWATER POTENTIOMETRIC SURFACE MAP
SATEGNA No. 2E NATURAL GAS WELL SITE
SECTION 21, T29N-R11W, BLOOMFIELD, NEW MEXICO
ConocoPhillips Company

074932-95(006)GN-DL002 JAN 5/2015

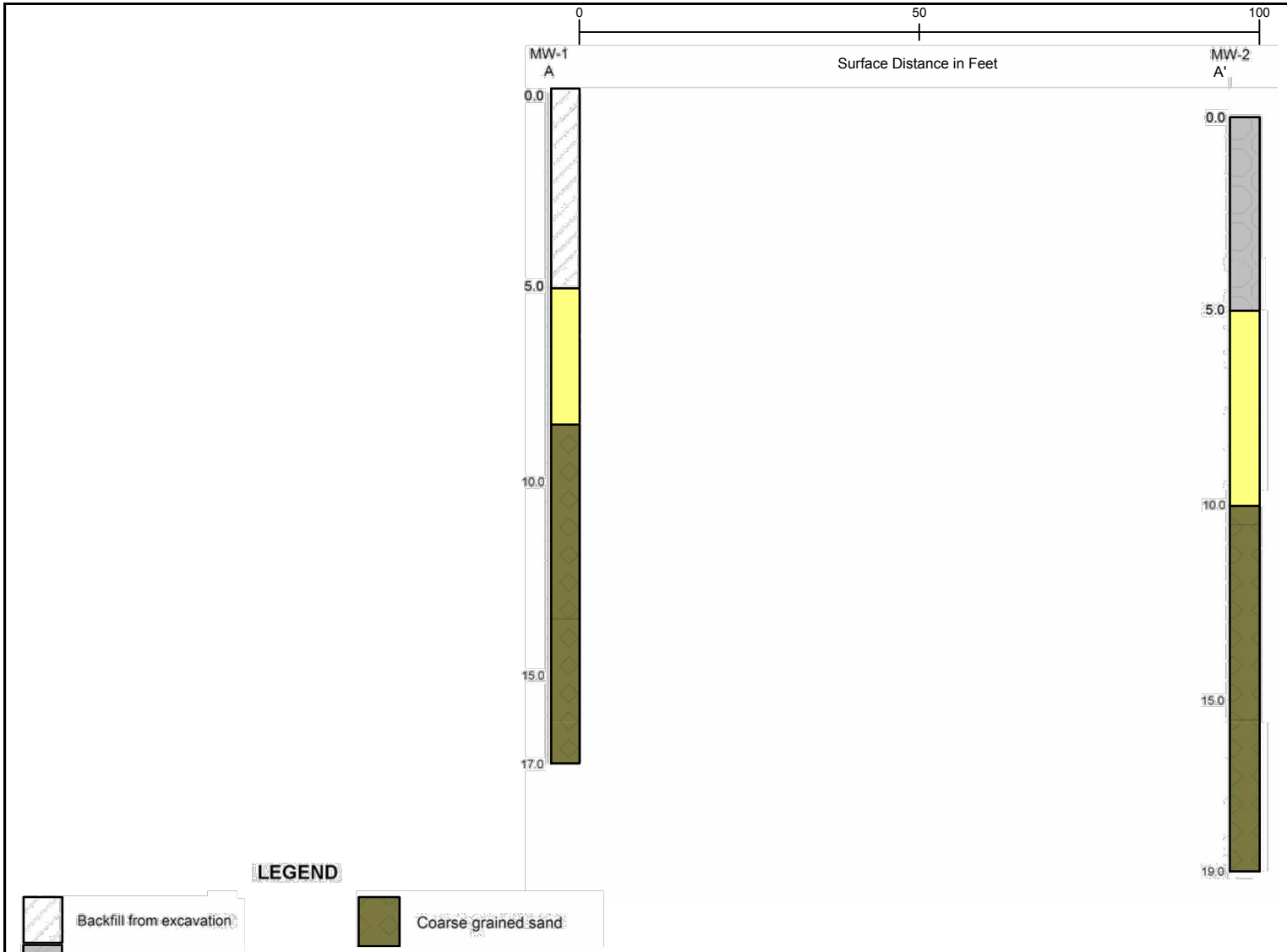


Figure 4

GEOLOGICAL CROSS SECTION
SATEGNA No. 2E NATURAL GAS WELL SITE
SECTION 21, T29N-R11W, BLOOMFIELD, NEW MEXICO
ConocoPhillips Company

