

Groundwater Monitoring Report

Gourley Federal #3
Unit H, Section 28, T-22-S, R-28_E
Eddy County, New Mexico
AP-100

Prepared for: Unit Petroleum Company

Conestoga-Rovers & Associates

6121 Indian School Road, NE Suite 200
Albuquerque, New Mexico 87110

March 30 2015 • 082612 • Report No. 4

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Section 1.0 Introduction

This report presents the results of groundwater monitoring events conducted by Conestoga-Rovers and Associates (CRA) at the Gourley Federal #3 site (hereafter referred to as the "Site"). The Site is operated by Unit Petroleum Company (Unit) and is located within Unit H, Sec 28, Township 22 South, Range 28 East, in Eddy County, New Mexico (32° 22' 0.48" N, 104° 5' 12.91" W) (**Figure 1**). A detailed Site layout map is provided as **Figure 2**.

A meeting was held between Conestoga-Rovers & Associates (CRA) and Mr. Jim Griswold with the New Mexico Oil Conservation Division (NMOCD) on May 2, 2013 to discuss a path forward for the Site. During the meeting, Mr. Griswold agreed that additional soil remediation was not necessary and that existing data collected by Tetra Tech could qualify as two of the eight quarters of groundwater monitoring.

The scope of work for the project was developed between Unit Petroleum Company (Unit), NMOCD, and CRA personnel. CRA performed project management, general oversight of the remediation activities, soil and groundwater sampling, and documentation of the field work. Drilling and monitoring well installation was performed by Enviro-Drill, Inc. (EDI) of Albuquerque, New Mexico. The scope of services included:

- Obtaining required monitoring well permits, and coordinating with stakeholders,
- Installing two additional monitoring wells, one up-gradient of MW-2 and one down-gradient of MW-3 (**Figure 2**), and
- Conducting six quarterly groundwater monitoring and sampling events.

Section 2.0 Site History

In June 2007, Sweatt Construction excavated the pit to a maximum depth of six feet below ground surface (bgs). Trenches were excavated to depths up to 20 feet bgs to sample soils for chlorides. Sampling conducted on July 25, 2007 indicated that chloride concentrations within the pit were generally below 10,000 milligrams per kilogram (mg/kg) with the exception of three samples. At the request of the NMOCD, a temporary monitoring well was installed on the southern edge of the pit in June 2007 to establish the depth to groundwater. The well was drilled to a depth of 50 feet bgs. Samples from that well indicated chloride concentrations of 907 milligrams per liter (mg/L) and total dissolved solids (TDS) concentrations of 3990 mg/L. The pit was not backfilled following the excavation and sampling.

On October 5, 2008, The Bureau of Land Management (BLM) contacted the NMOCD to notify them that the pit had been left open. The NMOCD subsequently issued Unit a Notice of Violation (NOV No. 02-08-23) on November 17, 2008.

On February 19, 2009, Tetra Tech installed monitoring well MW-1 approximately 180 feet north of the northwest corner of the pit. This well was drilled to a depth of 60 feet bgs and installed with 30 feet of 0.02-inch slotted polyvinyl chloride (PVC) well screen.

On June 25, 2009, Tetra Tech installed two additional monitoring wells. MW-2 was installed east of the pit and MW-3 was installed west of the pit. Both wells were installed at a depth of 60 feet bgs with 20 feet of 0.02-inch slotted PVC.

On July 17, 2009, Tetra Tech submitted a Stage I Abatement Plan (AP) to the NMOCD. However, this AP was never approved by the NMOCD. A new Stage I AP was submitted by CRA to the NMOCD on July 10, 2013 and approved via email on August 12, 2013 by Mr. Jim Griswold with the NMOCD (AP# 100).

The Stage I AP included the installation of two new groundwater monitoring wells, which were installed in October 2013. MW-4 was installed up-gradient of the pit to provide background groundwater concentrations. MW-5 was installed to help assess the down-gradient extent of chloride concentrations in the groundwater. The AP plan also included six quarters of groundwater monitoring.

Section 3.0 Quarterly Groundwater Monitoring and Sampling

Groundwater sampling events were conducted at the Site on April 17, July 21 – 22, October 6, 2014 and January 13, 2015.

3.1 Groundwater Gradient

Prior to collection of groundwater samples, the depth to groundwater in each well was measured using an oil/water interface probe (**Table 1**). Data from the 2014 monitoring events indicated that the gradient is to the southwest towards the Pecos River. Groundwater potentiometric surface maps reflecting the April, July, October, and December groundwater elevations are presented as **Figures 3, through 6**, respectively. The groundwater gradient ranged from 0.0039 to 0.0043 feet per foot for the April, July, October, and January monitoring events.

3.2 Groundwater Monitoring Methodology

Site monitoring wells were purged of at least three casing volumes of groundwater using a 1.5-inch diameter, polyethylene, dedicated bailer. While purging each well, groundwater parameters were recorded using a YSI 556 multi-parameter sonde. Groundwater samples were placed in laboratory-supplied containers, labeled, placed on ice, and transported via overnight delivery under chain of custody documentation to the analytical laboratory. The analytical laboratory was Hall Environmental Analysis Laboratory of Albuquerque, New Mexico. Groundwater samples were analyzed for chlorides using EPA method 300.1 and TDS using method SM2540C. TDS was inadvertently not analyzed during the April 2014 monitoring event. A summary of analytical results is presented as **Table 2**. A copy of the laboratory analytical data is presented as Appendix A.

3.3 Groundwater Monitoring Analytical Results

A summary of the data obtained from groundwater monitoring is presented as follows:

April 2014

- Chlorides: The NMWQCC domestic water supply groundwater quality standard for chloride is 250 mg/L. In April 2014, MW-1, MW-2, MW-3, MW-4, and MW-5 returned results of 1,800 mg/L, 940 mg/L, 2,100 mg/L, 790 mg/L, and 1,100 mg/L, respectively. A chloride concentration map for this event is presented as **Figure 7**.

July 2014

- Chlorides: In July 2014, MW-1, MW-2, MW-3, MW-4, and MW-5 returned results of 1,500 mg/L, 1,100 mg/L, 2,400 mg/L, 890 mg/L, and 1,100 mg/L, respectively. A chloride concentration map for this event is presented as **Figure 8**.
- TDS: The NMWQCC domestic water supply groundwater quality standard for TDS is 1,000 mg/L. In July 2014, MW-1, MW-2, MW-3, MW-4, and MW-5 returned results of 5,180 mg/L, 4,060 mg/L, 6,660 mg/L, 3,660 mg/L, and 4,170 mg/L, respectively.

October 2014

- Chlorides: In October 2014, MW-1, MW-2, MW-3, MW-4, and MW-5 returned results of 1,600 mg/L, 1,000 mg/L, 2,600 mg/L, 800 mg/L, and 1,100 mg/L, respectively. A chloride concentration map for this event is presented as **Figure 9**.
- TDS: In October 2014, MW-1, MW-2, MW-3, MW-4, and MW-5 returned results of 5,680 mg/L, 4,140 mg/L, 6,950 mg/L, 3,730 mg/L, and 4,230 mg/L, respectively.

January 2015

- Chlorides: In January 2015, MW-1, MW-2, MW-3, MW-4, and MW-5 returned results of 1,700 mg/L, 1,100 mg/L, 2,800 mg/L, 920 mg/L, and 1,200 mg/L, respectively. A chloride concentration map for this event is presented as **Figure 10**.
- TDS: In January 2015, MW-1, MW-2, MW-3, MW-4, and MW-5 returned results of 5,380 mg/L, 4,160 mg/L, 7,300 mg/L, 3,690 mg/L, and 4,230 mg/L, respectively.

Section 4.0 Conclusion and Recommendations

Samples collected from Site monitoring wells during the April, July, October 2014, and January 2015 groundwater monitoring and sampling events exceeded the NMWQCC standards for chlorides and TDS. Samples collected from the up-gradient monitoring well, MW-4, (assumed to represent background concentrations) were found to contain chloride concentrations above regulatory limits. The concentrations indicate the presence of elevated background chloride conditions in the general area. The chloride concentrations in MW-4, as well as down-gradient monitoring wells, MW-3 and MW-5, appear to be trending upwards while the concentrations in MW-1 and MW-2 appear to be consistent with historical levels.

At this time, CRA recommends annual groundwater sampling at the Site in order to gather trend data.

Please feel free to contact the CRA Albuquerque office if there are any questions or additional information is required.

