MAVERICK
NATURAL RESOURCES

2024 Annual Report

Maljamar E&P
Groundwater Abatement Plan AP-115-1
Administrative/Environmental Order 1RP-959
Incident nPAC0619940049
Lea County, New Mexico

#212C-HN-02231
November 17, 2024

TETRA TECH

2024 Annual Report

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PRESENTED TO

Maverick Natural Resources, LLC
1111 Bagby Street
Suite 1600
Houston, TX 77002

PRESENTED BY

Tetra Tech, Inc.
1500 CityWest Boulevard
Suite 1000
Houston, TX 77042

P +1-832-251-5160
F +1-832-251-5170
tetratech.com

Prepared by:

Chris Straub 11/17/2023
Project Manager

Reviewed by:

Charles H. Terhune IV, P.G. 11/17/2023
Program Manager

TETRA TECH

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDICES

Appendix A: Laboratory Analytical Data
Appendix B: Chloride Concentration Trend Graphs
Appendix C: Historical Groundwater Gauging Data
Appendix D: Historical Groundwater Analytical Data
Appendix E: Well Construction Details

1.0 INTRODUCTION

On behalf of Maverick Natural Resources, LLC (Maverick) This report details the continuing groundwater monitoring and remedial activities at the Maverick Maljamar Exploration & Production (E&P) Site in Lea County, New Mexico (Site). The Site is located approximately 3.5 miles south-southwest of Maljamar, New Mexico, and adjacent to the north of the Maljamar Gas Plant as shown in **Figure 1**. Groundwater monitoring and remediation at the Site are conducted under New Mexico Oil Conservation District (NMOCD) Abatement Plan AP-115-1 and Administrative/Environmental Order 1RP-959 under NMOCD incident ID nPAC0619940049. The Site and surrounding areas are rural grasslands used primarily for oil and gas production.

Prior to 2007, the Maljamar Gas Plant was a single site owned by ConocoPhillips Company (ConocoPhillips) with a single monitoring well network spread across two present-day sites, the Maverick E&P Site and the Phillips 66 Maljamar Gas Plant. The initial unplanned release that triggered compliance occurred on February 13, 2000, at the Maljamar Gas Plant, when a release of approximately 15 barrels of condensate occurred. Between 2007 and 2009, Conestoga-Rovers & Associates took over environmental consulting oversight from Tetra Tech for which data gaps in historical documentation exist. During this period, the Maljamar Gas Plant was split into two sites: the Maljamar E&P site to the north of the Maljamar Gas Plant, which was the subject of elevated chloride and total dissolved solids (TDS) concentrations in groundwater, and the Maljamar Gas Plant Site which was the subject of condensate and produced water releases and remediation. Both sites were owned by ConocoPhillips when the sites were initially separated.

In 2012, ConocoPhillips and Phillips 66 separated. During the separation, Phillips 66 took ownership of the Maljamar Gas Plant Site along with responsibility for the 2000 condensate release and the 2006 produced water release from MCA Unit Battery #2. ConocoPhillips maintained ownership of the Maljamar E&P site and responsibility for the chloride-impacted groundwater at the Maljamar E&P Site discovered during the condensate release investigations. When ownership of the sites was divided, the monitor well network and remediation systems were also divided between ConocoPhillips and Phillips 66, and access was lost to the southern portion of the original monitoring well network currently owned by Phillips 66.

In accordance with the NMOCD-approved 2022 Workplan presented in the 2021 Annual Report approved by NMOCD, Tetra Tech shut down the groundwater extraction system on March 4, 2022.

In 2022 Maverick purchased the Site from ConocoPhillips and in June 2022, Maverick took over operations of the Site from ConocoPhillips.

2.0 BACKGROUND AND PREVIOUS INVESTIGATIONS

Between 2000 and 2005, the NMOCD conducted soil, groundwater, and geophysical investigations at the Maljamar Gas Plant associated with a condensate release on the current Phillips 66 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 pumping 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. An additional extraction well (EW-2) was installed in September 2017 but was offline 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 storage tank and transported to the MCA Unit Battery #2 for disposal by injection. In accordance with the 2022 work plan for the Site and NMOCD approval, Tetra Tech shut down the groundwater extraction system at the Site on March 14, 2022.

Phase-separated hydrocarbons (PSH) have not been historically observed at the Site. Historical groundwater analytical results have documented concentrations of chloride, nitrate, sulfate, and total dissolved solids (TDS) above applicable New Mexico Water Quality Control Commission (NMWQCC) Water Quality 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.

3.0 HYDROGEOLOGY

3.1 GEOLOGY

The Site is located in the Pecos Valley section of the Great Plains physiographic province. Generally, at the Site, overlying deposits consist of approximately 50 to 60 feet of sands and sandy silts with occasional caliche interbeds, shale stringers, and intermittent gravels representative of Quaternary age alluvium/Bolsun fill which are underlain by approximately 30 to 50 feet of green to grayish-green interbedded silty shales, sandy shales, and sands of the Triassic period Chinle Shale below which is the Tertiary period Ogallala Formation. The Ogallala formation outcrops approximately four miles northeast of the Site as Mescalero Ridge, the most prominent topographic feature in Lea County, where the Ogallala unconformably overlies the Chinle shales. The interbedded Chinle shale units overlie and presumably confine the groundwater contained in the underlying water-bearing Santa Rosa sand and sandstone units. Undifferentiated redbeds underlie the Santa Rosa sandstone consisting of red siltstones, shales, and sandstones. In the region, the Ogalla Formation provides the principal aquifer, however, in the vicinity of the site it is unsaturated. (Nicholson and Clebsch, 1961)

3.2 SITE HYDROGEOLOGY

Geological boring data indicates the presence of a saturated zone within the Ogallala Formation comprised primarily of sand, the upper surface of which is generally located between approximately 75 to 110 feet below ground surface (bgs). The saturated zone contains groundwater ranging in thickness from a few feet to up to 15 feet and greater than 25 feet at MW-12 where groundwater has historically been potentiometrically mounded. Historical groundwater mounding has been shown in historical Maxim Technologies, Inc. (Maxim) reports provided which appears to be related to unconfined conditions around MW-11, MW-12, and MW-14 acting as a recharge zone. The currently reported apparent groundwater flow direction appears to be affected by pumping at EW-1 and EW-2, near MW-12, and does not include groundwater elevations from monitoring wells south of the Site under the control of Phillips 66 as part of the Maljamar Gas Plant.

The groundwater-bearing zone at the Site appears to pinch out completely to the northwest due to a stratigraphic pinch-out observed at deep soil boring B-1-C and appears to pinch out to the northeast at MW-19 where the groundwater-bearing zone thins. Apparent groundwater flow at the Site appears to be affected by groundwater extraction near EW-1 and EW-2 locally drawing down the groundwater table in the unconfined recharge zone near MW-12, and the pinch out of the groundwater bearing zone to the northeast and northwest associated with the stratigraphic dip of lithology in the region. Groundwater appears to become semi-confined to confined to the northeast of the Site as the water-bearing zone pinches out toward the Mescalero Ridge. To the south and southeast, the water-bearing zone becomes confined beginning beneath the vicinity of the Maljamar Gas Plant.

Historical groundwater flow included monitoring wells that are currently part of the Phillips 66 Maljamar Gas Plant that have not been accessible for gauging and sampling since Phillips 66 took possession of the Maljamar

Gas Plant in 2012. When these wells were previously included in the groundwater gauging program prior to groundwater extraction at EW-1 and EW-2, groundwater potentiometric surface maps showed an apparent mound around the unconfined groundwater bearing zone in the vicinity of MW-11, MW-12, and MW-14, with apparent radial groundwater flow away from the mound. As discussed above the apparent groundwater flow to the northeast appears to be related to the pinch out of the groundwater-bearing zone toward Mescalero Ridge, but the regional groundwater flow in the area appears to be to the south based on site observations south of the Maljamar Gas Plant. Southern groundwater flow in the general area has been confirmed to flow due south by groundwater investigations conducted at the unrelated Maverick MCA 357 release site located approximately 0.6 miles south, on the south side of the Maljamar Gas Plant.

4.0 GROUNDWATER MONITORING

The Site is currently the subject of annual groundwater monitoring under the NMOCD-approved abatement plan. Tetra Tech contracted Hydrologic Monitoring, LLC (HMI) to conduct the groundwater sampling at the Site in 2024. HMI conducted the 2024 annual groundwater monitoring event on September 4, 2024.

4.1 GROUNDWATER LEVEL MEASUREMENTS

Prior to purging and sampling the monitor well network, HMI personnel gauged each well to measure the depth to groundwater and the presence of PSH, if any. PSH was not identified in any of the Site wells in 2024, **Table 1** presents 2024 groundwater level measurements with calculated groundwater elevations. **Figure 2** presents the site details map showing the current monitoring well network. All seven of the wells in the Site monitoring well network were gauged during the 2024 annual groundwater monitoring event.

In 2024, groundwater elevations ranged from 3,921.27 feet above mean sea level (AMSL) in MW-19 to 3,931.34 feet AMSL in MW-14. Groundwater elevations and the groundwater potentiometric surface map are presented in **Figure 3**. Groundwater flow at the Site was shown to flow to the northeast with an approximate hydraulic gradient of 0.00624 feet per foot in 2024, generally consistent with historical groundwater flow direction and gradient.

As discussed above in **Section 3**, Apparent groundwater flow at the Site appears to historically have been affected by groundwater extraction from EW-1 and EW-2 in combination with the pinch out of the groundwater-bearing zone to the northeast and northwest. Based on the COC concentration distributions and groundwater investigations conducted at the unrelated Maverick MCA 357 site approximately 0.6 miles south the true groundwater flow direction at the site is anticipated as to the south.

4.2 GROUNDWATER SAMPLING

During the 2024 monitoring event, wells MW-11, MW-12, MW-13, MW-14, MW-19, EW-1, and EW-2 were sampled. Low-flow sampling methodology was utilized to purge and sample each well using a bladder pump with dedicated disposable tubing and bladders in accordance with United States Environmental Protection Agency (EPA) guidance. The bladder pump intake was set to the approximate center of the screened interval for each monitor well prior to purging. **Table 2** presents a summary of the groundwater field analytical parameters that were tested during the sampling of the wells and **Appendix E** provides well construction details.

Groundwater quality parameters including temperature, pH, Specific Conductivity (SC), Dissolved Oxygen (DO), Oxygen Reduction Potential (ORP), and turbidity were recorded during purging in addition to well drawdown and flow rate to document monitor well stabilization.

Once field parameters stabilized at each well, samples were collected into laboratory-provided pre-preserved sample containers, immediately placed on ice, and submitted for analysis of the following constituents of concern (COCs):

- 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 then transported to Pace Analytical National laboratory, in Mount Juliet, Tennessee (Pace) under chain-of-custody documentation.

4.3 GROUNDWATER ANALYTICAL RESULTS

During the September 2024 monitoring event, wells EW-1, EW-2, MW-11, MW-12, MW-13, MW-14, and MW-19 were sampled. The concentrations of COCs in the following wells were reported at concentrations greater than NMWQCC standards:

- Chloride was reported in EW-1 (25,100 mg/L), EW-2 (24,300 mg/L), MW-11 (1,240 mg/L), and MW-12 (37,100 mg/L) at concentrations greater than the NMWQCC standard of 250 mg/L;
- Sulfate was reported in MW-12 (1,320 mg/L) and MW-14 (811 mg/L) at concentrations greater than the NMWQCC standard of 600 mg/L; and
- TDS was reported in EW-1 (58,700 mg/L), EW-2 (55,500 mg/L), MW-11 (3,450 mg/L), MW-12 (70,800 mg/L), MW-13 (1,000 mg/L), and MW-14 (1,860mg/L) at concentrations greater than the NMWQCC standard of 1,000 mg/L.

Table 3 presents a summary of the groundwater analytical results screened against NMWQCC Groundwater Quality Standards. The laboratory analytical report and chain-of-custody documentation are provided 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**.

5.0 QUALITY ASSURANCE/QUALITY CONTROL

A total of seven primary groundwater samples and one field duplicate groundwater sample were collected and analyzed during the annual groundwater monitoring events in 2024.

5.1 FIELD AND LABORATORY PRECISION

The project measurement quality objectives are 30 percent for relative percent differences (RPDs) between primary and duplicate sample results for inorganic analytes including bromide, chloride, sulfate, and TDS. **Table 4** presents primary and duplicate sample results and RPD calculations. The one primary-duplicate sample pair RPD calculations were less than the project data quality objectives of 30 percent with the exception of TDS for which a 44.6 percent RPD was calculated.

5.2 LABORATORY DATA QUALIFICATION

The Monitoring Well MW-19 laboratory analytical result for chloride and sulfate was flagged for the associated batch quality control as outside the established quality control range for precision for analysis.