074932-95(006)GN-DL003 OCT 22/2014

Tables

TABLE 1

SITE HISTORY TIMELINE
CONOCOPHILLIPS COMPANY
SATEGNA No. 2E
SAN JUAN COUNTY, NEW MEXICO

Date/Time Period	*Event/Action*	*Description/Comments*
November 24, 2008	Release Discovered	Approximately eight barrels of condensate were found to have spilled from an on-Site, aboveground storage tank (AST); corrosion was thought to be the cause of the release. A C-141 form was filled out by ConocoPhillips staff and notice was given to Brandon Powell of the New Mexico Oil Conservation Division (NMOCD) via electronic mail. The C-141 form stated that the well was shut down and the production tank was emptied.
November 25, 2008	Initial Site Assessment	Envirotech Inc. of Farmington, NM (Envirotech) collected soil samples and analyzed them using the heated headspace soil method; results were 0.2 and 1.1 parts per million (ppm) from outside the excavated area. Depth of soil samples was not noted. Envirotech hand augered two soil borings to groundwater at a depth of approximately 8 feet below ground surface (bgs) and submitted groundwater samples for analysis. Results were below OCD action levels for benzene, toluene, ethylbenzene, and total xylenes (BTEX) in groundwater. Envirotech noted that groundwater levels in the soil borings increased to approximately 5 feet bgs, and groundwater beneath the Site was thought to be under confined aquifer conditions.
December 4, 2008	Site Assessment	Envirotech returned to the Site and obtained grab and composite soil samples from an excavation measuring approximately 30 feet by 18 feet by 5 feet deep (Figure 2). Heated headspace results show values ranging from 6.5 ppm in a grab soil sample obtained from the bottom of the excavation to 1,400 ppm from a composite soil sample taken from the former location of the AST. Total petroleum hydrocarbons (TPH), BTEX, and chloride samples were obtained for soils analysis. Results were below OCD action levels for BTEX. One soil sample obtained for chlorides showed results of 370 milligrams per kilogram (mg/kg). Results for TPH analysis obtained through Environmental Protection Agency (EPA) method 8015B for the composite soil sample taken at the site of the AST revealed results of 205 mg/kg; the OCD action level is 100 mg/kg. Results for TPH analysis obtained through EPA method 418.1 for the composite soil sample obtained at the location of the below ground tank revealed results of 521 mg/kg. The below ground tank was located within the berm and adjacent to the AST (Figure 2). Results of all other soil analyses at all other sampling locations were below OCD action levels.
December 5, 2008	Site Assessment	Envirotech noted seepage of groundwater into the excavation on December 4, 2008, and returned to the Site on December 5, 2008 to collect groundwater samples from the excavation for BTEX analysis. The OCD groundwater action levels for benzene, toluene, and total xylenes are 10 ug/l, 750 ug/l, and 620 ug/l, respectively. Benzene was found at a concentration of 327 ug/l, toluene was detected at 4,300 ug/l, and total xylenes were found at a concentration of 8,480 ug/L.
Week of December 8, 2008	Removal of Groundwater Seepage	A vacuum truck was utilized to pump groundwater seepage from the surface of the excavated area. Once removed, further excavation took place and groundwater slowly seeped into the excavation; this process was repeated a total of four (4) times. The first time water was pumped from the surface of the excavation, a hydrocarbon odor and free-phase, light non-aqueous phase liquid (LNAPL) were present. By the fourth and last event, neither the hydrocarbon odor nor free-phase LNAPL were present in the groundwater seepage. Each pumping event removed approximately 30-60 barrels of liquid from the Site.
January 20, 2009 & January 30, 2009	Site Assessment	Tetra Tech conducted a Site visit to determine proposed groundwater monitoring well locations.
March 4-5, 2009	Monitoring Well Installation	Tetra Tech installed three groundwater monitoring wells at the Site: MW-1, MW-2, and MW-3.
March 2009	Additional Contamination Discovered	Construction and trenching for relocation of well operational equipment and tanks uncovered additional hydrocarbon impacted soils between the well head and separator tank. Work was stopped.
April 2, 2009	Quarterly Groundwater Monitoring Initiated	Tetra Tech conducted the first quarterly groundwater monitoring event at the Site.
April 2, 2009	Site Assessment	Envirotech created an exploratory trench between the proposed location of the separator tank and the well head and found an abandoned sewer line associated with hydrocarbon-impacted soils. The trenching was stopped and the excavated soils were stockpiled on site.