All of which is Respectfully Submitted,

CONESTOGA ROVERS & ASSOCIATES

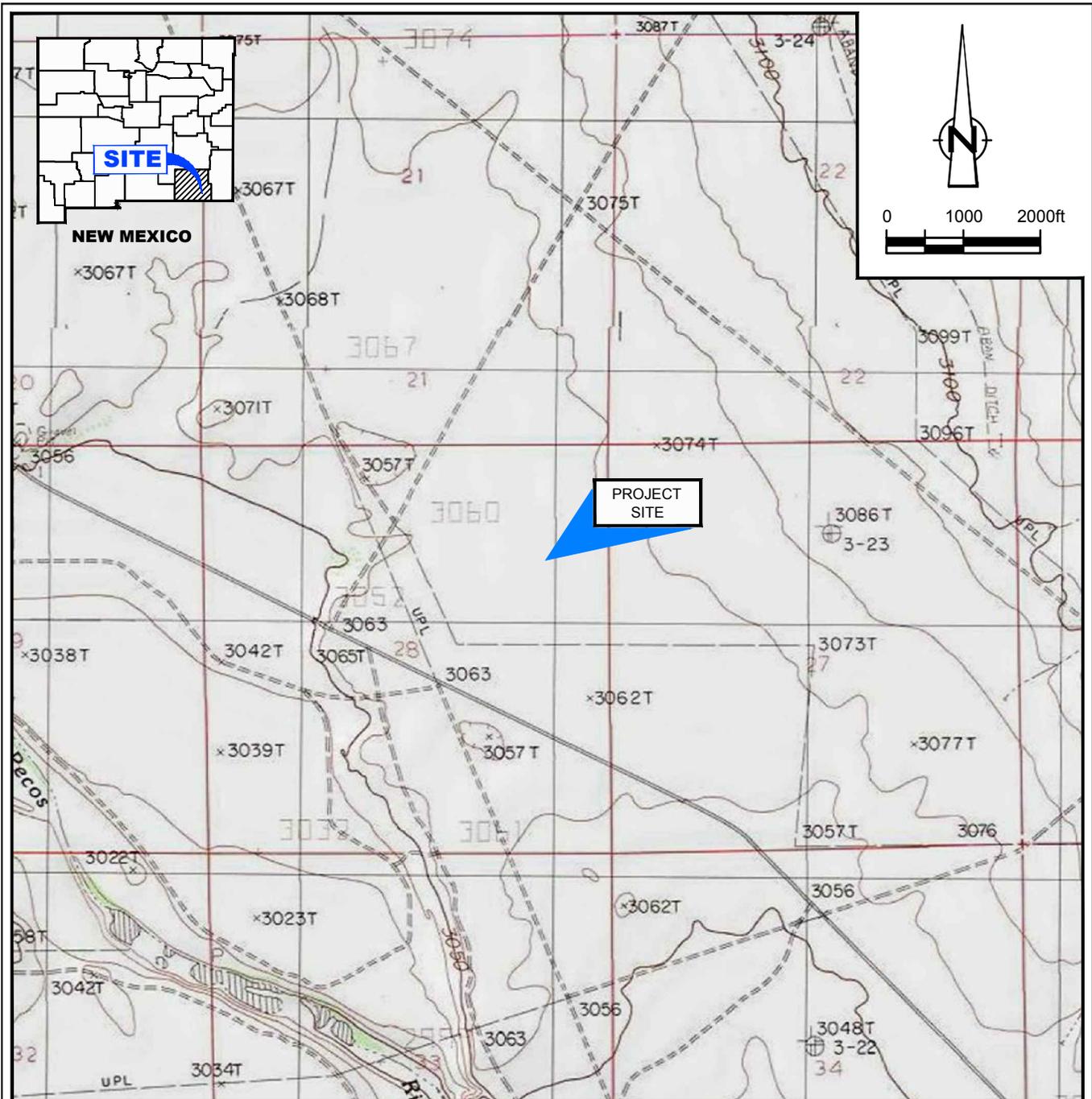


Cale Kanack
Staff Scientist



Bernard Bockisch, PMP
Sr. Project Manager

Figures

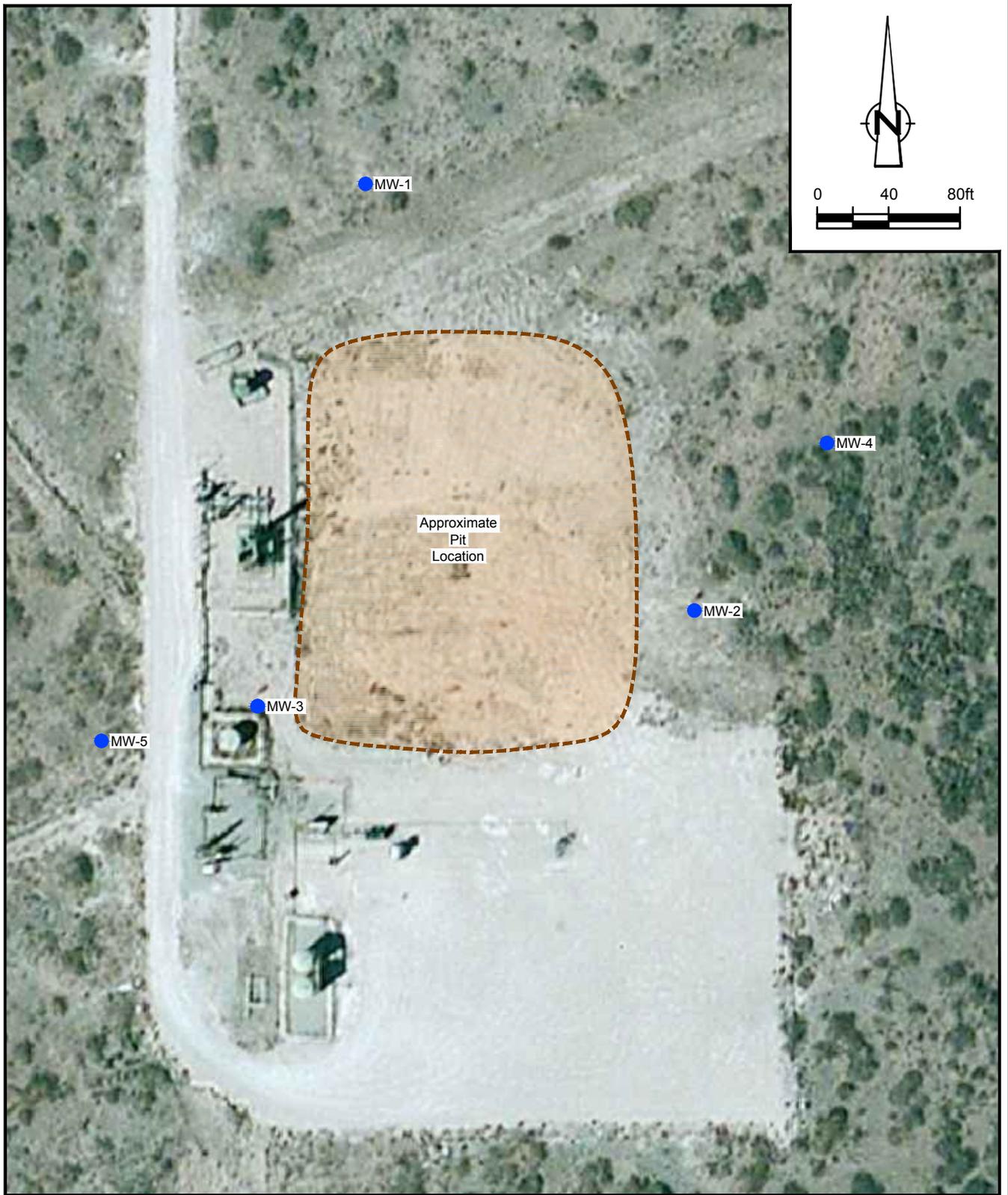


SOURCE: USGS 7.5 MINUTE QUAD
 "LOVING AND INDIAN FLATS, NEW MEXICO"

LAT/LONG: 32.3668° NORTH, 104.0869° WEST
 COORDINATE: NAD83 DATUM, U.S. FOOT
 STATE PLANE ZONE - NEW MEXICO EAST

Figure 1
 SITE LOCATION MAP
 GOURLEY FEDERAL #3
 EDDY COUNTY, NEW MEXICO
Unit Petroleum Company

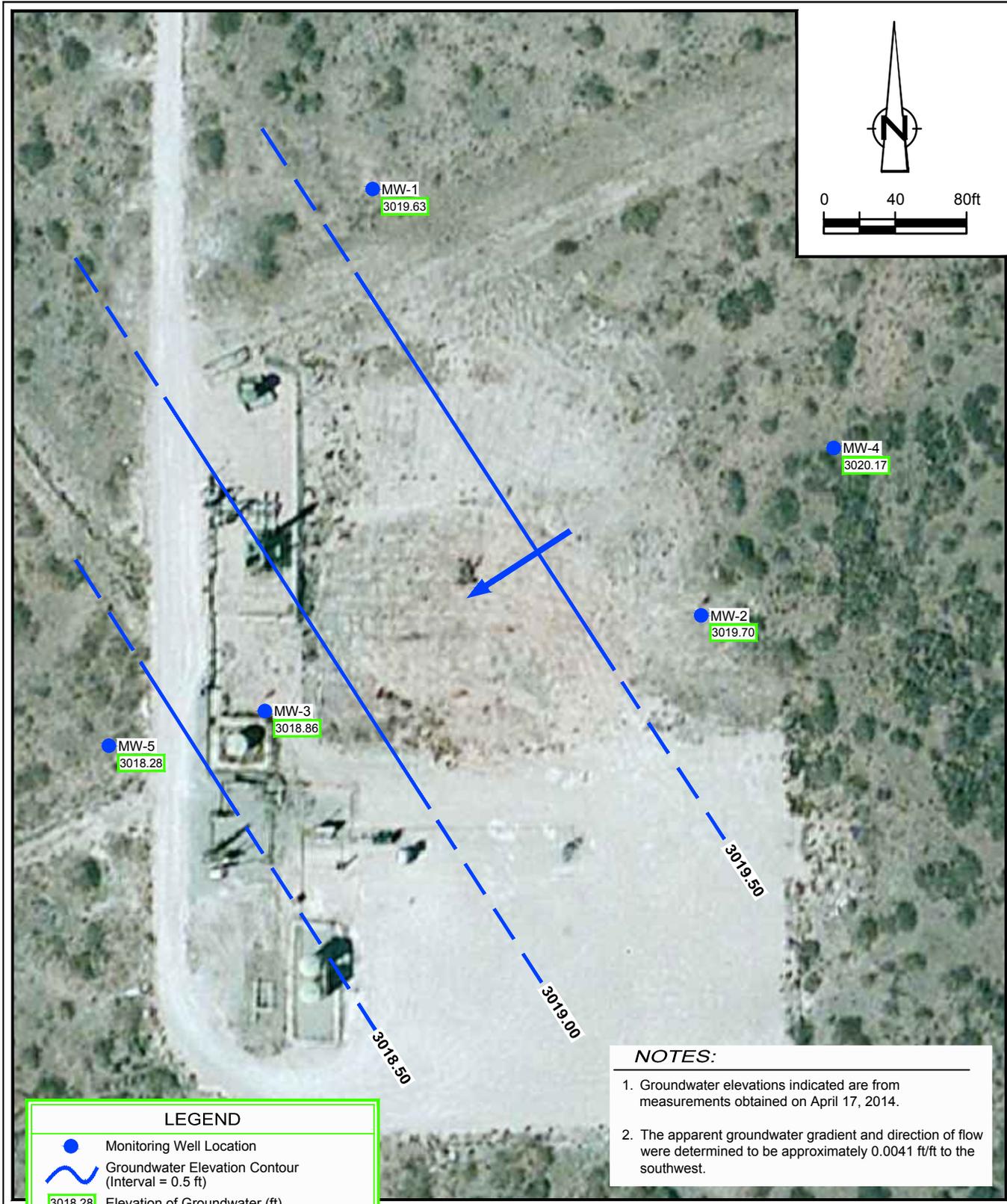




LEGEND	
	Monitoring Well Location

Figure 2
 SITE DETAIL MAP
 GOURLEY FEDERAL #3
 EDDY COUNTY, NEW MEXICO
Unit Petroleum Company





LEGEND

- Monitoring Well Location
- ~ Groundwater Elevation Contour (Interval = 0.5 ft)
- 3018.28 Elevation of Groundwater (ft)
- ➔ Direction Of Groundwater Flow

NOTES:

- Groundwater elevations indicated are from measurements obtained on April 17, 2014.
- The apparent groundwater gradient and direction of flow were determined to be approximately 0.0041 ft/ft to the southwest.

