



July 12, 2017

#5B24624-BG24

Mike Bratcher
Environmental Specialist
NMOCD District II
1301 W Grand Ave
Artesia, NM 88210

SUBJECT: FINAL CLOSURE REPORT FOR INCIDENT 2RP-4113, Paul 25 24S 28E RB #221H, UNIT D SECTION 25-T24S-R28E NMPM, API# 30-015-43018, EDDY COUNTY, NEW MEXICO

Dear Mr. Bratcher:

On behalf of Matador Production Company, Souder, Miller & Associates (SMA) has prepared this CLOSURE REPORT that describes the initial characterization and remediation for a release (2RP-4113) associated with the Paul 25 24S 28E RB #221H. The site is in UNIT D, SECTION 25, TOWNSHIP 24S, RANGE 28E, NMPM, Eddy County, New Mexico, on fee land. Figure 1 illustrates the vicinity and location of the site.

Table 1, below, summarizes information regarding the release.

Table 1: Release information and Site Ranking	
Name	Paul 25 24S 28E RB #221H
Company	Matador Production Company
Incident Number	2RP-4113
API Number	30-015-43018
Location	32.198747° -104.049118°
Estimated Date of Release	February 3, 2017
Date Reported to NMOCD	February 6, 2017
Land Owner	Fee
Reported To	Crystal Weaver
Source of Release	Buried pipeline
Released Material	Produced water
Released Volume	100 BBL
Recovered Volume	80 BBL
Net Release	20 BBL
Nearest Waterway	Nearest surface water is 1.3 miles east of Willow Lake
Depth to Groundwater	Estimated to be 49 feet
Nearest Domestic Water Source	Greater than 1,000 feet
NMOCD Ranking	20
SMA Response Dates	02/20/2017

1.0 Background

A pipeline leak occurred along the buried pipeline located north of the Paul 25 #221H. The cause of this leak is unknown, releasing 100 bbl of produced water within the right of way and adjacent pasture. SMA characterized the release and proposed further excavation in the Workplan dated March 6, 2017. The surface impact was determined to be approximately 420 feet long by 20 feet wide.

2.0 Site Ranking and Land Jurisdiction

Willow Lake is approximately 1.3 miles east of the release location. The elevation of the release site is approximately 2,934 feet above sea level. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is estimated to be less than 100 feet below ground surface (bgs). The New Mexico Office of the State Engineer (NMOSE) Database indicates one well, C 03833, in the vicinity with a recorded depth to water of 55 feet. When correlated with relative elevation of the release site, the depth to water is 49 feet.

Recommended Remediation Action Levels (RRALs) are determined by the site ranking according to the NMOCD *Guidelines for Remediation of Leaks, Spills, and Releases* (1993). Below in Table 2 are the remediation standards and the site ranking for this location. Justification for this site ranking is found in Figure 1 and Appendix B.

Table 2.

Soil Remediation Standards	0 to 9	10 to 19	>19
Benzene	10 PPM	10 PPM	10 PPM
BTEX	50 PPM	50 PPM	50 PPM
TPH	5000 PPM	1000 PPM	100 PPM

Depth to Groundwater	NMOCD Numeric Rank
< 50 BGS = 20	20
50' to 99' = 10	
>100' = 0	
Distance to Nearest Surface Water	NMOCD Numeric Rank
< 200' = 20	
200' - 1000' = 10	
>1000' = 0	0
Well Head Protection	NMOCD Numeric Rank
<1000' (or <200' domestic) = 20	
> 1000' = 0	0
Total Site Ranking	20

3.0 Release Characterization

On February 20, 2017 after receiving 811 clearance, SMA field personnel assessed the remediated release area onsite with a backhoe and a mobile chlorides titration kit EPA method 9045D meter. The remediated release area was found to be approximately 420 feet long and 20 feet wide. The site delineation samples were taken to depths of 12 feet bgs. Specific sample locations for all samples are depicted on Figure 2 (Sample Location Map) along with sampling details within Table 3. All samples were collected and processed according to NMOCD soil sampling procedures. The samples were sent under chain-of-custody protocols to Hall Environmental Analysis Laboratory for analysis for total Chlorides using EPA Method 300.0.