TABLE 1

SITE HISTORY TIMELINE
CONOCOPHILLIPS COMPANY
SATEGNA No. 2E
SAN JUAN COUNTY, NEW MEXICO

Date/Time Period	*Event/Action*	*Description/Comments*
April 23 - 24, 2009	Removal of Contaminated Soil	Tetra Tech provided oversight for removal of approximately 96 cubic yards of hydrocarbon-impacted soils located west of the tank berm and in the vicinity of the abandoned sewer line. Excavation was backfilled.
June 17, 2009	Quarterly Groundwater Monitoring	Tetra Tech conducted the second quarterly groundwater monitoring event at the Site.
September 28, 2009	Quarterly Groundwater Monitoring	Tetra Tech conducted the third quarterly groundwater monitoring event at the Site.
December 14, 2009	Quarterly Groundwater Monitoring	Tetra Tech conducted the fourth quarterly groundwater monitoring event at the Site.
March 31, 2010	Quarterly Groundwater Monitoring	Tetra Tech conducted the fifth quarterly groundwater monitoring event at the Site.
June 7, 2010	Quarterly Groundwater Monitoring	Tetra Tech conducted the sixth quarterly groundwater monitoring event at the Site.
September 23, 2010	Quarterly Groundwater Monitoring	Tetra Tech conducted the seventh quarterly groundwater monitoring event at the Site.
December 14, 2010	Quarterly Groundwater Monitoring	Tetra Tech conducted the eighth quarterly groundwater monitoring event at the Site.
March 14, 2011	Quarterly Groundwater Monitoring	Tetra Tech conducted the ninth quarterly groundwater monitoring event at the Site.
June 15, 2011	Transfer of Site Consulting Responsibilities	On June 15, 2011, Site consulting responsibilities were transferred from Tetra Tech of Albuquerque, NM to Conestoga-Rovers & Associates (CRA) of Albuquerque, NM.
June 24, 2011	Quarterly Groundwater Monitoring	CRA conducted the tenth quarterly groundwater monitoring event at the Site.
October 3, 2011	Quarterly Groundwater Monitoring	CRA conducted the 11th quarterly groundwater monitoring event at the Site.
September 17, 2012	Groundwater Monitoring	CRA conducted an annual groundwater monitoring event at the Site. Samples analyzed for dissolved Mn, sulfate, and total dissolved solids.
September 16, 2013	Groundwater Monitoring	CRA conducted an annual groundwater monitoring event at the Site. Samples analyzed for dissolved Mn, sulfate, and total dissolved solids.
September 22, 2014	Groundwater Monitoring	CRA conducted an annual groundwater monitoring event at the Site. Samples analyzed for dissolved Mn, sulfate, and total dissolved solids.
October 21, 2014	Monitoring Well Installation	CRA installed an up-gradient monitoring well MW-4.
December 17, 2014	Groundwater Monitoring	CRA conducted initial groundwater monitoring of the up-gradient monitoring well MW-4. The sample was analyzed for dissolved Mn, sulfate, and total dissolved solids.

TABLE 2

MONITORING WELL SPECIFICATIONS AND GROUNDWATER ELEVATIONS
CONOCOPHILLIPS COMPANY
SATEGNA No. 2E
SAN JUAN COUNTY, NEW MEXICO

Well ID	*Total Depth (ft below TOC)*	*Elevation**	*Screen Interval (bgs)*	*Date Measured*	*Depth to Groundwater (ft below TOC)*	*Relative Water Level*
MW-1	20.3	99.36	2.2 - 17.2	4/2/2009	5.15	94.21
				6/17/2009	5.43	93.93
				9/28/2009	5.45	93.91
				12/14/2009	5.06	94.30
				3/31/2010	5.03	94.33
				6/7/2010	5.41	93.95
				9/23/2010	5.25	94.11
				12/14/2010	5.07	94.29
				3/14/2011	5.09	94.27
				6/24/2011	5.56	93.80
				10/3/2011	5.90	93.46
				9/17/2012	6.83**	92.53**
				11/26/2012	5.51	93.85
				9/16/2013	5.73	93.63
				9/22/2014	6.03	93.33
MW-2	20.9	98.78	3.33 - 18.33	4/2/2009	5.96	92.82
				6/17/2009	6.21	92.57
				9/28/2009	6.23	92.55
				12/14/2009	5.92	92.86
				3/31/2010	5.90	92.88
				6/7/2010	6.21	92.57
				9/23/2010	6.06	92.72
				12/14/2010	5.91	92.87
				3/14/2011	5.94	92.84
				6/24/2011	6.32	92.46
				10/3/2011	6.60	92.18
				9/17/2012	7.42**	91.36**
				11/26/2012	6.14	92.64
				9/16/2013	6.31	92.47
				9/22/2014	6.62	92.16
MW-3	20.28	98.66	3 - 18	4/2/2009	5.70	92.96
				6/17/2009	5.97	92.69
				9/28/2009	5.96	92.70
				12/14/2009	5.63	93.03
				3/31/2010	5.61	93.05
				6/7/2010	5.95	92.71
				9/23/2010	5.77	92.89
				12/14/2010	5.61	93.05
				3/14/2011	5.63	93.03
				6/24/2011	6.06	92.60
				10/3/2011	6.27	92.39
				9/17/2012	6.11**	92.55**
				11/26/2012	6.00	92.66
				9/16/2013	6.05	92.61
				9/22/2014	6.38	92.28
MW-4	20.57	98.37	2.5-17.5	12/17/2014	4.37	94.00

Notes:
1. ft = feet
2. TOC = top of casing
3. bgs = below ground surface
4. * Elevation relative to wellhead, set at 100 feet.
5. ** Anomalous data

