P.O. Box 3483, MD 48-6
Tulsa, OK 74101

April 14, 2016

Randolph Bayliss
Hydrologist, Districts III and IV
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: Online Submission of 2016 Annual Groundwater Reports

Dear Mr. Bayliss,

LT Environmental (LTE), Inc., on behalf of Williams Four Corners LLC (Williams), is electronically submitting the attached 2016 annual groundwater monitoring reports covering the period from January 1, 2016 to December 31, 2016 for the following sites:

- Davis #1 (3RP-311-0);
- Dogie East Pit (3RP-312-0);
- Florance #40 (3RP-315-0);
- Florance #47X (3RP-317-0);
- Jicarilla Contract #147-6 (3RP-325-0); and
- Pritchard #2A (3RP-339-0).

If you have any questions regarding these reports please contact Brooke Herb with LTE at 970-385-1096 or BHerb@LTEnv.com or Aaron Galer with Williams at 801-584-6746 or Aaron.Galer@Williams.com.

Sincerely,

Aaron Galer

Aaron Galer
Environmental Specialist IV
Williams Companies

cc:
Attachments (6)

2016 ANNUAL GROUNDWATER REPORT

FLORANCE #40
ADMINISTRATIVE/ENVIRONMENTAL
ORDER NUMBER 3RP-315-0

APRIL 2017

Prepared for:

WILLIAMS FOUR CORNERS LLC
SALT LAKE CITY, UTAH

2016 ANNUAL GROUNDWATER REPORT

FLORANCE #40
ADMINISTRATIVE/ENVIRONMENTAL
ORDER NUMBER 3RP-315-0

APRIL 2017

Prepared for:

WILLIAMS FOUR CORNERS LLC
295 Chipeta Way
Salt Lake City, Utah 84108

Prepared by:

LT ENVIRONMENTAL, INC.
848 East Second Avenue
Durango, Colorado 81301
(970) 385-1096

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EXECUTIVE SUMMARY

Groundwater at the Florance #40 facility (Site), Administrative/Environmental Order Number 3RP-315-0, is impacted by petroleum hydrocarbons due to releases from two separate source areas: a former earthen separator pit and a former dehydrator pit. BP America Production Company (BP) is responsible for impacts from the former earthen separator pit and Williams Four Corners LLC (Williams) retains remedial responsibility for the former dehydrator pit. In 1996, Gas Company of New Mexico (GCNM), the former operator of the dehydrator pit, removed impacted soil and installed four monitoring wells between 1996 and 1997 (MW-1, MW-2, MW-3, and MW-4) to assess groundwater quality. Downgradient monitoring wells MW-5 and MW-7 were installed in 1997 and 2000, respectively, and damaged MW-2 was replaced by MW-6 in 2000. Williams purchased the former GCNM facility from Public Service Company of New Mexico (PNM) in 2000 and assumed environmental liability for the former dehydrator pit, which includes the groundwater quality in monitoring wells MW-3, MW-4, MW-6, and MW-7. BP is responsible for monitoring groundwater quality in monitoring wells AMOCO, MW-1, and MW-5.

Since 2000, Williams has monitored groundwater quality and conducted free-phase product removal in their monitoring wells MW-3, MW-4, MW-6, and MW-7. In 2016, Williams retained LT Environmental, Inc. (LTE) to complete annual sampling requirements. During 2016, LTE conducted one annual groundwater monitoring event in September 2016.

Monitoring wells Amoco, MW-1, and MW-5 were not sampled by Williams as they are the responsibility of BP. Monitoring wells MW-3, MW-6, and MW-7 were not sampled during 2016 due to insufficient water volume. Groundwater monitoring well MW-4 was not sampled during 2016 due to eight documented quarters of BTEX concentrations compliant with New Mexico Water Quality Control Commission (NMWQCC) standards and was removed from the sampling program. Depth to groundwater data collected in 2016 indicated the groundwater flow direction was south/southwest.

Williams proposes to continue annually monitoring the depth to groundwater and investigating for the presence of free-phase product in the monitoring wells. If sufficient water exists, groundwater samples will be collected from monitoring wells MW-3, MW-6, and MW-7 and analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) annually.

1.0 INTRODUCTION

LT Environmental, Inc. (LTE) has prepared this report on behalf of Williams Four Corners LLC (Williams) detailing groundwater monitoring completed from January 2016 through December 2016 at the Florance #40 facility (Site), Administrative/Environmental Order Number 3RP-315-0. The scope of work for this project is continued monitoring of petroleum hydrocarbon impacts to groundwater resulting from operations of a former earthen separator pit and a former dehydrator pit. LTE conducted annual groundwater monitoring to measure depth to groundwater, investigated phase-separated hydrocarbons (PSH), and collected groundwater samples, when possible, for laboratory analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX).

1.1 LOCATION

The Site is located at latitude 36.799827 and longitude -107.678573 in Unit G, Section 21, Township 30 North, Range 8 West. The Site is near Gobernador Canyon in the San Juan Basin in San Juan County, New Mexico (Figure 1).

1.2 HISTORY

There are two separate source areas at the Site: a former Amoco Production Company earthen separator pit that is now the responsibility of BP America Production Company (BP) and a former Public Service Company of New Mexico (PNM) dehydrator pit that is now the responsibility of Williams (Figure 2). According to a letter from the New Mexico Oil Conservation Division (NMOCD) to Amoco dated December 30, 1997, Amoco was responsible for remediation of soil and groundwater contamination downgradient of the former earthen separator pit, and PNM was responsible for groundwater contamination downgradient of the former dehydrator pit.

In 1996, 646 cubic yards of petroleum hydrocarbon-impacted soil were removed from the former dehydrator pit by PNM. The floor of the excavation was 17 feet below ground surface (bgs) and field screening indicated petroleum hydrocarbon-impacted soil remained at this depth. Monitoring well MW-1 was installed upgradient (north) of the source area and impacted soil was observed between 40 feet and 55 feet bgs. A test hole (later converted to monitoring well MW-2) was installed 24 feet south of the former dehydrator pit. Impacts to soil were observed from 20 feet bgs to the total depth of 50 feet bgs, and groundwater sampled from monitoring well MW-2 contained 11,507 micrograms per liter (µg/L) of BTEX.

In 1997, monitoring wells MW-3 and MW-4 were installed downgradient of the former dehydrator pit. In August 1997, the casing for monitoring well MW-2 collapsed, and the well was replaced with monitoring well MW-6 in March 2000. In addition, in 1997 and in 2000, upgradient monitoring well MW-5 and downgradient monitoring well MW-7 were installed, respectively.

In 1998, Blagg Engineering installed monitoring well AMOCO in or adjacent to the former earthen separator pit and assumed responsibility for monitoring existing monitoring wells MW-1 and MW-5.