Figure 3
APRIL 2014 GROUNDWATER POTENTIOMETRIC MAP
GOURLEY FEDERAL #3
EDDY COUNTY, NEW MEXICO
Unit Petroleum Company



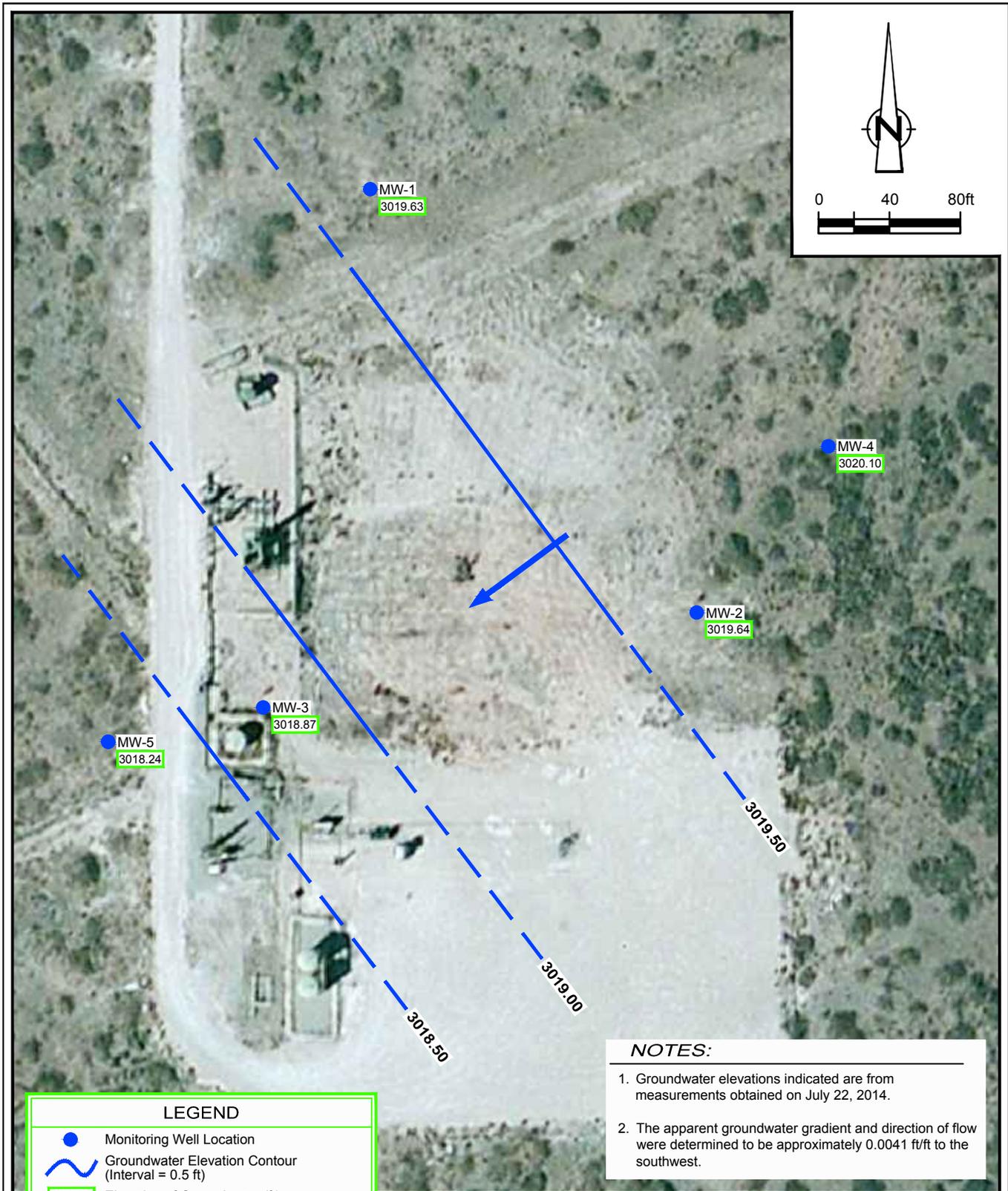


Figure 4

JULY 2014 GROUNDWATER POTENTIOMETRIC MAP
 GOURLEY FEDERAL #3
 EDDY COUNTY, NEW MEXICO
Unit Petroleum Company



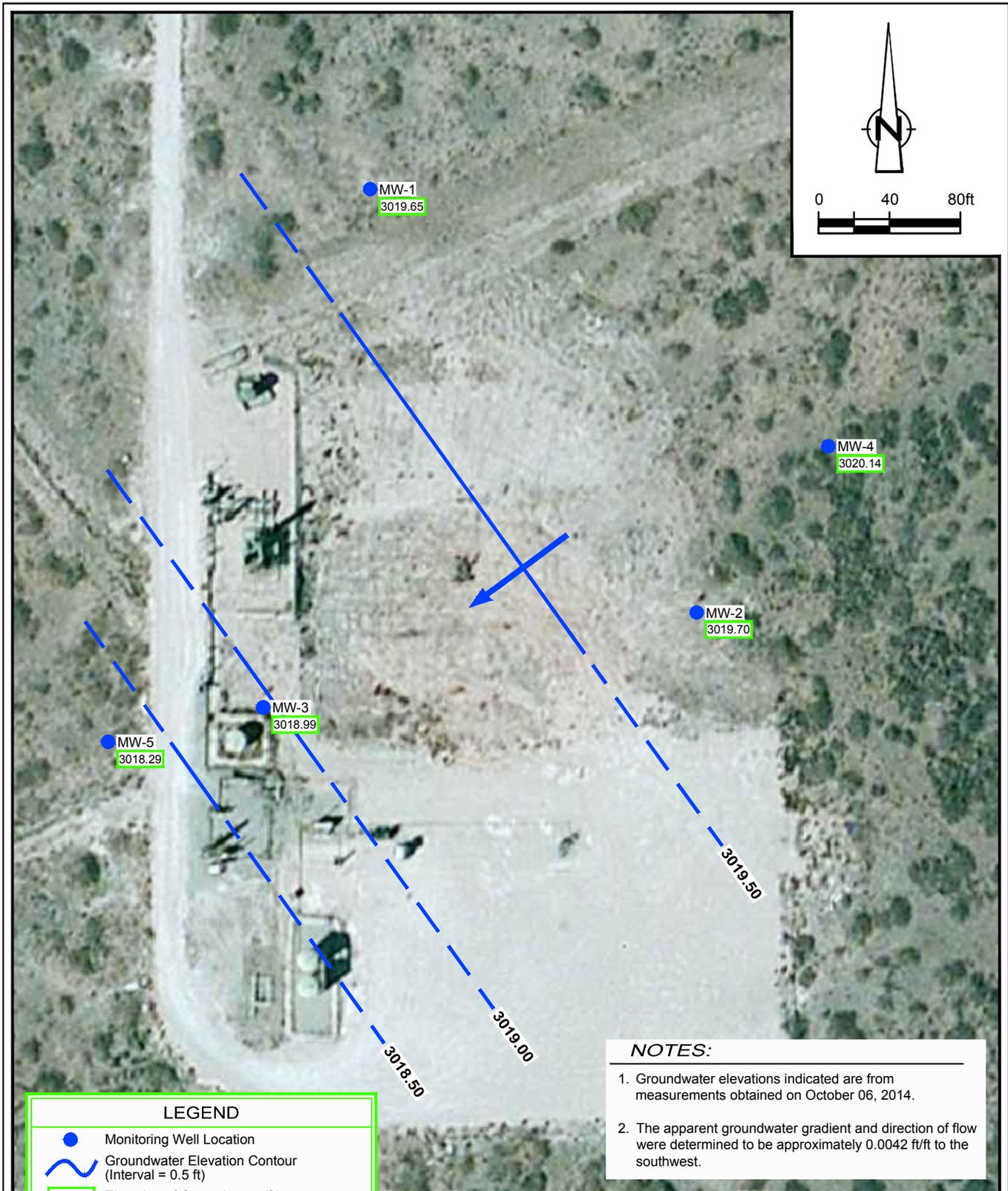
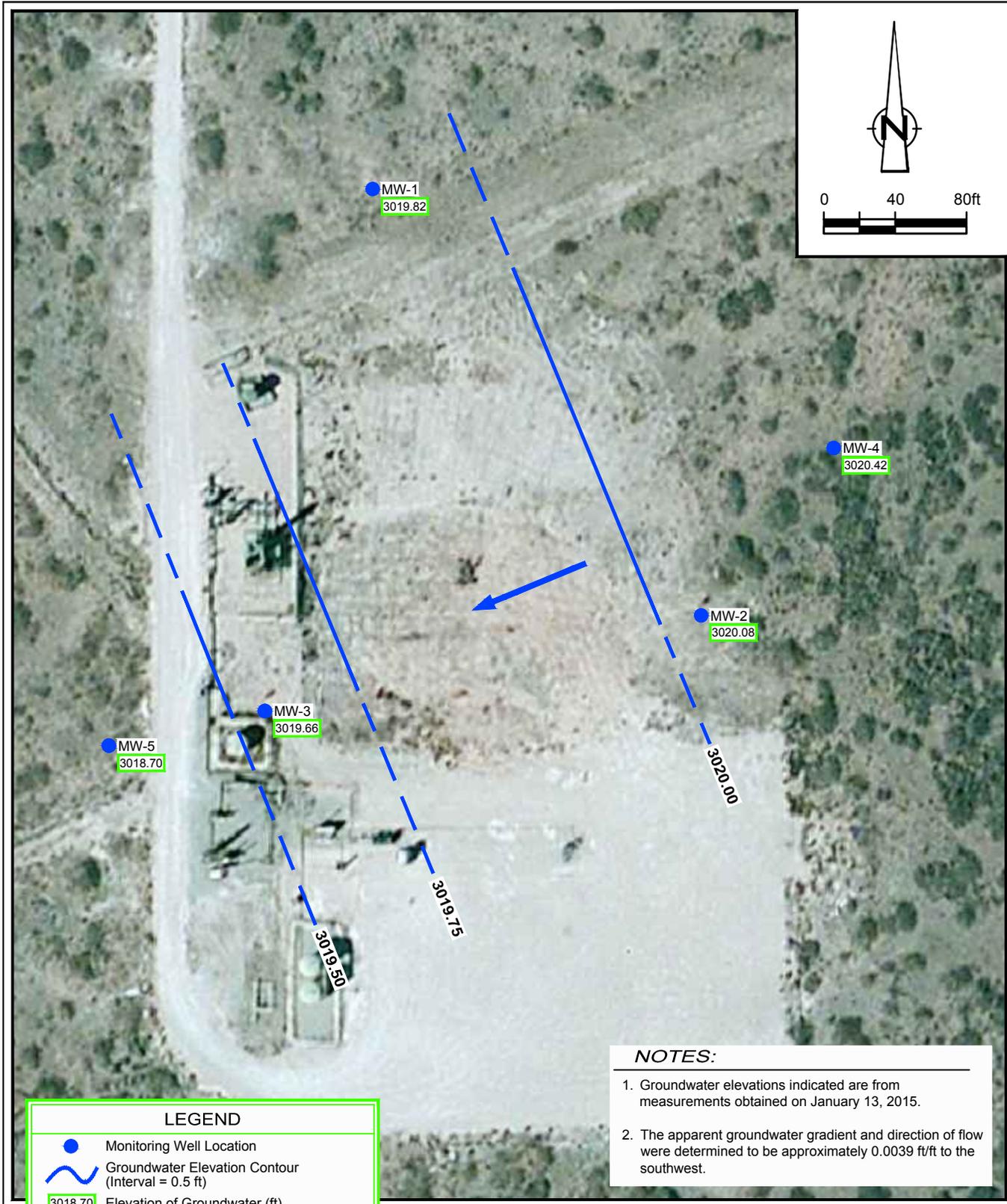