TABLE 3

FIELD PARAMETERS SUMMARY
CONOCOPHILLIPS COMPANY
SATEGNA No. 2E
SAN JUAN COUNTY, NEW MEXICO

Well ID	Sample Date	Temperature (°C)	pH	TDS (g/L)	Conductivity (µS/cm)	DO (mg/L)	ORP (mV)	Volume (gallons)
MW-1	9/22/2014	15.20	7.09	2.00	3050	8.97	92.0	5.75
	9/22/2014	15.30	7.09	1.30	3040	8.33	92.0	6.25
	9/22/2014	15.40	7.09	1.90	3040	8.68	94.0	6.75
MW-2	9/22/2014	17.40	7.13	2.10	3230	10.56	85.0	6.50
	9/22/2014	16.90	6.99	2.00	3160	8.31	80.0	7.00
	9/22/2014	16.70	6.97	2.00	3160	7.85	77.0	7.50
MW-3	9/22/2014	17.80	7.34	0.01	7	9.79	-15.0	4.50
	9/22/2014	16.50	7.08	2.20	3440	9.91	-20.0	5.00
	9/22/2014	15.90	7.03	2.20	3470	9.68	-23.0	5.25
	9/22/2014	15.70	7.01	2.30	3540	9.31	-27.0	5.50
MW-4	12/17/2014	12.40	5.43	1.40	2180	10.47	253.0	7.00
	12/17/2014	12.70	5.54	1.40	2190	10.51	252.0	7.50
	12/17/2014	13.10	5.64	1.40	2210	8.02	242.0	8.00

Notes:
TDS = total dissolved solids
DO = dissolved oxygen
ORP = oxidation-reduction potential

TABLE 4

GROUNDWATER ANALYTICAL RESULTS SUMMARY
CONOCOPHILLIPS COMPANY
SATEGNA No. 2E
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)*	*Iron (dissolved) (mg/L)*	*Manganese (dissolved) (mg/L)*	*Sulfate (mg/L)*	*Total dissolved solids (TDS) (mg/L)*
NMWQCC Groundwater Quality Standards				**0.01**	**0.75**	**0.75**	**0.62**	**1.0**	**0.2**	**600**	**1000**
MW-1	MW-1	4/2/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**1790**	--
	MW-1	6/17/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**1420**	--
	MW-1	9/28/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.02	**0.243**	**1770**	**2590**
	MW-1	12/14/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.152	--	**2470**
	MW-1	3/31/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.176	**1320**	**2470**
	MW-1	6/7/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**0.206**	**1330**	**2580**
	MW-1	9/23/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**0.238**	**1560**	**3210**
	MW-1	12/14/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**0.232**	**1600**	**2520**
	MW-1	3/14/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**0.323**	**1820**	**2770**
	GW-74932-062411-CB-02	6/24/2011	(orig)	--	--	--	--	--	**0.574**	**1790**	**2450**
	GW-074932-100311-CM-005	10/3/2011	(orig)	--	--	--	--	--	**0.335**	**2030**	**2560**
	GW-074932-091712-CM-MW-1	9/17/2012	(orig)	--	--	--	--	--	**0.32**	**1790**	**2660**
	GW-074932-091712-CM-DUP	9/17/2012	(duplicate)	--	--	--	--	--	**--**	**--**	**2620**
	GW-074932-091613-CM-MW-1	9/16/2013	(orig)	--	--	--	--	--	**0.36**	**1580**	**2560**
	GW-074932-091613-CM-DUP	9/16/2013	(duplicate)	--	--	--	--	--	**0.33**	**--**	**--**
	GW-074932-092214-CB-MW-1	9/22/2014	(orig)	--	--	--	--	--	**0.42**	**1440**	**2650**
MW-2	MW-2	4/2/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**1850**	--
	MW-2	6/17/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**1610**	--
	MW-2	9/28/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	0.0217	0.168	**1840**	**2260**
	MW-2	12/14/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.158	--	**2470**
	MW-2	3/31/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.136	**1530**	**2620**
	MW-2	6/7/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.157	**1290**	**2590**
	MW-2	9/23/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.0981	**1510**	**2800**
	MW-2	12/14/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.128	**1610**	**3000**
	MW-2	3/14/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.158	**1850**	**2680**
	GW-74932-062411-1B-01	6/24/2011	(orig)	--	--	--	--	--	0.174	**1860**	**2550**
	GW-074932-100311-CM-006	10/3/2011	(orig)	--	--	--	--	--	0.187	**1830**	**2590**
	GW-074932-091712-CM-MW-2	9/17/2012	(orig)	--	--	--	--	--	**0.22**	**1830**	**2710**
	GW-074932-091613-CM-MW-2	9/16/2013	(orig)	--	--	--	--	--	**0.21**	**1690**	**2570**
	GW-074932-092214-CB-MW-2	9/22/2014	(orig)	--	--	--	--	--	0.18	**1550**	**2630**
MW-3	MW-3	4/2/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**2110**	--
	MW-3	6/17/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**1650**	--
	MW-3	9/28/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.02	**2.68**	**2230**	**3340**
	MW-3	12/14/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**2.4**	--	**3060**
	MW-3	3/31/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**1.71**	**1660**	**3090**
	MW-3	6/7/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**0.968**	**1760**	**2650**
	MW-3	9/23/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**1.68**	**1910**	**3570**
	MW-3	12/14/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**1.13**	**1900**	**3000**
	MW-3	3/14/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**2.08**	**2090**	**3200**
	GW-74932-062411-CB-03	6/24/2011	(orig)	--	--	--	--	--	**1.7**	**2080**	**2860**
	GW-074932-100311-CM-007	10/3/2011	(orig)	--	--	--	--	--	**1.45**	**1770**	**2810**
	GW-074932-091712-CM-MW-3	9/17/2012	(orig)	--	--	--	--	--	**1.1**	**1910**	**2830**
	GW-074932-091613-CM-MW-3	9/16/2013	(orig)	--	--	--	--	--	**0.83**	**1750**	**2600**
	GW-074932-092213-CB-MW-3	9/22/2014	(orig)	--	--	--	--	--	**0.87**	**1670**	**2830**
MW-4	GW-074932-121714-JW-MW-4	12/17/2014	(orig)	--	--	--	--	--	**1.5**	**1140**	**1520**

