

**REVIEWED**

By Mike Buchanan at 9:08 am, Jan 09, 2024

April 7, 2022

Mr. Bradford Billings
State of New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

**Re: 2021 Annual Monitoring and Remedial Activities Report
ConocoPhillips – Maljamar E&P
Lea County, New Mexico (AP-115-1)**

Mr. Billings:

This report details the continuing groundwater monitoring and remedial activities at the ConocoPhillips Company (COP) Maljamar E&P site located in Lea County, New Mexico, approximately 3.5 miles south-southwest of Maljamar, New Mexico, and adjacent to the north of the Maljamar Gas Plant operated by Phillips 66. The Site location is shown in Figure 1. The Site was assigned the identifier AP-115-1 by the New Mexico Oil Conservation District (NMOCD). The Site and surrounding areas are rural grasslands used primarily for oil and gas production.

Review of the 2021 Annual Monitoring and Remedial Activities Report for the Maljamar E&P:

Content Satisfactory

1. Conoco Phillips must consider and propose other remediation options, for example, reverse osmosis, ion exchange, etc. The NMOCD does not agree that natural attenuation is sufficient to abate groundwater at the site with significantly high TDS, Sulfate and Chloride contamination.
2. Please submit a work plan with a proposed remediation plan to implement at the site.
3. Continue to conduct groundwater monitoring on a quarterly or semi-annual basis.
4. Submit the 2022 and 2023 Annual Groundwater report to NMOCD by April 1, 2024.

1.0 BACKGROUND AND PREVIOUS INVESTIGATIONS

Between 2000 and 2005, the NMOCD conducted several field investigations at the Maljamar Gas Plant. On July 6, 2006, a release of approximately 23 barrels of produced water was discovered at the Site. The release flowed into a drainage way west of the MCA Battery 2 and affected an area approximately 750 feet long and 30 feet wide. Groundwater samples and water level data were collected, surface and borehole geophysical surveys were performed, and an aquifer pump test was performed.

On October 17, 2014, a letter was submitted to the NMOCD listing wells that would be managed by COP following the split of ConocoPhillips upstream and downstream assets. Groundwater monitoring wells managed as part of this Site included MW-11, MW-12, MW-13, MW-14, and MW-19, and extraction well EW-1. Based on the distance from the Site, MW-18 and MW-20 were considered to be unrelated and would no longer be monitored. A map of the extraction and monitor wells is shown in Figure 2.

In June 2007, the groundwater extraction well EW-1 was installed adjacent to monitor well MW-12, and an additional extraction well (EW-2) was installed in September 2017, but was off-line intermittently between 2018 and 2020 due to power and maintenance issues. The pump was replaced, and the system was back in full operation by May 2021. The extracted groundwater is pumped into a flowline connected to an off-site 210 barrel tank and transported to the MCA Unit Battery #2.

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www.tetrattech.com



Phase separated hydrocarbons (PSH) have not been historically found at the site. Historical groundwater analytical results have documented concentrations of chloride, nitrate, sulfate, and total dissolved solids (TDS) above the applicable New Mexico Water Quality Control Commission (NMWQCC) standards in samples collected from EW-1, EW-2, MW-11, MW-12, MW-13, and MW-14. From 2009 through 2011, concentrations of benzene exceeded the applicable NMWQCC standard in MW-11.

2.0 HYDROGEOLOGY

The water-bearing zone consists of the Pliocene-age Ogallala aquifer under unconfined conditions at the site. The Ogallala aquifer is located at the base of the Ogallala Formation. In general, the Ogallala Formation consists of quartz sand and gravel that is poorly to well-cemented with calcium carbonate and contains minor amounts of clay. The wells installed at the site were drilled to depths of approximately 120 feet bgs with static groundwater water levels of approximately 90 feet bgs.

3.0 2021 GROUNDWATER MONITORING

3.1 Methodology

Prior to purging the wells, each well was gauged to measure the depth to groundwater and phase separated hydrocarbons (PSH), if any. The water levels and the PSH measurements are summarized in Table 1. The annual groundwater monitoring event occurred on August 10, 2021. No PSH was identified in the wells in 2021. All wells were gauged except EW-2, as the extraction pump was in operation at this well. However, a sample port was added to EW-2 and therefore a groundwater sample was collected. All wells in the well network for the Site were sampled. Each well was sampled utilizing low flow sampling techniques.

Groundwater samples were collected and analyzed for the following:

- bromide by EPA Method 300.0;
- chloride by EPA Method 300.0;
- sulfate by EPA Method 300.0; and
- Total dissolved solids (TDS) by SM Method 2540C.

Groundwater samples were transported to Pace Analytical Services, LLC, in Allen, TX under chain-of-custody documentation for the 2021 sampling event. Table 2 presents a summary of the groundwater analytical results screened against NMWQCC groundwater quality standards. The laboratory analytical report and chain-of-custody documentation are presented in Appendix A, chloride, sulfate, and TDS concentration maps are provided in Figures 4 through 6, and chloride concentration trend graphs are presented in Appendix B.



3.2 2021 Groundwater Gradient

A groundwater gradient map was generated for the August 2021 sampling event and is included as Figure 3. The hydraulic gradient for the aquifer was generally consistent with historical data to the northeast with an average hydraulic gradient of 0.00689 in 2021.

3.3 2021 Groundwater Analytical Results

During the August 2021 monitoring event, all wells (EW-1, EW-2, MW-11, MW-12, MW-13, MW-14, and MW-19) were sampled.

The concentrations of constituents of concern (COCs) in the following wells were reported at concentrations greater than NMWQCC standards:

- Chloride was reported in EW-1 (27,500 mg/L), EW-2 (27,500 mg/L), MW-11 (1,210 mg/L), and MW-12 (39,700 mg/L) at concentrations greater than the NMWQCC standard of 250 mg/L;
- Sulfate was reported in MW-12 (1,500 mg/L) and MW-14 (862 mg/L) at concentrations greater than the NMWQCC standard of 600 mg/L; and
- TDS was reported in EW-1 (38,100 mg/L), EW-2 (37,500 mg/L), MW-11 (3,180 mg/L), MW-12 (70,500 mg/L), MW-13 (1,100 mg/L), and MW-14 (1,290 mg/L) at concentrations greater than the NMWQCC standard of 1,000 mg/L.

Chloride concentrations appear to be generally stable or decreasing in the majority of the wells. No NMWQCC standard exceedances were reported in MW-19 during 2021.

4.0 GROUNDWATER EXTRACTION

Between 2018 and 2021, the groundwater extraction pump at EW-2 was intermittently operational and in need of repairs. On March 23, 2021, the extraction pump was removed from EW-2 and replaced with a new pump. Throughout April and May 2021, several additional repairs were made to the system, including the installation of a pump saver, piping repair and replacement, and meter replacement. The system was back to fully operational by May 28, 2021.

Between May and December 2021, the groundwater extraction system removed approximately 28,000 gallons of groundwater. The extracted groundwater is pumped into a flowline connected to an off-site 210-barrel tank and transported to the MCA Unit Battery #2 for disposal by injection.

5.0 WORK PLAN

Groundwater extraction and disposal has been used as a remediation technique at the Site for approximately 15 years with limited success in significantly reducing concentrations of constituents of concern (COCs). Therefore, Tetra Tech believes that long-term natural attenuation/dilution is the primary mechanism that



2021 Annual Groundwater Monitoring and Remedial Activities Report
ConocoPhillips - Maljamar E&P, AP-115-1
Lea County, New Mexico
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will reduce concentrations of chloride, sulfate, and TDS in groundwater, therefore, Tetra Tech proposes shutting off the extraction system currently in operation at the Site. If significant changes to COC concentrations are identified in the future, the operation of the extraction system can be re-evaluated. Groundwater monitoring and sampling of the on-site wells will be continued on an annual basis, with annual reporting to the New Mexico Oil Conservation Division.

If you have any questions please call Julie Evans at (432) 258-3451.

Sincerely,
Tetra Tech, Inc.

A handwritten signature in cursive script that reads 'Julie Evans'.

Julie Evans
Project Manager

Reviewed by:

A handwritten signature in cursive script that reads 'C. Terhune'.

Charles H. Terhune IV, P.G.
Senior Project Manager

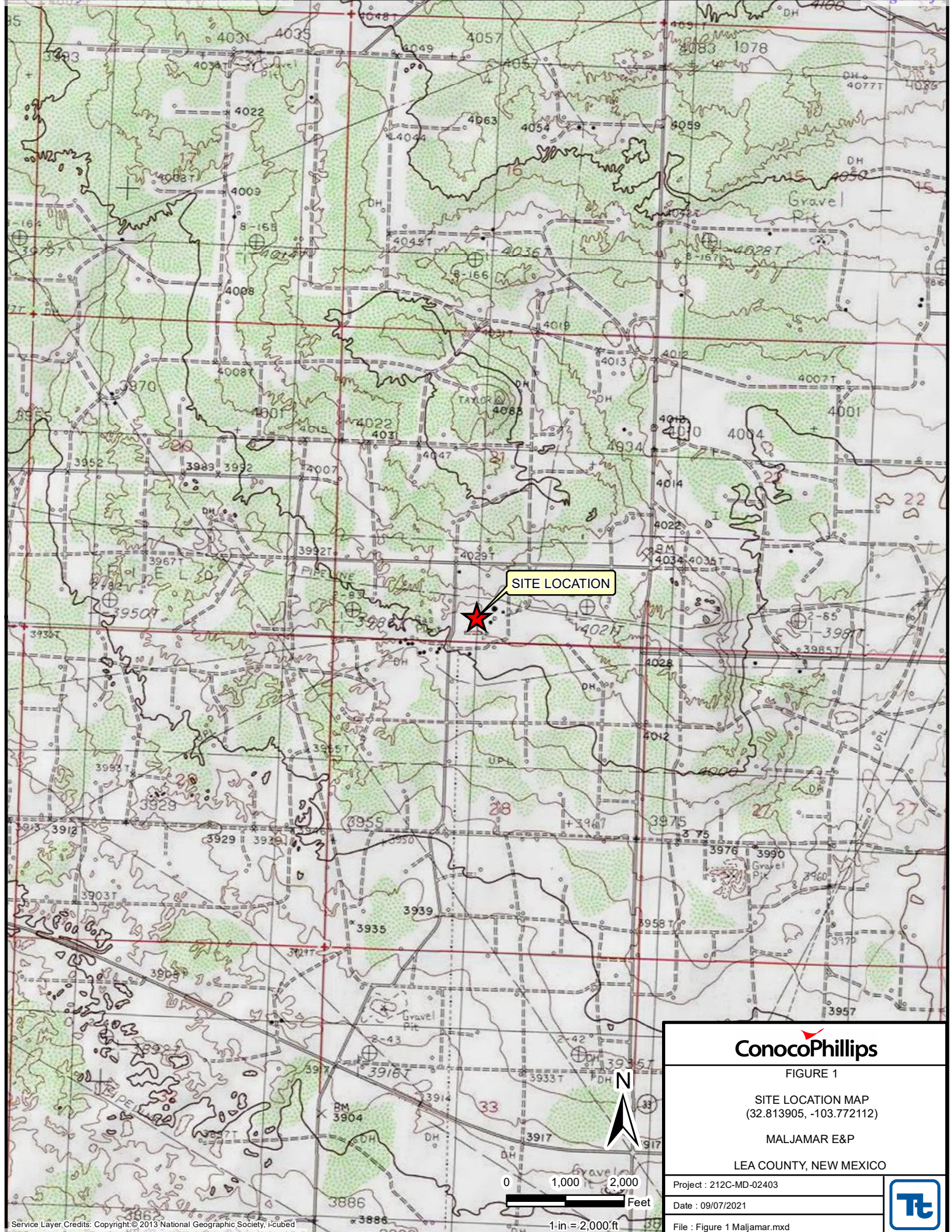
cc: Ms. Jenni Fortunato – ConocoPhillips

Attachments:

Figure 1	Site Location Map
Figure 2	Site Map
Figure 3	Groundwater Gradient Map – August 2021
Figure 4	Chloride Concentration Map – August 2021
Figure 5	Sulfate Concentration Map – August 2021
Figure 6	TDS Concentration Map – August 2021
Table 1	Summary of Groundwater Elevations and PSH Thickness
Table 2	Summary of Groundwater Analytical Data
Table 3	Summary of Soil Analytical Data
Appendix A	Laboratory Analytical Data
Appendix B	Chloride Concentration Trend Graphs



FIGURES



ConocoPhillips

FIGURE 1

SITE LOCATION MAP
(32.813905, -103.772112)

MALJAMAR E&P

LEA COUNTY, NEW MEXICO

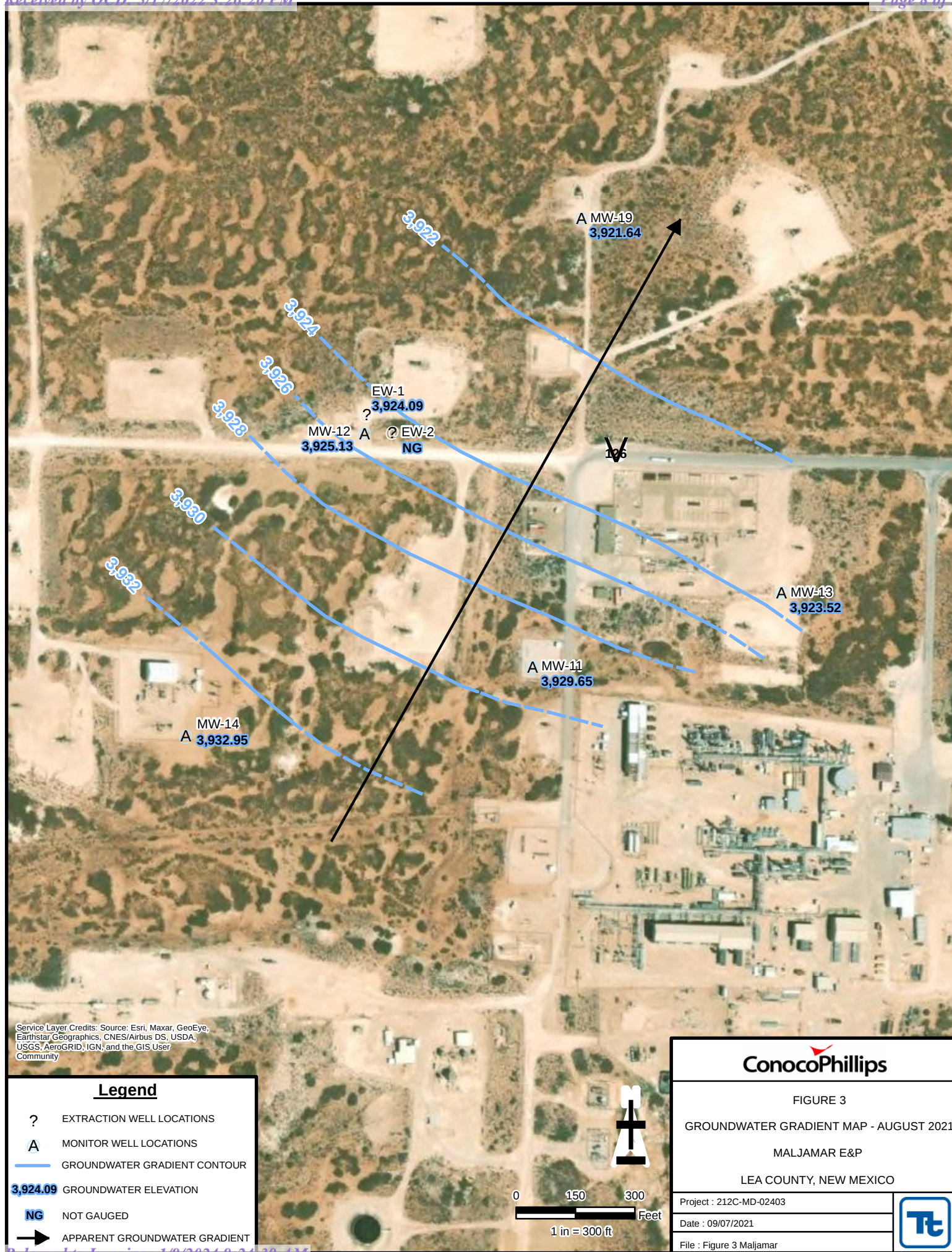
Project : 212C-MD-02403

Date : 09/07/2021

File : Figure 1 Maljamar.mxd









Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- ? EXTRACTION WELL LOCATIONS
- A MONITOR WELL LOCATIONS
- 1,210 CHLORIDE CONCENTRATION (mg/L)
- *NMWQCC REMEDIATION LIMIT FOR CHLORIDE = 250 mg/L