Figure 5

OCTOBER 2014 GROUNDWATER POTENTIOMETRIC MAP
 GOURLEY FEDERAL #3
 EDDY COUNTY, NEW MEXICO
Unit Petroleum Company





LEGEND

- Monitoring Well Location
- Groundwater Elevation Contour (Interval = 0.5 ft)
- 3018.70 Elevation of Groundwater (ft)
- ➔ Direction Of Groundwater Flow

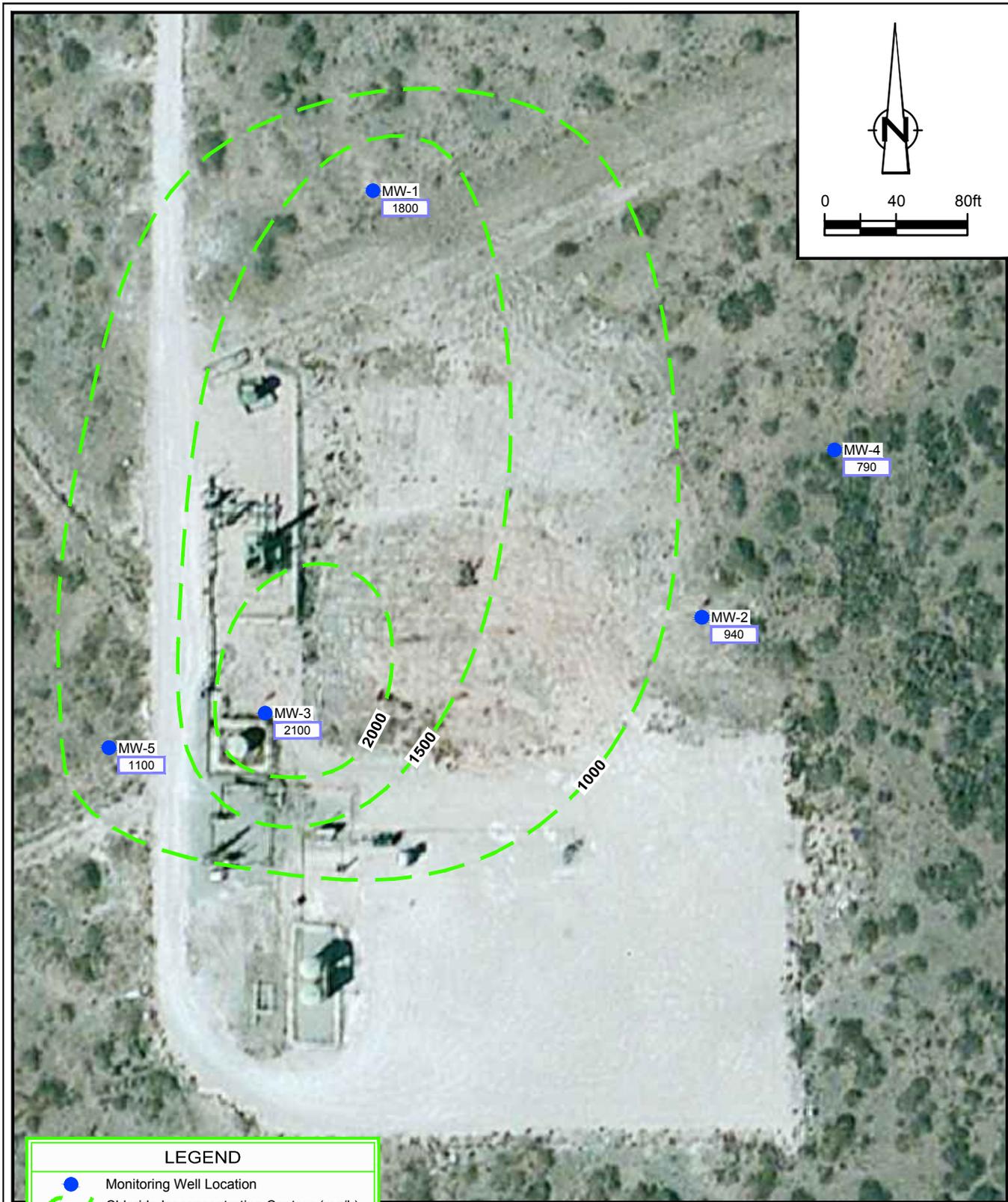
NOTES:

1. Groundwater elevations indicated are from measurements obtained on January 13, 2015.
2. The apparent groundwater gradient and direction of flow were determined to be approximately 0.0039 ft/ft to the southwest.

Figure 6

JANUARY 2015 GROUNDWATER POTENTIOMETRIC MAP
GOURLEY FEDERAL #3
EDDY COUNTY, NEW MEXICO
Unit Petroleum Company





LEGEND

- Monitoring Well Location
- Chloride Isoconcentration Contour (mg/L)
- 1100 Chloride Concentration (mg/L)

Figure 7

APRIL 2014 CHLORIDE CONCENTRATION MAP
GOURLEY FEDERAL #3
EDDY COUNTY, NEW MEXICO
Unit Petroleum Company



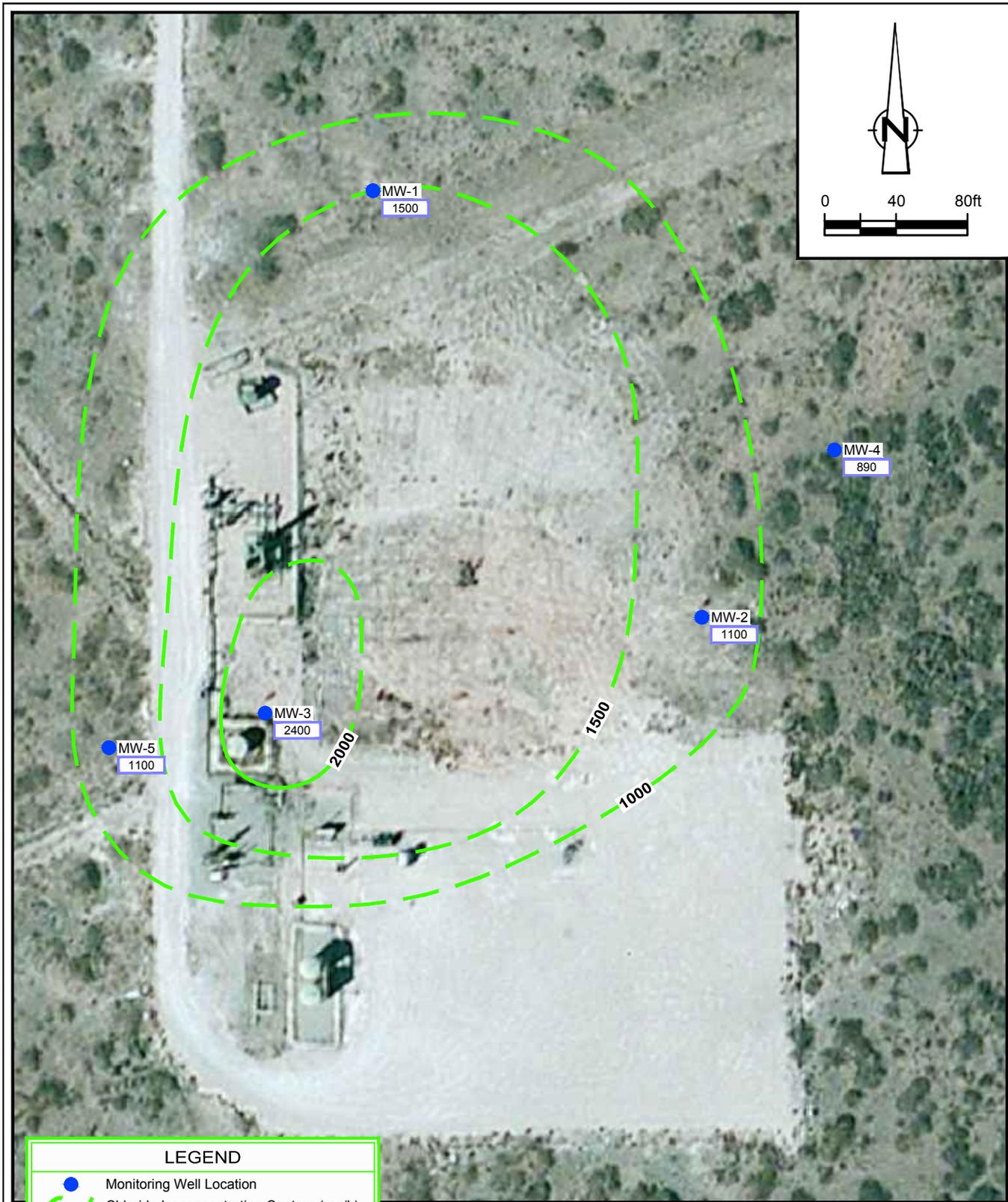
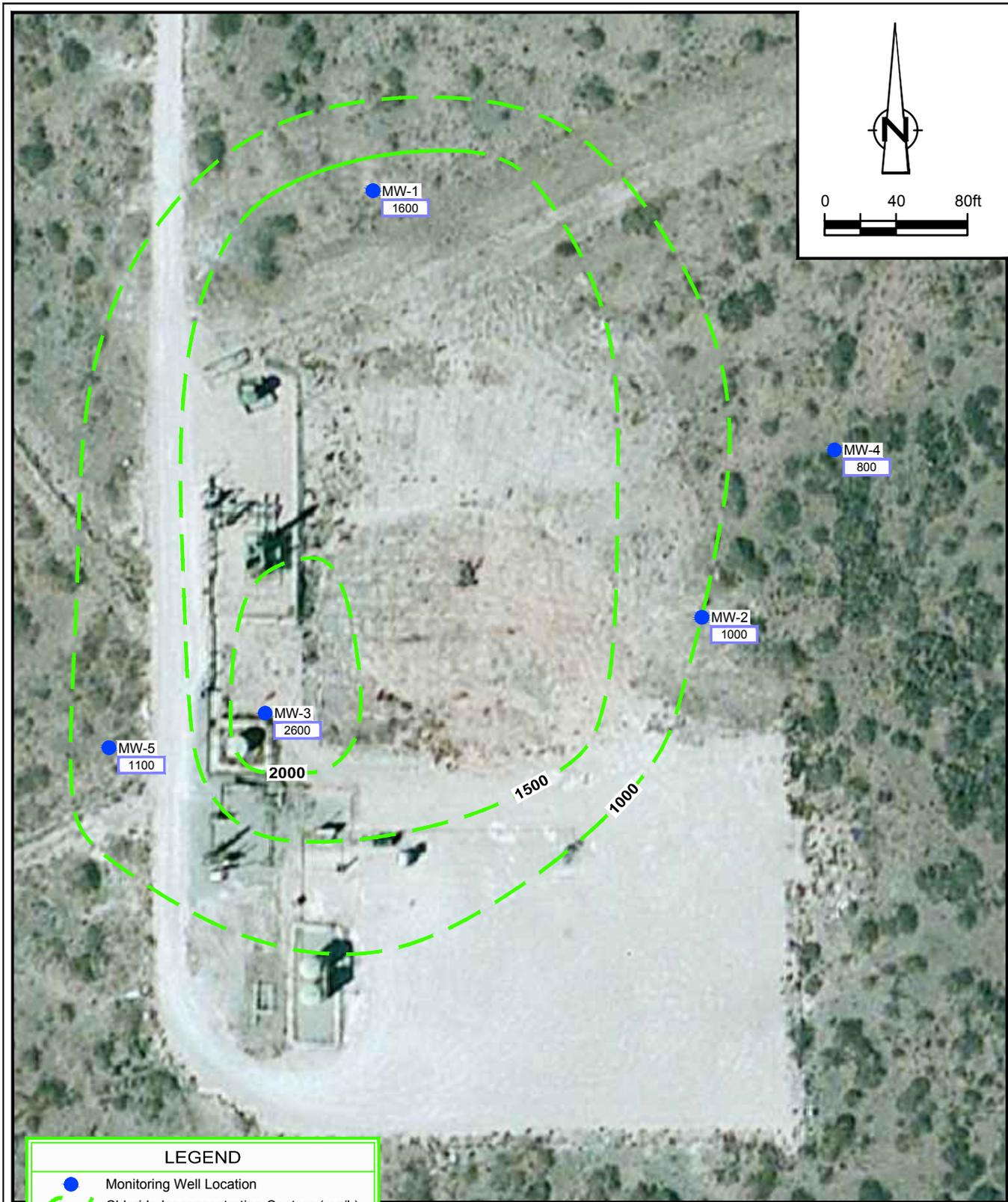