Notes:
1. MW = monitoring well
2. NMWQCC = New Mexico Water Quality Control Commission
3. Constituents in **BOLD** are in excess of NMWQCC groundwater quality standards
4. mg/L = milligrams per liter (parts per million)
5. -- = not analyzed
6. < 1.0 = Below laboratory detection limit of 1.0 mg/L

Appendix A

Groundwater Laboratory Analytical Reports

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

October 08, 2014

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

RE: Project: 074932 Sategna No. 2 E
Pace Project No.: 60178714

Dear Christine Matthews:
Enclosed are the analytical results for sample(s) received by the laboratory on September 24, 2014. 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
Angela Bown, Conestoga Rovers & Associates
Chris Fetters, COP Conestoga-Rovers & Associa
Jeff Walker, COP Conestoga-Rovers & Associa

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CERTIFICATIONS

Project: 074932 Sategna No. 2 E
Pace Project No.: 60178714

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
Utah Certification #: KS00021

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SAMPLE SUMMARY

Project: 074932 Sategna No. 2 E
Pace Project No.: 60178714

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60178714001	**GW-074932-092214-CB-MW-1**	Water	09/22/14 17:10	09/24/14 08:35
60178714002	**GW-074932-092214-CB-MW-2**	Water	09/22/14 17:15	09/24/14 08:35
60178714003	**GW-074932-092214-CB-MW-3**	Water	09/22/14 17:20	09/24/14 08:35

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SAMPLE ANALYTE COUNT

Project: 074932 Sategna No. 2 E
Pace Project No.: 60178714

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60178714001	**GW-074932-092214-CB-MW-1**	EPA 6010	TDS	1
		SM 2540C	MER	1
		EPA 300.0	OL	1
60178714002	**GW-074932-092214-CB-MW-2**	EPA 6010	TDS	1
		SM 2540C	MER	1
		EPA 300.0	OL	1
60178714003	**GW-074932-092214-CB-MW-3**	EPA 6010	TDS	1
		SM 2540C	MER	1
		EPA 300.0	OL	1

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PROJECT NARRATIVE

Project: 074932 Sategna No. 2 E
Pace Project No.: 60178714

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: CRA Conoco New Mexico
Date: October 08, 2014

General Information:
3 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: 074932 Sategna No. 2 E
Pace Project No.: 60178714

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: CRA Conoco New Mexico
Date: October 08, 2014

General Information:
3 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.

QC Batch: WET/50495

D6: The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

- DUP (Lab ID: 1448786)
  - Total Dissolved Solids

Additional Comments:

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PROJECT NARRATIVE

Project: 074932 Sategna No. 2 E
Pace Project No.: 60178714

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: CRA Conoco New Mexico
Date: October 08, 2014

General Information:
3 samples were analyzed for EPA 300.0. 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.

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:

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

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ANALYTICAL RESULTS

Project: 074932 Sategna No. 2 E
Pace Project No.: 60178714

Sample: GW-074932-092214-CB-MW-1 **Lab ID: 60178714001** Collected: 09/22/14 17:10 Received: 09/24/14 08:35 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	**0.42**	mg/L	0.025	5	09/26/14 17:15	10/02/14 12:31	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**2650**	mg/L	5.0	1		09/25/14 12:46		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**1440**	mg/L	200	200		10/03/14 14:23	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074932 Sategna No. 2 E
Pace Project No.: 60178714

Sample: GW-074932-092214-CB-MW-2 **Lab ID: 60178714002** Collected: 09/22/14 17:15 Received: 09/24/14 08:35 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	**0.18**	mg/L	0.025	5	09/26/14 17:15	10/02/14 12:33	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**2630**	mg/L	5.0	1		09/29/14 12:53		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**1550**	mg/L	200	200		10/03/14 15:09	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074932 Sategna No. 2 E
Pace Project No.: 60178714

Sample: GW-074932-092214-CB-MW-3 **Lab ID: 60178714003** Collected: 09/22/14 17:20 Received: 09/24/14 08:35 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	**0.87**	mg/L	0.025	5	09/26/14 17:15	10/02/14 12:35	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**2830**	mg/L	5.0	1		09/29/14 12:53		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**1670**	mg/L	200	200		10/03/14 15:25	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 074932 Sategna No. 2 E
Pace Project No.: 60178714

QC Batch: MPRP/29080 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60178714001, 60178714002, 60178714003

METHOD BLANK: 1449940 Matrix: Water
Associated Lab Samples: 60178714001, 60178714002, 60178714003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Manganese, Dissolved	mg/L	ND	0.0050	10/02/14 11:34	