4.0 Summary of Soil Remediation

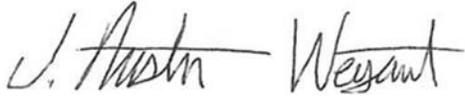
On June 7, 2017, with approval from area utilities owners via 811, SMA oversaw further excavation of the affected soils. Excavation occurred to depths of approximately 6 feet bgs at the point of the release, 2 feet bgs in the right of way and 1.5 feet bgs in the pasture to sufficiently remove the impacted materials to NMOCD requirements. In the pipeline area, excavation occurred only outside four feet horizontally from the pipeline due to pipeline safety concerns. SMA continuously guided the excavation activities by collecting composite soil samples for field screening with a mobile titration unit (EPA 4500) and sulfates testing from the laboratory. Approximately 600 additional cubic yards of contaminated soil were removed. Backfilling of the excavation occurred after the approval from NMOCD on 6/29/2017. Clean backfill material was used to return the surface to previous contours. The contaminated soil was transported for proper disposal at Lea Land, an NMOCD permitted disposal facility. Closure samples were collected at the final depth of excavation and from the excavation sidewalls. The closure samples taken were tested for sulfates. Sulfates were used as a reference criterion on this release due to the high background chlorides from previous agricultural activities, as discussed with the Environmental Specialist at NMOCD. Three background sample locations were used to establish the background level of sulfates in the area. The closure samples tested for sulfates were compared to the background sample results to help determine that contaminated soils were adequately removed. The samples were sent under chain-of-custody protocols to Hall Environmental Analysis Laboratory for analysis for sulfates. All closure samples were below NMOCD RRAL's for this site.

5.0 Scope and Limitations

The scope of our services consisted of the performance of assessment sampling, verification of release stabilization, remediation oversight, regulatory liaison, and preparation of this closure report. All work has been performed in accordance with generally accepted professional environmental consulting practices for oil and gas releases in the Permian Basin in New Mexico.

If there are any questions regarding this report, please contact either Austin Weyant at 575-689-8801 or Cynthia Gray at 505-325-7535, extension 1104.

Submitted by:
SOUDER, MILLER & ASSOCIATES



Austin Weyant
Project Scientist

Reviewed by:



Cynthia Gray, CHMM
Senior Scientist

ATTACHMENTS:

Figures:

Figure 1: Vicinity and NMOSE Well Head Protection Map
Figure 2: Site and Sample Location Map