Figure 8

JULY 2014 CHLORIDE CONCENTRATION MAP
 GOURLEY FEDERAL #3
 EDDY COUNTY, NEW MEXICO
Unit Petroleum Company





LEGEND

- Monitoring Well Location
- - - Chloride Isoconcentration Contour (mg/L)
- 1100 Chloride Concentration (mg/L)

Figure 9

OCTOBER 2014 CHLORIDE CONCENTRATION MAP
 GOURLEY FEDERAL #3
 EDDY COUNTY, NEW MEXICO
Unit Petroleum Company



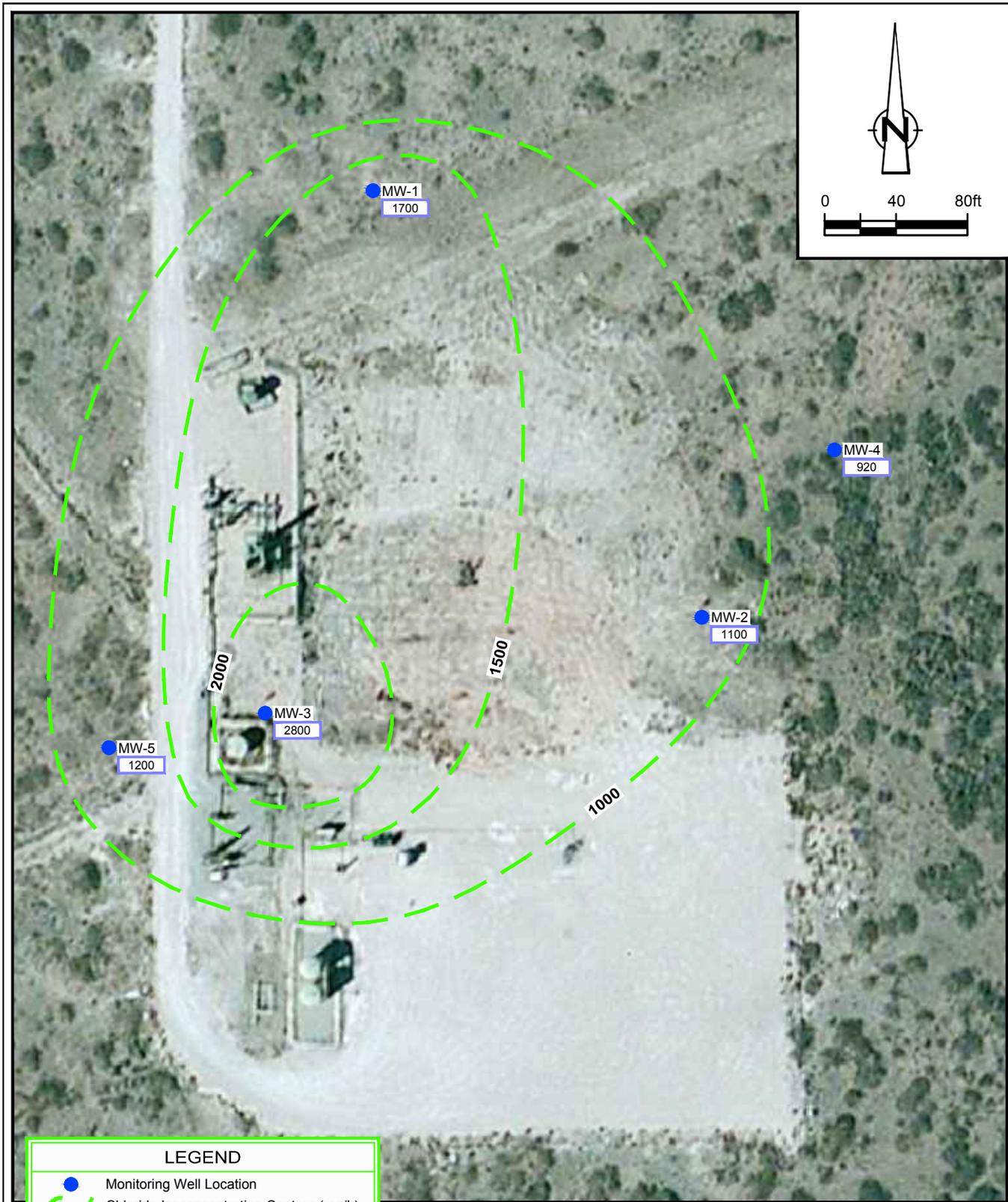


Figure 10

JANUARY 2015 CHLORIDE CONCENTRATION MAP
 GOURLEY FEDERAL #3
 EDDY COUNTY, NEW MEXICO
Unit Petroleum Company



Tables

Table 1
Monitoring Well Specifications and Groundwater Elevations
Gourley Federal No. 3
Eddy County, New Mexico

<i>Well ID</i>	<i>Total Depth (ft below TOC)</i>	<i>Top of Casing Elevation (feet amsl)</i>	<i>Screen Interval (feet bgs)</i>	<i>Date Measured</i>	<i>Depth to Groundwater (ft below TOC)</i>	<i>Relative Water Level (feet amsl)</i>
MW-1	55	3069.33	--	10/2/2013	49.63	3019.70
				1/29/2014	49.62	3019.71
				4/17/2014	49.70	3019.63
				7/21/2014	49.70	3019.63
				10/6/2014	49.68	3019.65
				1/13/2015	49.51	3019.82
MW-2	60	3067.84	--	10/2/2013	48.02	3019.82
				1/29/2014	47.99	3019.85
				4/17/2014	48.14	3019.70
				7/21/2014	48.20	3019.64
				10/6/2014	48.14	3019.70
				1/13/2015	47.76	3020.08
MW-3	60	3068.67	--	10/2/2013	49.65	3019.02
				1/29/2014	49.53	3019.14
				4/17/2014	49.81	3018.86
				7/21/2014	49.80	3018.87
				10/6/2014	49.68	3018.99
				1/13/2015	49.01	3019.66
MW-4	75	3067.44	55 - 75	10/2/2013	47.15	3020.29
				1/29/2014	47.16	3020.28
				4/17/2014	47.27	3020.17
				7/21/2014	47.34	3020.10
				10/6/2014	47.30	3020.14
				1/13/2015	47.02	3020.42
MW-5	70	3068.20	50 - 70	10/2/2013	--	--
				1/29/2014	49.75	3018.45
				4/17/2014	49.92	3018.28
				7/21/2014	49.96	3018.24
				10/6/2014	49.91	3018.29
				1/13/2015	49.50	3018.70

Notes:

TOC = top of casing

amsl = above mean sea level

bgs = below ground surface

Table 2
Groundwater Analytical Summary
Gourley Federal No. 3
Eddy County, New Mexico

<i>Well ID</i>	<i>Sample ID</i>	<i>Sample Date</i>	<i>Chloride (mg/L)</i>	<i>TDS (mg/L)</i>
MW-1	MW-1	2/25/2009	3220	7800
	MW-1	6/27/2009	4140	10000
	MW-1	7/1/2010	5310	13000
	MW-1	10/23/2012	3910	8340
	MW-1	2/7/2013	1770	5810
	GW-082612-100213-CK-MW-1	10/2/2013	1420	4910
	GW-082612-012914-CK-MW-1	1/29/2014	1380	4600
	GW-082612-041714-BB-MW-1	4/17/2014	1800	--
	GW-082612-072214-CK-MW-1	7/22/2014	1500	5180
	GW-082612-100614-SP-MW-1	10/6/2014	1600	5680
GW-082612-011315-SP-MW-1	1/13/2015	1700	5380	
MW-2	MW-2	6/27/2009	1110	3960
	MW-2	7/1/2010	983	4070
	MW-2	10/23/2012	944	4020
	MW-2	2/7/2013	956	4290
	GW-082612-100213-CK-MW-2	10/2/2013	1030	4060
	GW-082612-012914-CK-MW-2	1/29/2014	999	2950
	GW-082612-041714-BB-MW-2	4/17/2014	940	--
	GW-082612-072214-CK-MW-2	7/22/2014	1100	4060
	GW-082612-100614-SP-MW-2	10/6/2014	1000	4140
GW-082612-011315-SP-MW-2	1/13/2015	1100	4160	
MW-3	MW-3	6/27/2009	1270	4030
	MW-3	7/1/2010	1250	4160
	MW-3	10/23/2012	1540	4840
	MW-3	2/7/2013	1540	4980
	GW-082612-100213-CK-MW-3	10/2/2013	1890	5620
	GW-082612-012914-CK-MW-3	1/29/2014	1970	6240
	GW-082612-041714-BB-MW-3	4/17/2014	2100	--
	GW-082612-072214-CK-MW-3	7/22/2014	2400	6660
	GW-082612-100614-SP-MW-3	10/6/2014	2600	6950
GW-082612-011315-SP-MW-3	1/13/2015	2800	7300	
MW-4	GW-082612-100313-CK-MW-4	10/3/2013	767	3500
	GW-082612-012914-CK-MW-4	1/29/2014	787	3340
	GW-082612-041714-BB-MW-4	4/17/2014	790	--
	GW-082612-072214-CK-MW-4	7/22/2014	890	3660
	GW-082612-100614-SP-MW-4	10/6/2014	800	3730
GW-082612-011315-SP-MW-4	1/13/2015	920	3690	
MW-5	GW-082612-100313-CK-MW-5	10/3/2013	682	3280
	GW-082612-012914-CK-MW-5	1/29/2014	913	3500
	GW-082612-041714-BB-MW-5	4/17/2014	1100	--
	GW-082612-072214-CK-MW-5	7/22/2014	1100	4170
	GW-082612-100614-SP-MW-5	10/6/2014	1100	4230
GW-082612-011315-SP-MW-5	1/13/2015	1200	4230	
NMWQCC Groundwater Quality Standards			250	1000