Williams purchased the former Gas Company of New Mexico (GCNM) facility from PNM in 2000 and assumed environmental liability for the former dehydrator pit. Between 2000 and 2016, Williams monitored groundwater at the Site. Monitoring wells MW-3 and MW-6 contained PSH at some time between 1997 and 2002; it is not known if the PSH was recovered from monitoring wells MW-3 or MW-6 during this time. A fully saturated product recovery sock was discovered in monitoring well MW-1 during the February 2013 site visit, indicating product recovery had been conducted in monitoring well MW-1. Records regarding these activities are in previous groundwater reports submitted to the NMOCD. Monitoring well AMOCO was sampled by Williams in February 2013 during a site re-evaluation. However, since the monitoring well is in BP's area of responsibility, it has not been sampled since. Additionally, monitoring wells MW-1 and MW-5 are in BP's area of responsibility and not sampled by Williams.

2.0 METHODOLOGY

2.1 SCOPE OF WORK

Groundwater monitoring activities were conducted at the Site in September 2016. LTE measured depth to groundwater and investigated for the presence of PSH in monitoring wells MW-3, MW-4, MW-6, MW-7, and upgradient BP monitoring wells AMOCO, MW-1, and MW-5.

2.2 WATER AND PRODUCT LEVEL MEASUREMENTS

Groundwater monitoring activities included measuring depth to groundwater and depth to PSH, where present, with a Keck oil/water interface probe. The interface probe was decontaminated with Alconox™ soap and rinsed with de-ionized water prior to each measurement.

2.3 GROUNDWATER SAMPLING

Monitoring wells MW-3, MW-6, and MW-7 were not sampled in 2016 due to insufficient water. Groundwater monitoring well MW-4 was not sampled during 2016 due to eight documented quarters of BTEX concentrations compliant with NMWQCC standards and was removed from the sampling program.

2.4 GROUNDWATER CONTOUR MAPS

LTE used top of casing well elevations and depth to groundwater measurements to calculate groundwater elevations and draft groundwater contours. The contours were used to determine groundwater flow direction for the September 2016 monitoring event (Figure 2).

3.0 RESULTS

Monitoring wells MW-3, MW-6, and MW-7 were dry during the September 2016 monitoring event and were therefore not sampled. Using water elevations determined from the remaining monitoring wells on site, groundwater flow direction was determined to be generally south-southwest. Measurable PSH was not detected in any monitoring wells in September 2016. Groundwater elevations are listed in Table 1.

Table 2 summarizes the historical groundwater analytical results.

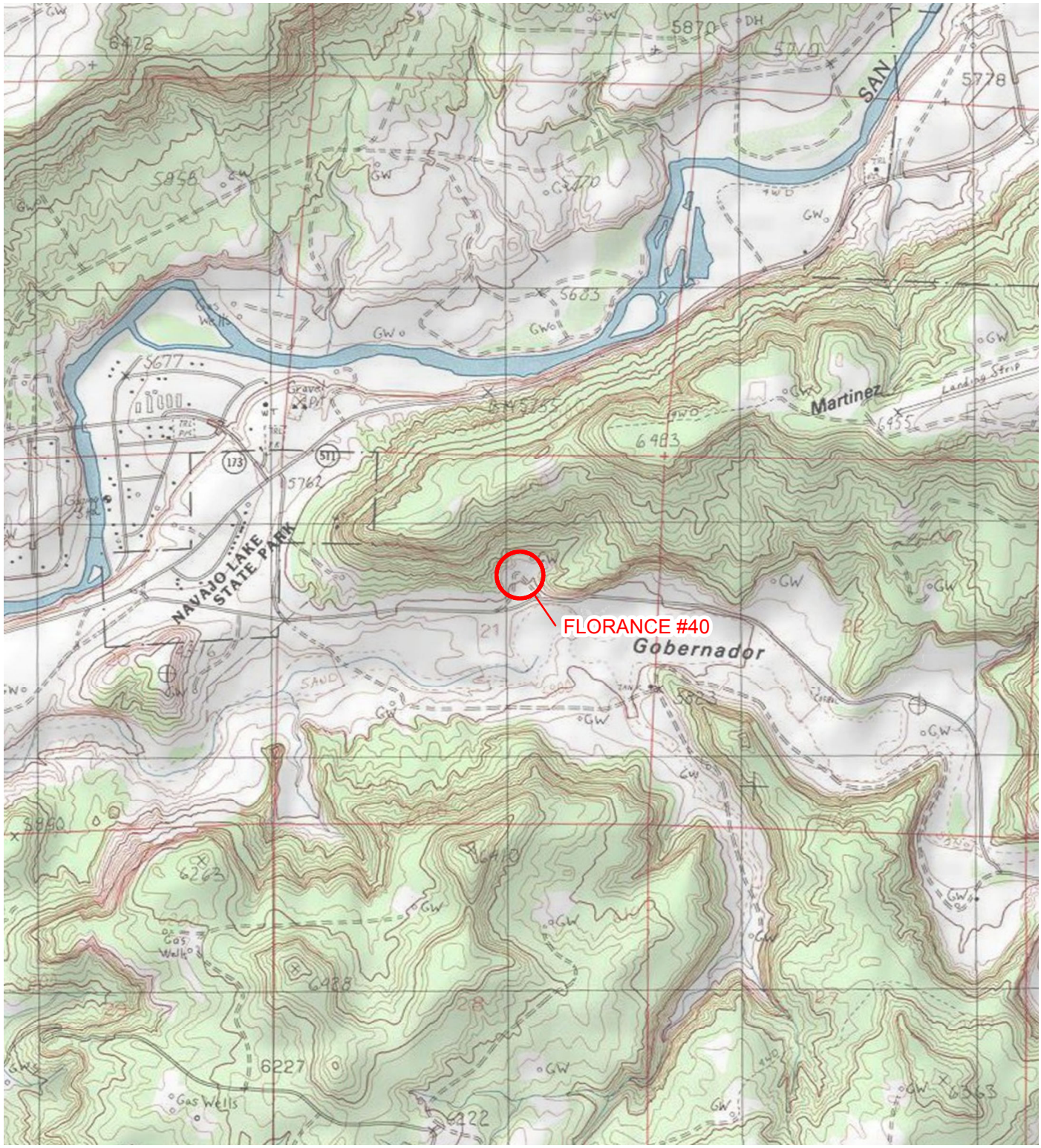
4.0 CONCLUSIONS

Within Williams' area of responsibility, the overall depth to groundwater at the Site has dropped to elevations that are below the total depths of three monitoring wells in the monitoring well network. Monitoring well MW-4 is the only monitoring well that has sufficient water within Williams area of responsibility; however it has eight documented quarters of BTEX concentrations compliant with NMWQCC standards and is no longer sampled.