0 150 300
Feet
1 in = 300 ft

ConocoPhillips

FIGURE 4

CHLORIDE CONCENTRATION MAP - AUGUST 2021

MALJAMAR E&P

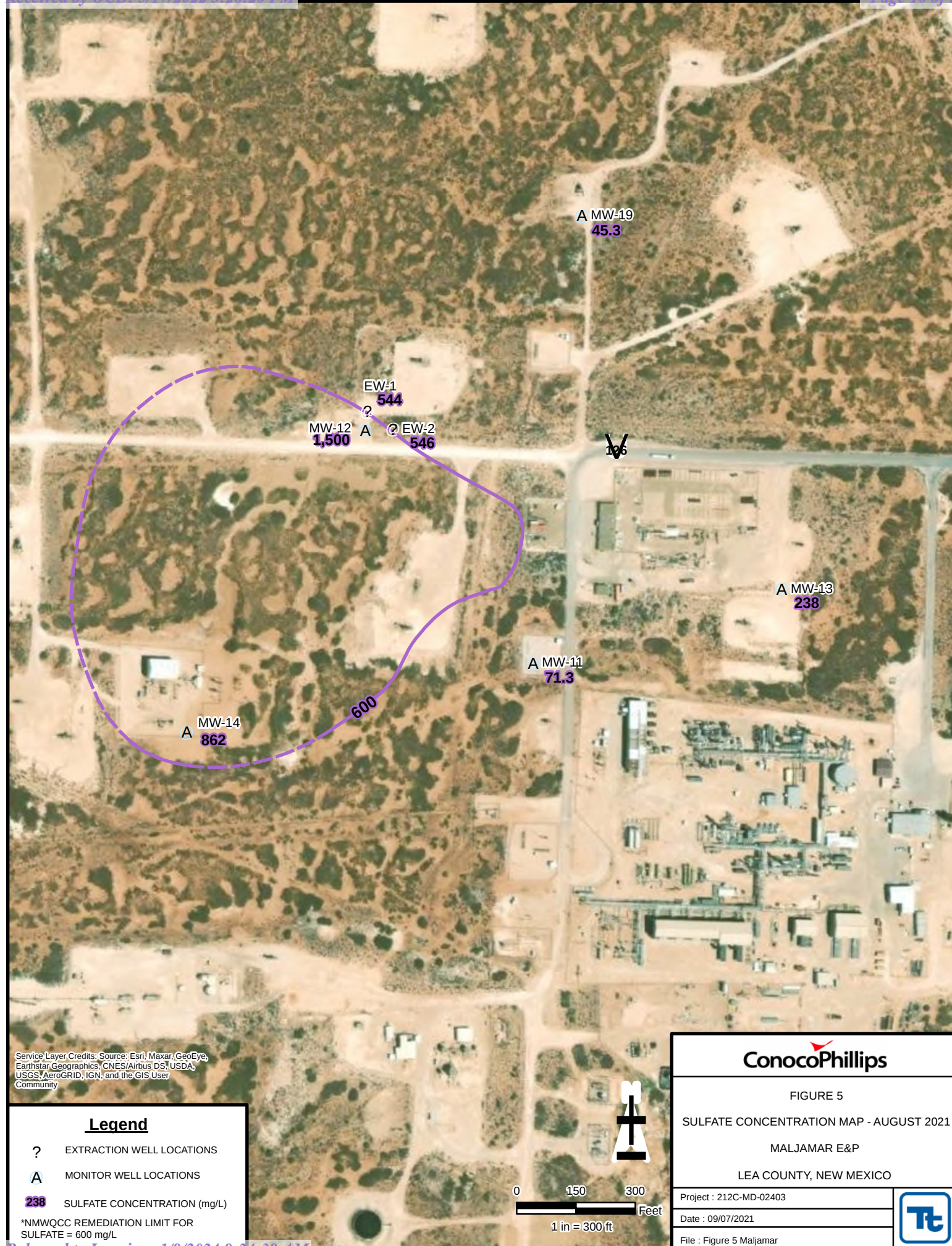
LEA COUNTY, NEW MEXICO

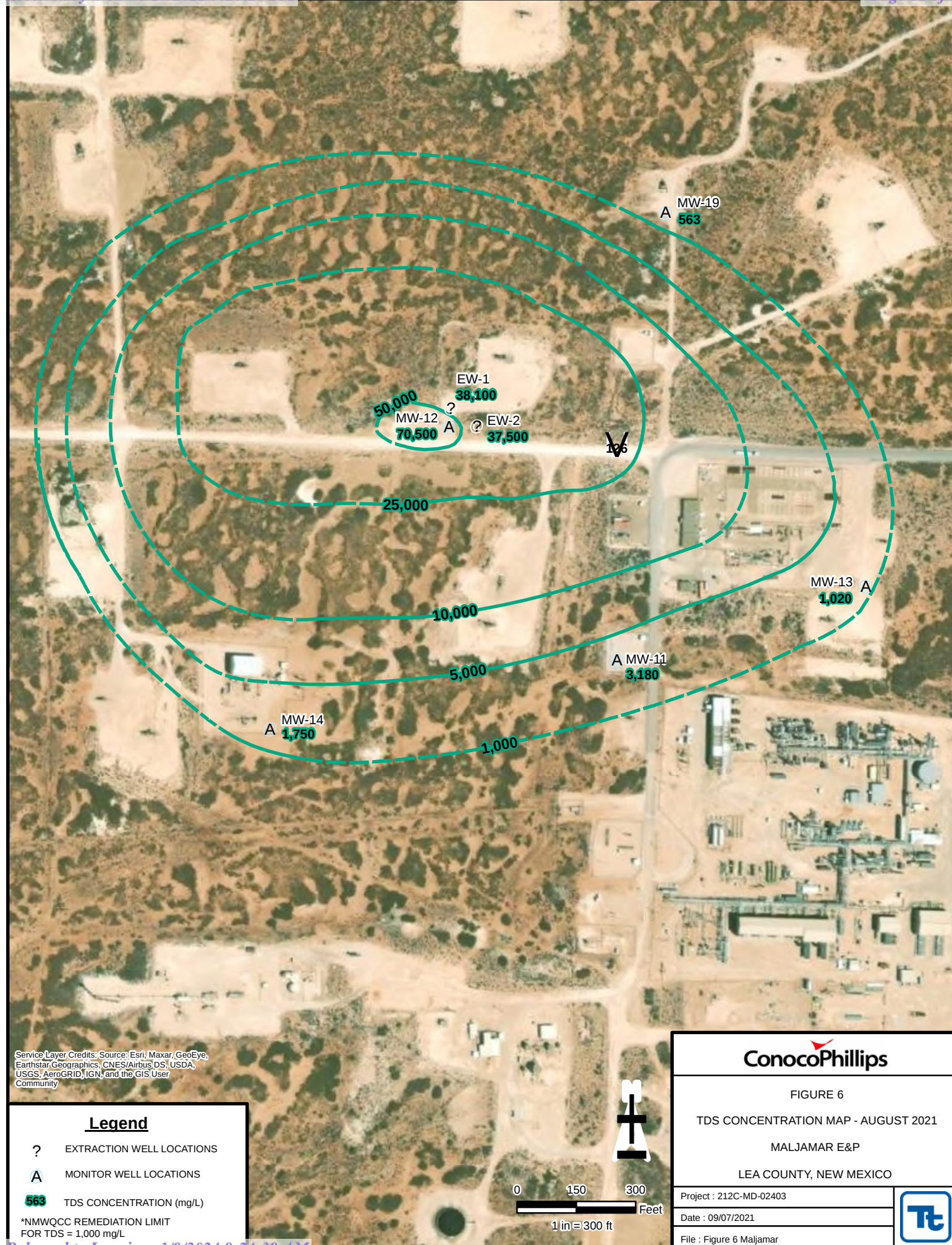
Project : 212C-MD-02403

Date : 09/07/2021

File : Figure 4 Maljamar









TABLES

Table 1
Summary of Groundwater Elevations and PSH Thickness
ConocoPhillips - Maljamar E&P
Lea County, New Mexico

Well Identification	Date Measured	Well Total Depth (feet)	Product (feet below TOC)	Water level (feet below TOC)	PSH Thickness (feet)	Product Elevation (feet AMSL)	Top of Casing Elevation (feet AMSL)	Groundwater Elevation (feet)
EW-1	6/27/2007	-	-	92.58	-	-	4,022.04	3,929.46
	7/19/2007	-	-	93.27	-	-	4,022.04	3,928.77
	10/24/2011	-	-	96.44	-	-	4,022.04	3,925.60
	8/3/2017	125	not gauged					
	8/16/2018	-	-	94.87	-	-	4,022.04	3,927.17
	8/16/2019	-	-	93.88	-	-	4,022.04	3,928.16
	8/18/2020	-	-	93.58	-	-	4,022.04	3,928.46
	8/10/2021	-	-	97.95	-	-	4,022.04	3,924.09
EW-2	10/4/2017	140	-	95.04	-	-	4,022.76	3,927.72
	8/16/2018	not gauged - extraction pump						
	8/15/2019	not gauged - extraction pump						
	8/18/2020	not gauged - extraction pump						
	8/10/2021	not gauged - extraction pump						
MW-11	12/13/2001	-	-	81.38	-	-	4,015.54	3,934.16
	3/22/2002	-	-	83.60	-	-	4,015.54	3,931.94
	9/16/2002	-	-	83.82	-	-	4,015.54	3,931.72
	9/20/2002	-	-	83.70	-	-	4,015.54	3,931.84
	9/4/2003	-	-	84.50	-	-	4,015.54	3,931.04
	4/5/2004	-	-	84.54	-	-	4,015.54	3,931.00
	5/17/2004	-	-	84.64	-	-	4,015.54	3,930.90
	5/24/2004	-	-	84.55	-	-	4,015.54	3,930.99
	6/1/2004	-	-	84.61	-	-	4,015.54	3,930.93
	6/7/2004	-	-	84.58	-	-	4,015.54	3,930.96
	6/15/2004	-	-	84.69	-	-	4,015.54	3,930.85
	6/21/2004	-	-	84.72	-	-	4,015.54	3,930.82
	6/28/2004	-	-	84.99	-	-	4,015.54	3,930.55
	7/6/2004	-	-	84.83	-	-	4,015.54	3,930.71
	7/12/2004	-	-	84.96	-	-	4,015.54	3,930.58
	7/19/2004	-	-	84.90	-	-	4,015.54	3,930.64
	7/26/2004	-	-	85.11	-	-	4,015.54	3,930.43
	8/2/2004	-	-	84.96	-	-	4,015.54	3,930.58
	8/10/2004	-	-	85.09	-	-	4,015.54	3,930.45
	8/16/2004	-	-	85.06	-	-	4,015.54	3,930.48
	8/23/2004	-	-	84.83	-	-	4,015.54	3,930.71
	8/30/2004	-	-	85.06	-	-	4,015.54	3,930.48
	9/8/2004	-	-	85.14	-	-	4,015.54	3,930.40
	10/8/2004	-	-	85.12	-	-	4,015.54	3,930.42
	12/30/2004	-	-	85.12	-	-	4,015.54	3,930.42
	1/17/2005	-	-	85.52	-	-	4,015.54	3,930.02
	2/9/2005	-	-	85.33	-	-	4,015.54	3,930.21
	3/9/2005	-	-	85.45	-	-	4,015.54	3,930.09
	4/5/2005	-	-	85.15	-	-	4,015.54	3,930.39
	5/10/2005	-	-	85.21	-	-	4,015.54	3,930.33
	6/8/2005	-	-	85.31	-	-	4,015.54	3,930.23
	7/5/2005	-	-	85.59	-	-	4,015.54	3,929.95
	8/8/2005	-	-	85.50	-	-	4,015.54	3,930.04
	9/14/2005	-	-	85.42	-	-	4,015.54	3,930.12
	10/12/2005	-	-	85.54	-	-	4,015.54	3,930.00
	11/9/2005	-	-	85.62	-	-	4,015.54	3,929.92
	12/14/2005	-	-	85.41	-	-	4,015.54	3,930.13
	1/12/2006	-	-	85.26	-	-	4,015.54	3,930.28
	2/2/2006	-	-	85.23	-	-	4,015.54	3,930.31
	3/7/2006	-	-	85.44	-	-	4,015.54	3,930.10

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MW-11 continued	4/5/2006	-	-	85.38	-	-	4,015.54	3,930.16
	5/8/2006	-	-	85.33	-	-	4,015.54	3,930.21
	6/5/2006	-	-	85.47	-	-	4,015.54	3,930.07
	7/11/2006	-	-	85.48	-	-	4,015.54	3,930.06
	8/16/2006	-	-	85.52	-	-	4,015.54	3,930.02
	9/7/2006	-	-	85.43	-	-	4,015.54	3,930.11
	10/11/2006	-	-	85.41	-	-	4,015.54	3,930.13
	11/8/2006	-	-	85.31	-	-	4,015.54	3,930.23
	12/4/2006	-	-	85.88	-	-	4,015.54	3,929.66
	1/4/2007	-	-	85.20	-	-	4,015.54	3,930.34
	2/27/2007	-	-	85.16	-	-	4,015.54	3,930.38
	3/20/2007	-	-	85.33	-	-	4,015.54	3,930.21
	4/17/2007	-	-	85.17	-	-	4,015.54	3,930.37
	5/7/2007	-	-	85.40	-	-	4,015.54	3,930.14
	6/27/2007	-	-	85.27	-	-	4,015.54	3,930.27
	7/19/2007	-	-	85.13	-	-	4,015.54	3,930.41
	8/21/2007	-	-	85.08	-	-	4,015.54	3,930.46
	9/17/2007	-	-	85.05	-	-	4,015.54	3,930.49
	10/16/2007	-	-	84.97	-	-	4,015.54	3,930.57
	11/20/2007	-	-	85.02	-	-	4,015.54	3,930.52
	12/21/2007	-	-	84.81	-	-	4,015.54	3,930.73
	1/22/2008	-	-	85.27	-	-	4,015.54	3,930.27
	2/27/2008	-	-	85.20	-	-	4,015.54	3,930.34
	3/25/2008	-	-	84.99	-	-	4,015.54	3,930.55
	4/29/2008	-	-	84.98	-	-	4,015.54	3,930.56
	5/5/2008	-	-	84.93	-	-	4,015.54	3,930.61
	6/10/2008	-	-	84.94	-	-	4,015.54	3,930.60
	7/15/2008	-	-	84.90	-	-	4,015.54	3,930.64
	8/19/2008	-	-	84.88	-	-	4,015.54	3,930.66
	9/16/2008	-	-	85.13	-	-	4,015.54	3,930.41
	10/15/2008	-	-	85.03	-	-	4,015.54	3,930.51
	11/12/2008	-	-	84.72	-	-	4,015.54	3,930.82
	12/11/2008	-	-	84.92	-	-	4,015.54	3,930.62
	1/13/2009	-	-	85.15	-	-	4,015.54	3,930.39
	2/11/2009	-	-	84.85	-	-	4,015.54	3,930.69
	3/10/2009	-	-	84.63	-	-	4,015.54	3,930.91
	4/13/2009	-	-	84.79	-	-	4,015.54	3,930.75
	5/1/2009	-	-	84.64	-	-	4,015.54	3,930.90
	6/8/2009	-	-	84.51	-	-	4,015.54	3,931.03
	7/13/2009	-	-	84.61	-	-	4,015.54	3,930.93
	8/10/2009	-	-	84.60	-	-	4,015.54	3,930.94
	9/15/2009	-	-	84.44	-	-	4,015.54	3,931.10
	10/6/2009	-	-	84.34	-	-	4,015.54	3,931.20
	11/9/2009	-	-	84.58	-	-	4,015.54	3,930.96
	12/23/2009	-	-	84.06	-	-	4,015.54	3,931.48
	1/20/2010	-	-	83.99	-	-	4,015.54	3,931.55
	2/9/2010	-	-	84.64	-	-	4,015.54	3,930.90
	3/9/2010	-	-	84.23	-	-	4,015.54	3,931.31
	4/12/2010	-	-	84.54	-	-	4,015.54	3,931.00
	5/24/2010	-	-	84.34	-	-	4,015.54	3,931.20
	6/14/2010	-	-	84.48	-	-	4,015.54	3,931.06
	7/20/2010	-	-	84.54	-	-	4,015.54	3,931.00
	8/11/2010	-	-	84.57	-	-	4,015.54	3,930.97
	9/21/2010	-	-	84.56	-	-	4,015.54	3,930.98
	10/20/2010	-	-	84.62	-	-	4,015.54	3,930.92