Notes:

NMWQCC = New Mexico Water Quality Control Commission

mg/L = milligrams per liter (parts per million)

< 0.001 = Below Laboratory Detection Limit of 0.001 mg/L

< = Below Laboratory Detection Limit

BOLD and highlighted = Concentrations that exceed the NMWQCC groundwater quality standard

Appendix A

Groundwater Laboratory Analytical Reports



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 25, 2014

Bernie Bockish

CRA

6121 Indian School #200

Albuquerque, NM 87110

TEL: (505) 884-0672

FAX

RE: Goorley Fed #3

OrderNo.: 1404905

Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 6 sample(s) on 4/22/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1404905

Date Reported: 4/25/2014

CLIENT: CRA

Client Sample ID: GW-082612-041714-BB-MW-1

Project: Goorley Fed #3

Collection Date: 4/17/2014 2:01:00 PM

Lab ID: 1404905-001

Matrix: AQUEOUS

Received Date: 4/22/2014 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	1800	50	*	mg/L	100	4/22/2014 10:36:07 PM	R18162

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1404905

Date Reported: 4/25/2014

CLIENT: CRA

Client Sample ID: GW-082612-041714-BB-MW2

Project: Goorley Fed #3

Collection Date: 4/17/2014 1:52:00 PM

Lab ID: 1404905-002

Matrix: AQUEOUS

Received Date: 4/22/2014 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	940	50	*	mg/L	100	4/22/2014 11:00:57 PM	R18162

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1404905**

Date Reported: **4/25/2014**

CLIENT: CRA

Client Sample ID: GW-082612-041714-BB-MW3

Project: Goorley Fed #3

Collection Date: 4/17/2014 2:15:00 PM

Lab ID: 1404905-003

Matrix: AQUEOUS

Received Date: 4/22/2014 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	2100	100	*	mg/L	200	4/23/2014 10:30:01 PM	R18180

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 3 of 8
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1404905

Date Reported: 4/25/2014

CLIENT: CRA

Client Sample ID: GW-082612-041714-BB-MW4

Project: Goorley Fed #3

Collection Date: 4/17/2014 1:47:00 PM

Lab ID: 1404905-004

Matrix: AQUEOUS

Received Date: 4/22/2014 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	790	50	*	mg/L	100	4/23/2014 12:15:24 AM	R18162

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1404905

Date Reported: 4/25/2014

CLIENT: CRA

Client Sample ID: GW-082612-041714-BB-MW5

Project: Goorley Fed #3

Collection Date: 4/17/2014 1:45:00 PM

Lab ID: 1404905-005

Matrix: AQUEOUS

Received Date: 4/22/2014 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	1100	50	*	mg/L	100	4/23/2014 12:40:13 AM	R18162

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1404905

Date Reported: 4/25/2014

CLIENT: CRA

Client Sample ID: GW-082612-041714-BB-DUP

Project: Goorley Fed #3

Collection Date: 4/17/2014

Lab ID: 1404905-006

Matrix: AQUEOUS

Received Date: 4/22/2014 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	2000	100	*	mg/L	200	4/23/2014 10:42:25 PM	R18180

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1404905

25-Apr-14

Client: CRA
Project: Goorley Fed #3

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R18162		RunNo: 18162							
Prep Date:	Analysis Date: 4/22/2014		SeqNo: 524159		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R18162		RunNo: 18162							
Prep Date:	Analysis Date: 4/22/2014		SeqNo: 524160		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.5	0.50	5.000	0	90.7	90	110			

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R18162		RunNo: 18162							
Prep Date:	Analysis Date: 4/22/2014		SeqNo: 524209		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R18162		RunNo: 18162							
Prep Date:	Analysis Date: 4/22/2014		SeqNo: 524210		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.0	90	110			

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R18180		RunNo: 18180							
Prep Date:	Analysis Date: 4/23/2014		SeqNo: 524794		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R18180		RunNo: 18180							
Prep Date:	Analysis Date: 4/23/2014		SeqNo: 524795		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	92.1	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1404905

25-Apr-14

Client: CRA
Project: Goorley Fed #3

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R18180		RunNo: 18180							
Prep Date:	Analysis Date: 4/23/2014		SeqNo: 524850		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R18180		RunNo: 18180							
Prep Date:	Analysis Date: 4/23/2014		SeqNo: 524851		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	92.7	90	110			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

Sample Log-In Check List

Client Name: CRA Albuquerque

Work Order Number: 1404905

RcptNo: 1

Received by/date:

CS

04/22/14

Logged By: Lindsay Mangin

4/22/2014 8:25:00 AM

[Signature]

Completed By: Lindsay Mangin

4/22/2014 9:14:43 AM

[Signature]

Reviewed By:

[Signature]

04/22/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present ✓
- 2. Is Chain of Custody complete? Yes ✓ No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes ✓ No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes ✓ No NA
- 6. Sample(s) in proper container(s)? Yes ✓ No
- 7. Sufficient sample volume for indicated test(s)? Yes ✓ No
- 8. Are samples (except VOA and ONG) properly preserved? Yes ✓ No
- 9. Was preservative added to bottles? Yes No ✓ NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials ✓
- 11. Were any sample containers received broken? Yes No ✓
- 12. Does paperwork match bottle labels? Yes ✓ No # of preserved bottles checked for pH: (<2 or >12 unless noted)
- (Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes ✓ No Adjusted?
- 14. Is it clear what analyses were requested? Yes ✓ No
- 15. Were all holding times able to be met? Yes ✓ No Checked by:
- (If no, notify customer for authorization.)

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA ✓

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks: *Verified sample time with Bernie for -004. No sample time. by 04/25/14*

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: CZA

Standard Rush

Project Name:

GORREY FED #3

Mailing Address: 612 INDIAN SCHOOL BLVD NE

ALBUQUERQUE NM 87110

Phone #: 505-884-0672

email or Fax#: BRUCKISCH@CRAWFORD.COM

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation

NELAP Other

EDD (Type)

Project Manager:

BRAND BECKSCH

Sampler: [Signature]

On Ice: Yes No

Sample Temperature: 1.0°

Turn-Around Time:



www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCBs	8260B (VOA)	8270 (Semi-VOA)	<u>Chlorides 30.0</u>
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Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
<u>04/17/14</u>	<u>14:01</u>	<u>GW</u>	<u>GW-08260-041714-083-MW-1</u>	<u>1/2L P227</u>	<u>NONE</u>	<u>1404905</u>
	<u>13:52</u>	<u>GW</u>	<u>GW-08260-041714-083-MW-2</u>	<u>1/2L P227</u>		<u>-001</u>
	<u>14:15</u>	<u>GW</u>	<u>GW-08260-041714-083-MW-3</u>	<u>1/2L P227</u>		<u>-002</u>
	<u>13:47</u>	<u>GW</u>	<u>GW-08260-041714-083-MW-4</u>	<u>1/2L P227</u>		<u>-003</u>
	<u>13:45</u>	<u>GW</u>	<u>GW-08260-041714-083-MW-5</u>	<u>1/2L P227</u>		<u>-004</u>
		<u>GW</u>	<u>GW-08260-041714-083-DUP</u>	<u>1/2L P227</u>		<u>-005</u>
						<u>-006</u>

Remarks:

Date:	Time:	Relinquished by:	Received by:	Date	Time
<u>04/17/14</u>	<u>16:00</u>	<u>[Signature]</u>	<u>Calin Sum</u>	<u>04/20/14</u>	<u>08:25</u>
Date:	Time:	Relinquished by:	Received by:	Date	Time

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 31, 2014

Bernie Bockish

CRA

6121 Indian School Road, NE #200

Albuquerque, NM 87110

TEL: (505) 884-0672

FAX

RE: Gourley Fed #3

OrderNo.: 1407A69

Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 6 sample(s) on 7/23/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1407A69**

Date Reported: 7/31/2014

CLIENT: CRA

Client Sample ID: GW-082612-072214-CR-MW-1

Project: Gourley Fed #3

Collection Date: 7/22/2014 9:55:00 AM

Lab ID: 1407A69-001

Matrix: AQUEOUS

Received Date: 7/23/2014 12:55:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	1500	50	*	mg/L	100	7/23/2014 5:19:45 PM	R20107
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	5180	100	*	mg/L	1	7/28/2014 12:40:00 PM	14424

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 8
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1407A69**

Date Reported: 7/31/2014

CLIENT: CRA

Client Sample ID: GW-082612-072214-CR-MW-2

Project: Gourley Fed #3

Collection Date: 7/22/2014 8:30:00 AM

Lab ID: 1407A69-002

Matrix: AQUEOUS

Received Date: 7/23/2014 12:55:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	1100	50	*	mg/L	100	7/23/2014 5:44:34 PM	R20107
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	4060	40.0	*	mg/L	1	7/28/2014 12:40:00 PM	14424

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 2 of 8
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1407A69

Date Reported: 7/31/2014

CLIENT: CRA

Client Sample ID: GW-082612-072214-CR-MW-3

Project: Gourley Fed #3

Collection Date: 7/22/2014 9:25:00 AM

Lab ID: 1407A69-003

Matrix: AQUEOUS

Received Date: 7/23/2014 12:55:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGP
Chloride	2400	100	*	mg/L	200	7/25/2014 6:58:39 PM	R20166
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	6660	40.0	*	mg/L	1	7/28/2014 12:40:00 PM	14424

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 3 of 8
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1407A69

Date Reported: 7/31/2014

CLIENT: CRA

Client Sample ID: GW-082612-072214-CR-MW-4

Project: Gourley Fed #3

Collection Date: 7/22/2014 8:15:00 AM

Lab ID: 1407A69-004

Matrix: AQUEOUS

Received Date: 7/23/2014 12:55:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	890	50	*	mg/L	100	7/23/2014 6:34:10 PM	R20107
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	3660	20.0	*	mg/L	1	7/28/2014 12:40:00 PM	14424

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	Page 4 of 8
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1407A69**

Date Reported: 7/31/2014

CLIENT: CRA

Client Sample ID: GW-082612-072214-CR-MW-5

Project: Gourley Fed #3

Collection Date: 7/22/2014 8:50:00 AM

Lab ID: 1407A69-005

Matrix: AQUEOUS

Received Date: 7/23/2014 12:55:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	1100	50	*	mg/L	100	7/23/2014 6:59:00 PM	R20107
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	4170	40.0	*	mg/L	1	7/28/2014 12:40:00 PM	14424

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 5 of 8
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1407A69**