5.0 MONITORING PLAN

Williams proposes to continue conducting annual monitoring for the presence of PSH and depth to groundwater in monitoring wells MW-3, MW-4, MW-6, and MW-7, as well as upgradient BP monitoring wells AMOCO, MW-1, and MW-5. If sufficient water exists, groundwater samples will be collected from monitoring wells MW-3, MW-6, and MW-7 and analyzed for BTEX annually.

FIGURES



LEGEND

SITE LOCATION

IMAGE COURTESY OF ESRI/BING MAPS

0 2,000 4,000

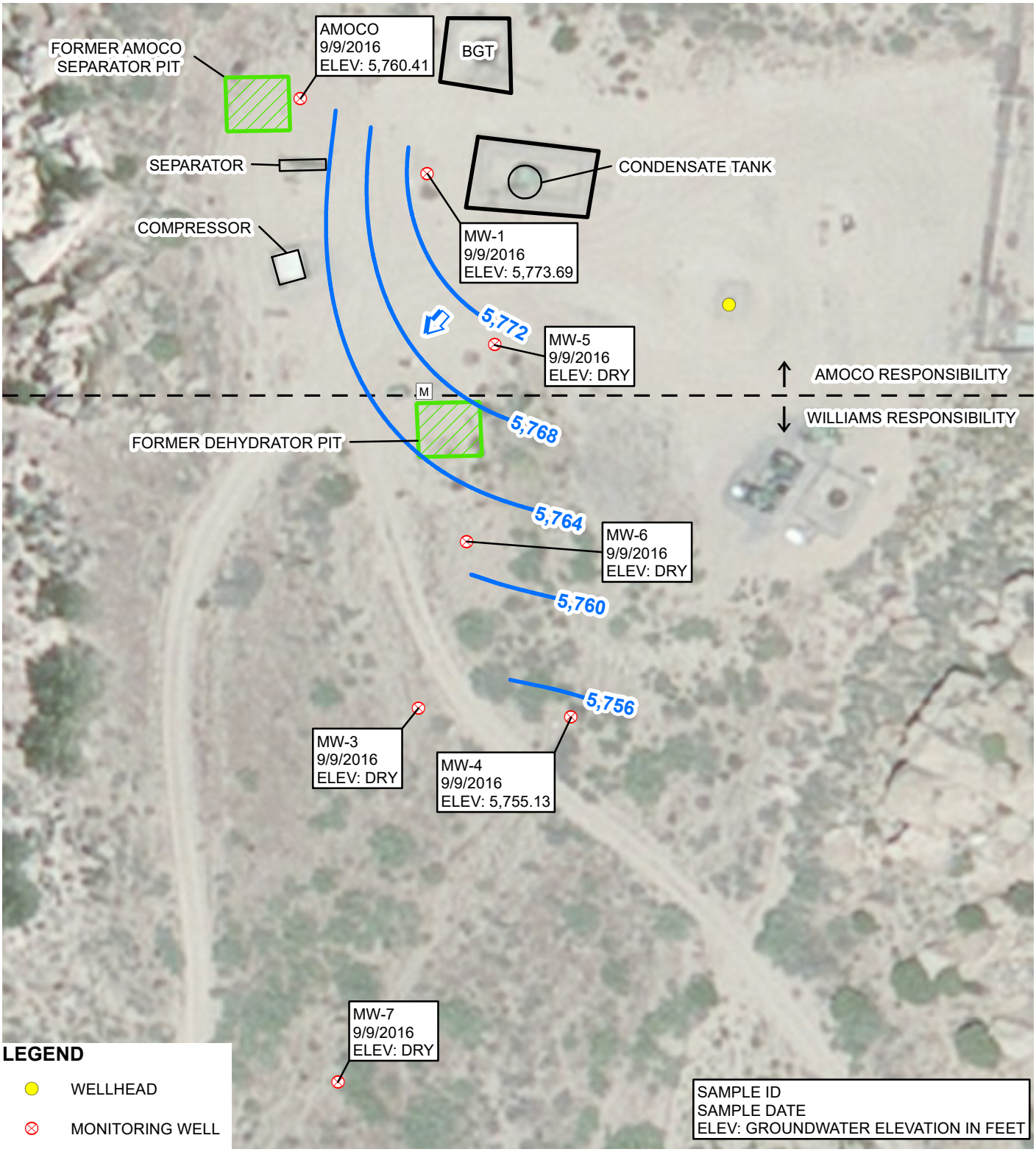
Feet

N

FIGURE 1
SITE LOCATION MAP
FLORANCE #40
SAN JUAN COUNTY, NEW MEXICO

WILLIAMS FIELD SERVICES, LLC

P:\Williams Four Corners\GIS\MXD\034013001_FLORANCE#40\034013001_FLORANCE_#40_FIG01_SL.mxd



LEGEND

- WELLHEAD
- MONITORING WELL
- M METER HOUSE
- ESTIMATED GROUNDWATER FLOW DIRECTION
- BERM
- RELATIVE GROUNDWATER ELEVATION CONTOUR
  CONTOUR INTERVAL = 4 FEET

BGT: BELOW GRADE TANK

IMAGE COURTESY OF ESRI

0 60 120
Feet

N

FIGURE 5
GROUNDWATER ELEVATION
(SEPTEMBER 2016)
FLORANCE #40
SAN JUAN COUNTY, NEW MEXICO
WILLIAMS FOUR CORNERS, LLC

P:\Williams Field Services\GIS\MXD\034013010_FLORANCE #40\034016002_FLORANCE_#40_FIG05_GWE_GWA_2016_Q3.mxd