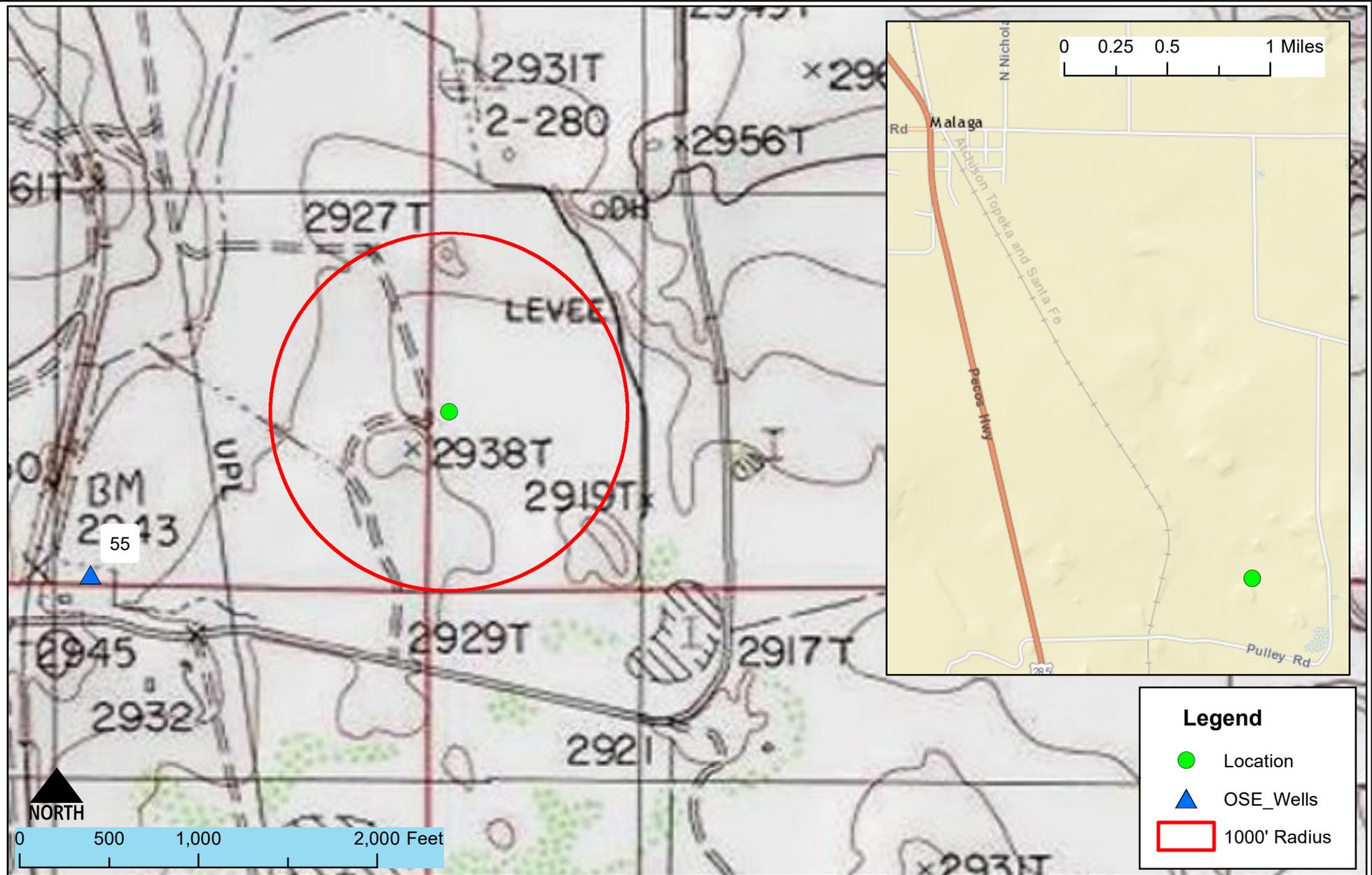
Tables:

Table 3: Summary of Sample Results

Appendices:

Appendix A: Form C141 Final
Appendix B: NMOSE Wells Report
Appendix C: Laboratory Analytical Reports

FIGURE 1
VICINITY AND NMOSE
DATA MAP



Legend

- Location
- ▲ OSE_Wells
- 1000' Radius

Vicinity and Well Head Protection Map
 Paul 25 24S 28E RB #221H- Matador Resources
 S: 25 T 24S, R28 E, Eddy County, New Mexico