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MW-11 continued	11/8/2010	-	-	84.48	-	-	4,015.54	3,931.06
	12/7/2010	-	-	84.58	-	-	4,015.54	3,930.96
	1/18/2011	-	-	84.61	-	-	4,015.54	3,930.93
	2/8/2011	-	-	84.38	-	-	4,015.54	3,931.16
	3/8/2011	-	-	84.40	-	-	4,015.54	3,931.14
	4/13/2011	-	-	84.61	-	-	4,015.54	3,930.93
	5/23/2011	-	-	84.54	-	-	4,015.54	3,931.00
	6/28/2011	-	-	84.85	-	-	4,015.54	3,930.69
	7/19/2011	-	-	84.73	-	-	4,015.54	3,930.81
	8/31/2011	-	-	84.61	-	-	4,015.54	3,930.93
	9/27/2011	-	-	84.66	-	-	4,015.54	3,930.88
	10/24/2011	-	-	84.79	-	-	4,015.54	3,930.75
	11/29/2011	-	-	84.99	-	-	4,015.54	3,930.55
	12/23/2011	-	-	84.83	-	-	4,015.54	3,930.71
	1/31/2012	-	-	84.77	-	-	4,015.54	3,930.77
	2/29/2012	-	-	84.81	-	-	4,015.54	3,930.73
	3/27/2012	-	-	84.85	-	-	4,015.54	3,930.69
	4/18/2012	-	-	84.91	-	-	4,015.54	3,930.63
	5/21/2012	-	-	85.15	-	-	4,015.54	3,930.39
	7/17/2012	-	-	84.97	-	-	4,015.54	3,930.57
	8/21/2012	-	-	84.97	-	-	4,015.54	3,930.57
	9/17/2012	-	-	84.83	-	-	4,015.54	3,930.71
	12/13/2012	-	-	85.15	-	-	4,015.54	3,930.39
	1/9/2013	-	-	85.24	-	-	4,015.54	3,930.30
	2/6/2013	-	-	85.03	-	-	4,015.54	3,930.51
	3/6/2013	-	-	85.33	-	-	4,015.54	3,930.21
	5/1/2013	-	-	85.11	-	-	4,015.54	3,930.43
	6/5/2013	-	-	85.29	-	-	4,015.54	3,930.25
	7/3/2013	-	-	85.51	-	-	4,015.54	3,930.03
	7/30/2013	-	-	85.55	-	-	4,015.54	3,929.99
	8/15/2013	-	-	85.58	-	-	4,015.54	3,929.96
	10/2/2013	-	-	85.50	-	-	4,015.54	3,930.04
	12/23/2013	-	-	85.86	-	-	4,015.54	3,929.68
	1/9/2014	-	-	85.46	-	-	4,015.54	3,930.08
	2/12/2014	-	-	85.73	-	-	4,015.54	3,929.81
	3/19/2014	-	-	85.85	-	-	4,015.54	3,929.69
	4/3/2014	-	-	85.46	-	-	4,015.54	3,930.08
	5/7/2014	-	-	85.46	-	-	4,015.54	3,930.08
	6/5/2014	-	-	85.54	-	-	4,015.54	3,930.00
	7/1/2014	-	-	85.76	-	-	4,015.54	3,929.78
	7/22/2014	-	-	85.90	-	-	4,015.54	3,929.64
	8/5/2014	-	-	85.88	-	-	4,015.54	3,929.66
	9/4/2014	-	-	85.73	-	-	4,015.54	3,929.81
	10/2/2014	-	-	85.77	-	-	4,015.54	3,929.77
	11/6/2014	-	-	86.22	-	-	4,015.54	3,929.32
	12/4/2014	-	-	85.79	-	-	4,015.54	3,929.75
	8/24/2015	-	-	86.21	-	-	4,015.54	3,929.33
	1/20/2016	-	-	85.91	-	-	4,015.54	3,929.63
	2/16/2016	-	-	85.94	-	-	4,015.54	3,929.60
	3/15/2016	-	-	85.86	-	-	4,015.54	3,929.68
	4/20/2016	-	-	85.90	-	-	4,015.54	3,929.64
	5/17/2016	-	-	86.00	-	-	4,015.54	3,929.54
	8/16/2016	-	-	85.85	-	-	4,015.54	3,929.69
	9/20/2016	-	-	85.75	-	-	4,015.54	3,929.79
	10/18/2016	-	-	85.56	-	-	4,015.54	3,929.98

Table 1
Summary of Groundwater Elevations and PSH Thickness
ConocoPhillips - Maljamar E&P
Lea County, New Mexico

Well Identification	Date Measured	Well Total Depth (feet)	Product (feet below TOC)	Water level (feet below TOC)	PSH Thickness (feet)	Product Elevation (feet AMSL)	Top of Casing Elevation (feet AMSL)	Groundwater Elevation (feet)
MW-11 continued	12/20/2016	-	-	85.82	-	-	4,015.54	3,929.72
	8/3/2017	120	-	86.32	-	-	4,015.54	3,929.22
	8/16/2018	-	-	84.80	-	-	4,015.54	3,930.74
	8/15/2019	-	-	84.85	-	-	4,015.54	3,930.69
	8/18/2020	119.7	-	84.90	-	-	4,015.54	3,930.64
	8/10/2021	-	-	85.89	-	-	4,015.54	3,929.65
MW-12	12/13/2001	-	-	91.43	-	-	4,022.71	3,931.28
	3/22/2002	-	-	94.38	-	-	4,022.71	3,928.33
	9/16/2002	-	-	94.51	-	-	4,022.71	3,928.20
	9/20/2002	-	-	94.31	-	-	4,022.71	3,928.40
	4/5/2004	-	-	94.59	-	-	4,022.71	3,928.12
	5/17/2004	-	-	94.60	-	-	4,022.71	3,928.11
	5/24/2004	-	-	94.51	-	-	4,022.71	3,928.20
	6/1/2004	-	-	94.53	-	-	4,022.71	3,928.18
	6/7/2004	-	-	94.45	-	-	4,022.71	3,928.26
	6/15/2004	-	-	94.56	-	-	4,022.71	3,928.15
	6/21/2004	-	-	94.57	-	-	4,022.71	3,928.14
	6/28/2004	-	-	94.84	-	-	4,022.71	3,927.87
	7/6/2004	-	-	94.70	-	-	4,022.71	3,928.01
	7/12/2004	-	-	94.80	-	-	4,022.71	3,927.91
	7/19/2004	-	-	94.74	-	-	4,022.71	3,927.97
	7/26/2004	-	-	94.92	-	-	4,022.71	3,927.79
	8/2/2004	-	-	94.77	-	-	4,022.71	3,927.94
	8/10/2004	-	-	94.88	-	-	4,022.71	3,927.83
	8/16/2004	-	-	94.86	-	-	4,022.71	3,927.85
	8/23/2004	-	-	94.60	-	-	4,022.71	3,928.11
	8/30/2004	-	-	94.82	-	-	4,022.71	3,927.89
	9/8/2004	-	-	94.89	-	-	4,022.71	3,927.82
	10/8/2004	-	-	94.83	-	-	4,022.71	3,927.88
	12/30/2004	-	-	94.72	-	-	4,022.71	3,927.99
	1/17/2005	-	-	95.06	-	-	4,022.71	3,927.65
	2/9/2005	-	-	94.94	-	-	4,022.71	3,927.77
	3/9/2005	-	-	94.92	-	-	4,022.71	3,927.79
	4/5/2005	-	-	94.58	-	-	4,022.71	3,928.13
	5/10/2005	-	-	94.61	-	-	4,022.71	3,928.10
	6/8/2005	-	-	94.58	-	-	4,022.71	3,928.13
	7/5/2005	-	-	94.84	-	-	4,022.71	3,927.87
	8/8/2005	-	-	94.78	-	-	4,022.71	3,927.93
	9/14/2005	-	-	94.71	-	-	4,022.71	3,928.00
	10/12/2005	-	-	94.82	-	-	4,022.71	3,927.89
	11/9/2005	-	-	94.92	-	-	4,022.71	3,927.79
	12/14/2005	-	-	94.70	-	-	4,022.71	3,928.01
	1/12/2006	-	-	94.50	-	-	4,022.71	3,928.21
	2/2/2006	-	-	94.58	-	-	4,022.71	3,928.13
	3/7/2006	-	-	94.76	-	-	4,022.71	3,927.95
	4/5/2006	-	-	94.67	-	-	4,022.71	3,928.04
	5/8/2006	-	-	94.61	-	-	4,022.71	3,928.10
	6/5/2006	-	-	94.77	-	-	4,022.71	3,927.94
	7/11/2006	-	-	94.84	-	-	4,022.71	3,927.87
	8/16/2006	-	-	94.93	-	-	4,022.71	3,927.78
	9/7/2006	-	-	94.86	-	-	4,022.71	3,927.85
	10/11/2006	-	-	94.86	-	-	4,022.71	3,927.85
	11/8/2006	-	-	94.72	-	-	4,022.71	3,927.99
	12/4/2006	-	-	95.35	-	-	4,022.71	3,927.36

Table 1
Summary of Groundwater Elevations and PSH Thickness
ConocoPhillips - Maljamar E&P
Lea County, New Mexico

Well Identification	Date Measured	Well Total Depth (feet)	Product (feet below TOC)	Water level (feet below TOC)	PSH Thickness (feet)	Product Elevation (feet AMSL)	Top of Casing Elevation (feet AMSL)	Groundwater Elevation (feet)
MW-12 continued	1/4/2007	-	-	94.68	-	-	4,022.71	3,928.03
	2/27/2007	-	-	94.73	-	-	4,022.71	3,927.98
	3/20/2007	-	-	94.93	-	-	4,022.71	3,927.78
	4/17/2007	-	-	94.73	-	-	4,022.71	3,927.98
	5/7/2007	-	-	94.95	-	-	4,022.71	3,927.76
	6/27/2007	-	-	94.42	-	-	4,022.71	3,928.29
	7/19/2007	-	-	94.71	-	-	4,022.71	3,928.00
	8/21/2007	-	-	94.77	-	-	4,022.71	3,927.94
	9/17/2007	-	-	94.90	-	-	4,022.71	3,927.81
	10/16/2007	-	-	98.83	-	-	4,022.71	3,923.88
	11/20/2007	-	-	99.07	-	-	4,022.71	3,923.64
	12/21/2007	-	-	98.82	-	-	4,022.53	3,923.71
	1/22/2008	-	-	97.14	-	-	4,022.53	3,925.39
	2/27/2008	-	-	97.32	-	-	4,022.53	3,925.21
	3/25/2008	-	-	98.91	-	-	4,022.53	3,923.62
	4/29/2008	-	-	98.87	-	-	4,022.53	3,923.66
	5/5/2008	-	-	98.82	-	-	4,022.53	3,923.71
	6/10/2008	-	-	98.63	-	-	4,022.53	3,923.90
	7/15/2008	-	-	98.65	-	-	4,022.53	3,923.88
	8/19/2008	-	-	98.43	-	-	4,022.53	3,924.10
	9/16/2008	-	-	98.92	-	-	4,022.53	3,923.61
	10/15/2008	-	-	98.84	-	-	4,022.53	3,923.69
	11/12/2008	-	-	98.52	-	-	4,022.53	3,924.01
	12/11/2008	-	-	98.48	-	-	4,022.53	3,924.05
	1/13/2009	-	-	98.86	-	-	4,022.53	3,923.67
	2/11/2009	-	-	98.52	-	-	4,022.53	3,924.01
	3/10/2009	-	-	98.29	-	-	4,022.53	3,924.24
	4/13/2009	-	-	98.44	-	-	4,022.53	3,924.09
	5/1/2009	-	-	98.27	-	-	4,022.53	3,924.26
	6/8/2009	-	-	98.25	-	-	4,022.53	3,924.28
	7/13/2009	-	-	98.28	-	-	4,022.53	3,924.25
	8/10/2009	-	-	98.27	-	-	4,022.53	3,924.26
	9/15/2009	-	-	98.04	-	-	4,022.53	3,924.49
	10/6/2009	-	-	94.93	-	-	4,022.53	3,927.60
	11/9/2009	-	-	97.97	-	-	4,022.53	3,924.56
	12/23/2009	-	-	97.47	-	-	4,022.53	3,925.06
	1/20/2010	-	-	97.36	-	-	4,022.53	3,925.17
	2/9/2010	-	-	97.98	-	-	4,022.53	3,924.55
	3/9/2010	-	-	97.58	-	-	4,022.53	3,924.95
	4/12/2010	-	-	97.85	-	-	4,022.53	3,924.68
	5/24/2010	-	-	97.57	-	-	4,022.53	3,924.96
	6/14/2010	-	-	98.32	-	-	4,022.53	3,924.21
	7/20/2010	-	-	98.23	-	-	4,022.53	3,924.30
	8/11/2010	-	-	98.22	-	-	4,022.53	3,924.31
	9/21/2010	-	-	98.01	-	-	4,022.53	3,924.52
	10/20/2010	-	-	98.13	-	-	4,022.53	3,924.40
	11/8/2010	-	-	97.97	-	-	4,022.53	3,924.56
	12/7/2010	-	-	97.93	-	-	4,022.53	3,924.60
	1/18/2011	-	-	97.81	-	-	4,022.53	3,924.72
	2/8/2011	-	-	96.88	-	-	4,022.53	3,925.65
	3/8/2011	-	-	94.42	-	-	4,022.53	3,928.11
	4/13/2011	-	-	94.36	-	-	4,022.53	3,928.17
	5/23/2011	-	-	94.20	-	-	4,022.53	3,928.33
	6/28/2011	-	-	97.80	-	-	4,022.53	3,924.73
	7/19/2011	-	-	97.74	-	-	4,022.53	3,924.79

Table 1
Summary of Groundwater Elevations and PSH Thickness
ConocoPhillips - Maljamar E&P
Lea County, New Mexico