TABLES

TABLE 1
GROUNDWATER ELEVATION SUMMARY

FLORANCE #40
SAN JUAN COUNTY, NEW MEXICO
WILLIAMS FOUR CORNERS LLC

Well ID	Date	Top of Casing Elevation (feet AMSL)	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
AMOCO	1/3/2012	6,234.87	UNK	UNK	UNK	UNK
AMOCO	4/2/2012	6,234.87	UNK	UNK	UNK	UNK
AMOCO	6/13/2012	6,234.87	UNK	UNK	UNK	UNK
AMOCO	10/2/2012	6,234.87	UNK	UNK	UNK	UNK
AMOCO	12/6/2012	6,234.87	UNK	UNK	UNK	UNK
AMOCO	2/28/2013	6,234.87	61.27	NP	NP	6,173.60
AMOCO	6/24/2013	5,822.11*	61.63	NP	NP	5,760.48
AMOCO	9/26/2013	5,822.11	61.64	NP	NP	5,760.47
AMOCO	12/6/2013	5,822.11	61.31	NP	NP	5,760.80
AMOCO	3/19/2014	5,822.11	61.36	NP	NP	5,760.75
AMOCO	6/12/2014	5,822.11	61.65	NP	NP	5,760.46
AMOCO	9/12/2014	5,822.11	61.73	NP	NP	5,760.38
AMOCO	12/4/2014	5,822.11	61.70	NP	NP	5,760.41
AMOCO	3/10/2015	5,822.11	61.71	NP	NP	5,760.40
AMOCO	6/15/2015	5,822.11	61.75	NP	NP	5,760.36
AMOCO	9/24/2015	5,822.11	61.82	NP	NP	5,760.29
AMOCO	12/17/2015	5,822.11	61.56	NP	NP	5,760.55
AMOCO	9/9/2016	5,822.11	61.70	NP	NP	5,760.41
MW-1	1/3/2012	6,231.60	UNK	UNK	UNK	UNK
MW-1	4/2/2012	6,231.60	UNK	UNK	UNK	UNK
MW-1	6/13/2012	6,231.60	UNK	UNK	UNK	UNK
MW-1	10/2/2012	6,231.60	UNK	UNK	UNK	UNK
MW-1	12/6/2012	6,231.60	UNK	UNK	UNK	UNK
MW-1**	2/28/2013	6,231.60	45.92	45.90	0.02	6,185.70
MW-1**	6/24/2013	5,818.84*	46.00	NP	NP	5,772.84
MW-1**	9/26/2013	5,818.84	45.35	NP	NP	5,773.49
MW-1**	12/6/2013	5,818.84	45.42	45.40	0.02	5,773.44
MW-1	3/19/2014	5,818.84	45.43	NP	NP	5,773.41
MW-1	6/12/2014	5,818.84	45.40	NP	NP	5,773.44
MW-1	9/12/2014	5,818.84	45.46	NP	NP	5,773.38
MW-1	12/4/2014	5,818.84	DRY	DRY	DRY	DRY
MW-1	3/10/2015	5,818.84	44.27	NP	NP	5,774.57
MW-1	6/15/2015	5,818.84	45.59	NP	NP	5,773.25
MW-1	9/24/2015	5,818.84	45.70	NP	NP	5,773.14
MW-1	12/17/2015	5,818.84	45.60	NP	NP	5,773.24
MW-1	9/9/2016	5,818.84	45.15	NP	NP	5,773.69
MW-3	1/3/2012	6,219.05	UNK	UNK	UNK	UNK
MW-3	4/2/2012	6,219.05	UNK	UNK	UNK	UNK
MW-3	6/13/2012	6,219.05	UNK	UNK	UNK	UNK
MW-3	10/2/2012	6,219.05	UNK	UNK	UNK	UNK
MW-3	12/6/2012	6,219.05	UNK	UNK	UNK	UNK
MW-3	2/28/2013	6,219.05	DRY	DRY	DRY	DRY
MW-3	6/24/2013	5,806.34*	DRY	DRY	DRY	DRY
MW-3	9/26/2013	5,806.34	DRY	DRY	DRY	DRY
MW-3	12/6/2013	5,806.34	DRY	DRY	DRY	DRY
MW-3	3/19/2014	5,806.34	DRY	DRY	DRY	DRY
MW-3	6/12/2014	5,806.34	DRY	DRY	DRY	DRY
MW-3	9/12/2014	5,806.34	DRY	DRY	DRY	DRY
MW-3	12/4/2014	5,806.34	DRY	DRY	DRY	DRY

TABLE 1
GROUNDWATER ELEVATION SUMMARY

FLORANCE #40
SAN JUAN COUNTY, NEW MEXICO
WILLIAMS FOUR CORNERS LLC

Well ID	Date	Top of Casing Elevation (feet AMSL)	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW-3	3/10/2015	5,806.34	DRY	DRY	DRY	DRY
MW-3	6/15/2015	5,806.34	DRY	DRY	DRY	DRY
MW-3	9/24/2015	5,806.34	DRY	DRY	DRY	DRY
MW-3	12/17/2015	5,806.34	DRY	DRY	DRY	DRY
MW-3	9/9/2016	5,806.34	DRY	DRY	DRY	DRY
MW-4	1/3/2012	6,219.64	UNK	UNK	UNK	UNK
MW-4	4/2/2012	6,219.64	UNK	UNK	UNK	UNK
MW-4	6/13/2012	6,219.64	UNK	UNK	UNK	UNK
MW-4	10/2/2012	6,219.64	UNK	UNK	UNK	UNK
MW-4	12/6/2012	6,219.64	UNK	UNK	UNK	UNK
MW-4	2/28/2013	6,219.64	46.61	46.59	0.02	6,173.05
MW-4	6/24/2013	5,806.56*	46.72	46.71	0.01	5,759.85
MW-4	9/26/2013	5,806.56	48.28	48.25	0.03	5,758.30
MW-4	12/6/2013	5,806.56	48.44	48.42	0.02	5,758.14
MW-4	3/19/2014	5,806.56	48.32	NP	NP	5,758.24
MW-4	6/12/2014	5,806.56	48.64	NP	NP	5,757.92
MW-4	9/12/2014	5,806.56	49.38	NP	NP	5,757.18
MW-4	12/4/2014	5,806.56	49.71	NP	NP	5,756.85
MW-4	3/10/2015	5,806.56	49.74	NP	NP	5,756.82
MW-4	6/15/2015	5,806.56	49.88	NP	NP	5,756.68
MW-4	9/24/2015	5,806.56	50.17	NP	NP	5,756.39
MW-4	12/17/2015	5,806.56	50.43	NP	NP	5,756.13
MW-4	9/9/2016	5,806.56	51.43	NP	NP	5,755.13
MW-5	1/3/2012	6,228.57	UNK	UNK	UNK	UNK
MW-5	4/2/2012	6,228.57	UNK	UNK	UNK	UNK
MW-5	6/13/2012	6,228.57	UNK	UNK	UNK	UNK
MW-5	10/2/2012	6,228.57	UNK	UNK	UNK	UNK
MW-5	12/6/2012	6,228.57	UNK	UNK	UNK	UNK
MW-5	2/28/2013	6,228.57	52.16	NP	NP	6,176.41
MW-5	6/24/2013	5,815.74*	52.12	NP	NP	5,763.62
MW-5	9/26/2013	5,815.74	52.23	NP	NP	5,763.51
MW-5	12/6/2013	5,815.74	DRY	DRY	DRY	DRY
MW-5	3/19/2014	5,815.74	52.17	NP	NP	5,763.57
MW-5	6/12/2014	5,815.74	DRY	DRY	DRY	DRY
MW-5	9/12/2014	5,815.74	52.20	NP	NP	5,763.54
MW-5	12/4/2014	5,815.74	52.20	NP	NP	5,763.54
MW-5	3/10/2015	5,815.74	DRY	DRY	DRY	DRY
MW-5	6/15/2015	5,815.74	52.25	NP	NP	5,763.49
MW-5	9/24/2015	5,815.74	DRY	DRY	DRY	DRY
MW-5	12/17/2015	5,815.74	52.20	NP	NP	5,763.54
MW-5	9/9/2016	5,815.74	DRY	DRY	DRY	DRY
MW-6	1/3/2012	6,221.28	UNK	UNK	UNK	UNK
MW-6	4/2/2012	6,221.28	UNK	UNK	UNK	UNK
MW-6	6/13/2012	6,221.28	UNK	UNK	UNK	UNK
MW-6	10/2/2012	6,221.28	UNK	UNK	UNK	UNK
MW-6	12/6/2012	6,221.28	UNK	UNK	UNK	UNK
MW-6	3/6/2013	6,221.28	DRY	DRY	DRY	DRY
MW-6	6/24/2013	5,808.50*	DRY	DRY	DRY	DRY