5.3 DATA USABILITY

Groundwater analytical data are deemed useable for the purpose of determining groundwater COC concentrations at the Site. MW-19 chloride results were flagged as outside of the established quality control range for precision and the field duplicate sample reported results within Data quality objectives with the exception of TDS. Based on professional judgment and review of historical Site data, the integrity of analytical data was not significantly affected for samples for batch quality control precision of chloride or the RPD of TDS in the primary duplicate sample pair.

6.0 2024 CONCLUSIONS

Since the groundwater extraction system shutdown in March 2022, groundwater elevations in the former extraction wells have rebounded back to anticipated levels in relation to the surrounding monitoring well network. The water level in nearby MW-12 has remained stable since the system shutdown.

Generally, COC concentrations in the monitoring well network have remained stable as compared to historical concentration data since the shutdown of the groundwater extraction system in March of 2022. The only exception to this appears to be the TDS concentrations reported in EW-2 and MW-12 which increased significantly in 2023 as compared to previous years. The TDS concentration in MW-12 is within historical concentrations and the EW-2 TDS concentration has risen above historical levels. The changes in TDS concentration data are limited to EW-2 and MW-12 in the source zone which were subject to previous extraction, these changes observed during 2023 are attributed to the re-equalization of the aquifer subsequent to the cessation of extraction activities.

Groundwater monitoring and sampling of the on-site wells are proposed to continue on an annual basis with annual reporting to the New Mexico Oil Conservation Division. Tetra Tech will continue to evaluate annual groundwater analytical results to assess whether groundwater extraction should be re-implemented at the Site in the future.

7.0 REFERENCES

Nicholson Jr., A. and Clebsch Jr., A.. (1961). Geology and Ground-Water Conditions in Southern Lea County, New Mexico. Socorro, NM: State Bureau of Mines and Mineral Resources and New Mexico Institute of Mining & Technology Campus Station.

FIGURES

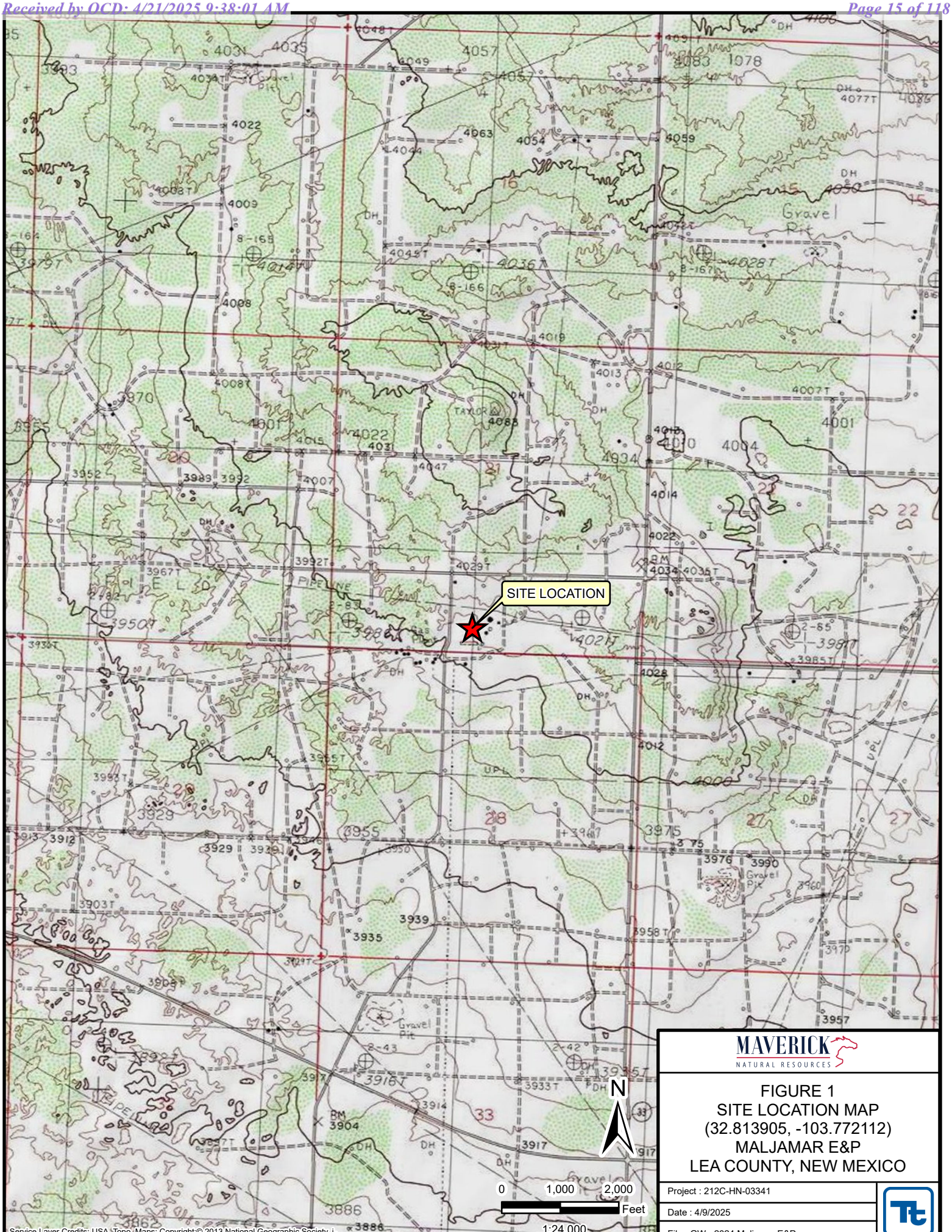

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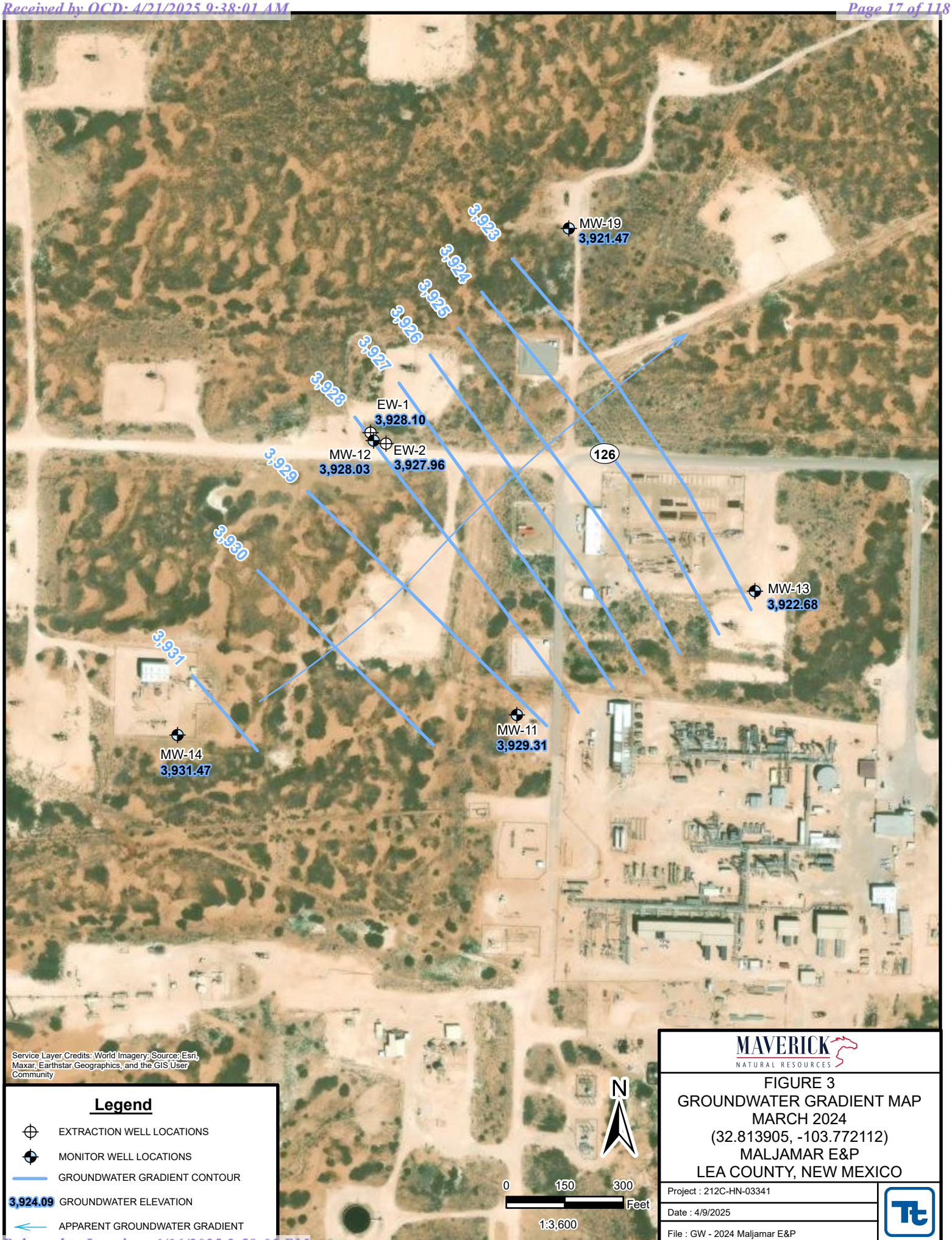
FIGURE 1
SITE LOCATION MAP
(32.813905, -103.772112)
MALJAMAR E&P
LEA COUNTY, NEW MEXICO

Project : 212C-HN-03341	
Date : 4/9/2025	
File : GW - 2024 Maljamar E&P	

MAVERICK
NATURAL RESOURCES

FIGURE 2
SITE MAP
(32.813905, -103.772112)
MALJAMAR E&P
LEA COUNTY, NEW MEXICO

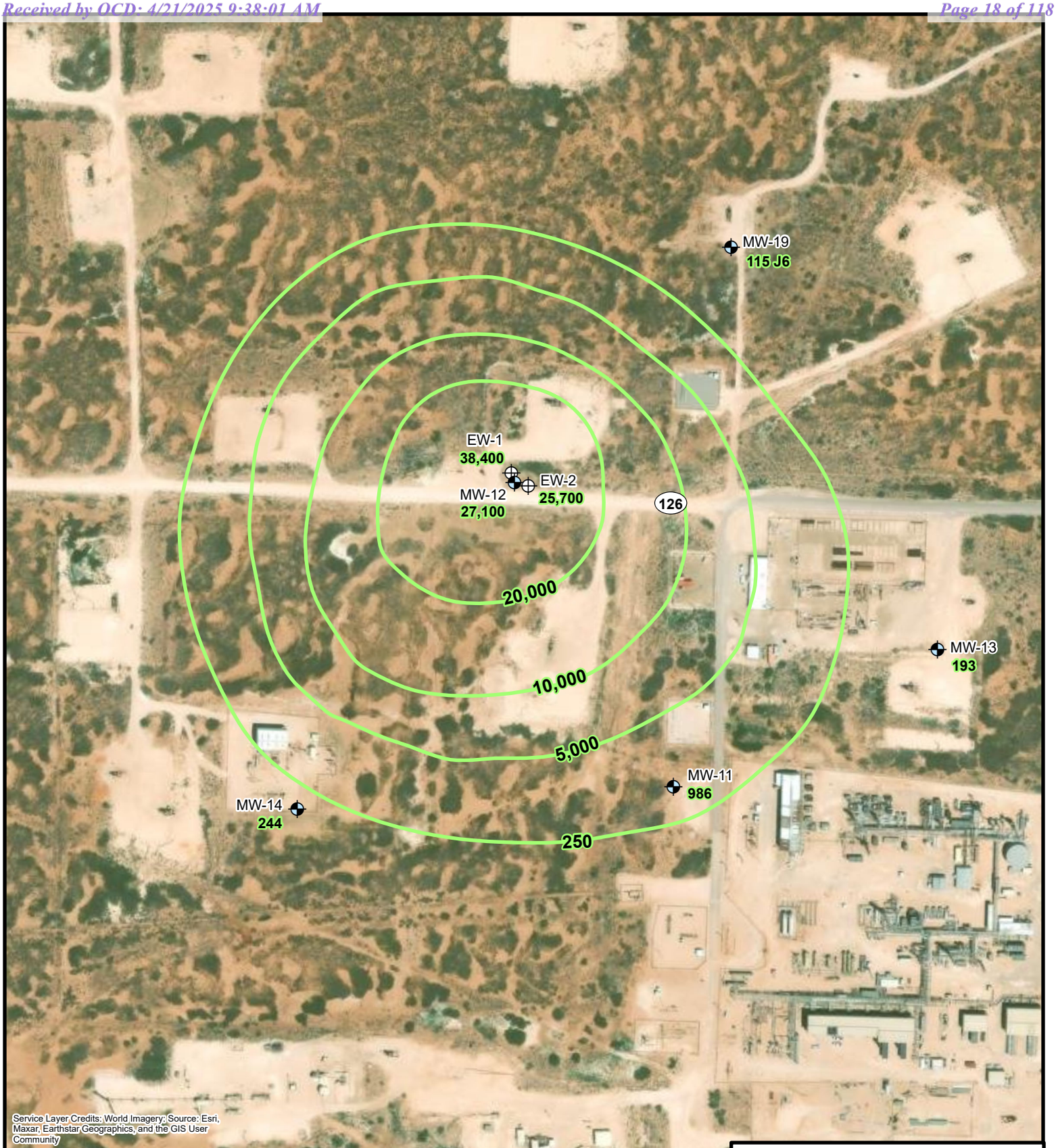
Project : 212C-HN-03341	
Date : 4/9/2025	
File : GW - 2024 Maljamar E&P	



MAVERICK NATURAL RESOURCES

FIGURE 3
GROUNDWATER GRADIENT MAP
MARCH 2024
(32.813905, -103.772112)
MALJAMAR E&P
LEA COUNTY, NEW MEXICO

Project : 212C-HN-03341	
Date : 4/9/2025	
File : GW - 2024 Maljamar E&P	



Legend

- EXTRACTION WELL LOCATIONS
- MONITOR WELL LOCATIONS
- CHLORIDE ISOPLETH
- 1,210 CHLORIDE CONCENTRATION (mg/L)
- J6 THE SAMPLE MATRIX INTERFERED WITH THE ABILITY TO MAKE ANY ACCURATE DETERMINATION; SPIKE VALUE IS LOW.