Well Identification	Date Measured	Well Total Depth (feet)	Product (feet below TOC)	Water level (feet below TOC)	PSH Thickness (feet)	Product Elevation (feet AMSL)	Top of Casing Elevation (feet AMSL)	Groundwater Elevation (feet)
MW-12 continued	8/31/2011	-	-	97.65	-	-	4,022.53	3,924.88
	9/27/2011	-	-	97.67	-	-	4,022.53	3,924.86
	10/24/2011	-	-	96.44	-	-	4,022.53	3,926.09
	11/29/2011	-	-	98.06	-	-	4,022.53	3,924.47
	12/23/2011	-	-	97.87	-	-	4,022.53	3,924.66
	1/31/2012	-	-	97.73	-	-	4,022.53	3,924.80
	2/29/2012	-	-	97.83	-	-	4,022.53	3,924.70
	3/27/2012	-	-	97.78	-	-	4,022.53	3,924.75
	4/18/2012	-	-	97.80	-	-	4,022.53	3,924.73
	5/21/2012	-	-	98.02	-	-	4,022.53	3,924.51
	7/17/2012	-	-	94.66	-	-	4,022.53	3,927.87
	8/21/2012	-	-	97.65	-	-	4,022.53	3,924.88
	9/17/2012	-	-	97.62	-	-	4,022.53	3,924.91
	12/13/2012	-	-	97.87	-	-	4,022.53	3,924.66
	1/9/2013	-	-	98.05	-	-	4,022.53	3,924.48
	2/6/2013	-	-	94.89	-	-	4,022.53	3,927.64
	3/6/2013	-	-	94.80	-	-	4,022.53	3,927.73
	5/1/2013	-	-	94.36	-	-	4,022.53	3,928.17
	6/5/2013	-	-	97.82	-	-	4,022.53	3,924.71
	7/3/2013	-	-	98.07	-	-	4,022.53	3,924.46
	7/30/2013	-	-	98.16	-	-	4,022.53	3,924.37
	8/15/2013	-	-	98.36	-	-	4,022.53	3,924.17
	10/2/2013	-	-	98.05	-	-	4,022.53	3,924.48
	12/23/2013	-	-	98.45	-	-	4,022.53	3,924.08
	1/9/2014	-	-	97.90	-	-	4,022.53	3,924.63
	2/12/2014	-	-	98.05	-	-	4,022.53	3,924.48
	3/19/2014	-	-	98.48	-	-	4,022.53	3,924.05
	4/3/2014	-	-	98.07	-	-	4,022.53	3,924.46
	5/7/2014	-	-	98.09	-	-	4,022.53	3,924.44
	6/5/2014	-	-	98.13	-	-	4,022.53	3,924.40
	7/1/2014	-	-	98.33	-	-	4,022.53	3,924.20
	7/22/2014	-	-	98.45	-	-	4,022.53	3,924.08
	8/5/2014	-	-	98.58	-	-	4,022.53	3,923.95
	9/4/2014	-	-	98.42	-	-	4,022.53	3,924.11
	10/2/2014	-	-	98.43	-	-	4,022.53	3,924.10
	11/6/2014	-	-	98.79	-	-	4,022.53	3,923.74
	12/4/2014	-	-	98.36	-	-	4,022.53	3,924.17
	4/21/2015	-	-	94.69	-	-	4,022.53	3,927.84
	5/15/2015	-	-	94.62	-	-	4,022.53	3,927.91
	6/11/2015	-	-	94.62	-	-	4,022.53	3,927.91
	8/24/2015	-	-	95.00	-	-	4,022.53	3,927.53
	11/23/2015	-	-	94.87	-	-	4,022.53	3,927.66
	1/20/2016	-	-	94.79	-	-	4,022.53	3,927.74
	2/16/2016	-	-	94.80	-	-	4,022.53	3,927.73
	3/15/2016	-	-	94.74	-	-	4,022.53	3,927.79
	4/20/2016	-	-	94.79	-	-	4,022.53	3,927.74
	5/17/2016	-	-	95.25	-	-	4,022.53	3,927.28
	8/16/2016	-	-	94.90	-	-	4,022.53	3,927.63
	9/20/2016	-	-	94.89	-	-	4,022.53	3,927.64
	10/18/2016	-	-	94.74	-	-	4,022.53	3,927.79
	12/20/2016	-	-	95.00	-	-	4,022.53	3,927.53
	8/3/2017	120	-	94.72	-	-	4,022.53	3,927.81
	8/16/2018	-	-	94.57	-	-	4,022.53	3,927.96
	8/16/2019	123	-	94.43	-	-	4,022.53	3,928.10
	8/18/2020	122.85	-	94.27	-	-	4,022.53	3,928.26

Table 1
Summary of Groundwater Elevations and PSH Thickness
ConocoPhillips - Maljamar E&P
Lea County, New Mexico

Well Identification	Date Measured	Well Total Depth (feet)	Product (feet below TOC)	Water level (feet below TOC)	PSH Thickness (feet)	Product Elevation (feet AMSL)	Top of Casing Elevation (feet AMSL)	Groundwater Elevation (feet)
MW-12 continued	8/10/2021	-	-	97.40	-	-	4,022.53	3,925.13
MW-13	12/13/2001	-	-	103.76	-	-	4,031.96	3,928.20
	3/22/2002	-	-	107.18	-	-	4,031.96	3,924.78
	9/16/2002	-	-	107.58	-	-	4,031.96	3,924.38
	9/20/2002	-	-	107.48	-	-	4,031.96	3,924.48
	4/5/2004	-	-	108.04	-	-	4,031.96	3,923.92
	5/17/2004	-	-	108.06	-	-	4,031.96	3,923.90
	5/24/2004	-	-	107.97	-	-	4,031.96	3,923.99
	6/1/2004	-	-	107.97	-	-	4,031.96	3,923.99
	6/7/2004	-	-	107.89	-	-	4,031.96	3,924.07
	6/15/2004	-	-	107.99	-	-	4,031.96	3,923.97
	6/21/2004	-	-	107.98	-	-	4,031.96	3,923.98
	6/28/2004	-	-	108.29	-	-	4,031.96	3,923.67
	7/6/2004	-	-	108.12	-	-	4,031.96	3,923.84
	7/12/2004	-	-	108.22	-	-	4,031.96	3,923.74
	7/19/2004	-	-	108.16	-	-	4,031.96	3,923.80
	7/26/2004	-	-	108.34	-	-	4,031.96	3,923.62
	8/2/2004	-	-	108.17	-	-	4,031.96	3,923.79
	8/10/2004	-	-	108.29	-	-	4,031.96	3,923.67
	8/16/2004	-	-	108.27	-	-	4,031.96	3,923.69
	8/23/2004	-	-	108.01	-	-	4,031.96	3,923.95
	8/30/2004	-	-	108.24	-	-	4,031.96	3,923.72
	9/8/2004	-	-	108.31	-	-	4,031.96	3,923.65
	10/8/2004	-	-	108.23	-	-	4,031.96	3,923.73
	12/30/2004	-	-	108.12	-	-	4,031.96	3,923.84
	1/17/2005	-	-	108.49	-	-	4,031.96	3,923.47
	2/9/2005	-	-	108.38	-	-	4,031.96	3,923.58
	3/9/2005	-	-	108.44	-	-	4,031.96	3,923.52
	4/5/2005	-	-	108.04	-	-	4,031.96	3,923.92
	5/10/2005	-	-	108.09	-	-	4,031.96	3,923.87
	6/8/2005	-	-	108.18	-	-	4,031.96	3,923.78
	7/5/2005	-	-	108.47	-	-	4,031.96	3,923.49
	8/8/2005	-	-	108.37	-	-	4,031.96	3,923.59
	9/14/2005	-	-	108.28	-	-	4,031.96	3,923.68
	10/12/2005	-	-	108.42	-	-	4,031.96	3,923.54
	11/9/2005	-	-	108.51	-	-	4,031.96	3,923.45
	12/14/2005	-	-	108.31	-	-	4,031.96	3,923.65
	1/12/2006	-	-	108.16	-	-	4,031.96	3,923.80
	2/2/2006	-	-	108.17	-	-	4,031.96	3,923.79
	3/7/2006	-	-	108.33	-	-	4,031.96	3,923.63
	4/5/2006	-	-	108.22	-	-	4,031.96	3,923.74
	5/8/2006	-	-	108.18	-	-	4,031.96	3,923.78
	6/5/2006	-	-	108.30	-	-	4,031.96	3,923.66
	7/11/2006	-	-	108.34	-	-	4,031.96	3,923.62
	8/16/2006	-	-	108.43	-	-	4,031.96	3,923.53
	9/7/2006	-	-	108.32	-	-	4,031.96	3,923.64
	10/11/2006	-	-	108.31	-	-	4,031.96	3,923.65
	11/8/2006	-	-	108.18	-	-	4,031.96	3,923.78
	12/4/2006	-	-	108.79	-	-	4,031.96	3,923.17
	1/4/2007	-	-	108.11	-	-	4,031.96	3,923.85
	2/27/2007	-	-	108.16	-	-	4,031.96	3,923.80
	3/20/2007	-	-	108.37	-	-	4,031.96	3,923.59
	4/17/2007	-	-	108.13	-	-	4,031.96	3,923.83
	5/7/2007	-	-	108.37	-	-	4,031.96	3,923.59

Table 1
Summary of Groundwater Elevations and PSH Thickness
ConocoPhillips - Maljamar E&P
Lea County, New Mexico

Well Identification	Date Measured	Well Total Depth (feet)	Product (feet below TOC)	Water level (feet below TOC)	PSH Thickness (feet)	Product Elevation (feet AMSL)	Top of Casing Elevation (feet AMSL)	Groundwater Elevation (feet)
MW-13 continued	6/27/2007	-	-	108.23	-	-	4,031.96	3,923.73
	7/19/2007	-	-	108.13	-	-	4,031.96	3,923.83
	8/21/2007	-	-	108.10	-	-	4,031.96	3,923.86
	9/17/2007	-	-	108.08	-	-	4,031.96	3,923.88
	10/16/2007	-	-	108.03	-	-	4,031.96	3,923.93
	11/20/2007	-	-	108.11	-	-	4,031.96	3,923.85
	12/21/2007	-	-	107.92	-	-	4,031.96	3,924.04
	1/22/2008	-	-	108.42	-	-	4,031.96	3,923.54
	2/27/2008	-	-	108.40	-	-	4,031.96	3,923.56
	3/25/2008	-	-	108.22	-	-	4,031.96	3,923.74
	4/29/2008	-	-	108.22	-	-	4,031.96	3,923.74
	5/5/2008	-	-	108.22	-	-	4,031.96	3,923.74
	6/10/2008	-	-	108.23	-	-	4,031.96	3,923.73
	7/15/2008	-	-	108.23	-	-	4,031.96	3,923.73
	8/19/2008	-	-	108.24	-	-	4,031.96	3,923.72
	9/16/2008	-	-	108.52	-	-	4,031.96	3,923.44
	10/15/2008	-	-	108.44	-	-	4,031.96	3,923.52
	11/12/2008	-	-	108.15	-	-	4,031.96	3,923.81
	12/11/2008	-	-	108.34	-	-	4,031.96	3,923.62
	1/13/2009	-	-	108.55	-	-	4,031.96	3,923.41
	2/11/2009	-	-	108.27	-	-	4,031.96	3,923.69
	3/10/2009	-	-	108.05	-	-	4,031.96	3,923.91
	4/13/2009	-	-	108.20	-	-	4,031.96	3,923.76
	5/1/2009	-	-	108.02	-	-	4,031.96	3,923.94
	6/8/2009	-	-	107.90	-	-	4,031.96	3,924.06
	7/13/2009	-	-	107.97	-	-	4,031.96	3,923.99
	8/10/2009	-	-	107.98	-	-	4,031.96	3,923.98
	9/15/2009	-	-	107.83	-	-	4,031.96	3,924.13
	10/6/2009	-	-	107.73	-	-	4,031.96	3,924.23
	11/9/2009	-	-	107.95	-	-	4,031.96	3,924.01
	12/23/2009	-	-	107.45	-	-	4,031.96	3,924.51
	1/20/2010	-	-	107.40	-	-	4,031.96	3,924.56
	2/9/2010	-	-	108.03	-	-	4,031.96	3,923.93
	3/9/2010	-	-	107.65	-	-	4,031.96	3,924.31
	4/12/2010	-	-	107.94	-	-	4,031.96	3,924.02
	5/24/2010	-	-	107.76	-	-	4,031.96	3,924.20
	6/14/2010	-	-	107.90	-	-	4,031.96	3,924.06
	7/20/2010	-	-	107.98	-	-	4,031.96	3,923.98
	8/11/2010	-	-	108.00	-	-	4,031.96	3,923.96
	9/21/2010	-	-	107.90	-	-	4,031.96	3,924.06
	10/20/2010	-	-	108.08	-	-	4,031.96	3,923.88
	11/8/2010	-	-	107.93	-	-	4,031.96	3,924.03
	12/7/2010	-	-	107.99	-	-	4,031.96	3,923.97
	1/18/2011	-	-	108.03	-	-	4,031.96	3,923.93
	2/8/2011	-	-	108.77	-	-	4,031.96	3,923.19
	3/8/2011	-	-	107.82	-	-	4,031.96	3,924.14
	4/13/2011	-	-	108.03	-	-	4,031.96	3,923.93
	5/23/2011	-	-	108.01	-	-	4,031.96	3,923.95
	6/28/2011	-	-	108.28	-	-	4,031.96	3,923.68
	7/19/2011	-	-	108.19	-	-	4,031.96	3,923.77
	8/31/2011	-	-	108.05	-	-	4,031.96	3,923.91
	9/27/2011	-	-	108.09	-	-	4,031.96	3,923.87
	10/24/2011	-	-	108.19	-	-	4,031.96	3,923.77
	11/29/2011	-	-	108.31	-	-	4,031.96	3,923.65
	12/23/2011	-	-	108.13	-	-	4,031.96	3,923.83

Table 1
Summary of Groundwater Elevations and PSH Thickness
ConocoPhillips - Maljamar E&P
Lea County, New Mexico

Well Identification	Date Measured	Well Total Depth (feet)	Product (feet below TOC)	Water level (feet below TOC)	PSH Thickness (feet)	Product Elevation (feet AMSL)	Top of Casing Elevation (feet AMSL)	Groundwater Elevation (feet)
MW-13 continued	1/31/2012	-	-	108.14	-	-	4,031.96	3,923.82
	2/29/2012	-	-	108.06	-	-	4,031.96	3,923.90
	3/27/2012	-	-	108.05	-	-	4,031.96	3,923.91
	4/18/2012	-	-	108.12	-	-	4,031.96	3,923.84
	5/21/2012	-	-	108.36	-	-	4,031.96	3,923.60
	7/17/2012	-	-	108.18	-	-	4,031.96	3,923.78
	8/21/2012	-	-	108.21	-	-	4,031.96	3,923.75
	9/17/2012	-	-	108.08	-	-	4,031.96	3,923.88
	12/13/2012	-	-	108.40	-	-	4,031.96	3,923.56
	1/9/2013	-	-	108.49	-	-	4,031.96	3,923.47
	2/6/2013	-	-	108.28	-	-	4,031.96	3,923.68
	3/6/2013	-	-	108.55	-	-	4,031.96	3,923.41
	6/5/2013	-	-	108.44	-	-	4,031.96	3,923.52
	7/3/2013	-	-	108.61	-	-	4,031.96	3,923.35
	7/30/2013	-	-	108.65	-	-	4,031.96	3,923.31
	8/15/2013	-	-	108.65	-	-	4,031.96	3,923.31
	10/2/2013	-	-	108.75	-	-	4,031.96	3,923.21
	12/23/2013	-	-	108.83	-	-	4,031.96	3,923.13
	1/9/2014	-	-	118.34	-	-	4,031.96	3,913.62
	2/12/2014	-	-	108.53	-	-	4,031.96	3,923.43
	3/19/2014	-	-	108.50	-	-	4,031.96	3,923.46
	4/3/2014	-	-	108.05	-	-	4,031.96	3,923.91
	5/7/2014	-	-	107.90	-	-	4,031.96	3,924.06
	6/5/2014	-	-	107.92	-	-	4,031.96	3,924.04
	7/1/2014	-	-	108.01	-	-	4,031.96	3,923.95
	7/22/2014	-	-	108.12	-	-	4,031.96	3,923.84
	8/5/2014	-	-	108.06	-	-	4,031.96	3,923.90
	9/4/2014	-	-	107.93	-	-	4,031.96	3,924.03
	10/2/2014	-	-	107.93	-	-	4,031.96	3,924.03
	11/6/2014	-	-	108.31	-	-	4,031.96	3,923.65
	12/4/2014	-	-	107.93	-	-	4,031.96	3,924.03
	8/24/2015	-	-	108.50	-	-	4,031.96	3,923.46
	1/20/2016	-	-	108.60	-	-	4,031.96	3,923.36
	2/16/2016	-	-	108.65	-	-	4,031.96	3,923.31
	3/15/2016	-	-	108.65	-	-	4,031.96	3,923.31
	4/20/2016	-	-	108.74	-	-	4,031.96	3,923.22
	5/17/2016	-	-	108.92	-	-	4,031.96	3,923.04
	8/16/2016	-	-	108.92	-	-	4,031.96	3,923.04
	9/20/2016	-	-	108.86	-	-	4,031.96	3,923.10
	10/18/2016	-	-	108.74	-	-	4,031.96	3,923.22
	12/20/2016	-	-	109.02	-	-	4,031.96	3,922.94
	8/3/2017	127	-	108.80	-	-	4,031.96	3,923.16
	8/16/2018	-	-	108.40	-	-	4,031.96	3,923.56
	8/15/2019	-	-	108.27	-	-	4,031.96	3,923.69
	8/18/2020	125.1	-	108.37	-	-	4,031.96	3,923.59
	8/10/2021	-	-	108.44	-	-	4,031.96	3,923.52
MW-14	12/13/2001	-	-	74.67	-	-	4,006.98	3,932.31
	3/22/2002	-	-	74.67	-	-	4,006.98	3,932.31
	9/16/2002	-	-	74.56	-	-	4,006.98	3,932.42
	9/20/2002	-	-	74.40	-	-	4,006.98	3,932.58
	4/5/2004	-	-	75.20	-	-	4,006.98	3,931.78
	5/17/2004	-	-	75.25	-	-	4,006.98	3,931.73
	5/24/2004	-	-	75.17	-	-	4,006.98	3,931.81
	6/1/2004	-	-	75.18	-	-	4,006.98	3,931.80