TABLE 1
GROUNDWATER ELEVATION SUMMARY

FLORANCE #40
SAN JUAN COUNTY, NEW MEXICO
WILLIAMS FOUR CORNERS LLC

Well ID	Date	Top of Casing Elevation (feet AMSL)	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW-6	9/26/2013	5,808.50	44.37	NP	NP	5,764.13
MW-6	12/6/2013	5,808.50	44.39	NP	NP	5,764.11
MW-6	3/19/2014	5,808.50	DRY	DRY	DRY	DRY
MW-6	6/12/2014	5,808.50	DRY	DRY	DRY	DRY
MW-6	9/12/2014	5,808.50	DRY	DRY	DRY	DRY
MW-6	12/4/2014	5,808.50	DRY	DRY	DRY	DRY
MW-6	3/10/2015	5,808.50	DRY	DRY	DRY	DRY
MW-6	6/15/2015	5,808.50	DRY	DRY	DRY	DRY
MW-6	9/24/2015	5,808.50	DRY	DRY	DRY	DRY
MW-6	12/17/2015	5,808.50	44.36	NP	NP	5,764.14
MW-6	9/9/2016	5,808.50	DRY	DRY	DRY	DRY
MW-7	1/3/2012	6,211.30	UNK	UNK	UNK	UNK
MW-7	4/2/2012	6,211.30	UNK	UNK	UNK	UNK
MW-7	6/13/2012	6,211.30	UNK	UNK	UNK	UNK
MW-7	10/2/2012	6,211.30	UNK	UNK	UNK	UNK
MW-7	12/6/2012	6,211.30	UNK	UNK	UNK	UNK
MW-7	2/28/2013	6,211.30	DRY	DRY	DRY	DRY
MW-7	6/24/2013	5,798.73*	DRY	DRY	DRY	DRY
MW-7	9/26/2013	5,798.73	DRY	DRY	DRY	DRY
MW-7	12/6/2013	5,798.73	DRY	DRY	DRY	DRY
MW-7	3/19/2014	5,798.73	DRY	DRY	DRY	DRY
MW-7	6/12/2014	5,798.73	DRY	DRY	DRY	DRY
MW-7	9/12/2014	5,798.73	DRY	DRY	DRY	DRY
MW-7	9/12/2014	5,798.73	DRY	DRY	DRY	DRY
MW-7	12/4/2014	5,798.73	DRY	DRY	DRY	DRY
MW-7	3/10/2015	5,798.73	DRY	DRY	DRY	DRY
MW-7	6/15/2015	5,798.73	DRY	DRY	DRY	DRY
MW-7	9/24/2015	5,798.73	DRY	DRY	DRY	DRY
MW-7	12/17/2015	5,798.73	DRY	DRY	DRY	DRY
MW-7	9/9/2016	5,798.73	DRY	DRY	DRY	DRY

Notes:

* Top of casing elevation was resurveyed on 6/20/13

** Product recovery sock was present in well

Groundwater elevation calculation in wells with product: (Top of Casing Elevation - Depth to Water) + (Product Thickness * 0.8)

AMSL - above mean sea level

BTOC - below top of casing

DEST - well has been destroyed

NP - no product

UNK - data are not known

TABLE 2
GROUNDWATER LABORATORY ANALYTICAL RESULTS

FLORANCE #40
SAN JUAN COUNTY, NEW MEXICO
WILLIAMS FOUR CORNERS LLC

Well Name	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standard (µg/L)		**10**	**750**	**750**	**620**
AMOCO	11/15/2000	**966**	64.4	**1,070**	**12,700**
AMOCO	1/22/2001	**1,210**	299	**1,750**	**19,400**
AMOCO	4/30/2001	**1,080**	71	**1,030**	**11,600**
AMOCO	10/16/2001	**930**	13	**1,100**	**12,000**
AMOCO	3/30/2002	**610**	**790**	**1,100**	**13,000**
AMOCO	6/16/2002	**740**	ND	**3,400**	**22,000**
AMOCO	12/13/2002	**570**	ND	670	**8,400**
AMOCO	12/3/2003	**440**	<100	**760**	**8,600**
AMOCO	3/10/2004	**200**	56	430	**7,400**
AMOCO	6/27/2004	**270**	150	600	**6,600**
AMOCO	9/20/2004	**210**	61	430	**3,900**
AMOCO	12/6/2004	**1,000**	100	**750**	**7,800**
AMOCO	3/8/2005	**330**	94	730	**5,900**
AMOCO	11/30/2005	**325**	59.7	**809**	**11,400**
AMOCO	7/18/2006	**375**	<20.0	**1,100**	**9,010**
AMOCO	3/27/2008	**168**	<25.0	**1,800**	**10,200**
AMOCO	3/27/2008	**183**	<25.0	**3,920**	**11,000**
AMOCO	6/4/2008	**211**	<25.0	**1,350**	**8,170**
AMOCO	9/18/2008	**169**	<50.0	**2,110**	**17,500**
AMOCO	12/5/2008	**134**	<100	**1,280**	**10,900**
AMOCO	3/28/2009	**130**	<100	**1760**	**15,800**
AMOCO	7/8/2009	**220**	<50.0	**2,350**	**16,400**
AMOCO	9/11/2009	**133**	<100	**2,880**	**20,700**
AMOCO	12/20/2019	**106**	<10.0	**823**	**5,450**
AMOCO	3/29/2010	**114**	<100	**1,230**	**8,840**
AMOCO	6/23/2010	**116**	<25.0	**3,400**	**19,000**
AMOCO	9/10/2010	**112**	<50.0	**2,980**	**22,000**
AMOCO	12/4/2010	**103**	<50.0	**1,710**	**10,900**
AMOCO	3/11/2011	**78.1**	23.3	**1,130**	**6,350**
AMOCO	6/14/2011	**88.1**	<10	**1,980**	**14,200**
AMOCO	9/12/2011	**75.6**	<1.0	670	**3,710**
AMOCO	1/3/2012	**73.8**	<5.0	732	**3,380**
AMOCO	4/2/2012	NS	NS	NS	NS
AMOCO	6/13/2012	**81.8**	30.5	**966**	**4,480**
AMOCO	10/2/2012	**71.6**	<5.0	**881**	**4,320**
AMOCO	12/6/2012	**80.4**	<5.0	**952**	**3,730**
AMOCO	2/28/2013	**60**	<50	650	**4,200**
AMOCO	6/24/2013	NS-BP	NS-BP	NS-BP	NS-BP
AMOCO	9/26/2013	NS-BP	NS-BP	NS-BP	NS-BP
AMOCO	12/6/2013	NS-BP	NS-BP	NS-BP	NS-BP
AMOCO	3/19/2014	NS-BP	NS-BP	NS-BP	NS-BP
AMOCO	6/12/2014	NS-BP	NS-BP	NS-BP	NS-BP
AMOCO	9/12/2014	NS-BP	NS-BP	NS-BP	NS-BP
AMOCO	12/4/2014	NS-BP	NS-BP	NS-BP	NS-BP
AMOCO	3/10/2015	NS-BP	NS-BP	NS-BP	NS-BP
AMOCO	6/15/2015	NS-BP	NS-BP	NS-BP	NS-BP
AMOCO	9/24/2015	NS-BP	NS-BP	NS-BP	NS-BP
AMOCO	12/17/2015	NS-BP	NS-BP	NS-BP	NS-BP
AMOCO	9/9/2016	NS-BP	NS-BP	NS-BP	NS-BP