*NMWQCC REMEDIATION LIMIT FOR CHLORIDE = 250 mg/L

N

0 150 300 Feet

1:3,600

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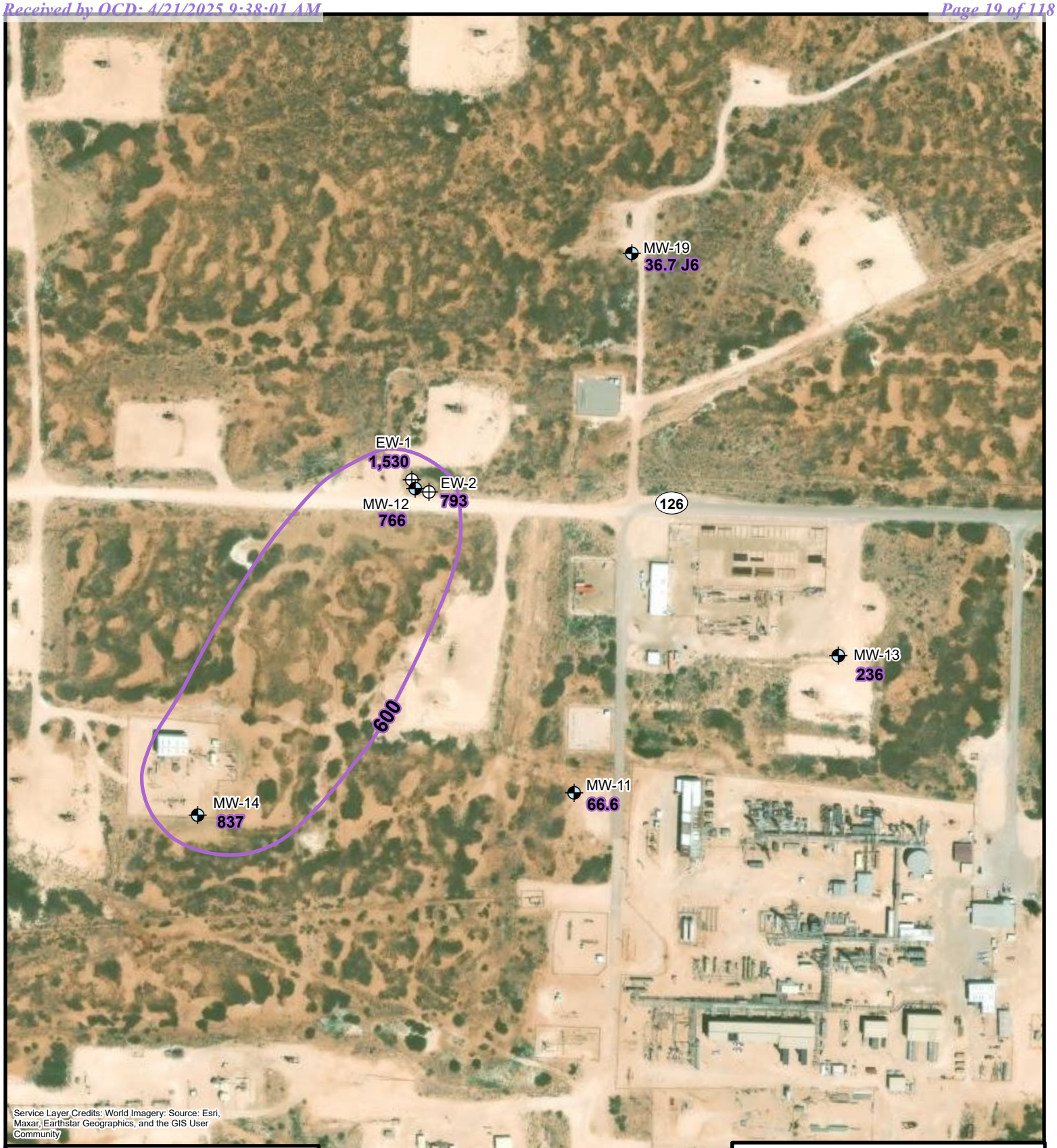
FIGURE 4
CHLORIDE CONCENTRATION MAP
MARCH 2024
(32.813905, -103.772112)
MALJAMAR E&P
LEA COUNTY, NEW MEXICO

Project : 212C-HN-03341	
Date : 4/9/2025	
File : GW - 2024 Maljamar E&P	



Legend

- EXTRACTION WELL LOCATIONS
- MONITOR WELL LOCATIONS
- SULFATE ISOPLETH
- 238 SULFATE CONCENTRATION (mg/L)
- J6 THE SAMPLE MATRIX INTERFERED WITH THE ABILITY TO MAKE ANY ACCURATE DETERMINATION; SPIKE VALUE IS LOW.

*NMWQCC REMEDIATION LIMIT FOR SULFATE = 600 mg/L

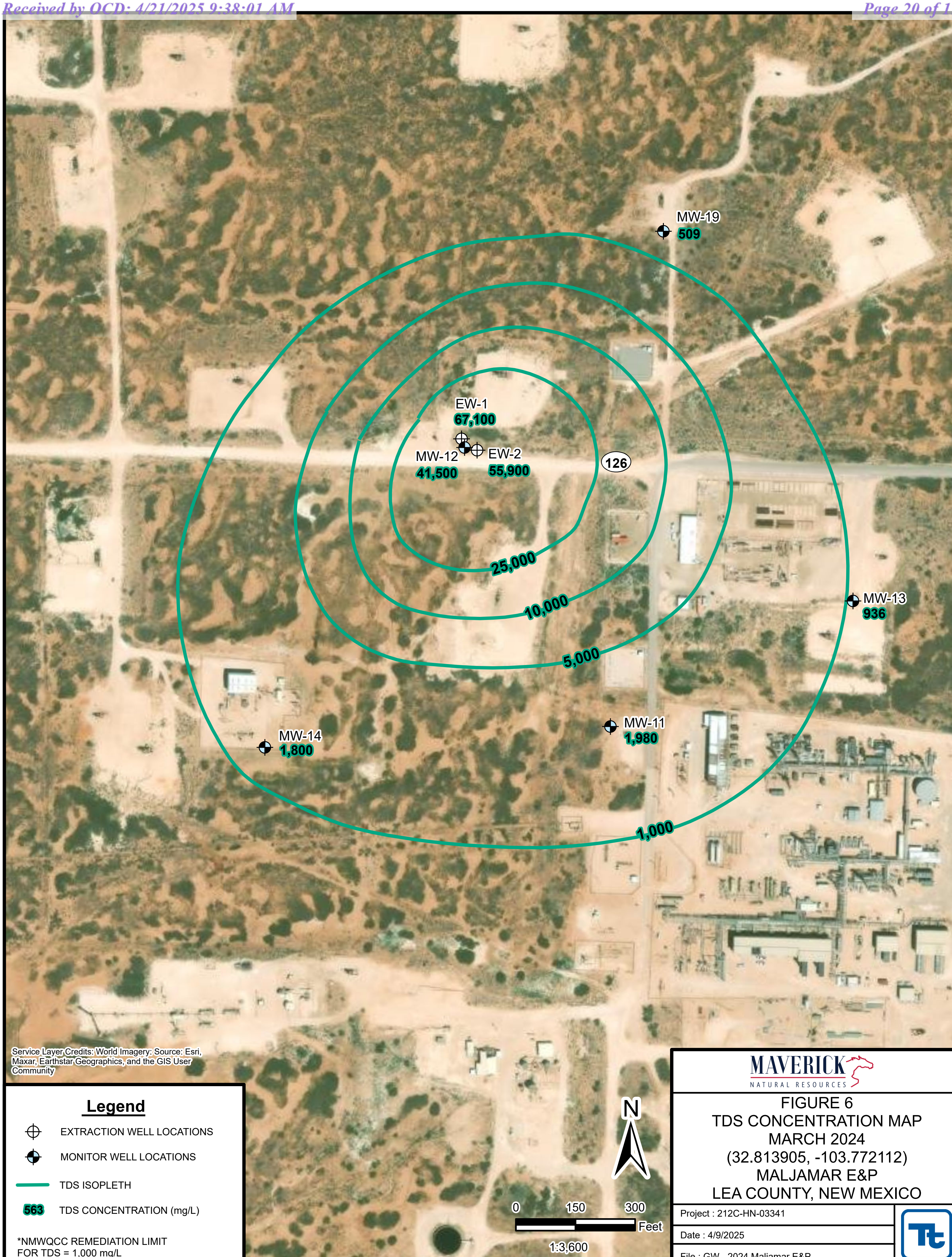
MAVERICK NATURAL RESOURCES

FIGURE 5
SULFATE CONCENTRATION MAP
MARCH 2024
(32.813905, -103.772112)
MALJAMAR E&P
LEA COUNTY, NEW MEXICO

Project : 212C-HN-03341

Date : 4/9/2025

File : GW - 2024 Maljamar E&P



Legend

- EXTRACTION WELL LOCATIONS
- MONITOR WELL LOCATIONS
- TDS ISOPLETH
- 563 TDS CONCENTRATION (mg/L)

*NMWQCC REMEDIATION LIMIT FOR TDS = 1,000 mg/L

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FIGURE 6
TDS CONCENTRATION MAP
MARCH 2024
(32.813905, -103.772112)
MALJAMAR E&P
LEA COUNTY, NEW MEXICO

Project : 212C-HN-03341
Date : 4/9/2025
File : GW - 2024 Maljamar E&P

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TABLES

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Table 1
2024 Groundwater Elevation Summary
Maljamar E&P
Lea County, New Mexico

Well ID	Gauging Date	Well Total Depth (feet BTOC)	Depth to Water (feet BTOC)	Top of Casing Elevation (feet AMSL)	Groundwater Elevation (feet)
EW-1	3/27/2024	124.9	93.94	4,022.04	**3,928.10**
EW-2	3/27/2024	143.9	94.80	4,022.76	**3,927.96**
MW-11	3/27/2024	119.6	86.23	4,015.54	**3,929.31**
MW-12	3/27/2024	122.9	94.50	4,022.53	**3,928.03**
MW-13	3/27/2024	125.0	109.28	4,031.96	**3,922.68**
MW-14	3/27/2024	119.7	75.64	4,006.98	**3,931.34**
MW-19	3/27/2024	121.4	115.87	4,037.34	**3,921.47**

Notes:

AMSL: Above Mean Sea Level
BTOC: Below Top of Casing
NG: Not gauged

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Table 2
2024 Groundwater Field Parameters
Maljamar E&P
Lea County, New Mexico

Well ID	Gauging Date	PH	Temperature (°C)	Standard Conducivity (µs/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)	Turbidity (NTU)
EW-1	3/27/2024	6.51	16.6	67,700	1.4	76.4	27.8
EW-2	3/27/2024	6.47	16.9	66,000	1.3	-132.1	3.0
MW-11	3/27/2024	6.99	18.4	4,090	1.4	45.3	19.1
MW-12	3/27/2024	6.54	16.3	92,300	0.8	168.2	25.6
MW-13	3/27/2024	6.46	17.6	1,427	3.4	36.3	27.9
MW-14	3/27/2024	6.62	17.4	2,722	2.5	135.8	12.6
MW-19	3/27/2024	6.96	17.5	972	1.7	135.6	9.8

Notes:

BTOC: Below Top of Casing
µs/cm: Microsiemens per Centimeter
mV: Millivolts
NTU: Nephelometric Turbidity Units

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Table 3
2024 Groundwater Analytical Summary
Maljamar E&P
Lea County, New Mexico

Well ID	Sample Date	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Bromide (mg/L)
NMWQCC Groundwater Quality		**250**	**600**	**1,000**	**NE**
EW-1	3/27/2024	38,400	1,530	67,100	44.1 J
EW-2	3/27/2024	25,700	793	55,900	40.6 J
MW-11	3/27/2024	986	66.6	1,980	5.6
MW-12	3/27/2024	27,100	766	41,500	41.1 J
MW-13	3/27/2024	193	236	936	3.14
MW-14	3/27/2024	261	837	1,800	7.04 J
MW-19	3/27/2024	115 J6	36.7 J6	509	1.86 P1

Notes:

NMWQCC: New Mexico Water Quality Control Commission

Exceeds applicable regulatory standards

NE: No Established Standard

J: The identification of the analyte is acceptable; the reported value is an estimate

P1: RPD value not applicable for sample concentrations less than 5 times the reporting limit

J6: The sample matrix interfered with the ability to make any accurate determination; spike value is low.