Date Reported: 7/31/2014

CLIENT: CRA

Client Sample ID: GW-082612-072214-CR-

Project: Gourley Fed #3

Collection Date: 7/22/2014

Lab ID: 1407A69-006

Matrix: AQUEOUS

Received Date: 7/23/2014 12:55:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGP
Chloride	2400	100	*	mg/L	200	7/25/2014 7:11:04 PM	R20166
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	6580	40.0	*	mg/L	1	7/28/2014 12:40:00 PM	14424

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 6 of 8
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1407A69

31-Jul-14

Client: CRA
Project: Gourley Fed #3

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R20107		RunNo: 20107							
Prep Date:	Analysis Date: 7/23/2014		SeqNo: 584549		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R20107		RunNo: 20107							
Prep Date:	Analysis Date: 7/23/2014		SeqNo: 584550		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.8	90	110			

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R20107		RunNo: 20107							
Prep Date:	Analysis Date: 7/23/2014		SeqNo: 584603		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R20107		RunNo: 20107							
Prep Date:	Analysis Date: 7/23/2014		SeqNo: 584604		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.8	90	110			

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R20166		RunNo: 20166							
Prep Date:	Analysis Date: 7/25/2014		SeqNo: 586196		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R20166		RunNo: 20166							
Prep Date:	Analysis Date: 7/25/2014		SeqNo: 586197		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	91.8	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1407A69

31-Jul-14

Client: CRA
Project: Gourley Fed #3

Sample ID MB-14424	SampType: MBLK		TestCode: SM2540C MOD: Total Dissolved Solids							
Client ID: PBW	Batch ID: 14424		RunNo: 20177							
Prep Date: 7/24/2014	Analysis Date: 7/28/2014		SeqNo: 586600		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID LCS-14424	SampType: LCS		TestCode: SM2540C MOD: Total Dissolved Solids							
Client ID: LCSW	Batch ID: 14424		RunNo: 20177							
Prep Date: 7/24/2014	Analysis Date: 7/28/2014		SeqNo: 586601		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1030	20.0	1000	0	103	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: CRA Albuquerque

Work Order Number: 1407A69

RcptNo: 1

Received by/date: [Signature] 07/23/14

Logged By: **Ashley Gallegos** 7/23/2014 12:55:00 PM [Signature]

Completed By: **Ashley Gallegos** 7/23/2014 12:58:55 PM [Signature]

Reviewed By: mg 07/23/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? Client

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No
(Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No
(If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.9	Good	Not Present			



CONESTOGA-ROVERS & ASSOCIATES

CHAIN OF CUSTODY RECORD
 Address: 621 INDIAN SCHOOL RD NE, STE 200, ABR, NM 87116
 Phone: 505-884-0672 Fax: _____

CUSTOMER NO.: 082612
 PAGE _____ OF _____
 (See Reverse Side for Instructions)

Project No/Phase/Task Code: 082612		Laboratory Name: HALL EAL		Lab Location: ABR, NM		SSOW ID: 082612-2014-004	
Project Name: GOURLEY FED #3		Lab Contact: ANDY FREEMAN		Lab Quote No:		Cooler No:	
Project Location: EDDY CO., NM		CONTAINER QUANTITY & PRESERVATION		ANALYSIS REQUESTED (See Back of COC for Definitions)		Carrier:	
Chemistry Contact: CHRIS KNIGHT		SAMPLE TYPE		MS/MSD Request		Airbill No:	
Sampler(s): CALE KAMACK		Grab (g) or Comp (c)		Total Containers/Sample		Date Shipped:	
		Matrix Code		Other:		COMMENTS/SPECIAL INSTRUCTIONS	
		Unpreserved		Encores 3x5-g, 1x25-g		1407AL09-001	
		Hydrochloric Acid (HCl)		Methanol/Water (Soil)		-002	
		Nitric Acid (HNO3)		VOC		-003	
		Sulfuric Acid (H2SO4)		Sodium Hydroxide (NaOH)		-004	
		Sulfuric Acid (H2SO4)		Sulfuric Acid (H2SO4)		-005	
		Grab (g) or Comp (c)		Other:		-006	
		X		X		-007	
		X		X		-008	
		X		X		-009	
		X		X		-010	
		X		X		-011	
		X		X		-012	
		X		X		-013	
		X		X		-014	
		X		X		-015	
		X		X		-016	
		X		X		-017	
		X		X		-018	
		X		X		-019	
		X		X		-020	
		X		X		-021	
		X		X		-022	
		X		X		-023	
		X		X		-024	
		X		X		-025	
		X		X		-026	
		X		X		-027	
		X		X		-028	
		X		X		-029	
		X		X		-030	
		X		X		-031	
		X		X		-032	
		X		X		-033	
		X		X		-034	
		X		X		-035	
		X		X		-036	
		X		X		-037	
		X		X		-038	
		X		X		-039	
		X		X		-040	
		X		X		-041	
		X		X		-042	
		X		X		-043	
		X		X		-044	
		X		X		-045	
		X		X		-046	
		X		X		-047	
		X		X		-048	
		X		X		-049	
		X		X		-050	
		X		X		-051	
		X		X		-052	
		X		X		-053	
		X		X		-054	
		X		X		-055	
		X		X		-056	
		X		X		-057	
		X		X		-058	
		X		X		-059	
		X		X		-060	
		X		X		-061	
		X		X		-062	
		X		X		-063	
		X		X		-064	
		X		X		-065	
		X		X		-066	
		X		X		-067	
		X		X		-068	
		X		X		-069	
		X		X		-070	
		X		X		-071	
		X		X		-072	
		X		X		-073	
		X		X		-074	
		X		X		-075	
		X		X		-076	
		X		X		-077	
		X		X		-078	
		X		X		-079	
		X		X		-080	
		X		X		-081	
		X		X		-082	
		X		X		-083	
		X		X		-084	
		X		X		-085	
		X		X		-086	
		X		X		-087	
		X		X		-088	
		X		X		-089	
		X		X		-090	
		X		X		-091	
		X		X		-092	
		X		X		-093	
		X		X		-094	
		X		X		-095	
		X		X		-096	
		X		X		-097	
		X		X		-098	
		X		X		-099	
		X		X		-100	

TAT Required in business days (use separate COCs for different TATs):
 1 Day 2 Days 3 Days 1 Week 2 Week Other: STD

Total Number of Containers: 6
 All Samples in Cooler must be on COC

Notes/Special Requirements:

RELINQUISHED BY: [Signature] COMPANY: CRA DATE: 7/23/14 TIME: 1255
 RECEIVED BY: [Signature] COMPANY: HEAL DATE: 07/23/14 TIME: 1300



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 22, 2014

Bernie Bockisch

Conestoga-Rovers & Associates
6121 Indian School Rd. NE
Suite 200
Albuquerque, NM 87110
TEL: (505) 884-0672
FAX

RE: Gourley Fed #3

OrderNo.: 1410358

Dear Bernie Bockisch:

Hall Environmental Analysis Laboratory received 6 sample(s) on 10/8/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1410358

Date Reported: 10/22/2014

CLIENT: Conestoga-Rovers & Associates

Client Sample ID: GW-082612-100614-SP-MW-1

Project: Gourley Fed #3

Collection Date: 10/6/2014 12:45:00 PM

Lab ID: 1410358-001

Matrix: AQUEOUS

Received Date: 10/8/2014 8:48:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGP
Chloride	1600	50	*	mg/L	100	10/9/2014 12:04:38 PM	R21812
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	5680	200	*	mg/L	1	10/10/2014 2:23:00 PM	15830

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1410358

Date Reported: 10/22/2014

CLIENT: Conestoga-Rovers & Associates

Client Sample ID: GW-082612-100614-SP-MW-4

Project: Gourley Fed #3

Collection Date: 10/6/2014 2:45:00 PM

Lab ID: 1410358-002

Matrix: AQUEOUS

Received Date: 10/8/2014 8:48:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGP
Chloride	800	50	*	mg/L	100	10/9/2014 12:29:28 PM	R21812
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	3730	20.0	*	mg/L	1	10/10/2014 2:23:00 PM	15830

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	Page 2 of 9
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1410358

Date Reported: 10/22/2014

CLIENT: Conestoga-Rovers & Associates

Client Sample ID: GW-082612-100614-SP-MW-5

Project: Gourley Fed #3

Collection Date: 10/6/2014 4:30:00 PM

Lab ID: 1410358-003

Matrix: AQUEOUS

Received Date: 10/8/2014 8:48:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGP
Chloride	1100	50	*	mg/L	100	10/9/2014 1:19:08 PM	R21812
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	4230	100	*	mg/L	1	10/10/2014 2:23:00 PM	15830

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 3 of 9
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1410358**

Date Reported: **10/22/2014**

CLIENT: Conestoga-Rovers & Associates

Client Sample ID: GW-082612-100614-SP-MW-2

Project: Gourley Fed #3

Collection Date: 10/6/2014 5:40:00 PM

Lab ID: 1410358-004

Matrix: AQUEOUS

Received Date: 10/8/2014 8:48:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGP
Chloride	1000	50	*	mg/L	100	10/9/2014 1:43:57 PM	R21812
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	4140	20.0	*	mg/L	1	10/10/2014 2:23:00 PM	15830

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	Page 4 of 9
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1410358

Date Reported: 10/22/2014

CLIENT: Conestoga-Rovers & Associates

Client Sample ID: GW-082612-100614-SP-DUP

Project: Gourley Fed #3

Collection Date: 10/6/2014

Lab ID: 1410358-005

Matrix: AQUEOUS

Received Date: 10/8/2014 8:48:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGP
Chloride	1000	50	*	mg/L	100	10/9/2014 2:08:47 PM	R21812
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	4090	20.0	*	mg/L	1	10/10/2014 2:23:00 PM	15830

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 5 of 9
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1410358

Date Reported: 10/22/2014

CLIENT: Conestoga-Rovers & Associates

Client Sample ID: GW-082612-100614-SP-MW-3

Project: Gourley Fed #3

Collection Date: 10/6/2014 6:40:00 PM

Lab ID: 1410358-006

Matrix: AQUEOUS

Received Date: 10/8/2014 8:48:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: SRM
Chloride	2600	100	*	mg/L	200	10/22/2014 2:23:28 AM	R22055
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	6950	20.0	*	mg/L	1	10/10/2014 2:23:00 PM	15830

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	Page 6 of 9
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1410358

22-Oct-14

Client: Conestoga-Rovers & Associates

Project: Gourley Fed #3

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R21812		RunNo: 21812							
Prep Date:	Analysis Date: 10/9/2014		SeqNo: 641125		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R21812		RunNo: 21812							
Prep Date:	Analysis Date: 10/9/2014		SeqNo: 641126		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.5	90	110			

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R21812		RunNo: 21812							
Prep Date:	Analysis Date: 10/9/2014		SeqNo: 641187		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R21812		RunNo: 21812							
Prep Date:	Analysis Date: 10/9/2014		SeqNo: 641188		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	92.6	90	110			