TABLE 2
GROUNDWATER LABORATORY ANALYTICAL RESULTS

FLORANCE #40
SAN JUAN COUNTY, NEW MEXICO
WILLIAMS FOUR CORNERS LLC

Well Name	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standard (µg/L)		**10**	**750**	**750**	**620**
MW-1	1/2/1997	**357**	**1,550**	**1,060**	**5,830**
MW-1	5/8/1997	**3,643**	**11,525**	**1,097**	**16,005**
MW-1	8/13/1997	**3,653**	**12,785**	**1,160**	**16,191**
MW-1	11/25/1997	**3,942**	**14,574**	**1,262**	**17,568**
MW-1	1/23/1998	**4,421**	**15,035**	**1,181**	**19,184**
MW-1	4/28/1998	**4,000**	**13,000**	**1,000**	**18,800**
MW-1	8/7/1998	**3,600**	**11,000**	**970**	**15,400**
MW-1	12/15/1998	**3,800**	**7,200**	**670**	**17,900**
MW-1	2/9/1999	**3,400**	**5,300**	**1,100**	**18,900**
MW-1	4/21/1999	**3,500**	**3,500**	**810**	**16,500**
MW-1	7/28/1999	**2,700**	**1,800**	**220**	**15,300**
MW-1	11/1/1999	**3,200**	**1,100**	**910**	**17,600**
MW-1	7/13/2006	**16**	6	**<1.0**	**57**
MW-1	1/3/2012	NS	NS	NS	NS
MW-1	4/2/2012	NS	NS	NS	NS
MW-1	6/13/2012	NS	NS	NS	NS
MW-1	10/2/2012	NS	NS	NS	NS
MW-1	12/6/2012	**1,670**	<10.0	**1,300**	**995**
MW-1	2/28/2013	NS-BP	NS-BP	NS-BP	NS-BP
MW-1	6/24/2013	NS-BP	NS-BP	NS-BP	NS-BP
MW-1	9/12/2013	NS-BP	NS-BP	NS-BP	NS-BP
MW-1	12/6/2013	NS-BP	NS-BP	NS-BP	NS-BP
MW-1	3/19/2014	NS-BP	NS-BP	NS-BP	NS-BP
MW-1	6/12/2014	NS-BP	NS-BP	NS-BP	NS-BP
MW-1	9/12/2014	NS-BP	NS-BP	NS-BP	NS-BP
MW-1	12/4/2014	NS-BP	NS-BP	NS-BP	NS-BP
MW-1	3/10/2015	NS-BP	NS-BP	NS-BP	NS-BP
MW-1	6/15/2015	NS-BP	NS-BP	NS-BP	NS-BP
MW-1	9/24/2015	NS-BP	NS-BP	NS-BP	NS-BP
MW-1	12/17/2015	NS-BP	NS-BP	NS-BP	NS-BP
MW-1	9/9/2016	NS-BP	NS-BP	NS-BP	NS-BP
MW-3	2/6/1997	**171.0**	735	149	**1,572**
MW-3	5/8/1997	**97**	27	115	302
MW-3	11/1/1999	**1,600**	**820**	640	**6,400**
MW-3	7/13/2006	**57**	6.3	<1.0	8
MW-3	1/3/2012	NS	NS	NS	NS
MW-3	4/2/2012	NS	NS	NS	NS
MW-3	6/13/2012	NS	NS	NS	NS
MW-3	10/2/2012	NS	NS	NS	NS
MW-3	12/6/2012	NS	NS	NS	NS
MW-3	2/28/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-3	6/24/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-3	9/26/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-3	12/6/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-3	3/19/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-3	6/12/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-3	9/12/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-3	12/4/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-3	3/10/2015	NS-IW	NS-IW	NS-IW	NS-IW
MW-3	6/15/2015	NS-IW	NS-IW	NS-IW	NS-IW
MW-3	9/24/2015	NS-IW	NS-IW	NS-IW	NS-IW
MW-3	12/17/2015	NS-IW	NS-IW	NS-IW	NS-IW
MW-3	9/9/2016	NS-IW	NS-IW	NS-IW	NS-IW