Table 1
Summary of Groundwater Elevations and PSH Thickness
ConocoPhillips - Maljamar E&P
Lea County, New Mexico

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MW-14 continued	6/7/2004	-	-	75.12	-	-	4,006.98	3,931.86
	6/15/2004	-	-	75.23	-	-	4,006.98	3,931.75
	6/21/2004	-	-	75.24	-	-	4,006.98	3,931.74
	6/28/2004	-	-	75.55	-	-	4,006.98	3,931.43
	7/6/2004	-	-	75.37	-	-	4,006.98	3,931.61
	7/12/2004	-	-	75.49	-	-	4,006.98	3,931.49
	7/19/2004	-	-	75.43	-	-	4,006.98	3,931.55
	7/26/2004	-	-	75.64	-	-	4,006.98	3,931.34
	8/2/2004	-	-	75.49	-	-	4,006.98	3,931.49
	8/10/2004	-	-	75.62	-	-	4,006.98	3,931.36
	8/16/2004	-	-	75.59	-	-	4,006.98	3,931.39
	8/23/2004	-	-	75.32	-	-	4,006.98	3,931.66
	8/30/2004	-	-	75.57	-	-	4,006.98	3,931.41
	9/8/2004	-	-	75.65	-	-	4,006.98	3,931.33
	10/8/2004	-	-	75.61	-	-	4,006.98	3,931.37
	12/30/2004	-	-	75.45	-	-	4,006.98	3,931.53
	1/17/2005	-	-	75.74	-	-	4,006.98	3,931.24
	2/9/2005	-	-	75.46	-	-	4,006.98	3,931.52
	3/9/2005	-	-	75.37	-	-	4,006.98	3,931.61
	4/5/2005	-	-	74.84	-	-	4,006.98	3,932.14
	5/10/2005	-	-	74.72	-	-	4,006.98	3,932.26
	6/8/2005	-	-	74.71	-	-	4,006.98	3,932.27
	7/5/2005	-	-	74.93	-	-	4,006.98	3,932.05
	8/8/2005	-	-	74.78	-	-	4,006.98	3,932.20
	9/14/2005	-	-	74.62	-	-	4,006.98	3,932.36
	10/12/2005	-	-	74.69	-	-	4,006.98	3,932.29
	11/9/2005	-	-	74.69	-	-	4,006.98	3,932.29
	12/14/2005	-	-	74.29	-	-	4,006.98	3,932.69
	1/12/2006	-	-	74.01	-	-	4,006.98	3,932.97
	2/2/2006	-	-	73.91	-	-	4,006.98	3,933.07
	3/7/2006	-	-	73.97	-	-	4,006.98	3,933.01
	4/5/2006	-	-	73.80	-	-	4,006.98	3,933.18
	5/8/2006	-	-	73.69	-	-	4,006.98	3,933.29
	6/5/2006	-	-	73.78	-	-	4,006.98	3,933.20
	7/11/2006	-	-	73.83	-	-	4,006.98	3,933.15
	8/16/2006	-	-	73.94	-	-	4,006.98	3,933.04
	9/7/2006	-	-	72.93	-	-	4,006.98	3,934.05
	10/11/2006	-	-	73.95	-	-	4,006.98	3,933.03
	11/8/2006	-	-	73.88	-	-	4,006.98	3,933.10
	12/4/2006	-	-	74.53	-	-	4,006.98	3,932.45
	1/4/2007	-	-	73.79	-	-	4,006.98	3,933.19
	2/27/2007	-	-	73.73	-	-	4,006.98	3,933.25
	3/20/2007	-	-	73.90	-	-	4,006.98	3,933.08
	4/17/2007	-	-	73.68	-	-	4,006.98	3,933.30
	5/7/2007	-	-	73.88	-	-	4,006.98	3,933.10
	6/27/2007	-	-	73.80	-	-	4,006.98	3,933.18
	7/19/2007	-	-	73.69	-	-	4,006.98	3,933.29
	8/21/2007	-	-	73.61	-	-	4,006.98	3,933.37
	9/17/2007	-	-	73.54	-	-	4,006.98	3,933.44
	10/16/2007	-	-	73.39	-	-	4,006.98	3,933.59
	11/20/2007	-	-	73.34	-	-	4,006.98	3,933.64
	12/21/2007	-	-	73.05	-	-	4,006.98	3,933.93
	1/22/2008	-	-	73.44	-	-	4,006.98	3,933.54
	2/27/2008	-	-	73.37	-	-	4,006.98	3,933.61
	3/25/2008	-	-	73.17	-	-	4,006.98	3,933.81

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MW-14 continued	4/29/2008	-	-	73.16	-	-	4,006.98	3,933.82
	5/5/2008	-	-	73.14	-	-	4,006.98	3,933.84
	6/10/2008	-	-	73.16	-	-	4,006.98	3,933.82
	7/15/2008	-	-	73.25	-	-	4,006.98	3,933.73
	8/19/2008	-	-	73.32	-	-	4,006.98	3,933.66
	9/16/2008	-	-	73.68	-	-	4,006.98	3,933.30
	10/15/2008	-	-	73.67	-	-	4,006.98	3,933.31
	11/12/2008	-	-	73.44	-	-	4,006.98	3,933.54
	12/11/2008	-	-	73.69	-	-	4,006.98	3,933.29
	1/13/2009	-	-	73.89	-	-	4,006.98	3,933.09
	2/11/2009	-	-	73.57	-	-	4,006.98	3,933.41
	3/10/2009	-	-	73.34	-	-	4,006.98	3,933.64
	4/13/2009	-	-	73.43	-	-	4,006.98	3,933.55
	5/1/2009	-	-	73.30	-	-	4,006.98	3,933.68
	6/8/2009	-	-	73.15	-	-	4,006.98	3,933.83
	7/13/2009	-	-	73.29	-	-	4,006.98	3,933.69
	8/10/2009	-	-	73.32	-	-	4,006.98	3,933.66
	9/15/2009	-	-	73.22	-	-	4,006.98	3,933.76
	10/6/2009	-	-	73.15	-	-	4,006.98	3,933.83
	11/9/2009	-	-	73.43	-	-	4,006.98	3,933.55
	12/23/2009	-	-	72.93	-	-	4,006.98	3,934.05
	1/20/2010	-	-	72.88	-	-	4,006.98	3,934.10
	2/9/2010	-	-	73.48	-	-	4,006.98	3,933.50
	3/9/2010	-	-	73.09	-	-	4,006.98	3,933.89
	4/12/2010	-	-	73.40	-	-	4,006.98	3,933.58
	5/24/2010	-	-	73.24	-	-	4,006.98	3,933.74
	6/14/2010	-	-	73.40	-	-	4,006.98	3,933.58
	7/20/2010	-	-	73.53	-	-	4,006.98	3,933.45
	8/11/2010	-	-	73.59	-	-	4,006.98	3,933.39
	9/21/2010	-	-	73.55	-	-	4,006.98	3,933.43
	10/20/2010	-	-	73.74	-	-	4,006.98	3,933.24
	11/8/2010	-	-	73.62	-	-	4,006.98	3,933.36
	12/7/2010	-	-	73.73	-	-	4,006.98	3,933.25
	1/18/2011	-	-	73.73	-	-	4,006.98	3,933.25
	2/8/2011	-	-	73.53	-	-	4,006.98	3,933.45
	3/8/2011	-	-	73.54	-	-	4,006.98	3,933.44
	4/13/2011	-	-	73.78	-	-	4,006.98	3,933.20
	5/23/2011	-	-	73.75	-	-	4,006.98	3,933.23
	6/28/2011	-	-	74.04	-	-	4,006.98	3,932.94
	7/19/2011	-	-	73.93	-	-	4,006.98	3,933.05
	8/31/2011	-	-	73.82	-	-	4,006.98	3,933.16
	9/27/2011	-	-	73.92	-	-	4,006.98	3,933.06
	10/24/2011	-	-	74.05	-	-	4,006.98	3,932.93
	11/29/2011	-	-	74.22	-	-	4,006.98	3,932.76
	12/23/2011	-	-	74.09	-	-	4,006.98	3,932.89
	1/31/2012	-	-	74.05	-	-	4,006.98	3,932.93
	2/29/2012	-	-	74.12	-	-	4,006.98	3,932.86
	3/27/2012	-	-	74.05	-	-	4,006.98	3,932.93
	4/18/2012	-	-	74.23	-	-	4,006.98	3,932.75
	5/21/2012	-	-	74.49	-	-	4,006.98	3,932.49
	7/17/2012	-	-	74.41	-	-	4,006.98	3,932.57
	8/21/2012	-	-	74.46	-	-	4,006.98	3,932.52
	9/17/2012	-	-	74.36	-	-	4,006.98	3,932.62
	12/13/2012	-	-	74.26	-	-	4,006.98	3,932.72
	1/9/2013	-	-	74.85	-	-	4,006.98	3,932.13

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Lea County, New Mexico

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MW-14 continued	2/6/2013	-	-	74.66	-	-	4,006.98	3,932.32
	3/6/2013	-	-	74.97	-	-	4,006.98	3,932.01
	6/5/2013	-	-	74.93	-	-	4,006.98	3,932.05
	7/3/2013	-	-	75.15	-	-	4,006.98	3,931.83
	7/30/2013	-	-	75.14	-	-	4,006.98	3,931.84
	8/15/2013	-	-	75.21	-	-	4,006.98	3,931.77
	10/2/2013	-	-	75.15	-	-	4,006.98	3,931.83
	12/23/2013	-	-	75.59	-	-	4,006.98	3,931.39
	1/9/2014	-	-	75.23	-	-	4,006.98	3,931.75
	2/12/2014	-	-	75.50	-	-	4,006.98	3,931.48
	3/19/2014	-	-	75.63	-	-	4,006.98	3,931.35
	4/3/2014	-	-	75.24	-	-	4,006.98	3,931.74
	5/7/2014	-	-	75.26	-	-	4,006.98	3,931.72
	6/5/2014	-	-	75.37	-	-	4,006.98	3,931.61
	7/1/2014	-	-	75.60	-	-	4,006.98	3,931.38
	7/22/2014	-	-	75.77	-	-	4,006.98	3,931.21
	8/5/2014	-	-	75.77	-	-	4,006.98	3,931.21
	9/4/2014	-	-	75.67	-	-	4,006.98	3,931.31
	10/2/2014	-	-	75.70	-	-	4,006.98	3,931.28
	11/6/2014	-	-	76.15	-	-	4,006.98	3,930.83
	12/4/2014	-	-	75.78	-	-	4,006.98	3,931.20
	8/24/2015	-	-	75.10	-	-	4,006.98	3,931.88
	1/20/2016	-	-	74.31	-	-	4,006.98	3,932.67
	2/16/2016	-	-	74.22	-	-	4,006.98	3,932.76
	3/15/2016	-	-	74.06	-	-	4,006.98	3,932.92
	4/20/2016	-	-	74.02	-	-	4,006.98	3,932.96
	5/17/2016	-	-	74.09	-	-	4,006.98	3,932.89
	8/16/2016	-	-	73.91	-	-	4,006.98	3,933.07
	9/20/2016	-	-	73.87	-	-	4,006.98	3,933.11
	10/18/2016	-	-	73.70	-	-	4,006.98	3,933.28
	12/20/2016	-	-	73.72	-	-	4,006.98	3,933.26
	8/3/2017	120	-	78.35	-	-	4,006.98	3,928.63
	8/16/2018	-	-	73.30	-	-	4,006.98	3,933.68
	8/15/2019	-	-	73.70	-	-	4,006.98	3,933.28
	8/18/2020	119.2	-	73.75	-	-	4,006.98	3,933.23
	8/10/2021	-	-	74.03	-	-	4,006.98	3,932.95
MW-19	9/20/2002	-	-	117.23	-	-	4,037.34	3,920.11
	4/5/2004	-	-	116.67	-	-	4,037.34	3,920.67
	5/17/2004	-	-	116.62	-	-	4,037.34	3,920.72
	5/24/2004	-	-	116.59	-	-	4,037.34	3,920.75
	6/1/2004	-	-	116.57	-	-	4,037.34	3,920.77
	6/7/2004	-	-	116.59	-	-	4,037.34	3,920.75
	6/15/2004	-	-	116.53	-	-	4,037.34	3,920.81
	6/21/2004	-	-	116.63	-	-	4,037.34	3,920.71
	6/28/2004	-	-	116.68	-	-	4,037.34	3,920.66
	7/6/2004	-	-	116.65	-	-	4,037.34	3,920.69
	7/12/2004	-	-	116.66	-	-	4,037.34	3,920.68
	7/19/2004	-	-	116.68	-	-	4,037.34	3,920.66
	7/26/2004	-	-	116.73	-	-	4,037.34	3,920.61
	8/2/2004	-	-	116.71	-	-	4,037.34	3,920.63
	8/10/2004	-	-	116.71	-	-	4,037.34	3,920.63
	8/16/2004	-	-	116.74	-	-	4,037.34	3,920.60
	8/23/2004	-	-	116.69	-	-	4,037.34	3,920.65
	8/30/2004	-	-	116.69	-	-	4,037.34	3,920.65

Table 1
Summary of Groundwater Elevations and PSH Thickness
ConocoPhillips - Maljamar E&P
Lea County, New Mexico