TDS: Total Dissolved Solids

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Table 4
2024 Quality Assurance/Quality Control Summary
Maljamar E&P
Lea County, New Mexico

Well ID	Sample Date	Analyte	Primary Sample Result (mg/L)	Duplicate Sample Result (mg/L)	RPD	DQO	Within DQOs
MW-11	3/27/2024	Bromide	5.6	5.56	0.7%	30%	Yes
		Chloride	986	834	16.7%	30%	Yes
		Sulfate	66.6	66.8	0.3%	30%	Yes
		TDS	1,980	2,160	8.7%	30%	Yes

Notes:

RPD: Relative Percent Difference calculated as = (SR-DR)*200/(SR+DR)
DQO: Data Quality Objectives
ND: Not Detected above the laboratory method detection limit
N/A: Not Applicable

APPENDIX A: LABORATORY ANALYTICAL DATA

ANALYTICAL REPORT

April 09, 2024

Tetra Tech EMI - Houston, TX

Sample Delivery Group:	L1719914
Samples Received:	03/28/2024
Project Number:	212C-HN-02231
Description:	MNR - Maljamar

Report To: Chris Straub
1500 CityWest Boulevard
Suite 1000
Houston, TX 77042

Entire Report Reviewed By:

Chad A Upchurch
Project Manager

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

MW-11 L1719914-01 GW

Collected by: HMI TEAM | Collected date/time: 03/27/24 08:40 | Received date/time: 03/28/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257765	1	04/01/24 15:30	04/03/24 14:28	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2257485	1	04/02/24 05:24	04/02/24 05:24	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2257485	20	04/02/24 05:39	04/02/24 05:39	GEB	Mt. Juliet, TN

MW-12 L1719914-02 GW

Collected by: HMI TEAM | Collected date/time: 03/27/24 07:55 | Received date/time: 03/28/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257765	1	04/01/24 15:30	04/03/24 14:28	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2257485	100	04/02/24 05:54	04/02/24 05:54	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2257485	500	04/02/24 06:09	04/02/24 06:09	GEB	Mt. Juliet, TN

MW-13 L1719914-03 GW

Collected by: HMI TEAM | Collected date/time: 03/27/24 08:00 | Received date/time: 03/28/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257765	1	04/01/24 15:30	04/03/24 14:28	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2257485	1	04/02/24 06:24	04/02/24 06:24	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2257485	5	04/02/24 06:39	04/02/24 06:39	GEB	Mt. Juliet, TN

MW-14 L1719914-04 GW

Collected by: HMI TEAM | Collected date/time: 03/27/24 07:45 | Received date/time: 03/28/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257464	1	04/01/24 07:45	04/01/24 11:57	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2257485	10	04/02/24 06:54	04/02/24 06:54	GEB	Mt. Juliet, TN

MW-19 L1719914-05 GW

Collected by: HMI TEAM | Collected date/time: 03/27/24 08:35 | Received date/time: 03/28/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257765	1	04/01/24 15:30	04/03/24 14:28	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2257485	1	04/02/24 07:09	04/02/24 07:09	GEB	Mt. Juliet, TN

EW-1 L1719914-06 GW

Collected by: HMI TEAM | Collected date/time: 03/27/24 07:55 | Received date/time: 03/28/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257765	1	04/01/24 15:30	04/03/24 14:28	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2257485	100	04/02/24 08:38	04/02/24 08:38	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2257485	500	04/02/24 08:53	04/02/24 08:53	GEB	Mt. Juliet, TN

EW-2 L1719914-07 GW

Collected by: HMI TEAM | Collected date/time: 03/27/24 08:30 | Received date/time: 03/28/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257464	1	04/01/24 07:45	04/01/24 11:57	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2257485	100	04/02/24 09:08	04/02/24 09:08	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2257485	500	04/02/24 09:23	04/02/24 09:23	GEB	Mt. Juliet, TN

SAMPLE SUMMARY

DUP-01 L1719914-08 GW

			Collected by	Collected date/time	Received date/time	
			HMI TEAM	03/27/24 08:00	03/28/24 09:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257765	1	04/01/24 15:30	04/03/24 14:28	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2257485	1	04/02/24 09:38	04/02/24 09:38	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2257485	20	04/02/24 09:53	04/02/24 09:53	GEB	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.

Chad A Upchurch
Project Manager

Sample Delivery Group (SDG) Narrative

The Laboratory is not accredited for specific analytes on the associated Sample/Method. These analytes are flagged in the Sample Results section of the report with an asterisk (*).

Lab Sample ID	Project Sample ID	Method
L1719914-01	MW-11	9056A
L1719914-02	MW-12	9056A
L1719914-03	MW-13	9056A
L1719914-04	MW-14	9056A
L1719914-05	MW-19	9056A
L1719914-06	EW-1	9056A
L1719914-07	EW-2	9056A
L1719914-08	DUP-01	9056A

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1980		50.0	1	04/03/2024 14:28	WG2257765

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
*Bromide	5.60		0.353	1.00	1	04/02/2024 05:24	WG2257485
Chloride	986		7.58	20.0	20	04/02/2024 05:39	WG2257485
Sulfate	66.6		0.594	5.00	1	04/02/2024 05:24	WG2257485

MW-12
Collected date/time: 03/27/24 07:55
L1719914

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	41500		1000	1	04/03/2024 14:28	WG2257765

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
*Bromide	41.1	J	35.3	100	100	04/02/2024 05:54	WG2257485
Chloride	27100		190	500	500	04/02/2024 06:09	WG2257485
Sulfate	766		59.4	500	100	04/02/2024 05:54	WG2257485

Sample Narrative:

L1719914-02 WG2257485: Br- BDL at 100x due to matrix/high Cl

MW-13
Collected date/time: 03/27/24 08:00
L1719914

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	936		20.0	1	04/03/2024 14:28	WG2257765

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
*Bromide	3.14		0.353	1.00	1	04/02/2024 06:24	WG2257485
Chloride	193		0.379	1.00	1	04/02/2024 06:24	WG2257485
Sulfate	236		2.97	25.0	5	04/02/2024 06:39	WG2257485

MW-14
Collected date/time: 03/27/24 07:45
L1719914

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1800		50.0	1	04/01/2024 11:57	WG2257464

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
*Bromide	7.04	J	3.53	10.0	10	04/02/2024 06:54	WG2257485
Chloride	261		3.79	10.0	10	04/02/2024 06:54	WG2257485
Sulfate	837		5.94	50.0	10	04/02/2024 06:54	WG2257485

Sample Narrative:

L1719914-04 WG2257485: Br- BDL at 10x due to matrix/high SO4

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	509		10.0	1	04/03/2024 14:28	WG2257765

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
*Bromide	1.86	P1	0.353	1.00	1	04/02/2024 07:09	WG2257485
Chloride	115	J6	0.379	1.00	1	04/02/2024 07:09	WG2257485
Sulfate	36.7	J6	0.594	5.00	1	04/02/2024 07:09	WG2257485

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	67100		1000	1	04/03/2024 14:28	WG2257765

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
*Bromide	44.1	J	35.3	100	100	04/02/2024 08:38	WG2257485
Chloride	38400		190	500	500	04/02/2024 08:53	WG2257485
Sulfate	1530		59.4	500	100	04/02/2024 08:38	WG2257485

Sample Narrative:

L1719914-06 WG2257485: Br- BDL at 100x due to matrix/high Cl-,

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	55900		1000	1	04/01/2024 11:57	WG2257464

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
*Bromide	40.6	J	35.3	100	100	04/02/2024 09:08	WG2257485
Chloride	25700		190	500	500	04/02/2024 09:23	WG2257485
Sulfate	793		59.4	500	100	04/02/2024 09:08	WG2257485

Sample Narrative:

L1719914-07 WG2257485: Br- BDL at 100x due to matrix/high Cl-,

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	2160		50.0	1	04/03/2024 14:28	WG2257765

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
*Bromide	5.56		0.353	1.00	1	04/02/2024 09:38	WG2257485
Chloride	834		7.58	20.0	20	04/02/2024 09:53	WG2257485
Sulfate	66.8		0.594	5.00	1	04/02/2024 09:38	WG2257485

Method Blank (MB)

(MB) R4053474-1 04/01/24 11:57

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

L1719651-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1719651-02 04/01/24 11:57 • (DUP) R4053474-3 04/01/24 11:57

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2720	2990	1	9.46		10

L1719651-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1719651-06 04/01/24 11:57 • (DUP) R4053474-4 04/01/24 11:57

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2820	3060	1	8.16		10

Laboratory Control Sample (LCS)

(LCS) R4053474-2 04/01/24 11:57

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8510	96.7	85.0-115	

Method Blank (MB)

(MB) R4054411-1 04/03/24 14:28

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

L1720146-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1720146-03 04/03/24 14:28 • (DUP) R4054411-3 04/03/24 14:28

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	367	376	1	2.42		10

L1720146-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1720146-09 04/03/24 14:28 • (DUP) R4054411-4 04/03/24 14:28

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	596	607	1	1.77		10

Laboratory Control Sample (LCS)

(LCS) R4054411-2 04/03/24 14:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8390	95.3	85.0-115	

Method Blank (MB)

(MB) R4054452-1 04/01/24 20:54

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

L1719910-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1719910-05 04/02/24 04:10 • (DUP) R4054452-4 04/02/24 04:25

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	U	U	5	0.000		15
Chloride	40.6	40.4	5	0.582		15
Sulfate	53.9	53.7	5	0.386		15

L1719914-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1719914-05 04/02/24 07:09 • (DUP) R4054452-5 04/02/24 07:24

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	1.86	3.44	1	59.8	P1	15
Chloride	115	114	1	0.810		15
Sulfate	36.7	35.5	1	3.26		15

Laboratory Control Sample (LCS)

(LCS) R4054452-2 04/01/24 21:08

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromide	40.0	42.5	106	80.0-120	
Chloride	40.0	41.0	103	80.0-120	
Sulfate	40.0	40.7	102	80.0-120	

L1719637-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1719637-01 04/01/24 23:43 • (MS) R4054452-3 04/02/24 00:27

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Bromide	40.0	U	43.4	108	1	80.0-120	
Chloride	40.0	8.44	50.2	104	1	80.0-120	
Sulfate	40.0	12.7	55.1	106	1	80.0-120	

L1719914-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1719914-05 04/02/24 07:09 • (MS) R4054452-6 04/02/24 07:39 • (MSD) R4054452-7 04/02/24 08:23

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	40.0	1.86	43.5	43.9	104	105	1	80.0-120			0.727	15
Chloride	40.0	115	150	130	89.0	38.1	1	80.0-120		J6	14.5	15
Sulfate	40.0	36.7	68.3	67.8	78.8	77.7	1	80.0-120	J6	J6	0.674	15

Sample Narrative:

MS: SO4 spike failed due to sample matrix

MSD: SO4/Cl spike failed due to sample matrix

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
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

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	LAO000356
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.