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FLORANCE #40
SAN JUAN COUNTY, NEW MEXICO
WILLIAMS FOUR CORNERS LLC

Well Name	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standard (µg/L)		**10**	**750**	**750**	**620**
MW-4	5/8/1997	<0.2	0.3	<0.2	0.5
MW-4	8/13/1997	<1.0	<1.0	<1.0	<1.0
MW-4	11/25/1997	<0.2	<0.2	<0.2	<0.4
MW-4	1/23/1998	<0.2	<0.2	<0.2	<0.4
MW-4	11/15/2000	<1.0	<1.0	<1.0	<1.0
MW-4	1/22/2001	**15.1**	46.1	14.7	306
MW-4	4/30/2001	**103**	3.85	2.38	42.5
MW-4	10/16/2001	<2.0	<2.0	<2.0	<2.0
MW-4	3/30/2002	**42**	13	19	150
MW-4	6/16/2002	**56**	32	68	470
MW-4	9/25/2002	**170**	85	170	**1,200**
MW-4	12/13/2002	**130**	39	180	**990**
MW-4	3/8/2005	**17**	15	170	**1,100**
MW-4	7/18/2006	**<20.0**	<20.0	230	**1,640**
MW-4	3/27/2008	<10.0	<10.0	285	**2,390**
MW-4	6/4/2008	<1.0	<10.0	232	**1,830**
MW-4	9/18/2008	<5.0	16.1	218	**1,640**
MW-4	12/5/2008	<5.0	<5.0	55.6	410
MW-4	3/28/2009	<5.0	<5.0	111	**732**
MW-4	7/8/2009	6.1	<5.0	91.2	587
MW-4	9/11/2009	<1.0	<1.0	39.9	199
MW-4	12/20/2009	<1.0	<1.0	28.1	145
MW-4	3/29/2010	<5.0	7.1	65.5	360
MW-4	6/23/2010	<5.0	<5.0	70.1	439
MW-4	9/10/2010	<1.0	<1.0	11.8	110
MW-4	12/4/2010	<5.0	<5.0	15.8	152
MW-4	3/11/2011	<5.0	<5.0	18.1	167
MW-4	6/14/2011	<1.0	<1.0	4.9	33.3
MW-4	9/12/2011	<1.0	<1.0	<1.0	7.9
MW-4	1/3/2012	<1.0	<1.0	<1.0	3.6
MW-4	4/2/2012	NS	NS	NS	NS
MW-4	6/13/2012	<1.0	<1.0	<1.0	<3.0
MW-4	10/2/2012	<5.0	<5.0	<5.0	<15.0
MW-4	12/6/2012	<1.0	<1.0	<1.0	<3.0
MW-4	2/28/2013	NSP	NSP	NSP	NSP
MW-4	6/24/2013	NSP	NSP	NSP	NSP
MW-4	9/26/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-4	12/6/2013	NSP	NSP	NSP	NSP
MW-4	3/19/2014	<1.0	<1.0	3.9	12
MW-4	6/12/2014	<2.0	<2.0	<2.0	7.2
MW-4	9/12/2014	<1.0	<1.0	<1.0	5.7
MW-4	12/4/2014	<2.0	<2.0	<2.0	5.2
MW-4	3/10/2015	<2.0	<2.0	<2.0	<4.0
MW-4	6/15/2015	<1.0	<1.0	<1.0	<2.0
MW-4	9/24/2015	<1.0	<1.0	<1.0	<1.5
MW-4	12/17/2015	<1.0	<1.0	<1.0	<2.0
MW-4	9/9/2016	NS	NS	NS	NS

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GROUNDWATER LABORATORY ANALYTICAL RESULTS

FLORANCE #40
SAN JUAN COUNTY, NEW MEXICO
WILLIAMS FOUR CORNERS LLC

Well Name	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standard (µg/L)		**10**	**750**	**750**	**620**
MW-5	5/8/1997	<2.0	0.3	<0.2	0.4
MW-5	8/13/1997	**3,683**	**12,739**	**1,143**	**16,086**
MW-5	11/25/1997	<0.2	<0.2	<0.2	<0.4
MW-5	1/23/1998	**4,299**	**14,477**	**1,120**	**18,281**
MW-5	2/9/1999	**3,500**	**5,100**	**100**	**17,700**
MW-5	4/21/1999	**3,300**	**3,400**	**790**	**16,400**
MW-5	3/21/2000	**730**	**220**	**1,200**	**11,600**
MW-5	6/14/2000	**800**	**33**	**980**	**5,890**
MW-5	11/15/2000	**953**	65	**1,600**	**8,010**
MW-5	1/22/2001	**818**	<1	**1,390**	**7,530**
MW-5	4/30/2001	**873**	124	**1,450**	**4,320**
MW-5	10/16/2001	**770**	73	**1,300**	**8,000**
MW-5	3/30/2002	**350**	12	**540**	**440**
MW-5	6/16/2002	**300**	ND	**290**	**110**
MW-5	9/25/2002	**250**	15	**110**	**330**
MW-5	12/13/2002	**100**	ND	**48**	**150**
MW-5	7/13/2006	**22**	8	<1.0	**45**
MW-5	1/3/2012	<1.0	<1.0	<1.0	3.6
MW-5	4/2/2012	NS	NS	NS	NS
MW-5	6/13/2012	<1.0	<1.0	<1.0	<3.0
MW-5	10/2/2012	<5.0	<5.0	<5.0	<15.0
MW-5	12/6/2012	<1.0	<1.0	<1.0	<3.0
MW-5	2/28/2013	NS-BP	NS-BP	NS-BP	NS-BP
MW-5	6/24/2013	NS-BP	NS-BP	NS-BP	NS-BP
MW-5	9/26/2013	NS-BP	NS-BP	NS-BP	NS-BP
MW-5	12/6/2013	NS-BP	NS-BP	NS-BP	NS-BP
MW-5	3/19/2014	NS-BP	NS-BP	NS-BP	NS-BP
MW-5	6/12/2014	NS-BP	NS-BP	NS-BP	NS-BP
MW-5	6/12/2014	NS-BP	NS-BP	NS-BP	NS-BP
MW-5	9/12/2014	NS-BP	NS-BP	NS-BP	NS-BP
MW-5	12/4/2014	NS-BP	NS-BP	NS-BP	NS-BP
MW-5	3/10/2015	NS-BP	NS-BP	NS-BP	NS-BP
MW-5	6/15/2015	NS-BP	NS-BP	NS-BP	NS-BP
MW-5	9/24/2015	NS-BP	NS-BP	NS-BP	NS-BP
MW-5	12/17/2015	NS-BP	NS-BP	NS-BP	NS-BP
MW-5	9/9/2016	NS-BP	NS-BP	NS-BP	NS-BP
MW-6	3/21/2000	**4,200**	**12,000**	**1,300**	**15,200**
MW-6	6/14/2000	**4,400**	**11,000**	**1,200**	**15,200**
MW-6	7/13/2006	**795**	**1,480**	**285**	**2,450**
MW-6	3/27/2008	**3,670**	**2,150**	**1,210**	**14,300**
MW-6	6/4/2008	**2,380**	**1,370**	580	**11,900**
MW-6	9/18/2008	**3,600**	278	**1,290**	**18,100**
MW-6	12/5/2008	**1,580**	85.3	**828**	**10,100**
MW-6	3/28/2009	**1,790**	95	**886**	**15,300**
MW-6	9/11/2009	**1,200**	95	523	**3,580**
MW-6	6/23/2010	**815**	75.3	32.3	**3,090**
MW-6	9/10/2010	**674**	129	28.7	**4,010**
MW-6	1/3/2012	NS	NS	NS	NS
MW-6	4/2/2012	**86.7**	28	**799**	**4,240**
MW-6	6/13/2012	NS	NS	NS	NS
MW-6	10/2/2012	NS	NS	NS	NS
MW-6	12/6/2012	NS	NS	NS	NS
MW-6	3/6/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-6	6/24/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-6	9/26/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-6	12/6/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-6	3/19/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-6	6/12/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-6	6/12/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-6	9/12/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-6	12/4/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-6	3/10/2015	NS-IW	NS-IW	NS-IW	NS-IW

