

**Devon Energy  
Cotton Draw 163 (11 Federal #2H)  
Closure Report**

**Unit Letter C, Section 11, T25S, 31E  
Eddy County, New Mexico**

**2RP-3021  
November 06, 2015**



**Prepared for:**

***Devon Energy Production  
PO Box 250  
Artesia, NM 88211***

**By:**

**Safety & Environmental Solutions, Inc.  
703 East Clinton Street  
Hobbs, New Mexico 88240  
(575) 397-0510**

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## I. Company Contacts

Representative	Company	Telephone	E-mail
Brett Fulks	Devon Energy	575-748-1844	Brett.Fulks@devon.com
Bob Allen	SESI	575-397-0510	ballen@sesi-nm.com

## II. Background

Safety and Environmental Solutions, Inc. (SESI) was engaged by Devon Production to perform site assessments for two environmental incidents on the Cotton Draw 163 location.

According to the initial C-141: On April 29, 2015 a small hole on the underside of the Poseidon tank may have been caused by a power washer that created the initial leak, then an additional hole was discovered in the secondary containment caused by an anchor. Vacuum trucks were utilized to recover approximately 5 bbl. of fluid. The form C-141 associated with this incident was filed with the NMOCD on June 1, 2015 and assigned (2RP-3021). This site is situated in Eddy County, Section 11, Township 25S, and Range 31E (Appendix D).

## III. Surface and Ground Water

There is no record of groundwater in the immediate vicinity of the site location. According to the topography map for Eddy County the depth to ground water for Section 11, Township 25S, Range 31E is approximately 400' bgs. Further research of the New Mexico Office of the State Engineer records indicate the average depth to groundwater for the area to be 390' bgs. Thereby, posing no eminent threat or danger to life forms in the area (Appendix A). According to the target clean up levels using the *Guidelines for Remediation of Leaks, Spills and Releases* published by the NMOCD (August 13, 1993). The site ranking score for this location is a Zero (0).

## IV. Work Performed

On May 12, 2015, SESI personnel were onsite with Alfredo's Trucking, as well as a Devon representative to photograph, and map the spill area.

On June 04, 2015, SESI personnel returned to the site in order to confirm vertical extent of the impacted area. Six representative sample points were established inside the impacted area. The representative soil samples were properly packaged, preserved and transported to Cardinal Laboratories, Hobbs, NM and analyzed for Chloride constituents. The returned analyses for Cl<sup>-</sup> is recapped in the following table:

Sample Date 06/04/15	Chloride (mg/kg)
Depth	
AH-1 Surface	10400
AH-1 1'	4560
AH-1 2'	4160
AH-2 Surface	20400
AH-2 1'	4240
AH-2 2'	6080

AH-2 3'	4800
AH-3 Surface	10200
AH-3 1'	4160
AH-3 2'	4960
AH-3 3'	6080
AH-4 Surface	4960
AH-4 1'	1600
AH-4 2'	3320
AH-4 3'	8720
AH-4 4'	8640
AH-5 Surface	1310
AH-5 1'	160
AH-5 2'	96
AH-5 3'	80
AH-6 Surface	1640
AH-6 1'	256
AH-6 2'	2240
AH-6 3'	1170
AH-6 4'	1660

On August 14, 2015, SESI personnel returned to the location with Hobbs Anchor in order to retrieve a representative soil bore, confirming the vertical extent of chloride impact. The soil bore was extracted between the previously sampled areas of AH=2 and AH-3 respectively, as this area indicated the deepest impact from the previous analytical results. The soil bore was transported to Cardinal Laboratories, Hobbs, NM for Chloride constituents. The following is a recap of the results (Appendix B).

Sample Date 08/14/15	Chloride (mg/kg)
Depth	
BH-1 8'	256
BH-1 10'	464

On August 26, 2015, a written plan for environmental remediation for the spill incident related to this site was submitted to the NMOCD, and BLM respectively for approval of the same. Based on site ranking score and soil analytical, the proposed activities were inclusive of excavating to a depth of 4' bgs., installing a 30 mil. Liner and backfilling with a layer of imported clean topsoil followed by like surface material and restoring the area to grade. On September 01, 2015 the same regulatory parties of concern approved said plan to remediate. However, on October 15, 2015 the plan was revised and approval granted by the NMOCD to use a 20 mil. Liner as opposed to the 30 mil. Liner, which was originally proposed.