Figure 1

Document: C:\Users\lcom\CBODocuments\GIS DATA\MAPS\PAUL2 Figure 1.mxd

Date Saved:
7/11/2017

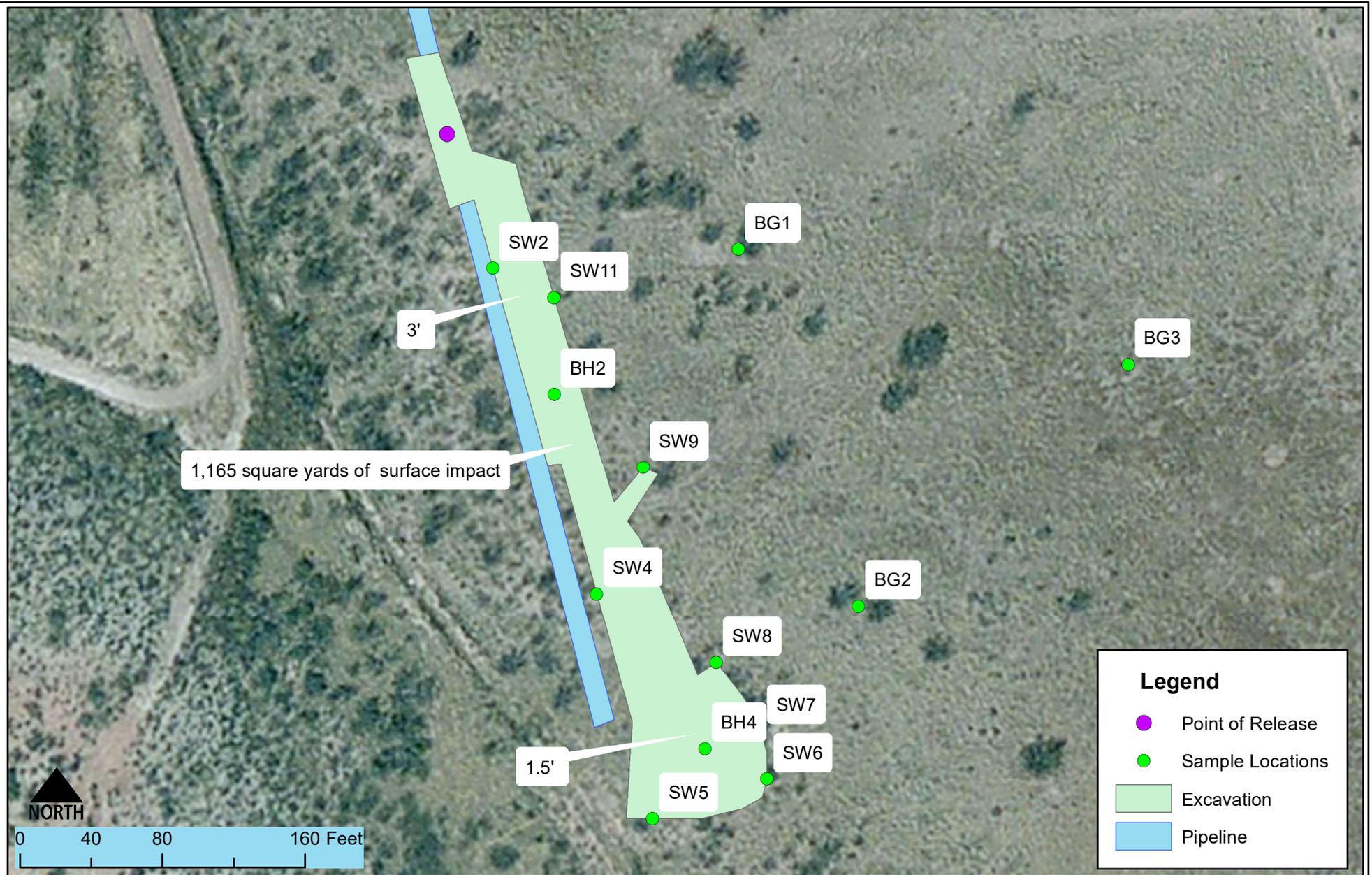
By: _____	Date: _____	Revisions	Descr: _____
By: _____	Date: _____		Descr: _____
Copyright 2015 Souder, Miller & Associates - All Rights Reserved			

Drawn	<u>Lucas Middleton</u>
Checked	_____
Approved	_____



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 Carlsbad, New Mexico 88221
 (575) 689-7040
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FIGURE 2
SITE AND SAMPLE
LOCATION MAP



Detailed Site and Sample Map
 Paul 25 24S 28E RB #221H- Matador Resources
 S: 25 T 24S, R28 E, Eddy County, New Mexico

Figure 2

Date Saved: 7/17/2017	By: _____	Date: _____	Revisions	Descr: _____
	By: _____	Date: _____		Descr: _____
Copyright 2015 Souder, Miller & Associates - All Rights Reserved				

Drawn	<u>Lucas Middleton</u>
Checked	_____
Approved	_____



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TABLE 3
SUMMARY SAMPLE RESULTS

Summary of Sample Results¹

Sample Number on Figure 2 Map	Depth	Sulfate mg/Kg	Background ²
SW2	1.5'	6400	8850
SW4	1'	5800	7700
SW5	1'	5400	7700
SW6	1'	5300	7700
SW7	1'	5100	7700
SW8	1'	5100	7700
SW9	0.5'	5100	6250
SW11	1.5'	5300	8850
BH2	3'	4100	7800
BH2	5.5'	7500	7400
BH2	10'	6300	7200
BH4	1.5'	5600	8850