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R22055		RunNo: 22055							
Prep Date:	Analysis Date: 10/21/2014		SeqNo: 648407		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R22055		RunNo: 22055							
Prep Date:	Analysis Date: 10/21/2014		SeqNo: 648408		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.0	90	110			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1410358

22-Oct-14

Client: Conestoga-Rovers & Associates

Project: Gourley Fed #3

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R22055		RunNo: 22055							
Prep Date:	Analysis Date: 10/21/2014		SeqNo: 648463		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R22055		RunNo: 22055							
Prep Date:	Analysis Date: 10/21/2014		SeqNo: 648464		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.5	0.50	5.000	0	90.1	90	110			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1410358

22-Oct-14

Client: Conestoga-Rovers & Associates

Project: Gourley Fed #3

Sample ID	MB-15830	SampType:	MBLK	TestCode:	SM2540C MOD: Total Dissolved Solids					
Client ID:	PBW	Batch ID:	15830	RunNo:	21821					
Prep Date:	10/9/2014	Analysis Date:	10/10/2014	SeqNo:	641479	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	LCS-15830	SampType:	LCS	TestCode:	SM2540C MOD: Total Dissolved Solids					
Client ID:	LCSW	Batch ID:	15830	RunNo:	21821					
Prep Date:	10/9/2014	Analysis Date:	10/10/2014	SeqNo:	641480	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	0	101	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Client Name: **CONESTOGA-ROVERS** Work Order Number: 1410358 RcptNo: 1

Received by/date: CS 10/08/14

Logged By: **Michelle Garcia** 10/8/2014 8:48:00 AM *Michelle Garcia*

Completed By: **Michelle Garcia** 10/8/2014 9:24:50 AM *Michelle Garcia*

Reviewed By: *[Signature]* 10/08/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C? Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes No
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? (If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.3	Good	Yes			

Chain-of-Custody Record

Client: *Corstegen Roves & Associates*

Mailing Address: *6121 Indian School Rd NE*

Ste 200 Albuquerque, NM, 87110

Phone #: *505-884-0672*

email or Fax#: *bbockisch@croward.com*

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation

NELAP Other

EDD (Type)

Turn-Around Time:

Standard Rush

Project Name:

Courley Fed #3

Project #:

082612

Project Manager:

*Bernie Bowkisch
(505) 280-0572*

Sampler: *Steve Perez*

On Ice: Yes No

Sample Temperature: *33°C*

Date Time Matrix Sample Request ID

<i>10/6/14 12:45</i>	<i>EW</i>	<i>EW-082612-100614-SF-MN-1</i>	<i>1</i>	<i>Ice</i>	<i>HEAL No. 1410358</i>
<i>14:45</i>		<i>EW-082612-100614-SF-MN-4</i>	<i>1</i>		<i>-001</i>
<i>16:30</i>		<i>EW-082612-100614-SF-MN-5</i>	<i>1</i>		<i>-002</i>
<i>17:40</i>		<i>EW-082612-100614-SF-MN-2</i>	<i>1</i>		<i>-003</i>
<i>18:40</i>		<i>EW-082612-100614-SF-DUP</i>	<i>1</i>		<i>-004</i>
		<i>EW-082612-100614-SF-MN-3</i>	<i>1</i>		<i>-005</i>
					<i>-006</i>

Date: *10/7/14 2:15*

Relinquished by: *Steven Lewis*

Received by:

Celine Serna 10/08/14 08:48

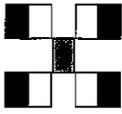
Date Time

Remarks:

Please disregard the Sampling site name on the labels, they should read Courley Fed #3

Analysis Request

<input type="checkbox"/>	BTEX + MTBE + TMB's (8021)
<input type="checkbox"/>	BTEX + MTBE + TPH (Gas only)
<input type="checkbox"/>	TPH 8015B (GRO / DRO / MRO)
<input type="checkbox"/>	TPH (Method 418.1)
<input type="checkbox"/>	EDB (Method 504.1)
<input type="checkbox"/>	PAH's (8310 or 8270 SIMS)
<input type="checkbox"/>	RCRA 8 Metals
<input type="checkbox"/>	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)
<input type="checkbox"/>	8081 Pesticides / 8082 PCB's
<input type="checkbox"/>	8260B (VOA)
<input type="checkbox"/>	8270 (Semi-VOA)
<input type="checkbox"/>	Chlorides 300.0
<input type="checkbox"/>	TDS 5M 2540C



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 28, 2015

Bernie Bockisch

Conestoga-Rovers & Associates
6121 Indian School Rd. NE
Suite 200
Albuquerque, NM 87110
TEL: (505) 884-0672
FAX

RE: Gourley Fed #3Q

OrderNo.: 1501532

Dear Bernie Bockisch:

Hall Environmental Analysis Laboratory received 6 sample(s) on 1/16/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1501532

Date Reported: 1/28/2015

CLIENT: Conestoga-Rovers & Associates

Client Sample ID: GW-082612-011315-SP-MW1

Project: Gourley Fed #3Q

Collection Date: 1/13/2015 3:50:00 PM

Lab ID: 1501532-001

Matrix: AQUEOUS

Received Date: 1/16/2015 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: Igp
Chloride	1700	100	*	mg/L	200	1/19/2015 11:20:25 PM	R23761
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	5380	40.0	*	mg/L	1	1/20/2015 5:36:00 PM	17286

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1501532

Date Reported: 1/28/2015

CLIENT: Conestoga-Rovers & Associates

Client Sample ID: GW-082612-011315-SR-MW2

Project: Gourley Fed #3Q

Collection Date: 1/13/2015 4:07:00 PM

Lab ID: 1501532-002

Matrix: AQUEOUS

Received Date: 1/16/2015 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: Igp
Chloride	1100	50	*	mg/L	100	1/19/2015 11:32:49 PM	R23761
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	4160	20.0	*	mg/L	1	1/20/2015 5:36:00 PM	17286

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 2 of 8
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1501532

Date Reported: 1/28/2015

CLIENT: Conestoga-Rovers & Associates

Client Sample ID: GW-082612-011315-SP-MW3

Project: Gourley Fed #3Q

Collection Date: 1/13/2015 4:15:00 PM

Lab ID: 1501532-003

Matrix: AQUEOUS

Received Date: 1/16/2015 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: Igp
Chloride	2800	100	*	mg/L	200	1/19/2015 11:45:14 PM	R23761
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	7300	20.0	*	mg/L	1	1/20/2015 5:36:00 PM	17286

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 3 of 8
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1501532

Date Reported: 1/28/2015

CLIENT: Conestoga-Rovers & Associates

Client Sample ID: GW-082612-011315-SP-MW4

Project: Gourley Fed #3Q

Collection Date: 1/13/2015 3:58:00 PM

Lab ID: 1501532-004

Matrix: AQUEOUS

Received Date: 1/16/2015 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: Igp
Chloride	920	50	*	mg/L	100	1/19/2015 11:57:38 PM	R23761
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	3690	20.0	*	mg/L	1	1/20/2015 5:36:00 PM	17286

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 4 of 8
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1501532

Date Reported: 1/28/2015

CLIENT: Conestoga-Rovers & Associates

Client Sample ID: GW-082612-011315-SP-MW5

Project: Gourley Fed #3Q

Collection Date: 1/13/2015 4:26:00 PM

Lab ID: 1501532-005

Matrix: AQUEOUS

Received Date: 1/16/2015 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: Igp
Chloride	1200	50	*	mg/L	100	1/20/2015 12:10:03 AM	R23761
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	4230	40.0	*	mg/L	1	1/20/2015 5:36:00 PM	17286

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 5 of 8
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1501532

Date Reported: 1/28/2015

CLIENT: Conestoga-Rovers & Associates

Client Sample ID: GW-082612-011315-SP-DUP

Project: Gourley Fed #3Q

Collection Date: 1/13/2015

Lab ID: 1501532-006

Matrix: AQUEOUS

Received Date: 1/16/2015 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: Igp
Chloride	3100	100	*	mg/L	200	1/20/2015 12:22:27 AM	R23761
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	7250	20.0	*	mg/L	1	1/20/2015 5:36:00 PM	17286

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 6 of 8
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1501532

28-Jan-15

Client: Conestoga-Rovers & Associates

Project: Gourley Fed #3Q

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R23761		RunNo: 23761							
Prep Date:	Analysis Date: 1/19/2015		SeqNo: 701075		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R23761		RunNo: 23761							
Prep Date:	Analysis Date: 1/19/2015		SeqNo: 701076		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.2	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1501532

28-Jan-15

Client: Conestoga-Rovers & Associates

Project: Gourley Fed #3Q

Sample ID	MB-17286	SampType:	MBLK	TestCode:	SM2540C MOD: Total Dissolved Solids					
Client ID:	PBW	Batch ID:	17286	RunNo:	23779					
Prep Date:	1/19/2015	Analysis Date:	1/20/2015	SeqNo:	701571	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	LCS-17286	SampType:	LCS	TestCode:	SM2540C MOD: Total Dissolved Solids					
Client ID:	LCSW	Batch ID:	17286	RunNo:	23779					
Prep Date:	1/19/2015	Analysis Date:	1/20/2015	SeqNo:	701572	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	0	102	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: CONESTOGA-ROVERS

Work Order Number: 1501532

RcptNo: 1

Received by/date: [Signature] 01/16/15

Logged By: Lindsay Mangin 1/16/2015 8:45:00 AM [Signature]

Completed By: Lindsay Mangin 1/16/2015 9:03:34 AM [Signature]

Reviewed By: IO 01/16/15

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No
(Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No
(If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.9	Good	Yes			

Chain-of-Custody Record

Client: Cenestoga Rovers + Associates
 Project Name: Standard Rush
 Mailing Address: 6121 Indian School Blvd NE
Albuquerque, NM 87110
 Phone #: 505-884-0672
 Email or Fax#: bbockisch@crworld.com
 QA/QC Package: Standard Level 4 (Full Validation)
 NELAP Other
 EDD (Type) _____



www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Analysis Request	Analysis Request
BTEX + MTBE + TMBs (8021)	BTEX + MTBE + TPH (Gas only)
TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)
EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)
RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)
8081 Pesticides / 8082 PCBs	8260B (VOA)
8270 (Semi-VOA)	Chlorides 300.0
Air Bubbles (Y or N)	Total Dissolved Solids 500.0

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
11/3/15	1550	GW	GW-082612-011315-SP-MW1	Plastic	Ice	1501532
↓	1607	↓	GW-082612-011315-SP-MW2	↓	↓	-001
↓	1615	↓	GW-082612-011315-SP-MW3	↓	↓	-003
↓	1558	↓	GW-082612-011315-SP-MW4	↓	↓	-001
↓	1623	↓	GW-082612-011315-SP-MW5	↓	↓	-005
11/3/15	-	GW	GW-082612-011315-SP-DP	↓	↓	-006

Relinquished by: John Arroy Date: 11/15/15 2:45
 Relinquished by: _____ Date: _____
 Received by: [Signature] Date: 01/15/2016
 Received by: _____ Date: _____

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.