## Conclusion

On October 20, 2015 the exaction activities were completed and confirmed by retrieving five (5) bottom and sidewall soil samples of the excavated area. The representative soil samples were properly packaged, preserved and transported to Cardinal Laboratories, Hobbs, NM and analyzed for Chloride constituents. The returned analyses for Cl<sup>-</sup> is recapped in the following table:

Sample Date 10/20/2015	Chloride (mg/kg)
Depth	
WS SP-1 Bottom 4'	96.0
WS SP-3 Bottom 4'	112
WS SP-5 Bottom 4'	432
WS SP-8 West Wall	192
WS SP-9 East Wall	224
SS SP-2 Bottom 4'	4640
SS SP-4 Bottom 4'	<16.0
SS SP-7 North Wall	<16.0
SS SP-8 South Wall	160
ES SP-2 Bottom 4'	480
ES SP-4 Bottom 4'	576
ES SP-6 East Wall	224
ES SP-8 West Wall	240
BA SP-1 Bottom 4'	192
BA SP-2 Bottom 4'	3400
BA SP-4 West Wall	32.0
BA SP-5 East Wall	176
BA SP-6 South Wall	32.0

Based on the above confirmation of field analysis; the 4' bgs. excavation was lined with a 20 mil. Liner, backfilled with fresh topsoil and the area returned to grade with a fresh caliche cap. According to disposal manifest; a total of 3,319.53 tons of impacted soils were disposed of at an NMOCD approved facility.

SESI respectfully submits this closure report for your consideration and approval.