¹SMA determined that the comparison of Nitrate Background data to Nitrate Excavation data are a Null Hypothesis

²Background numbers are an average of the 2 nearest delineation samples that is representing the soil horizon at given depth

APPENDIX A
FORM C141 FINAL

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-141
Revised August 8, 2011

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

Name of Company Matador Resources Company	Contact Catherine Green
Address 500 N Main St Ste One Roswell NM 88201	Telephone No.575-623-6601
Facility Name Paul 25 24S 28E RB #221H	Facility Type Oil

Surface Owner Fee	Mineral Owner Fee	API No.30-015-43018
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LOCATION OF RELEASE

Unit Letter D	Section 25	Township 24S	Range 28E	Feet from the 359	North/South Line N	Feet from the 217	East/West Line W	County Eddy
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Latitude 32.194817 Longitude -104.0487226

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release ~100BBLs	Volume Recovered 80BBLs
Source of Release pipeline	Date and Hour of Occurrence Feb 3, 2017 7am	Date and Hour of Discovery Feb 3, 2017 7:30am
Was Immediate Notice Given? Required <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not	If YES, To Whom? Crystal Weaver, voicemail	
By Whom? Catherine Green	Date and Hour Feb. 3 2017 12:07pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Water recycling facility at Tiger was on Emergency Shut Down. Lease operator went to Paul location that sends water to Tiger. Found that separator Shut Down Valve had failed to close. Lease operator drove right of way to Tiger and found produced water on ground at (~32°11'52", 104°2'55".179999). Well shut in to isolate line, vacuum truck called. Excavator dug down at spill sight, located pipe with hole in. Crew replaced section of pipe. Excavated area currently fenced off. Vacuum truck removed 80 barrels of produced water. Replaced Shut Down Valve on separator.

Describe Area Affected and Cleanup Action Taken.*

Approximately 1,165 square yards of surface impacted. Remove and replace impacted soil.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <i>Catherine Green</i>		OIL CONSERVATION DIVISION	
Printed Name: <i>Catherine Green</i>		Approved by Environmental Specialist:	
Title: <i>Regulatory Analyst</i>		Approval Date:	Expiration Date:
E-mail Address: <i>egreen@matadorresources.com</i>		Conditions of Approval:	
Date: <i>Feb 6, 2017</i>		Attached <input type="checkbox"/>	

* Attach Additional Sheets If Necessary

APPENDIX B
NMOSE WELLS REPORT



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 03833 POD1	C	ED	2	1	2	26	24S	28E	589014	3562545		660	96	55	41
C 03358 POD1	C	ED	1	4	1	26	24S	28E	588416	3562116		1287	135		

Average Depth to Water: **55 feet**

Minimum Depth: **55 feet**

Maximum Depth: **55 feet**

Record Count: 2

UTMNAD83 Radius Search (in meters):

Easting (X): 589664.55

Northing (Y): 3562429.4

Radius: 1500

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

APPENDIX C
LABORATORY ANALYTICAL
REPORTS



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

June 30, 2017

Austin Weyant
Souder, Miller & Associates
201 S Halagueno
Carlsbad, NM 88221
TEL: (575) 689-7040
FAX

RE: Matador Paul 2nd

OrderNo.: 1706A44

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 21 sample(s) on 6/20/2017 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: SW2

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-001

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	5500	300		mg/Kg	200	6/27/2017 4:36:37 AM	32485
Nitrogen, Nitrate (As N)	8.4	6.0		mg/Kg	20	6/26/2017 1:05:47 PM	32485
Sulfate	6400	300		mg/Kg	200	6/27/2017 4:36:37 AM	32485

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: SW4

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-002

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	120	30		mg/Kg	20	6/26/2017 2:20:15 PM	32485
Nitrogen, Nitrate (As N)	1.9	0.30		mg/Kg	1	6/26/2017 1:43:01 PM	32485
Sulfate	5800	75		mg/Kg	50	6/27/2017 4:49:02 AM	32485