LABORATORY CONTROL SAMPLE: 1449941

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Manganese, Dissolved	mg/L	1	0.96	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1449942 1449943

Parameter	Units	60178510001 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	18.8 ug/L	1	1	0.97	0.99	95	97	75-125	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 074932 Sategna No. 2 E
Pace Project No.: 60178714

QC Batch: WET/50495 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 60178714001

METHOD BLANK: 1448784 Matrix: Water
Associated Lab Samples: 60178714001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	09/25/14 12:41	

LABORATORY CONTROL SAMPLE: 1448785

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1040	104	80-120	

SAMPLE DUPLICATE: 1448786

Parameter	Units	60178516001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	346	292	17	10	D6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 074932 Sategna No. 2 E
Pace Project No.: 60178714

QC Batch: WET/50536 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 60178714002, 60178714003

METHOD BLANK: 1450650 Matrix: Water
Associated Lab Samples: 60178714002, 60178714003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	09/29/14 12:52	

LABORATORY CONTROL SAMPLE: 1450651

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

SAMPLE DUPLICATE: 1450652

Parameter	Units	7519096001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	106000	107000	1	10	

SAMPLE DUPLICATE: 1450653

Parameter	Units	60178654001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	377	376	0	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 074932 Sategna No. 2 E
Pace Project No.: 60178714

QC Batch: WETA/31201 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60178714001, 60178714002, 60178714003

METHOD BLANK: 1454631 Matrix: Water
Associated Lab Samples: 60178714001, 60178714002, 60178714003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	10/03/14 10:01	

LABORATORY CONTROL SAMPLE: 1454632

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	4.7	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1452655 1452656

Parameter	Units	60178693008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	2640	2500	2500	5150	5150	100	101	80-120	0	15	

MATRIX SPIKE SAMPLE: 1452657

Parameter	Units	60178711001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	155	50	207	103	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 074932 Sategna No. 2 E
Pace Project No.: 60178714

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.

PQL - Practical Quantitation 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.

ANALYTE QUALIFIERS

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

Pace Analytical Services, Inc.
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 074932 Sategna No. 2 E
Pace Project No.: 60178714

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60178714001	**GW-074932-092214-CB-MW-1**	EPA 3010	MPRP/29080	EPA 6010	ICP/21882
60178714002	**GW-074932-092214-CB-MW-2**	EPA 3010	MPRP/29080	EPA 6010	ICP/21882
60178714003	**GW-074932-092214-CB-MW-3**	EPA 3010	MPRP/29080	EPA 6010	ICP/21882
60178714001	**GW-074932-092214-CB-MW-1**	SM 2540C	WET/50495		
60178714002	**GW-074932-092214-CB-MW-2**	SM 2540C	WET/50536		
60178714003	**GW-074932-092214-CB-MW-3**	SM 2540C	WET/50536		
60178714001	**GW-074932-092214-CB-MW-1**	EPA 300.0	WETA/31201		
60178714002	**GW-074932-092214-CB-MW-2**	EPA 300.0	WETA/31201		
60178714003	**GW-074932-092214-CB-MW-3**	EPA 300.0	WETA/31201		

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Sample Condition Upon Receipt
ESI Tech Spec Client

WO# : 60178714

60178714

Client Name: CLA COP NM

Optional
Proj Due Date:
Proj Name:

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

Tracking #: 6113 5279 8876 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 ☒ 2PLC

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

Temperature should be above freezing to 6°C

Date and initials of person examining contents: JB 9/24

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.
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: 9/25/14

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

Start: 1140	Start:
End: 1145	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:	CRA COP 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.:	
Project Name:	Sategna No. 2 E
Project Number:	74932

Section C — Invoice Information:

Attention:	CRA
Company Name:	Angela Bown
Address:	
Pace Quote Reference:	
Pace Project Manager:	Alice Flanagan
Pace Profile #:	7801, 17

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	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	300.0 Sulfate	6010 Dissolved Mn	2540C TDS	BP3U	BP3F								Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	GW-074932-092214-CB-MW-1	WT	G	—	—	9.22.14	1710		2	X		X							X	X	X	↓	↓									001
2	GW-074932-092214-CB-MW-2	WT	G	—	—	9.22.14	1715		2	X		X							X	X	X											002
3	GW-074932-092214-CB-MW-3	WT	G	—	—	9.22.14	1720		2	X		X							X	X	X											003
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Pace Project No./ Lab I.D. 60178714

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
metals have been field filtered	Jessie Braun/CRA	9.23.14	1700	[signature] Pace	9/24	0835	1.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jessie Braun

SIGNATURE of SAMPLER: Jessie Braun — DATE Signed (MM/DD/YY): 9/23/14

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

January 08, 2015

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

RE: Project: 074932 Sategna No.2 E
Pace Project No.: 60185038

Dear Christine Mathews:
Enclosed are the analytical results for sample(s) received by the laboratory on December 19, 2014. 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
Angela Bown, Conestoga Rovers & Associates
Chris Fetters, COP Conestoga-Rovers & Associa
Jeff Walker, COP Conestoga-Rovers & Associa