Company Information

Tetra Tech EMI - Houston, TX

1500 CityWest Boulevard
Suite 1000
Houston, TX 77042

Billing Information:
Accounts Payable
901 West Wall
Suite 100
Midland, TX 79701

Pres Chk

Report to: **Chris Straub**

Email To: chris.straub@tetratech.com;chuck.terhune@tet

Project Description: **MNR - Maljamar**

City/State Collected: MAIJAMAR, NM

Please Circle: PT MT CT ET

Phone: **832-251-5160**

Client Project # **212C-HN-02231**

Lab Project # **TETRAHTX-MALJAMAR**

Collected by (print): HMI TOTM

Site/Facility ID #

P.O. #

Collected by (signature): GH

Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Br, Cl, SO4 250mlHDPE-NoPres	TDS 1L-HDPE NoPres	Remarks	Sample # (lab only)
MW-11	GRAB	GW		3-27-24	840	2	X	X		-01
MW-12		GW			755					-02
MW-13		GW			800					-03
MW-14		GW			745					-04
MW-19		GW			835					-05
EW-1		GW			755					-06
EW-2		GW			830					-07
Dup-01		GW			800					-08
		GW								
		GW								

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1719914

A026

Acctnum: **TETRAHTX**
Template: **T237098**
Prelogin: **P1062540**
PM: **3564 - Chad A Upchurch**
PB:

Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS ✓ FedEx __ Courier _____

Tracking # 7123 3308 2850

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / (No) HCL / MeoH TBR	If preservation required by Login: Date/Time
	3-27-24	1100			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
				OPAL 1.8+.1	=1.9
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / (OK)
			Tab Wolf	3-28-24 900	

ANALYTICAL REPORT

September 27, 2024

Tetra Tech EMI - Houston, TX

Sample Delivery Group:	L1775166
Samples Received:	09/06/2024
Project Number:	212C-HN-02231
Description:	MNR - Maljamar

Report To: Chris Straub
1500 CityWest Boulevard
Suite 1000
Houston, TX 77042

Entire Report Reviewed By:

Chad A Upchurch
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 National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

TABLE OF CONTENTS

MW-11 L1775166-01 GW

Collected by: JT / HMI Team | Collected date/time: 09/04/24 16:20 | Received date/time: 09/06/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2358880	1	09/09/24 16:28	09/09/24 21:17	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2358067	20	09/09/24 14:54	09/09/24 14:54	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2358067	5	09/09/24 14:42	09/09/24 14:42	DLH	Mt. Juliet, TN

MW-12 L1775166-02 GW

Collected by: JT / HMI Team | Collected date/time: 09/04/24 14:20 | Received date/time: 09/06/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2358880	1	09/09/24 16:28	09/09/24 21:17	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2358067	100	09/09/24 15:07	09/09/24 15:07	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2358067	500	09/09/24 15:20	09/09/24 15:20	DLH	Mt. Juliet, TN

MW-13 L1775166-03 GW

Collected by: JT / HMI Team | Collected date/time: 09/04/24 17:10 | Received date/time: 09/06/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2358912	1	09/11/24 11:10	09/11/24 11:15	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2358067	1	09/09/24 15:33	09/09/24 15:33	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2358067	10	09/09/24 15:45	09/09/24 15:45	DLH	Mt. Juliet, TN

MW-14 L1775166-04 GW

Collected by: JT / HMI Team | Collected date/time: 09/04/24 16:40 | Received date/time: 09/06/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2358912	1	09/11/24 11:10	09/11/24 11:15	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2358067	5	09/09/24 15:58	09/09/24 15:58	DLH	Mt. Juliet, TN

MW-19 L1775166-05 GW

Collected by: JT / HMI Team | Collected date/time: 09/04/24 17:25 | Received date/time: 09/06/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2358880	1	09/09/24 16:28	09/09/24 21:17	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2358067	1	09/09/24 16:49	09/09/24 16:49	DLH	Mt. Juliet, TN

EW-1 L1775166-06 GW

Collected by: JT / HMI Team | Collected date/time: 09/04/24 15:40 | Received date/time: 09/06/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2361161	1	09/12/24 10:14	09/12/24 21:53	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2358067	50	09/09/24 17:02	09/09/24 17:02	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2358067	500	09/09/24 17:14	09/09/24 17:14	DLH	Mt. Juliet, TN

EW-2 L1775166-07 GW

Collected by: JT / HMI Team | Collected date/time: 09/04/24 15:00 | Received date/time: 09/06/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2358880	1	09/09/24 16:28	09/09/24 21:17	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2358067	50	09/09/24 17:27	09/09/24 17:27	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2358067	500	09/09/24 17:40	09/09/24 17:40	DLH	Mt. Juliet, TN

SAMPLE SUMMARY

DUP-01 L1775166-08 GW

Collected by	Collected date/time	Received date/time
JT / HMI Team	09/04/24 15:30	09/06/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2358912	1	09/11/24 11:10	09/11/24 11:15	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2358067	20	09/09/24 18:05	09/09/24 18:05	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2358067	5	09/09/24 17:52	09/09/24 17:52	DLH	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.

Chad A Upchurch
Project Manager

Sample Delivery Group (SDG) Narrative

The Laboratory is not accredited for specific analytes on the associated Sample/Method. These analytes are flagged in the Sample Results section of the report with an asterisk (*).

Lab Sample ID	Project Sample ID	Method
L1775166-01	MW-11	9056A
L1775166-02	MW-12	9056A
L1775166-03	MW-13	9056A
L1775166-04	MW-14	9056A
L1775166-05	MW-19	9056A
L1775166-06	EW-1	9056A
L1775166-07	EW-2	9056A
L1775166-08	DUP-01	9056A

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	3450		50.0	1	09/09/2024 21:17	WG2358880

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
*Bromide	9.23		3.40	5.00	5	09/09/2024 14:42	WG2358067
Chloride	1240		10.9	20.0	20	09/09/2024 14:54	WG2358067
Sulfate	81.9		3.18	25.0	5	09/09/2024 14:42	WG2358067

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	70800		100	1	09/09/2024 21:17	WG2358880

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
*Bromide	99.2	J	68.0	100	100	09/09/2024 15:07	WG2358067
Chloride	37100		274	500	500	09/09/2024 15:20	WG2358067
Sulfate	1320		63.7	500	100	09/09/2024 15:07	WG2358067

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1000		20.0	1	09/11/2024 11:15	WG2358912

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
*Bromide	2.98		0.680	1.00	1	09/09/2024 15:33	WG2358067
Chloride	185		0.547	1.00	1	09/09/2024 15:33	WG2358067
Sulfate	214		6.37	50.0	10	09/09/2024 15:45	WG2358067

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1860		50.0	1	09/11/2024 11:15	WG2358912

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
*Bromide	6.37		3.40	5.00	5	09/09/2024 15:58	WG2358067
Chloride	245		2.74	5.00	5	09/09/2024 15:58	WG2358067
Sulfate	811		3.18	25.0	5	09/09/2024 15:58	WG2358067

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	597		10.0	1	09/09/2024 21:17	WG2358880

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
*Bromide	3.26		0.680	1.00	1	09/09/2024 16:49	WG2358067
Chloride	118		0.547	1.00	1	09/09/2024 16:49	WG2358067
Sulfate	38.1		0.637	5.00	1	09/09/2024 16:49	WG2358067

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	58700	Q	1000	1	09/12/2024 21:53	WG2361161

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
*Bromide	54.7		34.0	50.0	50	09/09/2024 17:02	WG2358067
Chloride	25100		274	500	500	09/09/2024 17:14	WG2358067
Sulfate	637		31.8	250	50	09/09/2024 17:02	WG2358067

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	50500		100	1	09/09/2024 21:17	WG2358880

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
*Bromide	54.0		34.0	50.0	50	09/09/2024 17:27	WG2358067
Chloride	24300		274	500	500	09/09/2024 17:40	WG2358067
Sulfate	704		31.8	250	50	09/09/2024 17:27	WG2358067

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	2760		50.0	1	09/11/2024 11:15	WG2358912

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
*Bromide	8.81		3.40	5.00	5	09/09/2024 17:52	WG2358067
Chloride	1170		10.9	20.0	20	09/09/2024 18:05	WG2358067
Sulfate	76.9		3.18	25.0	5	09/09/2024 17:52	WG2358067

Method Blank (MB)

(MB) R4119245-1 09/09/24 21:17

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

L1774782-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1774782-01 09/09/24 21:17 • (DUP) R4119245-3 09/11/24 10:34

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2050	2070	1	1.22		10

L1775437-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1775437-05 09/09/24 21:17 • (DUP) R4119245-4 09/11/24 10:34

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	293	313	1	6.60		10

Laboratory Control Sample (LCS)

(LCS) R4119245-2 09/09/24 21:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8600	97.7	85.0-115	

Method Blank (MB)

(MB) R4120027-1 09/11/24 11:15

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

L1775523-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1775523-05 09/11/24 11:15 • (DUP) R4120027-4 09/11/24 11:15

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	4990	5090	1	1.98		10

Laboratory Control Sample (LCS)

(LCS) R4120027-2 09/11/24 11:15

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8690	98.8	85.0-115	

Method Blank (MB)

(MB) R4120069-1 09/12/24 21:53

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

L1776521-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1776521-01 09/12/24 21:53 • (DUP) R4120069-3 09/12/24 21:53

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1170	1190	1	2.21		10

Laboratory Control Sample (LCS)

(LCS) R4120069-2 09/12/24 21:53

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8340	94.8	85.0-115	

Method Blank (MB)

(MB) R4119465-1 09/09/24 11:31

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Bromide	U		0.680	1.00
Chloride	U		0.547	1.00
Sulfate	U		0.637	5.00

L1775161-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1775161-01 09/09/24 13:51 • (DUP) R4119465-3 09/09/24 14:04

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	U	U	1	0.000		15
Chloride	17.4	17.5	1	0.458		15
Sulfate	118	122	1	2.83		15

L1775113-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1775113-03 09/09/24 12:22 • (DUP) R4119465-5 09/09/24 12:35

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	U	U	1	0.000		15
Chloride	U	U	1	0.000		15
Sulfate	U	U	1	0.000		15

Laboratory Control Sample (LCS)

(LCS) R4119465-2 09/09/24 11:44

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromide	40.0	36.5	91.2	80.0-120	
Chloride	40.0	36.1	90.2	80.0-120	
Sulfate	40.0	36.6	91.6	80.0-120	

L1775161-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1775161-01 09/09/24 13:51 • (MS) R4119465-4 09/09/24 14:16

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Bromide	40.0	U	38.9	97.2	1	80.0-120	
Chloride	40.0	17.4	53.8	90.9	1	80.0-120	
Sulfate	40.0	118	134	38.6	1	80.0-120	J6

L1775113-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1775113-03 09/09/24 12:22 • (MS) R4119465-6 09/09/24 12:47 • (MSD) R4119465-7 09/09/24 13:00

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	40.0	U	39.5	38.0	98.7	95.1	1	80.0-120			3.73	15
Chloride	40.0	U	38.9	37.4	97.2	93.6	1	80.0-120			3.74	15
Sulfate	40.0	U	39.8	38.2	99.4	95.4	1	80.0-120			4.16	15

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
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
Q	Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.

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	LAO000356
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.

Company Name/Address:
Tetra Tech EMI - Houston, TX

1500 CityWest Boulevard
Suite 1000
Houston, TX 77042

Billing Information:
Accounts Payable
901 West Wall
Suite 100
Midland, TX 79701

Pres Chk

Report to: **Chris Straub**

Email To: chris.straub@tetratech.com;chuck.terhune@tet

Project Description: MNR - Maljamar

City/State Collected: MALJAMAR, NM

Please Circle: PT MT CT ET

Phone: 832-251-5160

Client Project # 212C-HN-02231

Lab Project # TETRAHTX-MALJAMAR

Collected by (print): Jakob Trojan / HMI Tpwn

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # 1775166
B137

Acctnum: TETRAHTX
Template: T237098
Prelogin: P1096725
PM: 3564 - Chad A Upchurch
PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Br, Cl, SO4 250mlHDPE-NoPres	TDS 1L-HDPE NoPres	Remarks	Sample # (lab only)
MW-11	Grab	GW		9-4-24	1620	2	X	X		-01
MW-12	↓	GW		↓	1420	↓	↓	↓		-02
MW-13		GW			1710					-03
MW-14		GW			1640					-04
MW-19		GW			1725					-05
EW-1		GW			1540					-06
EW-2		GW			1500					-07
DUP-01	↓	GW		↓	1530	↓	↓	↓		-08
		GW								
		GW								