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: SW5

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-003

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	1000	30		mg/Kg	20	6/26/2017 2:45:04 PM	32485
Nitrogen, Nitrate (As N)	2.3	1.5		mg/Kg	5	6/26/2017 2:32:40 PM	32485
Sulfate	5400	75		mg/Kg	50	6/27/2017 5:01:27 AM	32485

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: SW6

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-004

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	19	7.5		mg/Kg	5	6/26/2017 2:57:28 PM	32485
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	6/26/2017 2:57:28 PM	32485
Sulfate	5300	75		mg/Kg	50	6/27/2017 5:13:52 AM	32485

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: SW7

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-005

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	15	7.5		mg/Kg	5	6/26/2017 3:22:16 PM	32485
Nitrogen, Nitrate (As N)	1.7	1.5		mg/Kg	5	6/26/2017 3:22:16 PM	32485
Sulfate	5100	75		mg/Kg	50	6/27/2017 5:26:17 AM	32485

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: SW8

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-006

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	1200	75		mg/Kg	50	6/27/2017 5:38:41 AM	32485
Nitrogen, Nitrate (As N)	1.9	1.5		mg/Kg	5	6/26/2017 4:11:55 PM	32485
Sulfate	5100	75		mg/Kg	50	6/27/2017 5:38:41 AM	32485

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: SW9

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-007

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	140	7.5		mg/Kg	5	6/26/2017 4:36:44 PM	32485
Nitrogen, Nitrate (As N)	2.8	1.5		mg/Kg	5	6/26/2017 4:36:44 PM	32485
Sulfate	5100	75		mg/Kg	50	6/27/2017 5:51:06 AM	32485

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: SW11

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-008

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	87	7.5		mg/Kg	5	6/26/2017 5:01:33 PM	32485
Nitrogen, Nitrate (As N)	3.1	1.5		mg/Kg	5	6/26/2017 5:01:33 PM	32485
Sulfate	5300	75		mg/Kg	50	6/27/2017 6:03:30 AM	32485

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: BH 2-3

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-009

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	3000	150		mg/Kg	100	6/27/2017 6:15:54 AM	32485
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	6/26/2017 5:26:23 PM	32485
Sulfate	4100	150		mg/Kg	100	6/27/2017 6:15:54 AM	32485

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: BH 2-5.5

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-010

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	2100	150		mg/Kg	100	6/27/2017 6:28:19 AM	32485
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	6/26/2017 5:51:13 PM	32485
Sulfate	7500	150		mg/Kg	100	6/27/2017 6:28:19 AM	32485

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: BH 2-10

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-011

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	1200	150		mg/Kg	100	6/27/2017 9:08:03 AM	32485
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	6/26/2017 6:40:51 PM	32485
Sulfate	6300	150		mg/Kg	100	6/27/2017 9:08:03 AM	32485

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: BH 4-1.5

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-012

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	300	7.5		mg/Kg	5	6/26/2017 7:05:40 PM	32485
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	6/26/2017 7:05:40 PM	32485
Sulfate	5600	75		mg/Kg	50	6/27/2017 9:20:27 AM	32485

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: BGC-S

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:45:00 AM

Lab ID: 1706A44-013

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	24	7.5		mg/Kg	5	6/26/2017 7:30:29 PM	32485
Nitrogen, Nitrate (As N)	6.3	1.5		mg/Kg	5	6/26/2017 7:30:29 PM	32485
Sulfate	4800	75		mg/Kg	50	6/27/2017 9:32:52 AM	32485

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: BGC-1

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:45:00 AM

Lab ID: 1706A44-014

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	1000	30		mg/Kg	20	6/26/2017 8:07:43 PM	32485
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	6/26/2017 7:55:18 PM	32485
Sulfate	7700	150		mg/Kg	100	6/27/2017 9:45:17 AM	32485

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: BGC-2

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:45:00 AM

Lab ID: 1706A44-015

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	3200	150		mg/Kg	100	6/27/2017 9:57:41 AM	32503
Nitrogen, Nitrate (As N)	1.5	1.5		mg/Kg	5	6/26/2017 9:09:47 PM	32503
Sulfate	10000	150		mg/Kg	100	6/27/2017 9:57:41 AM	32503