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: 074932 Sategna No.2 E
Pace Project No.: 60185038

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
Utah Certification #: KS00021

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 074932 Sategna No.2 E
Pace Project No.: 60185038

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60185038001	**GW-074932-121714-JW-MW4**	Water	12/17/14 08:15	12/19/14 10:00

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SAMPLE ANALYTE COUNT

Project: 074932 Sategna No.2 E
Pace Project No.: 60185038

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60185038001	**GW-074932-121714-JW-MW4**	EPA 6010	SMW	1
		SM 2540C	JML	1
		EPA 300.0	TDB	1

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PROJECT NARRATIVE

Project: 074932 Sategna No.2 E
Pace Project No.: 60185038

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: CRA Conoco New Mexico
Date: January 08, 2015

General Information:
1 sample was 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: 074932 Sategna No.2 E
Pace Project No.: 60185038

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: CRA Conoco New Mexico
Date: January 08, 2015

General Information:
1 sample was 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:

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PROJECT NARRATIVE

Project: 074932 Sategna No.2 E
Pace Project No.: 60185038

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: CRA Conoco New Mexico
Date: January 08, 2015

General Information:
1 sample was analyzed for EPA 300.0. 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.

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:

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

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ANALYTICAL RESULTS

Project: 074932 Sategna No.2 E
Pace Project No.: 60185038

Sample: GW-074932-121714-JW-MW4 **Lab ID: 60185038001** Collected: 12/17/14 08:15 Received: 12/19/14 10:00 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	12/23/14 10:30	12/29/14 13:51	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**1520**	mg/L	5.0	1		12/23/14 15:23		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**1140**	mg/L	100	100		01/08/15 10:25	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 074932 Sategna No.2 E
Pace Project No.: 60185038

QC Batch: MPRP/30290
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60185038001

METHOD BLANK: 1499240 Matrix: Water
Associated Lab Samples: 60185038001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Manganese, Dissolved	mg/L	ND	0.0050	12/29/14 13:25	

LABORATORY CONTROL SAMPLE: 1499241

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Manganese, Dissolved	mg/L	1	0.97	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1499242 1499243

Parameter	Units	60185128002 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	1370 ug/L	1	1	2.3	2.3	93	93	75-125	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 074932 Sategna No.2 E
Pace Project No.: 60185038

QC Batch: WET/52205 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 60185038001

METHOD BLANK: 1499557 Matrix: Water
Associated Lab Samples: 60185038001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	12/23/14 15:20	

LABORATORY CONTROL SAMPLE: 1499558

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1040	104	80-120	

SAMPLE DUPLICATE: 1499559

Parameter	Units	60184880001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	351	352	0	10	

SAMPLE DUPLICATE: 1499560

Parameter	Units	60184881006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	270	262	3	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: 074932 Sategna No.2 E
Pace Project No.: 60185038

QC Batch: WETA/32416 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60185038001

METHOD BLANK: 1502594 Matrix: Water
Associated Lab Samples: 60185038001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	01/07/15 22:45	

LABORATORY CONTROL SAMPLE: 1502595

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	5.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1502596 1502597

Parameter	Units	60185355011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	2310	1000	1000	3410	3360	110	106	80-120	1	15	

MATRIX SPIKE SAMPLE: 1502598

Parameter	Units	60185376001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	493	250	783	116	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: 074932 Sategna No.2 E
Pace Project No.: 60185038

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.

PQL - Practical Quantitation 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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9608 Loiret Blvd.
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(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 074932 Sategna No.2 E
Pace Project No.: 60185038

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60185038001	**GW-074932-121714-JW-MW4**	EPA 3010	MPRP/30290	EPA 6010	ICP/22647
60185038001	**GW-074932-121714-JW-MW4**	SM 2540C	WET/52205		
60185038001	**GW-074932-121714-JW-MW4**	EPA 300.0	WETA/32416		

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Sample Condition Upon Receipt
ESI Tech Spec Client

WO# : 60185038

60185038

Optional
Proj Due Date:
Proj Name:

Client Name: CRA COP NM

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

Tracking #: 780161998542 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 ☑ 2PIC

Thermometer Used: T-238 / T-194 **Type of Ice:** (Wet) Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 0.7

Temperature should be above freezing to 6°C

Date and initials of person examining contents: 12/19/14

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: AAF Date: 12/19/14

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

Start: 1223	Start:
End: 1225	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:	CRA COP 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.:	4071729
Project Name:	Sategna No. 2 E
Project Number:	74932

Section C — Invoice Information:

Attention:	CRA
Company Name:	Angela Bown
Address:	
Pace Quote Reference:	
Pace Project Manager:	Alice Flanagan
Pace Profile #:	7801, 17

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	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	300.0 Sulfate	6010 Dissolved Mn	2540C TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	GW-074932-12/7/14-JW-MW-4	WT	G			12/17/14	0815		2	1		1							X	X	X		60185038 IBP3U IBP3F 1.5 @1
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	CRA	12/18/14	1100		12/19/14	1000	0.7	X	X	X

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: CALE KANACK

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 12/18/14

*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.