TABLE 2
GROUNDWATER LABORATORY ANALYTICAL RESULTS

FLORANCE #40
SAN JUAN COUNTY, NEW MEXICO
WILLIAMS FOUR CORNERS LLC

Well Name	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standard (µg/L)		**10**	**750**	**750**	**620**
MW-6	6/15/2015	NS-IW	NS-IW	NS-IW	NS-IW
MW-6	9/24/2015	NS-IW	NS-IW	NS-IW	NS-IW
MW-6	12/17/2015	NS-IW	NS-IW	NS-IW	NS-IW
MW-6	9/9/2016	NS-IW	NS-IW	NS-IW	NS-IW
MW-7	3/21/2000	<0.5	<0.5	<0.5	5.9
MW-7	6/14/2000	<0.5	<0.5	<0.5	<1.5
MW-7	11/15/2000	<1.0	<1.0	<1.0	<1.0
MW-7	1/22/2001	<1.0	5.79	1.51	42.4
MW-7	4/30/2001	<1.0	<1.0	<1.0	<1.0
MW-7	10/16/2001	<1.0	<2.0	<2.0	3.2
MW-7	12/3/2003	<2.0	<2.0	<2.0	<5.0
MW-7	3/10/2004	ND	ND	ND	ND
MW-7	6/27/2004	ND	ND	ND	ND
MW-7	9/20/2004	ND	ND	ND	ND
MW-7	12/6/2004	<2.0	<2.0	<2.0	<5.0
MW-7	3/8/2005	<2.0	<2.0	<2.0	5.7
MW-7	6/19/2005	<2.0	<2.0	<2.0	<5.0
MW-7	9/15/2005	<2.0	<2.0	<2.0	<5.0
MW-7	11/30/2005	<2.0	<2.0	<2.0	<5.0
MW-7	7/13/2006	<1.0	<1.0	<1.0	<3.0
MW-7	3/27/2008	<1.0	<1.0	<1.0	<3.0
MW-7	6/4/2008	<1.0	<1.0	<1.0	<3.0
MW-7	9/18/2008	<1.0	<1.0	<1.0	<3.0
MW-7	12/5/2008	<1.0	<1.0	<1.0	<3.0
MW-7	3/28/2009	<1.0	<1.0	<1.0	<3.0
MW-7	7/8/2009	<1.0	<1.0	<1.0	<3.0
MW-7	9/11/2009	<1.0	<1.0	<1.0	<3.0
MW-7	12/20/2009	<1.0	<1.0	<1.0	<3.0
MW-7	3/29/2010	<5.0	<5.0	<5.0	<15.0
MW-7	6/23/2010	<1.0	<1.0	<1.0	<3.0
MW-7	9/10/2010	<1.0	<1.0	<1.0	<3.0
MW-7	12/4/2010	<1.0	<1.0	<1.0	<3.0
MW-7	3/11/2011	<1.0	<1.0	<1.0	<3.0
MW-7	6/14/2011	<1.0	<1.0	<1.0	<3.0
MW-7	9/12/2011	<1.0	<1.0	<1.0	<3.0
MW-7	1/3/2012	<1.0	<1.0	<1.0	<3.0
MW-7	4/2/2012	<1.0	<1.0	<1.0	<3.0
MW-7	6/13/2012	NS	NS	NS	NS
MW-7	10/2/2012	NS	NS	NS	NS
MW-7	12/6/2012	NS	NS	NS	NS
MW-7	2/28/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-7	6/24/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-7	9/26/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-7	12/6/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-7	3/19/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-7	6/12/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-7	9/12/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-7	12/4/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-7	3/10/2015	NS-IW	NS-IW	NS-IW	NS-IW
MW-7	6/15/2015	NS-IW	NS-IW	NS-IW	NS-IW
MW-7	9/24/2015	NS-IW	NS-IW	NS-IW	NS-IW
MW-7	12/17/2015	NS-IW	NS-IW	NS-IW	NS-IW
MW-7	9/9/2016	NS-IW	NS-IW	NS-IW	NS-IW

Notes:

Bold indicates sample exceeds NMWQCC standard
< - indicates result is less than laboratory reporting detection limit
µg/L - micrograms per liter
ND - analyte not detected
NMWQCC - New Mexico Water Quality Control Commission
NS - not sampled
NS- BP - not sampled, monitoring well is BP's responsibility
NS-IW - not sampled - Insufficient water
NSP - not sampled due to the presence of free phase hydrocarbons in the well

APPENDIX A

2016 ANNUAL FIELD NOTES

Location Florence #40 Date 9/9/16

Project / Client Quarterly Sampling

JSA/HASP/Sunny/Warm/T59

0913 AC onsite

	DTW	DTP	TD	sample time	purge volume
AMOC 0	61.70	-	-	-	-
MW-1	45.15	-	-	-	-
MW-3	DRY	-	41.65	-	-
MW-4	51.43	-	55.40	1020	0.85 gal
MW-5	DRY	-	52.90	-	-
MW-6	DRY	-	44.35	-	-
MW-7	Dry	-	36.56	-	-

- MW-3 : Dry, unable to sample
- MW-7 : Dry, unable to sample
- MW-4 : purged 0.85 gal, actual 1.94 gal. insufficient water to purge 3 well volumes
Sampled at 1020
1030 Began conducting Veg Survey

AC 9/9/16

Water Sample Collection Form

Sample Location	Florance #40	Client	Williams Field Services
Sample Date	9/9/16	Project Name	Florance #40
Sample Time	1020	Project #	034016002
Sample ID	MW-04	Sampler	Alexandria Crooks
Analyses	BTEX (8021)		
Matrix	Groundwater	Laboratory	Hall Environmental
Turn Around Time	Standard	Shipping Method	Hand delivery
Depth to Water	51.43	TD of Well	55.40
Time	0945	Depth to Product	NA

Purge Volume: 55.40 - 51.43 = 3.97 x .1631 = 0.64 x 3 = 1.94

*(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols*

Method of Purging: PVC Bailer

Method of Sampling: PVC Bailer

Time	Vol. Removed (gal)	Total Vol H_2O removed (gal)	pH (std. units)	Temp. (°C or ~~F~~)	Conductivity (µS or ~~mS~~)	Comments
0947	.25	.25	6.85	68.2	4.19	Clear / Slight cloud / no odor
0950	.50	.25	6.53	67.1	4.21	light brown / cloud / no odor
0952	.60	.10	6.49	66.5	4.25	NO change
0955	.70	.10	6.48	65.9	4.29	NO change
0958	.80	.10	6.45	65.7	4.23	NO Change
1000	.85	.05	6.46	65.3	4.25	Well bailed dry
1020						grab sample

Comments: Could not purge 3 well volumes before well went dry. Took sample at 1020

Describe Deviations from SOP: Could not purge 3 well volumes

Signature: Alex Crooks **Date:** 9/9/16