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: BGC-3

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:45:00 AM

Lab ID: 1706A44-016

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	4800	300		mg/Kg	200	6/27/2017 10:10:05 AM	32503
Nitrogen, Nitrate (As N)	1.6	1.5		mg/Kg	5	6/26/2017 9:59:26 PM	32503
Sulfate	7800	300		mg/Kg	200	6/27/2017 10:10:05 AM	32503

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: BGC-4

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:45:00 AM

Lab ID: 1706A44-017

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	4800	150		mg/Kg	100	6/27/2017 10:22:30 AM	32503
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	6/26/2017 10:24:16 PM	32503
Sulfate	9500	150		mg/Kg	100	6/27/2017 10:22:30 AM	32503

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: BGC-6

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:45:00 AM

Lab ID: 1706A44-018

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	3500	150		mg/Kg	100	6/27/2017 10:34:55 AM	32503
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	6/26/2017 10:49:05 PM	32503
Sulfate	5300	150		mg/Kg	100	6/27/2017 10:34:55 AM	32503

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: BGC-8

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:45:00 AM

Lab ID: 1706A44-019

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	2400	150		mg/Kg	100	6/27/2017 10:47:20 AM	32503
Nitrogen, Nitrate (As N)	1.6	1.5		mg/Kg	5	6/26/2017 11:38:45 PM	32503
Sulfate	8300	150		mg/Kg	100	6/27/2017 10:47:20 AM	32503

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: BGC-10

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:45:00 AM

Lab ID: 1706A44-020

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	2700	150		mg/Kg	100	6/27/2017 10:59:44 AM	32503
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	6/27/2017 12:03:34 AM	32503
Sulfate	7200	150		mg/Kg	100	6/27/2017 10:59:44 AM	32503

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: BGC-12

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:45:00 AM

Lab ID: 1706A44-021

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	1300	150		mg/Kg	100	6/27/2017 11:36:58 AM	32503
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	6/27/2017 12:28:23 AM	32503
Sulfate	7100	150		mg/Kg	100	6/27/2017 11:36:58 AM	32503

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1706A44

30-Jun-17

Client: Souder, Miller & Associates

Project: Matador Paul 2nd

Sample ID MB-32485	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 32485	RunNo: 43787								
Prep Date: 6/26/2017	Analysis Date: 6/26/2017	SeqNo: 1380561	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	ND	1.5								
Nitrogen, Nitrate (As N)	ND	0.30								
Sulfate	ND	1.5								

Sample ID LCS-32485	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 32485	RunNo: 43787								
Prep Date: 6/26/2017	Analysis Date: 6/26/2017	SeqNo: 1380562	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	14	1.5	15.00	0	91.1	90	110			
Nitrogen, Nitrate (As N)	7.1	0.30	7.500	0	94.2	90	110			
Sulfate	28	1.5	30.00	0	93.7	90	110			

Sample ID 1706A44-002AMS	SampType: ms	TestCode: EPA Method 300.0: Anions								
Client ID: SW4	Batch ID: 32485	RunNo: 43787								
Prep Date: 6/26/2017	Analysis Date: 6/26/2017	SeqNo: 1380574	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Nitrogen, Nitrate (As N)	8.7	0.30	7.500	1.907	90.0	61.8	142			
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Sample ID 1706A44-002AMSD	SampType: msd	TestCode: EPA Method 300.0: Anions								
Client ID: SW4	Batch ID: 32485	RunNo: 43787								
Prep Date: 6/26/2017	Analysis Date: 6/26/2017	SeqNo: 1380575	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Nitrogen, Nitrate (As N)	8.6	0.30	7.500	1.907	88.6	61.8	142	1.22	20	
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Sample ID MB-32503	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 32503	RunNo: 43787								
Prep Date: 6/26/2017	Analysis Date: 6/26/2017	SeqNo: 1380605	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	ND	1.5								
Nitrogen, Nitrate (As N)	ND	0.30								
Sulfate	ND	1.5								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1706A44

30-Jun-17

Client: Souder, Miller & Associates

Project: Matador Paul 2nd

Sample ID	LCS-32503	SampType:	ics	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	32503	RunNo:	43787					
Prep Date:	6/26/2017	Analysis Date:	6/26/2017	SeqNo:	1380606	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.3	90	110			
Nitrogen, Nitrate (As N)	7.3	0.30	7.500	0	97.5	90	110			
Sulfate	28	1.5	30.00	0	95.0	90	110			