Appendix B

Boring Log

PROJECT NAME: Sategna No. 2E
LOCATION: Sategna No. 2E
FIELD LOGGED BY: Cassie Brown
SURFACE ELEVATION (msl): N/A
GROUNDWATER ELEVATION (msl): Approx. 10 feet bgs
REMARKS: TD = 17.5 feet bgs
COORDINATES: 36°42'30.34", -107°59'39.32"

SOIL BORING NO: MW-4
DRILL TYPE: Hollow Stem Auger
CME-85
BORE HOLE DIAMETER: 7 7/8"
DRILLED BY: National EWP
DATE/TIME HOLE STARTED: 10/21/2014 @ 1500
DATE/TIME HOLE COMPLETED: 10/21/2014 @ 1530

DEPTH (bgs) - ft	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	USCS Symbol	DEPTH (bgs) - ft
0			Well completed with 3' casing stick up and locking well cap		0
			No sample recovered		
-5			Clay: Light gray, moderately stiff, some fine sand, wet	CL	-5
-10			Sand: Poorly graded, medium to coarse grained, well rounded, saturated	SP	-10
-15					-15

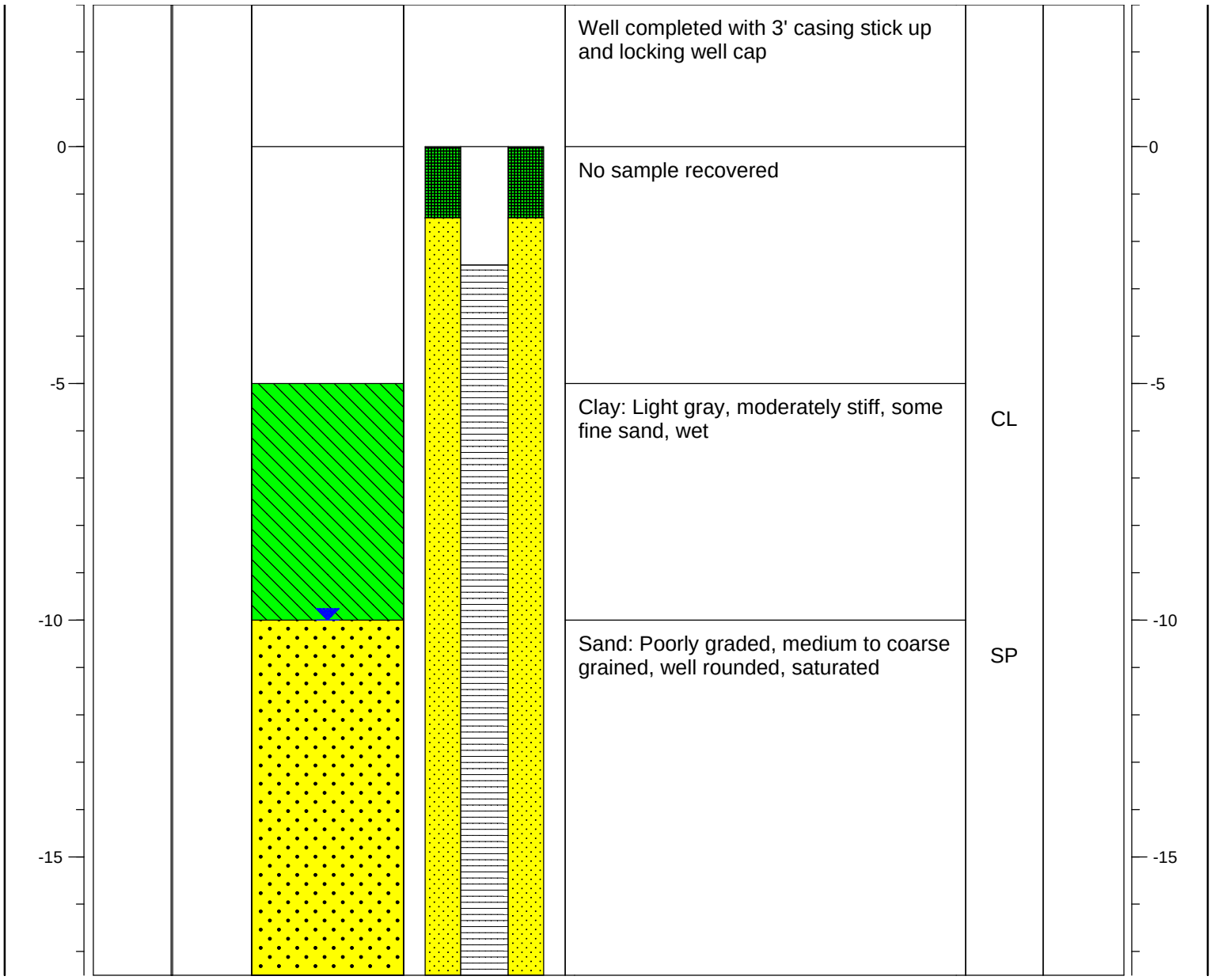

Figure 5

CONESTOGA-ROVERS & ASSOCIATES

BORING LOG AND WELL COMPLETION FORM