Well Identification	Date Measured	Well Total Depth (feet)	Product (feet below TOC)	Water level (feet below TOC)	PSH Thickness (feet)	Product Elevation (feet AMSL)	Top of Casing Elevation (feet AMSL)	Groundwater Elevation (feet)
MW-19 continued	9/8/2004	-	-	116.73	-	-	4,037.34	3,920.61
	10/8/2004	-	-	116.78	-	-	4,037.34	3,920.56
	12/30/2004	-	-	116.76	-	-	4,037.34	3,920.58
	1/17/2005	-	-	116.78	-	-	4,037.34	3,920.56
	2/9/2005	-	-	116.76	-	-	4,037.34	3,920.58
	3/9/2005	-	-	116.70	-	-	4,037.34	3,920.64
	4/5/2005	-	-	116.64	-	-	4,037.34	3,920.70
	5/10/2005	-	-	116.63	-	-	4,037.34	3,920.71
	6/8/2005	-	-	116.57	-	-	4,037.34	3,920.77
	7/5/2005	-	-	116.64	-	-	4,037.34	3,920.70
	8/8/2005	-	-	116.77	-	-	4,037.34	3,920.57
	9/15/2005	-	-	116.71	-	-	4,037.34	3,920.63
	10/12/2005	-	-	116.70	-	-	4,037.34	3,920.64
	11/9/2005	-	-	116.74	-	-	4,037.34	3,920.60
	12/14/2005	-	-	116.74	-	-	4,037.34	3,920.60
	1/12/2006	-	-	116.73	-	-	4,037.34	3,920.61
	2/2/2006	-	-	116.70	-	-	4,037.34	3,920.64
	3/7/2006	-	-	116.72	-	-	4,037.34	3,920.62
	4/5/2006	-	-	116.68	-	-	4,037.34	3,920.66
	5/8/2006	-	-	116.61	-	-	4,037.34	3,920.73
	6/5/2006	-	-	116.66	-	-	4,037.34	3,920.68
	7/11/2006	-	-	116.73	-	-	4,037.34	3,920.61
	8/16/2006	-	-	116.74	-	-	4,037.34	3,920.60
	9/7/2006	-	-	116.74	-	-	4,037.34	3,920.60
	10/11/2006	-	-	116.80	-	-	4,037.34	3,920.54
	11/8/2006	-	-	116.79	-	-	4,037.34	3,920.55
	12/4/2006	-	-	116.90	-	-	4,037.34	3,920.44
	1/4/2007	-	-	116.65	-	-	4,037.34	3,920.69
	2/27/2007	-	-	116.71	-	-	4,037.34	3,920.63
	3/20/2007	-	-	116.76	-	-	4,037.34	3,920.58
	4/17/2007	-	-	116.61	-	-	4,037.34	3,920.73
	5/7/2007	-	-	116.66	-	-	4,037.34	3,920.68
	6/27/2007	-	-	116.59	-	-	4,037.34	3,920.75
	7/19/2007	-	-	116.65	-	-	4,037.34	3,920.69
	8/21/2007	-	-	116.63	-	-	4,037.34	3,920.71
	9/17/2007	-	-	116.70	-	-	4,037.34	3,920.64
	10/16/2007	-	-	116.66	-	-	4,037.34	3,920.68
	11/20/2007	-	-	116.78	-	-	4,037.34	3,920.56
	12/21/2007	-	-	116.64	-	-	4,037.34	3,920.70
	1/22/2008	-	-	116.88	-	-	4,037.34	3,920.46
	2/27/2008	-	-	117.04	-	-	4,037.34	3,920.30
	3/25/2008	-	-	116.88	-	-	4,037.34	3,920.46
	4/29/2008	-	-	116.89	-	-	4,037.34	3,920.45
	5/5/2008	-	-	116.82	-	-	4,037.34	3,920.52
	6/10/2008	-	-	116.79	-	-	4,037.34	3,920.55
	7/15/2008	-	-	116.88	-	-	4,037.34	3,920.46
	8/19/2008	-	-	116.89	-	-	4,037.34	3,920.45
	9/16/2008	-	-	117.17	-	-	4,037.34	3,920.17
	10/15/2008	-	-	117.09	-	-	4,037.34	3,920.25
	11/12/2008	-	-	116.82	-	-	4,037.34	3,920.52
	12/11/2008	-	-	117.09	-	-	4,037.34	3,920.25
	1/13/2009	-	-	117.28	-	-	4,037.34	3,920.06
	2/11/2009	-	-	116.83	-	-	4,037.34	3,920.51
	3/10/2009	-	-	116.78	-	-	4,037.34	3,920.56
	4/13/2009	-	-	116.80	-	-	4,037.34	3,920.54

Table 1
Summary of Groundwater Elevations and PSH Thickness
ConocoPhillips - Maljamar E&P
Lea County, New Mexico

Well Identification	Date Measured	Well Total Depth (feet)	Product (feet below TOC)	Water level (feet below TOC)	PSH Thickness (feet)	Product Elevation (feet AMSL)	Top of Casing Elevation (feet AMSL)	Groundwater Elevation (feet)
MW-19 continued	5/1/2009	-	-	116.77	-	-	4,037.34	3,920.57
	6/8/2009	-	-	116.61	-	-	4,037.34	3,920.73
	7/13/2009	-	-	116.78	-	-	4,037.34	3,920.56
	8/10/2009	-	-	116.74	-	-	4,037.34	3,920.60
	9/15/2009	-	-	116.62	-	-	4,037.34	3,920.72
	10/6/2009	-	-	116.47	-	-	4,037.34	3,920.87
	11/9/2009	-	-	116.64	-	-	4,037.34	3,920.70
	12/23/2009	-	-	116.29	-	-	4,037.34	3,921.05
	1/20/2010	-	-	116.27	-	-	4,037.34	3,921.07
	2/9/2010	-	-	116.61	-	-	4,037.34	3,920.73
	3/9/2010	-	-	116.32	-	-	4,037.34	3,921.02
	4/12/2010	-	-	116.62	-	-	4,037.34	3,920.72
	5/24/2010	-	-	116.37	-	-	4,037.34	3,920.97
	6/14/2010	-	-	116.51	-	-	4,037.34	3,920.83
	7/20/2010	-	-	116.59	-	-	4,037.34	3,920.75
	8/11/2010	-	-	116.58	-	-	4,037.34	3,920.76
	9/21/2010	-	-	116.49	-	-	4,037.34	3,920.85
	10/20/2010	-	-	116.60	-	-	4,037.34	3,920.74
	11/8/2010	-	-	116.52	-	-	4,037.34	3,920.82
	12/7/2010	-	-	116.57	-	-	4,037.34	3,920.77
	1/18/2011	-	-	116.38	-	-	4,037.34	3,920.96
	2/8/2011	-	-	116.37	-	-	4,037.34	3,920.97
	3/8/2011	-	-	116.21	-	-	4,037.34	3,921.13
	4/13/2011	-	-	116.12	-	-	4,037.34	3,921.22
	5/23/2011	-	-	116.35	-	-	4,037.34	3,920.99
	6/28/2011	-	-	116.57	-	-	4,037.34	3,920.77
	7/19/2011	-	-	116.49	-	-	4,037.34	3,920.85
	8/31/2011	-	-	116.37	-	-	4,037.34	3,920.97
	9/27/2011	-	-	116.38	-	-	4,037.34	3,920.96
	10/24/2011	-	-	116.55	-	-	4,037.34	3,920.79
	11/29/2011	-	-	116.63	-	-	4,037.34	3,920.71
	12/23/2011	-	-	116.35	-	-	4,037.34	3,920.99
	1/31/2012	-	-	116.35	-	-	4,037.34	3,920.99
	2/29/2012	-	-	116.39	-	-	4,037.34	3,920.95
	3/27/2012	-	-	116.30	-	-	4,037.34	3,921.04
	4/18/2012	-	-	116.39	-	-	4,037.34	3,920.95
	5/21/2012	-	-	116.54	-	-	4,037.34	3,920.80
	7/17/2012	-	-	116.36	-	-	4,037.34	3,920.98
	8/21/2012	-	-	116.33	-	-	4,037.34	3,921.01
	9/17/2012	-	-	116.25	-	-	4,037.34	3,921.09
	12/13/2012	-	-	116.42	-	-	4,037.34	3,920.92
	1/9/2013	-	-	116.92	-	-	4,037.34	3,920.42
	2/6/2013	-	-	116.28	-	-	4,037.34	3,921.06
	3/6/2013	-	-	116.57	-	-	4,037.34	3,920.77
	5/1/2013	-	-	116.11	-	-	4,037.34	3,921.23
	6/5/2013	-	-	116.23	-	-	4,037.34	3,921.11
	7/3/2013	-	-	116.46	-	-	4,037.34	3,920.88
	7/30/2013	-	-	116.48	-	-	4,037.34	3,920.86
	8/15/2013	-	-	116.47	-	-	4,037.34	3,920.87
	10/2/2013	-	-	116.28	-	-	4,037.34	3,921.06
	12/23/2013	-	-	116.63	-	-	4,037.34	3,920.71
	1/9/2014	-	-	116.35	-	-	4,037.34	3,920.99
	2/12/2014	-	-	117.46	-	-	4,037.34	3,919.88
	3/19/2014	-	-	116.43	-	-	4,037.34	3,920.91
	4/3/2014	-	-	116.12	-	-	4,037.34	3,921.22

Table 1
Summary of Groundwater Elevations and PSH Thickness
ConocoPhillips - Maljamar E&P
Lea County, New Mexico

Well Identification	Date Measured	Well Total Depth (feet)	Product (feet below TOC)	Water level (feet below TOC)	PSH Thickness (feet)	Product Elevation (feet AMSL)	Top of Casing Elevation (feet AMSL)	Groundwater Elevation (feet)
MW-19 continued	5/7/2014	-	-	116.13	-	-	4,037.34	3,921.21
	6/5/2014	-	-	116.19	-	-	4,037.34	3,921.15
	7/1/2014	-	-	116.27	-	-	4,037.34	3,921.07
	7/22/2014	-	-	116.46	-	-	4,037.34	3,920.88
	8/5/2014	-	-	116.48	-	-	4,037.34	3,920.86
	9/4/2014	-	-	116.31	-	-	4,037.34	3,921.03
	10/2/2014	-	-	116.25	-	-	4,037.34	3,921.09
	11/6/2014	-	-	116.72	-	-	4,037.34	3,920.62
	12/4/2014	-	-	116.18	-	-	4,037.34	3,921.16
	8/24/2015	-	-	116.50	-	-	4,037.34	3,920.84
	1/20/2016	-	-	116.34	-	-	4,037.34	3,921.00
	2/16/2016	-	-	116.28	-	-	4,037.34	3,921.06
	3/15/2016	-	-	116.15	-	-	4,037.34	3,921.19
	4/20/2016	-	-	116.31	-	-	4,037.34	3,921.03
	5/17/2016	-	-	116.44	-	-	4,037.34	3,920.90
	8/16/2016	-	-	116.41	-	-	4,037.34	3,920.93
	9/20/2016	-	-	116.40	-	-	4,037.34	3,920.94
	10/18/2016	-	-	116.16	-	-	4,037.34	3,921.18
	12/20/2016	-	-	116.60	-	-	4,037.34	3,920.74
	8/3/2017	120	-	117.32	-	-	4,037.34	3,920.02
	8/16/2018	-	-	116.35	-	-	4,037.34	3,920.99
	8/16/2019	-	-	116.42	-	-	4,037.34	3,920.92
	8/18/2020	121.3	-	116.17	-	-	4,037.34	3,921.17
	8/10/2021	-	-	115.70	-	-	4,037.34	3,921.64

Notes:

ft feet
 TOC top of casing
 AMSL above mean sea level
 - no measurement

Table 2
Summary of Groundwater Analytical Data
ConocoPhillips - Maljamar E&P
Lea County, New Mexico

Well Identification	Sample Date	Bromide (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Nitrate as N (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	Carbonate Alkalinity (mg/L)	Bicarbonate Alkalinity (mg/L)	Total Alkalinity (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)
NMWQCC Groundwater Quality Standards (mg/L)		NE	250	600	1,000	10	0.01	0.75	0.75	0.62	NE	NE	NE	NE	NE	NE	NE
EW-1	7/19/2007	-	1,820	-	3,370	-	ND	ND	ND	ND	-	-	-	-	-	-	-
	5/6/2008	ND	41,500	1,150	77,200	ND	ND	ND	ND	ND	ND	105	105	3,340	1,040	74.1	19,000
	5/5/2009	ND	30,000	1,110	60,000	ND	ND	ND	ND	ND	ND	99	99	3,680	1,110	58	21,700
	5/25/2010	ND	29,600	852	40,200	ND	ND	ND	ND	ND	ND	113	113	2,830	1,050	74.7	16,300
	5/24/2011	8.8	32,300	865	58,300	0.57	<0.002	<0.002	<0.002	<0.006	<5	110	110	2,450	694	69.6	14,400
	10/25/2011	25.6	35,000	923	66,300	3.9	<0.001	0.003	<0.001	<0.003	<20	116	116	2,400	624	42.7	11,300
	7/18/2012	38	26,500	746	59,600	6.1	<0.001	<0.001	<0.001	<0.003	<20	108	108	2,450	748	67.6	13,000
	8/1/2013	<50	26,100	691	61,000	4	-	-	-	-	<20	148	148	2,480	740	68.9	13,900
	7/23/2014	25.3	28,900	803	52,300	-	<0.001	<0.001	<0.001	<0.003	-	-	-	-	-	-	-
	8/26/2015	<5.0	24,200	711	65,000	-	-	-	-	-	-	-	-	-	-	-	-
DUP	8/10/2016	Not Sampled															
	8/3/2017	Not Sampled															
	8/16/2018	11.7	21,000	588	36,000	-	-	-	-	-	-	-	-	-	-	-	-
	8/16/2018	11.7	22,100	556	39,900	-	-	-	-	-	-	-	-	-	-	-	-
	8/16/2019	5.9	13,600	148	28,700	-	-	-	-	-	-	-	-	-	-	-	-
	8/16/2019	<0.0790	11,600	34	30,200	-	-	-	-	-	-	-	-	-	-	-	-
	8/18/2020	4.81 J	13,600	151	33,900	-	-	-	-	-	-	-	-	-	-	-	-
	8/18/2020	7.81	24,600	661	58,200	-	-	-	-	-	-	-	-	-	-	-	-
	8/10/2021	7.94 B	18,900	544	38,100	-	-	-	-	-	-	-	-	-	-	-	-
	8/10/2021	65.8 BJ	27,500	583	51,500	-	-	-	-	-	-	-	-	-	-	-	-
EW-2	10/4/2017	6.6	17,500	492	28,000	-	-	-	-	-	-	-	-	-	-	-	-
	8/16/2018	Not Sampled - pump out of service															
	8/15/2019	Not Sampled - pump out of service															
	10/9/2020	<35.3	20,100	576	39,600	-	-	-	-	-	-	-	-	-	-	-	-
	8/10/2021	63.6 BJ	20,900	546	37,500	-	-	-	-	-	-	-	-	-	-	-	-
MW-11	5/8/2007	4.6	3,570	440	7,400	ND	ND	ND	ND	ND	ND	197	197	1,060	258	7.8	496
	5/6/2008	8.18	1,560	163	4,140	ND	0.009	ND	ND	ND	ND	168	168	615	166	8.62	204
	5/5/2009	6.82	1,140	149	3,430	ND	0.02	ND	ND	ND	ND	162	162	528	150	6	172
	5/25/2010	ND	1,010	142	3,630	ND	0.039	ND	ND	ND	ND	139	139	332	105	4.44	118
	5/24/2011	2.6	811	99.9	2,510	3.6	0.0912	<0.002	<0.002	<0.006	<5	149	149	298	83.7	6.61	103
	10/25/2011	2.7	715	90.9	1,790	4.9	<0.001	<0.001	<0.001	<0.003	<20	220	220	325	86	6	101
	10/25/2011	2.5	659	84.6	1,910	6.1	<0.001	<0.001	<0.001	<0.003	<5.0	208	208	352	93	6	108
	7/18/2012	4.1	560	55.3	1,780	7.3	<0.001	<0.001	<0.001	<0.003	<20	144	144	215	64.2	3.6	80.6
	8/2/2013	4.4	801	98.1	2,640	4.7	0.0056	<0.001	<0.001	<0.003	<20	198	198	325	97.5	8.37	93.2
	7/23/2014	2.3	532	50.4	1,760	-	<0.001	<0.001	<0.001	<0.003	-	-	-	-	-	-	-
	8/26/2015	2.2	521	57.9	3,620	-	-	-	-	-	-	-	-	-	-	-	-
	8/10/2016	2.5	564	78.2	1,750	-	-	-	-	-	-	-	-	-	-	-	-
	8/10/2016	2.5	564	78	1,750	-	-	-	-	-	-	-	-	-	-	-	-
	8/3/2017	5.3	1,170	116	3,030	-	-	-	-	-	-	-	-	-	-	-	-
	8/16/2018	3.19	879	161	3,250	-	-	-	-	-	-	-	-	-	-	-	-
	8/15/2019	2.07	760	124	2,280	-	-	-	-	-	-	-	-	-	-	-	-
	8/18/2020	1.69	517	31.1	1,480	-	-	-	-	-	-	-	-	-	-	-	-
	8/10/2021	3.16 B	1,210	71.3	3,180 J3	-	-	-	-	-	-	-	-	-	-	-	-
MW-12	5/8/2007	19.2	61,700	1,690	107,000	ND	ND	ND	ND	ND	ND	79.8	79.8	4,760	1,330	143	15,800
	5/8/2007	19.2	50,200	1,630	104,000	ND	ND	ND	ND	ND	ND	79.9	79.9	5,040	1,430	146	32,800
	5/6/2008	ND	48,600	1,600	88,500	ND	ND	ND	ND	ND	ND	97	97	3,880	1,030	84.3	24,000
	5/6/2008	ND	45,100	1,610	84,300	ND	ND	ND	ND	ND	ND	97	97	3,840	1,030	85.4	23,100
	5/5/2009	ND	35,300	1,140	71,200	1.79	ND	ND	ND	ND	ND	101	101	3,720	844	59.3	21,200
DUP	5/5/2009	ND	31,400	1,180	69,800	1.94	ND	ND	ND	ND	ND	116	116	3,760	872	54.8	22,200