Sample ID	1706A44-015AMS	SampType:	ms	TestCode:	EPA Method 300.0: Anions					
Client ID:	BGC-2	Batch ID:	32503	RunNo:	43787					
Prep Date:	6/26/2017	Analysis Date:	6/26/2017	SeqNo:	1380610	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	8.2	1.5	7.500	1.546	88.5	61.8	142			

Sample ID	1706A44-015AMSD	SampType:	msd	TestCode:	EPA Method 300.0: Anions					
Client ID:	BGC-2	Batch ID:	32503	RunNo:	43787					
Prep Date:	6/26/2017	Analysis Date:	6/26/2017	SeqNo:	1380611	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	8.1	1.5	7.500	1.546	87.7	61.8	142	0.768	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: SMA-CARLSBAD Work Order Number: 1706A44 RcptNo: 1

Received By: Sophia Campuzano 6/20/2017 10:15:00 AM *Sophia Campuzano*
 Completed By: Richie Eriacho 6/20/2017 10:54:47 AM *[Signature]*
 Reviewed By: *Re las* *6/20/17*

Chain of Custody

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

Log In

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

Special Handling (if applicable)

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

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

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	6.0	Good				

Chain-of-Custody Record

Client: SMA - Cansbad.

Mailing Address:

Turn-Around Time:

Standard Rush 5 day (Matador)

Project Name:

Matador: Paul 2nd

Project #:

Phone #:

email or Fax#:

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation

NELAP Other

EDD (Type)

Project Manager:

Austin Weyant

Sampler: LCM

On Ice: Yes No

Sample Temperature: 6.0

Date Time Matrix Sample Request ID

6/17 10:30	Soil	SW2	
		SW4	
		SW5	
		SW6	
		SW7	
		SW8	
		SW9	
		SW11	
		BH 2-3	
		BH 2-5.5	
		BH 2-10	
		BH 4-1.5	

Container Type and #

002 jar

HEAL No.

1706444

Preservative Type

-001
-002
-003
-004
-005
-006
-007
-008
-009
-010
-011
-012

Date: Time

Relinquished by: *[Signature]*

Receiver by:

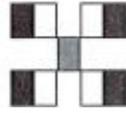
Remarks:

Date: Time

[Signature] 6/19/17 0900
[Signature] 06/20/17 1015

Date: Time

Date: Time



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

BTEX + MTBE + TMBs (8021)	
BTEX + MTBE + TPH (Gas only)	
TPH 8015B (GRO / DRO / MRO)	
TPH (Method 418.1)	
EDB (Method 504.1)	
PAH's (8310 or 8270 SIMS)	
RCRA 8 Metals	
Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	<input checked="" type="checkbox"/>
8081 Pesticides / 8082 PCBs	
8260B (VOA)	
8270 (Semi-VOA)	
Air Bubbles (Y or N)	

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

Chain-of-Custody Record

Client: SMA - Carlsbad

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation

NELAP Other

EDD (Type)

Turn-Around Time:

Standard Rush 5 day (matador)

Project Name:

Matador: Paul 2nd.

Project #:

Project Manager:

Austin Weyant

Sampler: UCM

On Ice: Yes No

Sample Temperature: 6.0

Date Time Matrix Sample Request ID

10/17/17 10:45 Soil BGC-S
 BGC-1
 BGC-2
 BGC-3
 BGC-4
 BGC-6
 BGC-8
 BGC-10
 BGC-12

Container Type and #

1007 jar

Preservative Type

HEAL No. 17064464

-013 -004
 -014 -002
 -015 -003
 -016 -004
 -017 -005
 -018 -006
 -019 -007
 -020 -008
 -021 -009

Date: 10/17/17

Time: 1900

Relinquished by: [Signature]

Relinquished by: [Signature]

Received by: [Signature]

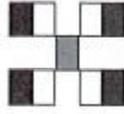
Date: 6/19/17

Date: 6/19/17

Time: 0900

Remarks:

[Signature] 06/20/17 1015



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

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