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

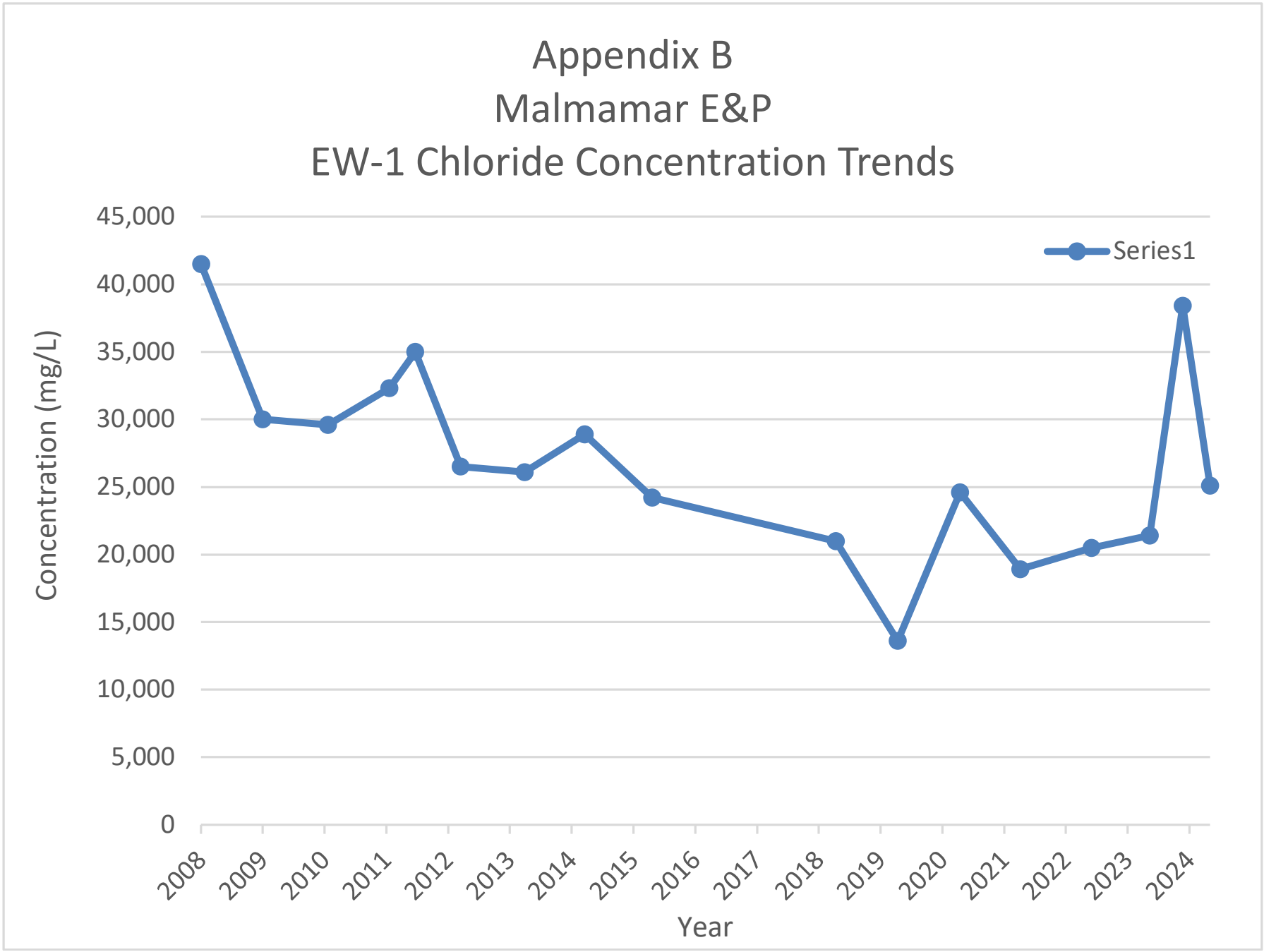
Samples returned via:
__ UPS __ FedEx ✓ Courier _____

Tracking # 4102 9166 8601

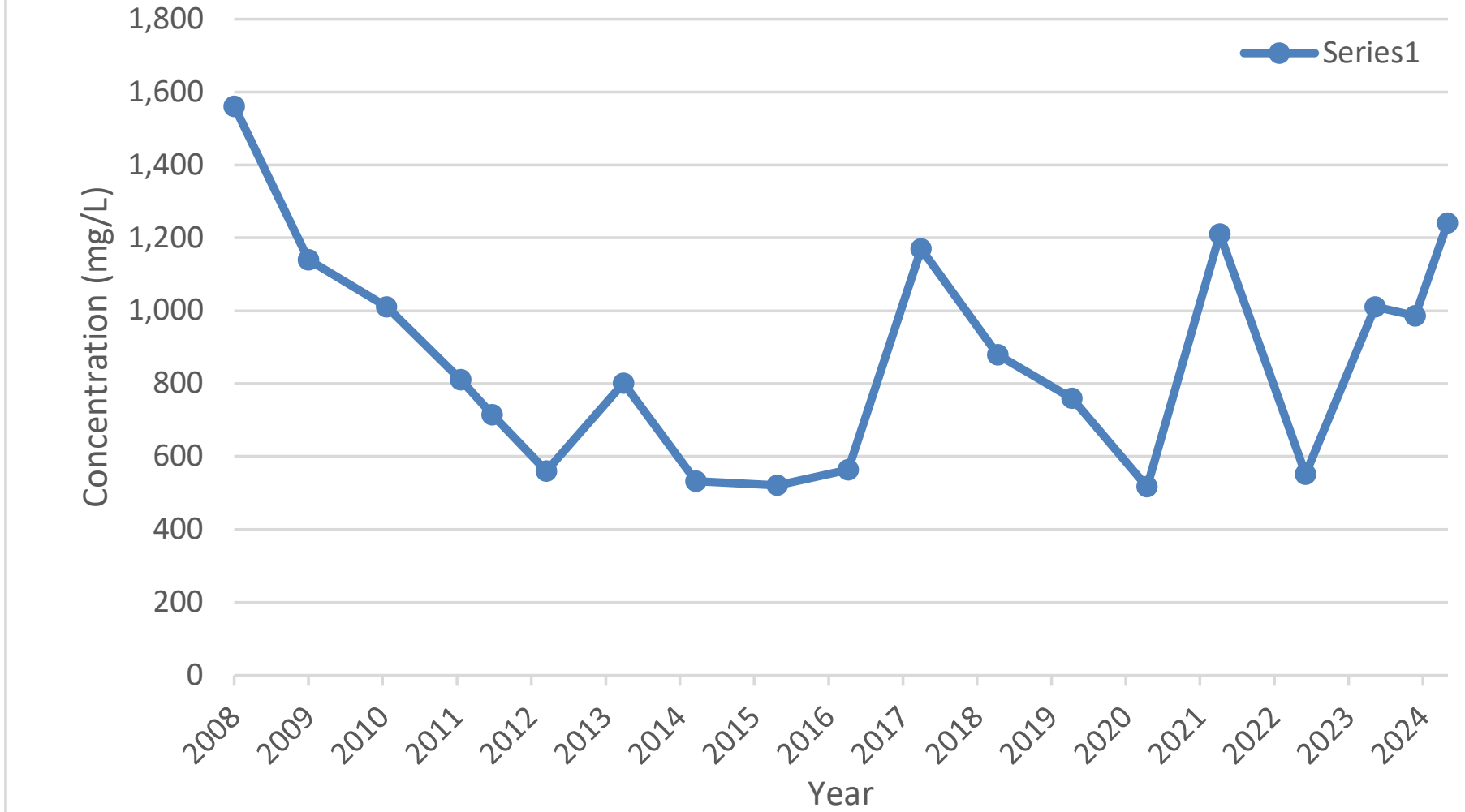
Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

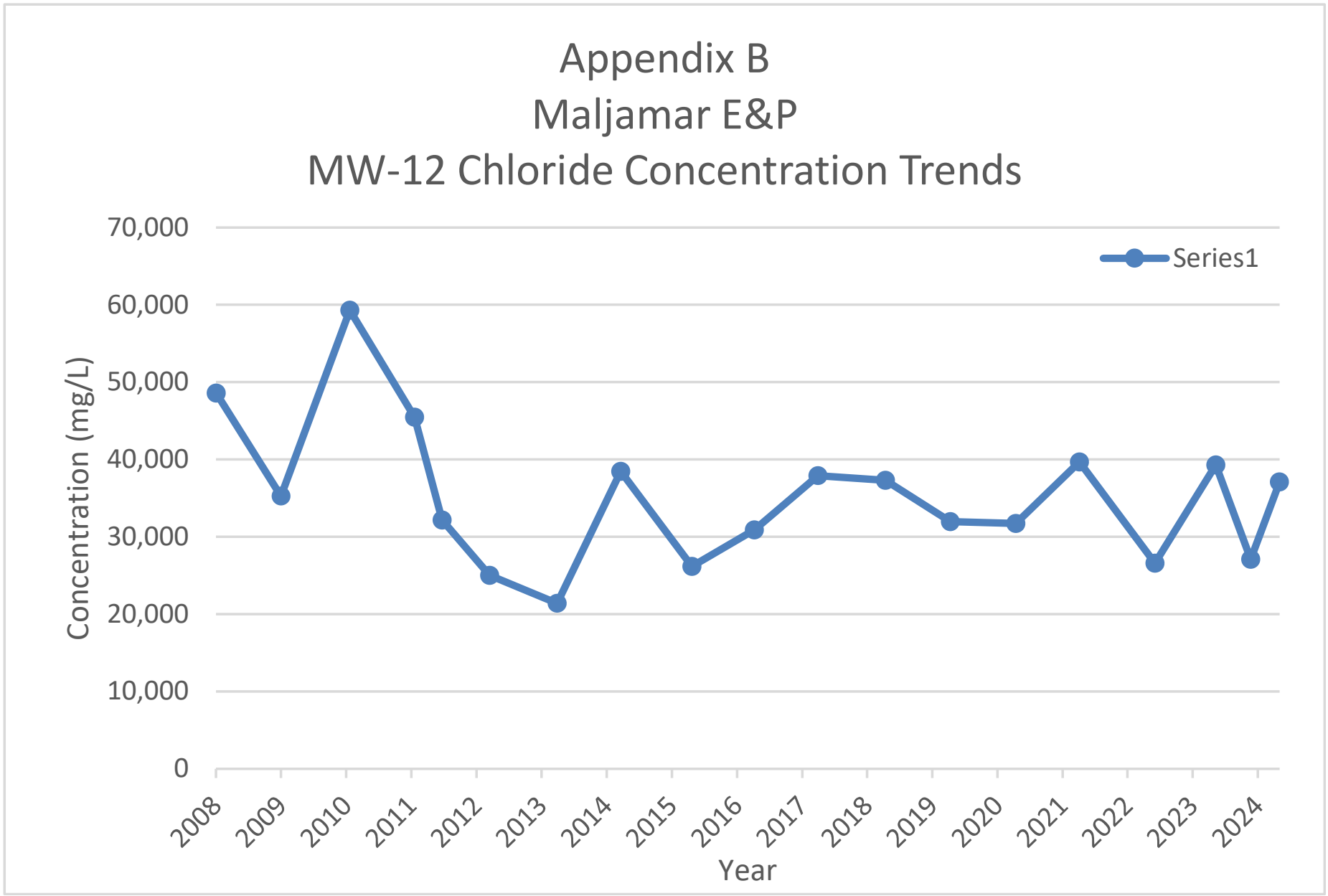
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	9-5-24	800			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.4 °C Bottles Received: 5+2+3=5.5 16	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Alexa Mitchell	Date: 9/6/24 Time: 0900	Hold: / Condition: NCF / OK