Table 2
Summary of Groundwater Analytical Data
ConocoPhillips - Maljamar E&P
Lea County, New Mexico

Well Identification	Sample Date	Bromide (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Nitrate as N (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	Carbonate Alkalinity (mg/L)	Bicarbonate Alkalinity (mg/L)	Total Alkalinity (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)
MW-12 continued DUP DUP DUP	5/25/2010	ND	59,300	1,210	72,000	ND	ND	ND	ND	ND	ND	106	106	2,490	700	42.4	14,300
	5/25/2010	ND	47,700	1,450	79,000	ND	ND	ND	ND	ND	ND	108	108	2,760	788	47.2	14,900
	5/24/2011	9.7	45,500	1,170	66,400	2.2	<0.002	<0.002	<0.002	<0.006	<20	114	114	3,260	794	79.1	15,100
	5/24/2011	10.2	46,600	1,350	75,500	2	<0.002	<0.002	<0.002	<0.006	<5	105	105	3,230	808	83.7	15,700
	10/25/2011	<1	32,200	1,020	55,900	3	<0.001	<0.001	<0.001	<0.003	<20	138	138	3,370	743	54	14,800
	7/18/2012	32.6	25,000	716	57,200	3.3	<0.001	<0.001	<0.001	<0.003	<20	122	122	3,420	812	56.5	11,400
	8/1/2013	<50	21,400	731	47,000	3.6	<0.001	<0.001	<0.001	<0.003	<20	163	163	2,580	613	60.6	12,100
	7/23/2014	<50	38,500	1,680	72,200	-	<0.001	<0.001	<0.001	<0.003	-	-	-	-	-	-	-
	8/26/2015	<5.0	26,200	804	87,300	-	-	-	-	-	-	-	-	-	-	-	-
	8/10/2016	34.1	30,900	1,070	63,900	-	-	-	-	-	-	-	-	-	-	-	-
	8/10/2016	34.1J	30,900	1,070	63,900	-	-	-	-	-	-	-	-	-	-	-	-
	8/3/2017	44.9	37,900	1,480	69,600	-	-	-	-	-	-	-	-	-	-	-	-
	8/3/2017	45.3	43,000	1,510	73,600	-	-	-	-	-	-	-	-	-	-	-	-
	8/16/2018	11.1	37,300	1,430	60,300	-	-	-	-	-	-	-	-	-	-	-	-
	8/16/2019	12.1	32,000	715	44,200	-	-	-	-	-	-	-	-	-	-	-	-
	8/18/2020	10.3	31,700	755	71,700	-	-	-	-	-	-	-	-	-	-	-	-
	8/10/2021	14.9 B	39,700	1,500	70,500	-	-	-	-	-	-	-	-	-	-	-	-
MW-13	5/8/2007	0.9	217	249	1,160	16	ND	ND	ND	ND	ND	209	209	198	43.1	ND	72.4
	5/6/2008	ND	192	234	1,270	11.9	ND	ND	ND	ND	ND	201	201	193	43.9	3.09	66.8
	5/5/2009	1.32	212	236	1,400	15.9	ND	ND	ND	ND	ND	204	204	226	46.8	3.1	74.4
	5/25/2010	1.42	214	276	1,500	17.8	ND	ND	ND	ND	ND	196	196	203	42.4	2.81	71.9
	5/24/2011	1.4	235	267	1,120	15	<0.002	<0.002	<0.002	<0.006	<5	217	218	204	41.4	<5.0	73.5
	10/25/2011	1.3	233	253	1,090	18	<0.001	<0.001	<0.001	<0.003	<20	765	765	541	99.6	16.9	81.3
	7/18/2012	2.4	230	239	1,240	15.2	<0.001	<0.001	<0.001	<0.003	<20	340	340	252	53.4	6.24	71.5
	8/1/2013	1.7	221	232	1,420	15.7	<0.001	<0.001	<0.001	<0.003	<20	243	243	321	51	6.22	74.9
	7/23/2014	1.7	206	284	1,160	-	<0.001	<0.001	<0.001	<0.003	-	-	-	-	-	-	-
	8/26/2015	1.2	201	278	1,850	-	-	-	-	-	-	-	-	-	-	-	-
	8/10/2016	7.4	206	310	1,220	-	-	-	-	-	-	-	-	-	-	-	-
	8/10/2016	7.4	206	310	1,220	-	-	-	-	-	-	-	-	-	-	-	-
	8/3/2017	2.0	192	267	972	-	-	-	-	-	-	-	-	-	-	-	-
	8/16/2018	1.42	200	248	1,180	-	-	-	-	-	-	-	-	-	-	-	-
	8/15/2019	3.00 J	237	247	1,350	-	-	-	-	-	-	-	-	-	-	-	-
	8/18/2020	1.99 J	218	254	1,100	-	-	-	-	-	-	-	-	-	-	-	-
	8/10/2021	1.26 B	196	238	1,020	-	-	-	-	-	-	-	-	-	-	-	-
MW-14	5/8/2007	7.1	1,000	1,010	4,990	10.7	ND	ND	ND	ND	ND	203	203	656	197	5.7	65.3
	5/6/2008	8.04	658	904	3,760	10.1	ND	ND	ND	ND	ND	208	208	613	165	6.09	57.1
	5/5/2009	6.05	576	774	3,740	11.8	ND	ND	ND	ND	ND	230	230	648	176	5.74	51.3
	5/25/2010	4.96	566	1,030	2,430	13.7	ND	ND	ND	ND	ND	263	263	544	150	6	79.3
	5/24/2011	4.2	527	1,110	2,980	16	<0.002	<0.002	<0.002	<0.006	<5	276	276	525	133	<5.0	57.7
	10/25/2011	3.4	408	848	2,350	20	<0.001	<0.001	<0.001	<0.003	<20	390	390	532	159	14.4	58.1
	7/18/2012	1.1	382	812	2,430	16	<0.001	<0.001	<0.001	<0.003	<20	314	314	455	137	9	49.8
	8/1/2013	3	333	863	2,150	19.6	<0.001	<0.001	<0.001	<0.003	<20	293	293	454	130	5	60.2
	8/1/2013	3	359	946	2,170	20.8	<0.001	<0.001	<0.001	<0.003	<20	289	289	452	132	6	62.2
	7/23/2014	3.2	393	847	2,430	-	<0.001	<0.001	<0.001	<0.003	-	-	-	-	-	-	-
	7/23/2014	3.2	362	784	2,280	-	<0.001	<0.001	<0.001	<0.003	-	-	-	-	-	-	-
	8/26/2015	1.4	160	930	3,130	-	-	-	-	-	-	-	-	-	-	-	-
	8/10/2016	1.7	190	1,010	2,180	-	-	-	-	-	-	-	-	-	-	-	-
	8/10/2016	1.7	190	1,010	2,180	-	-	-	-	-	-	-	-	-	-	-	-
	8/3/2017	2.4	215	953	2,220	-	-	-	-	-	-	-	-	-	-	-	-
	8/16/2018	<1.00	222	923	2,100	-	-	-	-	-	-	-	-	-	-	-	-
	8/15/2019	<1.00	67.9	585	1,270	-	-	-	-	-	-	-	-	-	-	-	-
	8/18/2020	<10.0	62.4	572	1,290	-	-	-	-	-	-	-	-	-	-	-	-
	8/10/2021	6.79 BJ	222.0	862	1,750	-	-	-	-	-	-	-	-	-	-	-	-

Table 2
Summary of Groundwater Analytical Data
ConocoPhillips - Maljamar E&P
Lea County, New Mexico

Well Identification	Sample Date	Bromide (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Nitrate as N (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	Carbonate Alkalinity (mg/L)	Bicarbonate Alkalinity (mg/L)	Total Alkalinity (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)
MW-19	5/8/2007	1.1	101	20.8	837	0.75	ND	ND	ND	ND	ND	272	272	1,690	571	24.7	983
	5/6/2008	ND	114	29.3	1,190	1.06	ND	ND	ND	ND	ND	229	229	3,220	617	27.8	1,260
	5/5/2009	0.836	105	26.7	597	0.944	ND	ND	ND	ND	ND	241	241	1,850	664	21.5	1,020
	5/25/2010	0.97	108	33.2	1,080	0.867	ND	ND	ND	ND	ND	245	245	2,050	632	53.8	1,000
	5/24/2011	1.1	140	27.4	589	1.4	<0.002	<0.002	<0.002	<0.006	<5	255	256	3,080	640	41.9	1,050
	10/25/2011	<1	122	32.9	523	2.2	<0.001	<0.001	<0.001	<0.003	<20	436	436	2,240	654	39.6	1,070
	7/18/2012	1.4	113	27.8	585	2.6	<0.001	<0.001	<0.001	<0.003	<20	635	635	203	37	4.2	53
DUP	8/1/2013	1.3	112	27.8	583	3.1	<0.001	<0.001	<0.001	<0.003	<20	289	289	-	-	-	-
	7/23/2014	1.4	113	31.3	557	-	<0.001	<0.001	<0.001	<0.003	-	-	-	-	-	-	-
	8/26/2015	<1.0	111	32.2	696	-	-	-	-	-	-	-	-	-	-	-	-
	8/26/2015	1.2	112	32.1	602	-	-	-	-	-	-	-	-	-	-	-	-
	8/10/2016	1.2	123	29.3	590	-	-	-	-	-	-	-	-	-	-	-	-
	8/10/2016	1.2	123	29.3	590	-	-	-	-	-	-	-	-	-	-	-	-
	8/3/2017	1.5	114	29.0	540	-	-	-	-	-	-	-	-	-	-	-	-
	8/16/2018	0.996 J	117	32.5	587	-	-	-	-	-	-	-	-	-	-	-	-
	8/16/2019	1.1	131	41.7	640	-	-	-	-	-	-	-	-	-	-	-	-
	8/18/2020	0.935 J	132	41.1	602	-	-	-	-	-	-	-	-	-	-	-	-
	8/10/2021	1.21 B	129	45.3	563	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

mg/L	milligrams per liter
TDS	total dissolved solids
NMWQCC	New Mexico Water Quality Control Commission
NE	not established
-	not analyzed
	result exceeds NMWQCC groundwater quality standards
DUP	duplicate sample
J	the identification of the analyte is acceptable; the reported value is an estimate
ND	not detected above laboratory detection limit
B	the same analyte is found in the associated blank
J	the identification of the analyte is acceptable; the reported value is an estimate



APPENDIX A LABORATORY ANALYTICAL DATA



ANALYTICAL REPORT

August 25, 2021

ConocoPhillips - Tetra Tech

Sample Delivery Group: L1390583
Samples Received: 08/13/2021
Project Number: 212C-MD-02403
Description: Maljamar E&P Groundwater
Site: MALJAMAR E&P
Report To: Julie Evans
4001 N. Big Spring St., Ste. 401
Midland, TX 79705

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Entire Report Reviewed By:

Erica McNeese
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

Cp: Cover Page	1	¹ Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	² Tc
Cn: Case Narrative	5	
Sr: Sample Results	6	³ Ss
MW-14 L1390583-01	6	
MW-11 L1390583-02	7	⁴ Cn
MW-13 L1390583-03	8	⁵ Sr
MW-19 L1390583-04	9	
MW-12 L1390583-05	10	⁶ Qc
EW-1 L1390583-06	11	
EW-2 L1390583-07	12	⁷ Gl
DUP L1390583-08	13	⁸ Al
Qc: Quality Control Summary	14	
Gravimetric Analysis by Method 2540 C-2011	14	⁹ Sc
Wet Chemistry by Method 9056A	15	
Gl: Glossary of Terms	17	
Al: Accreditations & Locations	18	
Sc: Sample Chain of Custody	19	

MW-14 L1390583-01 GW

Collected by Matthew Castrejan
Collected date/time 08/10/21 11:45
Received date/time 08/13/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1724498	1	08/17/21 12:09	08/17/21 13:16	VRP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725666	10	08/18/21 20:47	08/18/21 20:47	MCG	Mt. Juliet, TN

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

MW-11 L1390583-02 GW

Collected by Matthew Castrejan
Collected date/time 08/10/21 12:55
Received date/time 08/13/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1724498	1	08/17/21 12:09	08/17/21 13:16	VRP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725666	1	08/18/21 21:14	08/18/21 21:14	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725666	20	08/18/21 21:27	08/18/21 21:27	MSP	Mt. Juliet, TN

MW-13 L1390583-03 GW

Collected by Matthew Castrejan
Collected date/time 08/10/21 14:45
Received date/time 08/13/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1724498	1	08/17/21 12:09	08/17/21 13:16	VRP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725666	1	08/18/21 21:40	08/18/21 21:40	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725666	5	08/18/21 21:54	08/18/21 21:54	MSP	Mt. Juliet, TN

MW-19 L1390583-04 GW

Collected by Matthew Castrejan
Collected date/time 08/10/21 14:35
Received date/time 08/13/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1724498	1	08/17/21 12:09	08/17/21 13:16	VRP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725666	1	08/18/21 23:00	08/18/21 23:00	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725666	5	08/18/21 23:13	08/18/21 23:13	MSP	Mt. Juliet, TN

MW-12 L1390583-05 GW

Collected by Matthew Castrejan
Collected date/time 08/10/21 15:43
Received date/time 08/13/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1724498	1	08/17/21 12:09	08/17/21 13:16	VRP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725666	10	08/18/21 23:26	08/18/21 23:26	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725666	20	08/21/21 14:09	08/21/21 14:09	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725666	500	08/18/21 23:39	08/18/21 23:39	MSP	Mt. Juliet, TN

EW-1 L1390583-06 GW

Collected by Matthew Castrejan
Collected date/time 08/10/21 16:20
Received date/time 08/13/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1724498	1	08/17/21 12:09	08/17/21 13:16	VRP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725666	10	08/21/21 14:25	08/21/21 14:25	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725666	5	08/18/21 23:53	08/18/21 23:53	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725666	500	08/19/21 00:06	08/19/21 00:06	MSP	Mt. Juliet, TN

EW-2 L1390583-07 GW

Collected by Matthew Castrejan
Collected date/time 08/10/21 12:00
Received date/time 08/13/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1724498	1	08/17/21 12:09	08/17/21 13:16	VRP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725666	100	08/19/21 00:19	08/19/21 00:19	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725666	500	08/19/21 00:32	08/19/21 00:32	MSP	Mt. Juliet, TN

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

DUP L1390583-08 GW

Collected by Matthew Castrejan
Collected date/time 08/10/21 00:00
Received date/time 08/13/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1724498	1	08/17/21 12:09	08/17/21 13:16	VRP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725666	100	08/19/21 01:12	08/19/21 01:12	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725666	500	08/19/21 01:25	08/19/21 01:25	MSP	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Erica McNeese
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc

Collected date/time: 08/10/21 11:45

L1390583

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1750		50.0	1	08/17/2021 13:16	WG1724498

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	6.79	B J	3.53	10.0	10	08/18/2021 20:47	WG1725666
Chloride	222		3.79	10.0	10	08/18/2021 20:47	WG1725666
Sulfate	862		5.94	50.0	10	08/18/2021 20:47	WG1725666

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 08/10/21 12:55

L1390583

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	3180	J3	50.0	1	08/17/2021 13:16	WG1724498

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	3.16	B	0.353	1.00	1	08/18/2021 21:14	WG1725666
Chloride	1210		7.58	20.0	20	08/18/2021 21:27	WG1725666
Sulfate	71.3		0.594	5.00	1	08/18/2021 21:14	WG1725666

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 08/10/21 14:45

L1390583

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1020		20.0	1	08/17/2021 13:16	WG1724498

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	1.26	B	0.353	1.00	1	08/18/2021 21:40	WG1725666
Chloride	196		1.90	5.00	5	08/18/2021 21:54	WG1725666
Sulfate	238		2.97	25.0	5	08/18/2021 21:54	WG1725666

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 08/10/21 14:35

L1390583

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	563		10.0	1	08/17/2021 13:16	WG1724498

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	1.21	B	0.353	1.00	1	08/18/2021 23:00	WG1725666
Chloride	129		1.90	5.00	5	08/18/2021 23:13	WG1725666
Sulfate	45.3		0.594	5.00	1	08/18/2021 23:00	WG1725666

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Collected date/time: 08/10/21 15:43

L1390583

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	70500		500	1	08/17/2021 13:16	WG1724498

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	14.9	B	3.53	10.0	10	08/18/2021 23:26	WG1725666
Chloride	39700		190	500	500	08/18/2021 23:39	WG1725666
Sulfate	1500		11.9	100	20	08/21/2021 14:09	WG1725666

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Collected date/time: 08/10/21 16:20

L1390583

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	38100		500	1	08/17/2021 13:16	WG1724498

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	7.94	B	1.76	5.00	5	08/18/2021 23:53	WG1725666
Chloride	18900		190	500	500	08/19/2021 00:06	WG1725666
Sulfate	544		5.94	50.0	10	08/21/2021 14:25	WG1725666

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Collected date/time: 08/10/21 12:00

L1390583

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	37500		500	1	08/17/2021 13:16	WG1724498

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	63.6	B J	35.3	100	100	08/19/2021 00:19	WG1725666
Chloride	20900		190	500	500	08/19/2021 00:32	WG1725666
Sulfate	546		59.4	500	100	08/19/2021 00:19	WG1725666

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 08/10/21 00:00

L1390583

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	51500		500	1	08/17/2021 13:16	WG1724498

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	65.8	B J	35.3	100	100	08/19/2021 01:12	WG1725666
Chloride	27500		190	500	500	08/19/2021 01:25	WG1725666
Sulfate	583		59.4	500	100	08/19/2021 01:12	WG1725666

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3693658-1 08/17/21 13:16

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1390583-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1390583-01 08/17/21 13:16 • (DUP) R3693658-3 08/17/21 13:16

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1750	1810	1	3.38		5

L1390583-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1390583-02 08/17/21 13:16 • (DUP) R3693658-4 08/17/21 13:16

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	3180	3390	1	6.55	<u>J3</u>	5

Laboratory Control Sample (LCS)

(LCS) R3693658-2 08/17/21 13:16

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8220	93.4	77.4-123	

Wet Chemistry by Method 9056A

[L1390583-01,02,03,04,05,06,07,08](#)

Method Blank (MB)

(MB) R3694829-1 08/18/21 19:55

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Bromide	0.596	⌵	0.353	1.00
Chloride	U		0.379	1.00
Sulfate	U		0.594	5.00

L1390583-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1390583-01 08/18/21 20:47 • (DUP) R3694829-4 08/18/21 21:01

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	6.79	6.77	10	0.292	⌵	15
Chloride	222	221	10	0.365		15
Sulfate	862	855	10	0.853		15

L1390594-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1390594-01 08/19/21 02:18 • (DUP) R3694829-7 08/19/21 02:31

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide		0.625	1	0.144	⌵	15
Chloride	10.1	9.69	1	4.51		15
Sulfate	44.3	39.2	1	12.2		15

Laboratory Control Sample (LCS)

(LCS) R3694829-2 08/18/21 20:08

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromide	40.0	39.5	98.7	80.0-120	
Chloride	40.0	40.2	100	80.0-120	
Sulfate	40.0	40.2	101	80.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1390583-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1390583-03 08/18/21 21:40 • (MS) R3694829-5 08/18/21 22:33 • (MSD) R3694829-6 08/18/21 22:46

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromide	50.0	1.26	48.0	48.1	93.5	93.7	1	80.0-120			0.153	15
Chloride	50.0	198	239	239	81.8	82.1	1	80.0-120	E	E	0.0744	15
Sulfate	50.0	243	283	284	80.2	81.1	1	80.0-120	E	E	0.153	15

L1390594-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1390594-01 08/19/21 02:18 • (MS) R3694829-8 08/19/21 02:45

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Bromide	50.0		48.6	95.9	1	80.0-120	
Chloride	50.0	10.1	59.6	98.9	1	80.0-120	
Sulfate	50.0	44.3	92.9	97.4	1	80.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

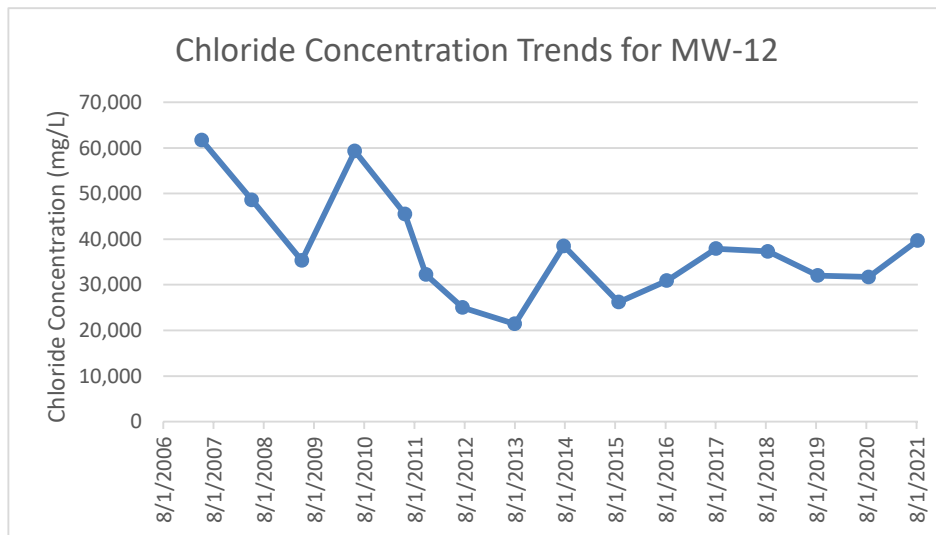
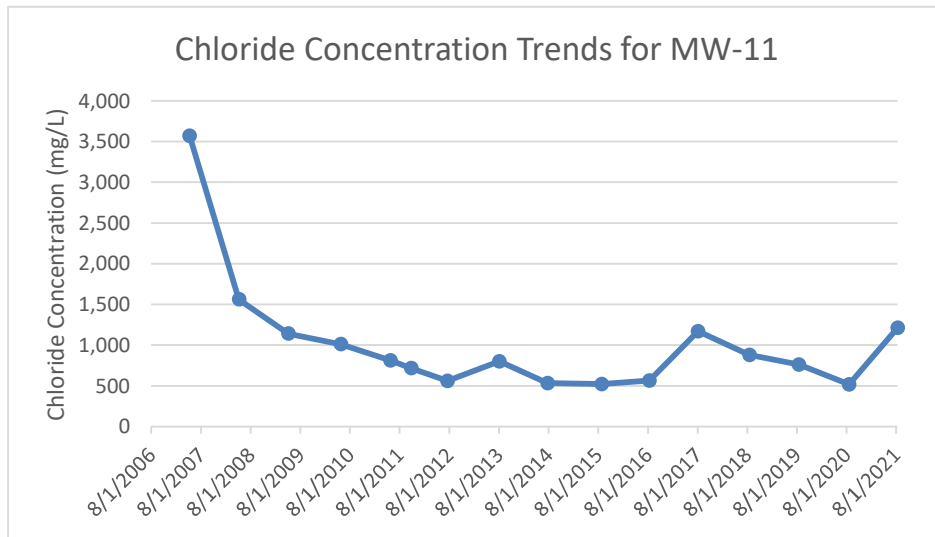
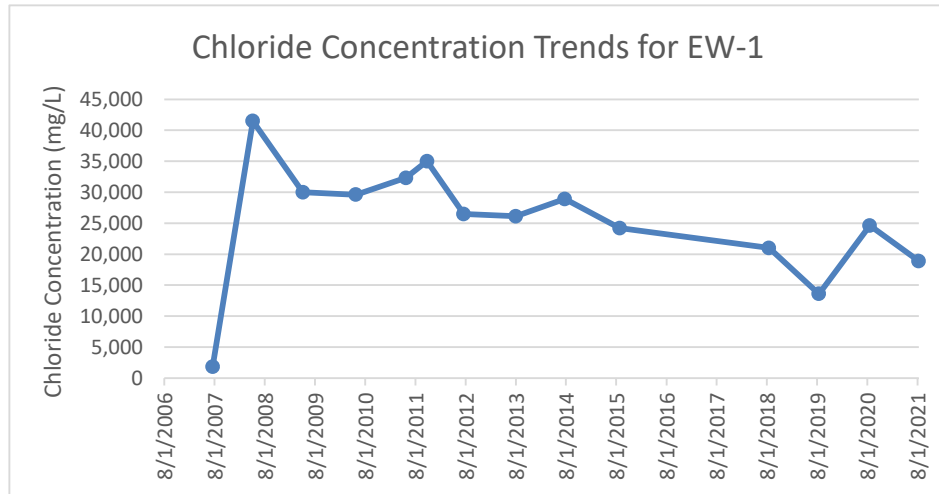
⁹Sc

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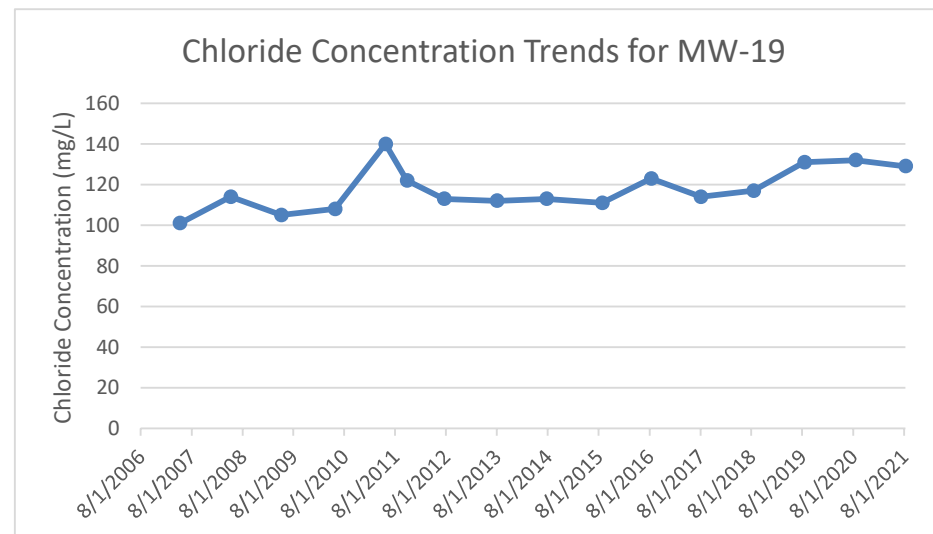
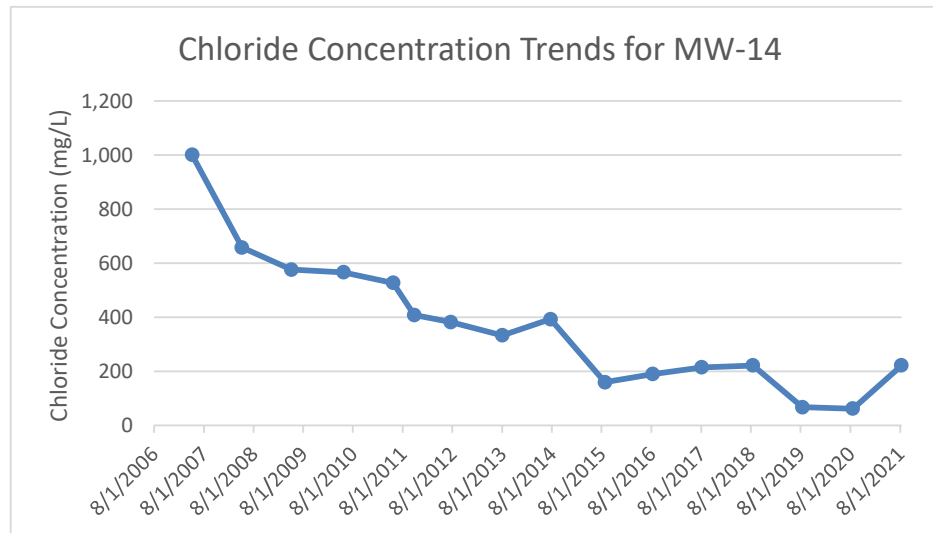
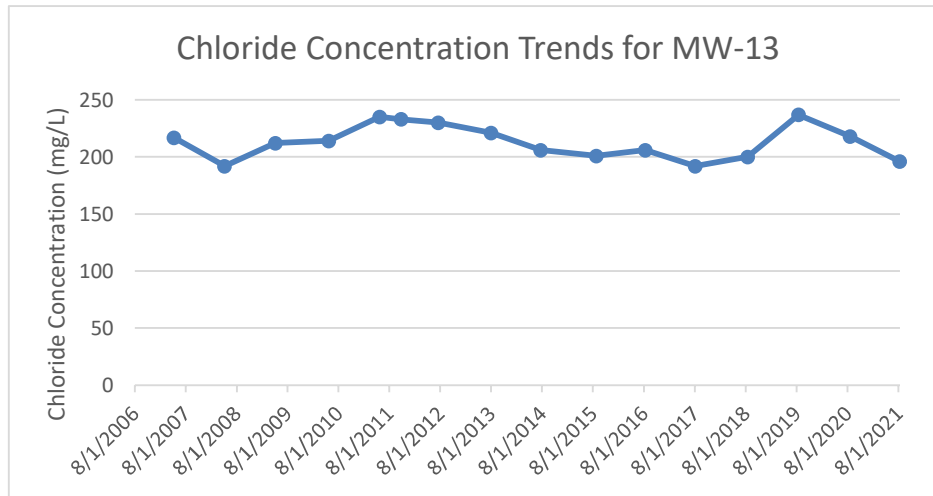


APPENDIX B CHLORIDE CONCENTRATION TREND GRAPHS

Chloride Concentration Graphs
ConocoPhillips - Maljamar E&P
Lea County, New Mexico



**Chloride Concentration Graphs
ConocoPhillips - Maljamar E&P
Lea County, New Mexico**



District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 107898

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 107898
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of the 2021 Annual Monitoring and Remedial Activities Report for the Maljamar E&P: Content Satisfactory 1. Conoco Phillips must consider and propose other remediation options, for example, reverse osmosis, ion exchange, etc. The NMOCD does not agree that natural attenuation is sufficient to abate groundwater at the site with significantly high TDS, Sulfate and Chloride contamination. 2. Please submit a work plan with a proposed remediation plan to implement at the site. 3. Continue to conduct groundwater monitoring on a quarterly or semi-annual basis. 4. Submit the 2022 and 2023 Annual Groundwater report to OCD by April 1, 2024.	1/9/2024