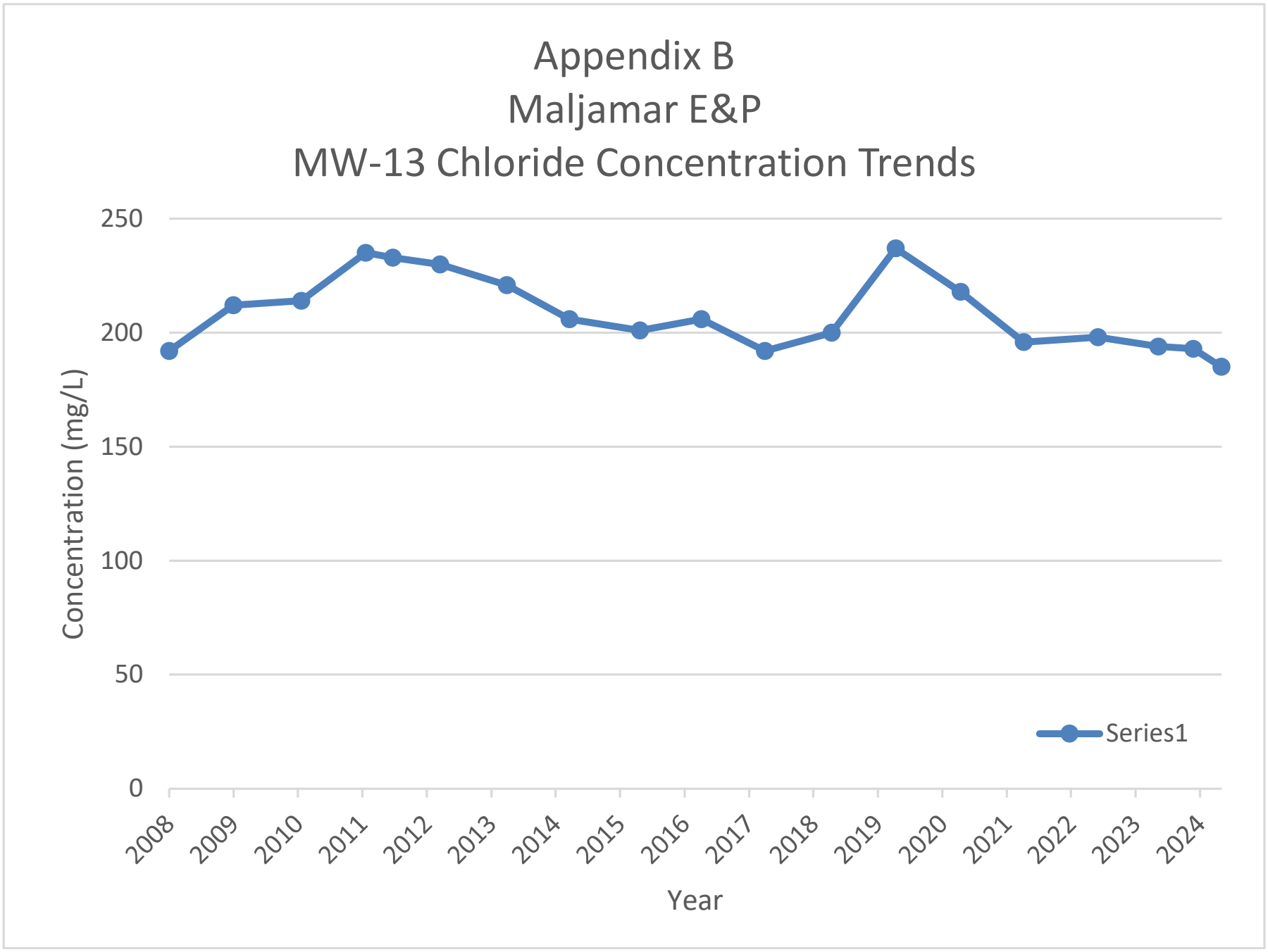
APPENDIX B: CHLORIDE CONCENTRATION GRAPHS

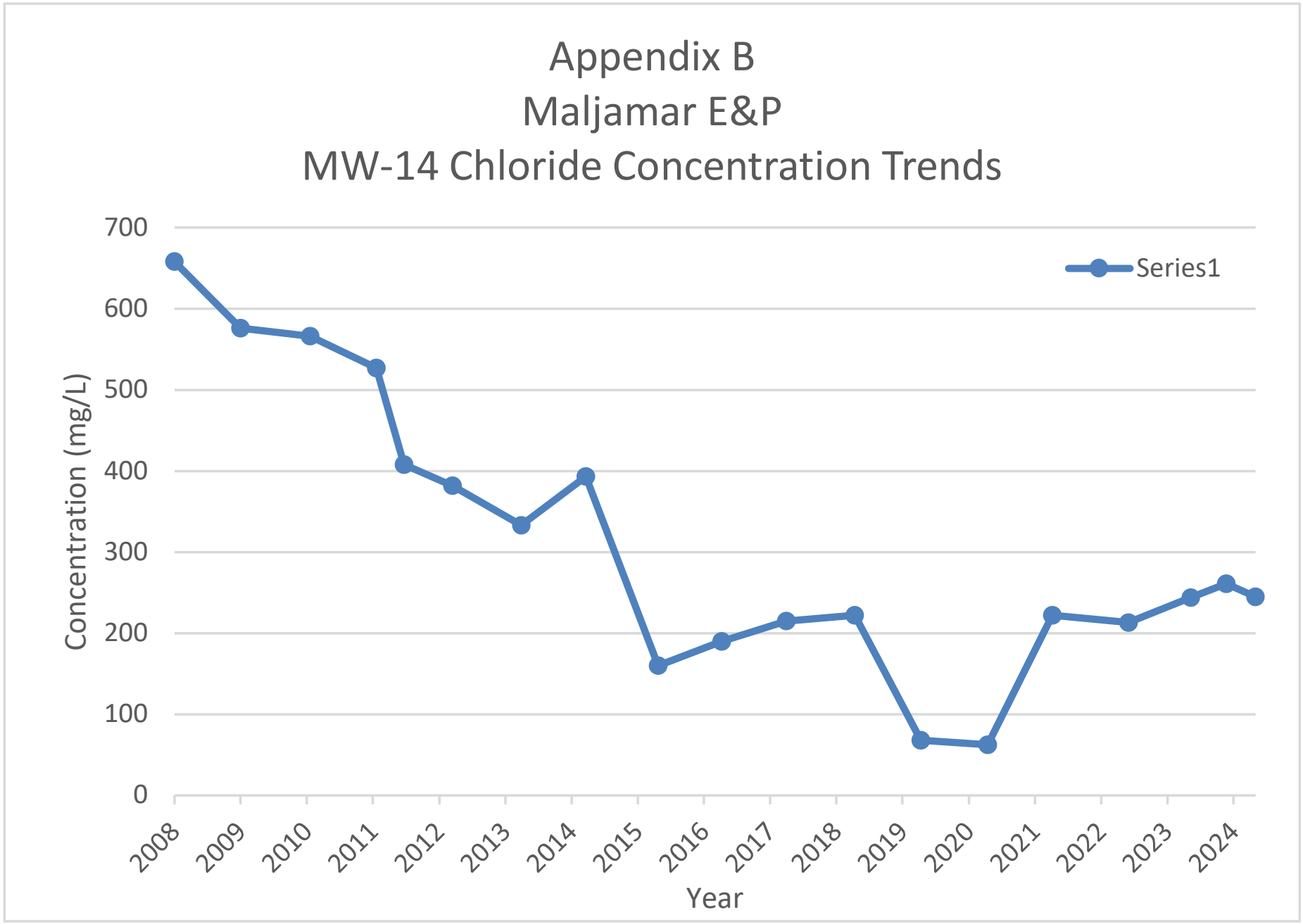

Appendix B
Malmamar E&P
EW-1 Chloride Concentration Trends
Concentration (mg/L)
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Series1
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
Year

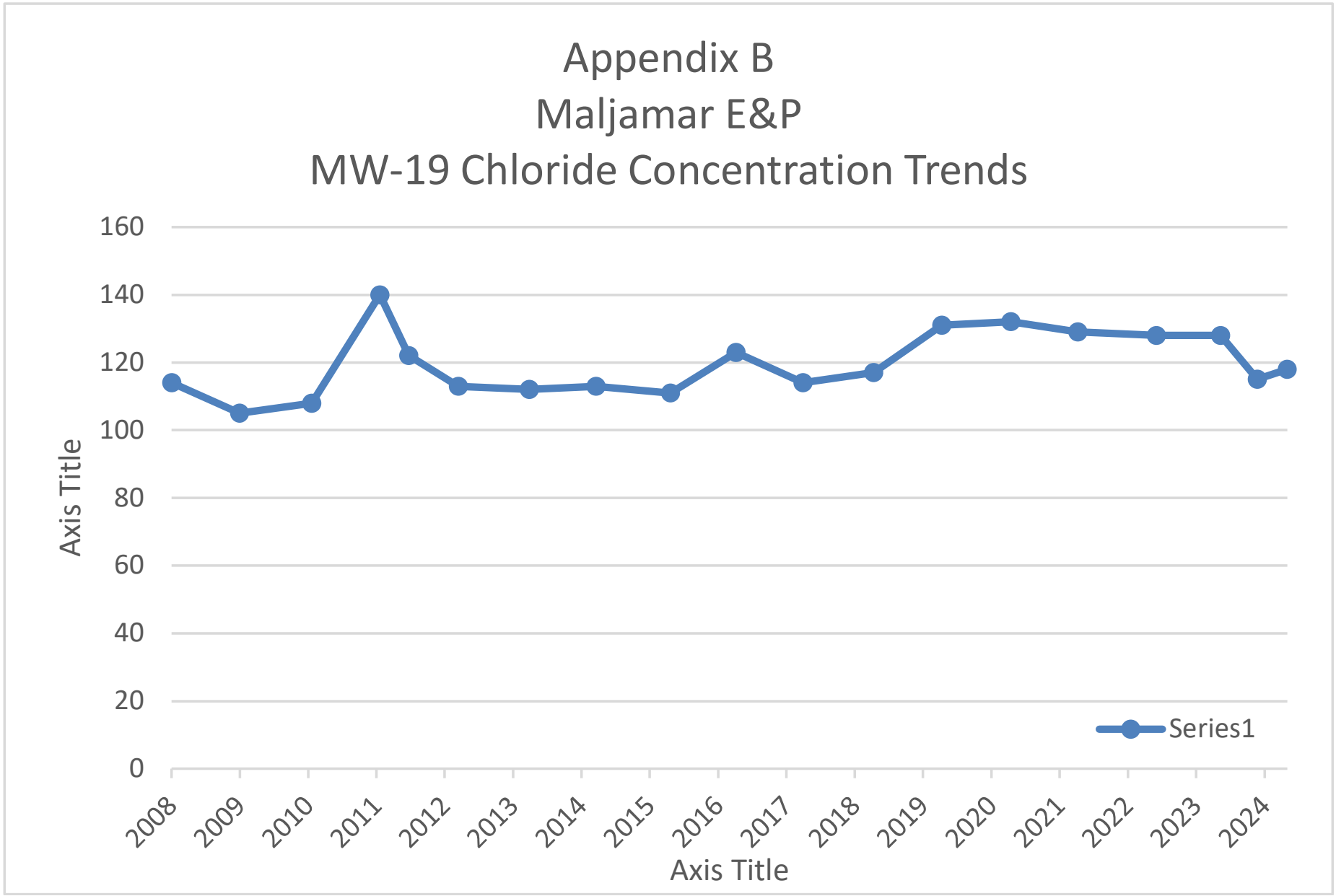
Appendix B
Maljamar E&P
MW-11 Chloride Concentration Trends




Appendix B
Maljamar E&P
MW-12 Chloride Concentration Trends
Concentration (mg/L)
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
Series1
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
Year


Appendix B
Maljamar E&P
MW-13 Chloride Concentration Trends
250
200
150
100
50
0
Concentration (mg/L)
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
Year
Series1


Appendix B
Maljamar E&P
MW-14 Chloride Concentration Trends
Concentration (mg/L)
700
600
500
400
300
200
100
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
Year
Series1


Appendix B
Maljamar E&P
MW-19 Chloride Concentration Trends
160
140
120
100
80
60
40
20
0
Axis Title
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
Axis Title
Series1

APPENDIX C: HISTORICAL GROUNDWATER GAUGING DATA

APPENDIX C
EW-1 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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				4,022.04	**-**
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**
10/4/2022	125	-	98.03	-	-	4,022.04	**3,924.01**
9/13/2023	-	-	94.00	-	-	4,022.04	**3,928.04**
3/27/2024	-	-	93.94	-	-	4,022.04	**3,928.10**

Notes:

PSH	Phase-Separated Hydrocarbons
AMSL	Above Mean Sea Level
BTOC	Below Top of Casing
-	No Measurement

APPENDIX C
EW-2 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
10/4/2017	140	-	95.04	-	-	4,022.76	**3,927.72**
8/16/2018	not gauged - extraction pump					4022.76	-
8/15/2019	not gauged - extraction pump					4022.76	-
8/18/2020	not gauged - extraction pump					4022.76	-
8/10/2021	not gauged - extraction pump					4022.76	-
10/4/2022	140.00	-	134.85	-	-	4022.76	**3,887.91**
9/13/2023	-	-	94.84	-	-	4022.76	**3,927.92**
3/27/2024	143.90	-	94.80	-	-	4022.76	**3,927.96**

Notes:

PSH	Phase-Separated Hydrocarbons
AMSL	Above Mean Sea Level
BTOC	Below Top of Casing
-	No Measurement

APPENDIX C
MW-11 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**

APPENDIX C
MW-11 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**
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**

APPENDIX C
MW-11 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**

APPENDIX C
MW-11 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**
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**

APPENDIX C
MW-11 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**

APPENDIX C
MW-11 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**
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**
10/4/2022	120	-	85.93	-	-	4,015.54	**3,929.61**
9/13/2023	-	-	86.13	-	-	4,015.54	**3,929.41**
3/27/2024	119.6	-	86.23	-	-	4,015.54	**3,929.31**

Notes:

PSH	Phase-Separated Hydrocarbons
AMSL	Above Mean Sea Level
BTOC	Below Top of Casing
-	No Measurement

APPENDIX C
MW-12 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**

APPENDIX C
MW-12 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**
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**

APPENDIX C
MW-12 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**

APPENDIX C
MW-12 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**
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**

APPENDIX C
MW-12 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**

APPENDIX C
MW-12 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**
8/10/2021	-	-	97.40	-	-	4,022.53	**3,925.13**
10/4/2022	123	-	97.35	-	-	4,022.53	**3,925.18**
9/13/2023	-	-	94.63	-	-	4,022.53	**3,927.90**
3/27/2024	122.9	-	94.50	-	-	4,022.53	**3,928.03**

Notes:

PSH	Phase-Separated Hydrocarbons
AMSL	Above Mean Sea Level
BTOC	Below Top of Casing
-	No Measurement

APPENDIX C
MW-13 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**

APPENDIX C
MW-13 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**
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**

APPENDIX C
MW-13 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**

APPENDIX C
MW-13 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**
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**

APPENDIX C
MW-13 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**

APPENDIX C
MW-13 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**
10/4/2022	125	-	108.41	-	-	4,031.96	**3,923.55**
9/13/2023	-	-	109.25	-	-	4,031.96	**3,922.71**
3/27/2024	125	-	109.28	-	-	4,031.96	**3,922.68**

Notes:

PSH	Phase-Separated Hydrocarbons
AMSL	Above Mean Sea Level
BTOC	Below Top of Casing
-	No Measurement

APPENDIX C
MW-14 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**
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**

APPENDIX C
MW-14 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**

APPENDIX C
MW-14 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**
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**

APPENDIX C
MW-14 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**

APPENDIX C
MW-14 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**
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**

APPENDIX C
MW-14 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**
10/4/2022	120	-	74.14	-	-	4,006.98	**3,932.84**
9/13/2023	-	-	75.41	-	-	4,006.98	**3,931.57**
3/27/2024	120	-	75.64	-	-	4,006.98	**3,931.34**

Notes:

PSH	Phase-Separated Hydrocarbons
AMSL	Above Mean Sea Level
BTOC	Below Top of Casing
-	No Measurement

APPENDIX C
MW-19 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**
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**

APPENDIX C
MW-19 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**

APPENDIX C
MW-19 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**
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**

APPENDIX C
MW-19 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**

APPENDIX C
MW-19 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**
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**

APPENDIX C
MW-19 Historical Groundwater Gauging Data
Maljamar E&P
Lea County, New Mexico

Gauging Date	Well Total Depth (feet)	PSH (feet BTOC)	Water level (feet BTOC)	PSH Thickness (feet)	PSH Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Groundwater Elevation (feet AMSL)
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**
10/4/2022	121		115.77	-	-	4,037.34	**3,921.57**
9/13/2023	-	-	116.07	-	-	4,037.34	**3,921.27**
3/27/2024	121	-	115.87	-	-	4,037.34	**3,921.47**

Notes:

PSH	Phase-Separated Hydrocarbons
AMSL	Above Mean Sea Level
BTOC	Below Top of Casing
-	No Measurement

APPENDIX D: HISTORICAL GROUNDWATER ANALYTICAL DATA

TETRA TECH

APPENDIX D
EW-1 Historical Groundwater Analytical Data
Maljamar E&P
Lea County, New Mexico

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 Alklanity (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)
NMWQCC GQS	**NE**	**250**	**600**	**1000**	**10**	**0.01**	**0.75**	**0.75**	**0.62**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**
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	-	-	-	-	-	-	-	-	-	-	-	-
8/10/2016	Not Sampled															
8/3/2017	Not Sampled															
8/16/2018	11.7	21,000	588	36,000	-	-	-	-	-	-	-	-	-	-	-	-
8/16/2019	5.9	13,600	148	28,700	-	-	-	-	-	-	-	-	-	-	-	-
8/18/2020	4.81 J	13,600	151	33,900	-	-	-	-	-	-	-	-	-	-	-	-
8/10/2021	7.94 B	18,900	544	38,100	-	-	-	-	-	-	-	-	-	-	-	-
10/6/2022	18.90	20,500	478	44,900	-	-	-	-	-	-	-	-	-	-	-	-
9/13/2023	66.60	21,400	550	42,300	-	-	-	-	-	-	-	-	-	-	-	-
3/27/2024	44.10	38,400	1,530	67,100												
9/4/2024	54.70	25,100	637	58,700	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

TDS	Total Dissolved Solids
NMWQCC	New Mexico Water Quality Control Commission
GQS	Groundwater Quality Standards
NE	Not Established
-	Not Analyzed
	Result exceeds NMWQCC groundwater quality standards
B	The same analyte is found in the associated blank
J	The identification of the analyte is acceptable; the reported value is an estimate
ND	Not detected above laboratory detection limit

TETRA TECH

APPENDIX D
EW-2 Historical Groundwater Analytical Data
Maljamar E&P
Lea County, New Mexico

Sample Date	Bromide (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)
NMWQCC GQS	**NE**	**250**	**600**	**1000**
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 B J	20,900	546	37,500
9/13/2023	66.3	21,700	586	47,800
3/27/2024	40.6 J	25,699	792	55,899
9/4/2024	54.0	24,300	704	50,500

Notes:

TDS	Total Dissolved Solids
NMWQCC	New Mexico Water Quality Control Commission
GQS	Groundwater Quality Standards
NE	Not Established
-	Not Analyzed
	Result exceeds NMWQCC groundwater quality standards
B	The same analyte is found in the associated blank
J	The identification of the analyte is acceptable; the reported value is an estimate
ND	Not detected above laboratory detection limit

TETRA TECH

APPENDIX D
MW-11 Historical Groundwater Analytical Data
Maljamar E&P
Lea County, New Mexico

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 Alklanity (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)
NMWQCC GQS	**NE**	**250**	**600**	**1000**	**10**	**0.01**	**0.75**	**0.75**	**0.62**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**
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
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	-	-	-	-	-	-	-	-	-	-	-	-
10/5/2022	4.14	552	38.2	1,290	-	-	-	-	-	-	-	-	-	-	-	-
9/13/2023	2.76	1,010	67.3	2,090	-	-	-	-	-	-	-	-	-	-	-	-
3/27/2024	5.6	986	65.6	1,980												
09/04/2024	9.23	1,240	81.9	3,450	-	-	-	-	-	-	-	-	-	-		

Notes:

TDS	Total Dissolved Solids
NMWQCC	New Mexico Water Quality Control Commission
GQS	Groundwater Quality Standards
NE	Not Established
-	Not Analyzed
	Result exceeds NMWQCC groundwater quality standards
B	The same analyte is found in the associated blank
J	The identification of the analyte is acceptable; the reported value is an estimate
J3	The associated quality control batch was outside of the established range for precision.
ND	Not detected above laboratory detection limit

TETRA TECH

APPENDIX D
MW-12 Historical Groundwater Analytical Data
Maljamar E&P
Lea County, New Mexico

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 Alklanity (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)
NMWQCC GQS	**NE**	**250**	**600**	**1000**	**10**	**0.01**	**0.75**	**0.75**	**0.62**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**
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
5/6/2008	ND	48,600	1,600	88,500	ND	ND	ND	ND	ND	ND	97	97	3,880	1,030	84.3	24,000
5/5/2009	ND	35,300	1,140	71,200	1.79	ND	ND	ND	ND	ND	101	101	3,720	844	59.3	21,200
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
5/24/2011	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
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	-	-	-	-	-	-	-	-	-	-	-	-
8/16/2018	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	-	-	-	-	-	-	-	-	-	-	-	-
10/6/2022	24.1	26,600	933	45,900	-	-	-	-	-	-	-	-	-	-	-	-
9/13/2023	69.7	39,300	1,380	93,500	-	-	-	-	-	-	-	-	-	-	-	-
3/27/2024	41.1 J	27,100	766	41,500												
9/4/2024	99.2	37,100	1,320	70,800	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

TDS	Total Dissolved Solids
NMWQCC	New Mexico Water Quality Control Commission
GQS	Groundwater Quality Standards
NE	Not Established
-	Not Analyzed
	Result exceeds NMWQCC groundwater quality standards
B	The same analyte is found in the associated blank
J	The identification of the analyte is acceptable; the reported value is an estimate
ND	Not detected above laboratory detection limit

TETRA TECH

APPENDIX D
MW-13 Historical Groundwater Analytical Data
Maljamar E&P
Lea County, New Mexico

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 Alklanity (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)
NMWQCC GQS	**NE**	**250**	**600**	**1000**	**10**	**0.01**	**0.75**	**0.75**	**0.62**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**
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	-	-	-	-	-	-	-	-	-	-	-	-
10/5/2022	3.16	198	248	922	-	-	-	-	-	-	-	-	-	-	-	-
9/13/2023	1.09	194	241	1,020	-	-	-	-	-	-	-	-	-	-	-	-
3/27/2024	3.14	193	236	936												
9/4/2024	2.98	185	214	1,000	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

TDS	Total Dissolved Solids
NMWQCC	New Mexico Water Quality Control Commission
GQS	Groundwater Quality Standards
NE	Not Established
-	Not Analyzed
	Result exceeds NMWQCC groundwater quality standards
B	The same analyte is found in the associated blank
J	The identification of the analyte is acceptable; the reported value is an estimate
ND	Not detected above laboratory detection limit

TETRA TECH

APPENDIX D
MW-14 Historical Groundwater Analytical Data
Maljamar E&P
Lea County, New Mexico

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 Alklanity (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)
NMWQCC GQS	**NE**	**250**	**600**	**1000**	**10**	**0.01**	**0.75**	**0.75**	**0.62**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**
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
7/23/2014	3.2	393	847	2,430	-	<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	862	1,750	-	-	-	-	-	-	-	-	-	-	-	-
10/5/2022	2.8	213	790	1,400	-	-	-	-	-	-	-	-	-	-	-	-
9/13/2023	U	244	792	1,470	-	-	-	-	-	-	-	-	-	-	-	-
3/27/2024	7.04 J	261	837	1,800												
9/4/2024	6.4	245	811	1,860	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

U	Not detected at the Reporting Limit (or MDL where applicable)
TDS	Total Dissolved Solids
NMWQCC	New Mexico Water Quality Control Commission
GQS	Groundwater Quality Standards
NE	Not Established
-	Not Analyzed
	Result exceeds NMWQCC groundwater quality standards
B	The same analyte is found in the associated blank
J	The identification of the analyte is acceptable; the reported value is an estimate
ND	Not detected above laboratory detection limit

TETRA TECH

APPENDIX D
MW-19 Historical Groundwater Analytical Data
Maljamar E&P
Lea County, New Mexico

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 Alklanity (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)
NMWQCC GQS	**NE**	**250**	**600**	**1000**	**10**	**0.01**	**0.75**	**0.75**	**0.62**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**
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
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	-	-	-	-	-	-	-	-	-	-	-	-
8/10/2016	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	-	-	-	-	-	-	-	-	-	-	-	-
10/6/2022	3.5	128	41.9	577	-	-	-	-	-	-	-	-	-	-	-	-
9/13/2023	1.2	128	37.9	571	-	-	-	-	-	-	-	-	-	-	-	-
3/27/2024	1.86 P0	115 J6	36.7 J6	509												
9/4/2024	3.3	118	38.1	597	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

TDS	Total Dissolved Solids
NMWQCC	New Mexico Water Quality Control Commission
GQS	Groundwater Quality Standards
NE	Not Established
-	Not Analyzed
	Result exceeds NMWQCC groundwater quality standards
B	The same analyte is found in the associated blank
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit
J6	The sample matrix interferred with the ability to make an accurate determination; spike value is low
J	The identification of the analyte is acceptable; the reported value is an estimate
ND	Not detected above laboratory detection limit

APPENDIX E: WELL CONSTRUCTION DETAILS

TETRA TECH

APPENDIX E
Well Construction Details
Maljamar E&P
Lea County, New Mexico

Well ID	Date Installed	Latitude	Longitude	Screen Length (feet)	Screened Interval (feet bgs)	Total Depth (feet bgs)
EW-1	5/15/2007	32.81650	-103.77452	30	95 - 125	125
EW-2	09/2017	32.81666	-103.77490	No Information Available		141
MW-11	12/4/2001	32.81442	-103.77314	20	100 - 120	120
MW-12	12/4/2001	32.81646	-103.77455	20	100 - 120	120
MW-13	12/3/2001	32.81547	-103.77128	20	105 - 125	125
MW-14	3/20/2002	32.81436	-103.77603	20	100 - 120	120
MW-19	9/17/2002	32.81796	-103.77289	20	100 - 120	120

Notes:

AMSL: Above Mean Sea Level

bgs: Below ground surface

BTOC: Below Top of Casing

No Information Available: Well installed by another consultant and not reported to NMOSE

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

CONDITIONS

Action 453725

CONDITIONS

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID: 331199
	Action Number: 453725
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Report approved. Continue annual groundwater monitoring and sampling.	6/16/2025