## VI. Figures & Appendices

Figure 1 – Vicinity Map

Figure 2 – Site Plan

Appendix A – Groundwater

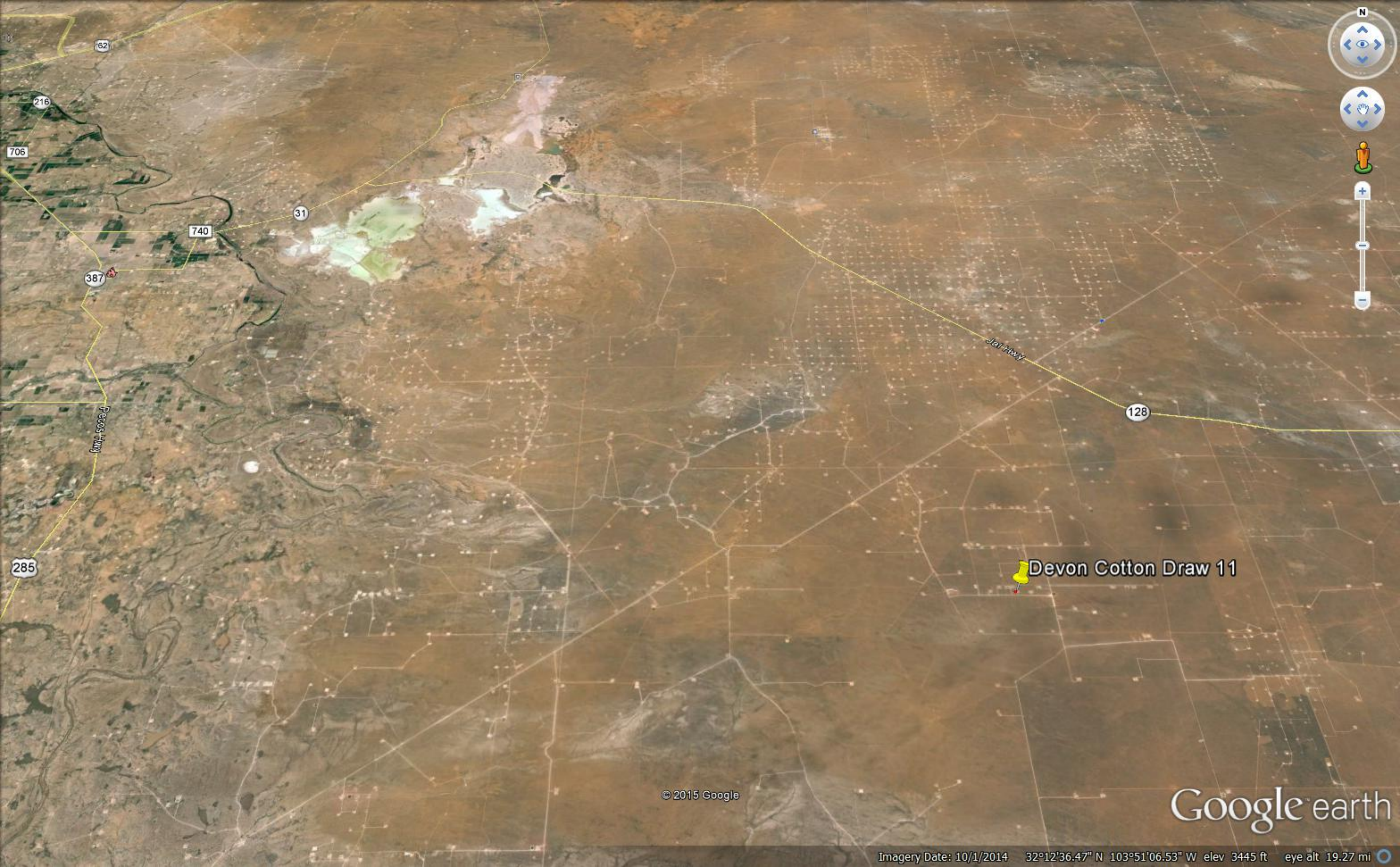
Appendix B – Analytical

Appendix C – Photo Documentation

Appendix D – Final C-141

**Figure 1**  
**Vicinity Map**





© 2015 Google

Google earth

Imagery Date: 10/1/2014 32°12'36.47" N 103°51'06.53" W elev 3445 ft eye alt 19.27 mi

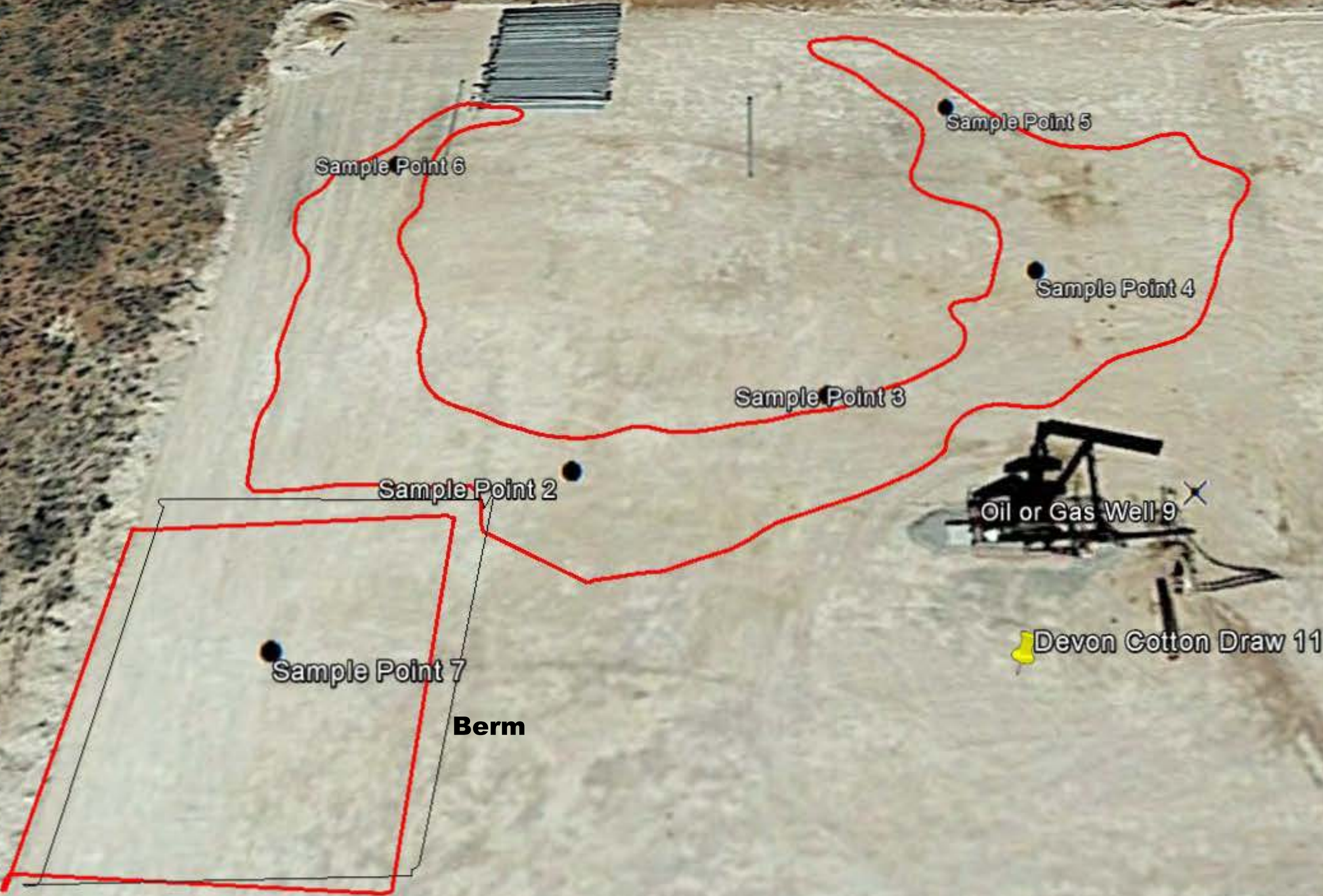


## **Figure 2**

### **Site Plan**



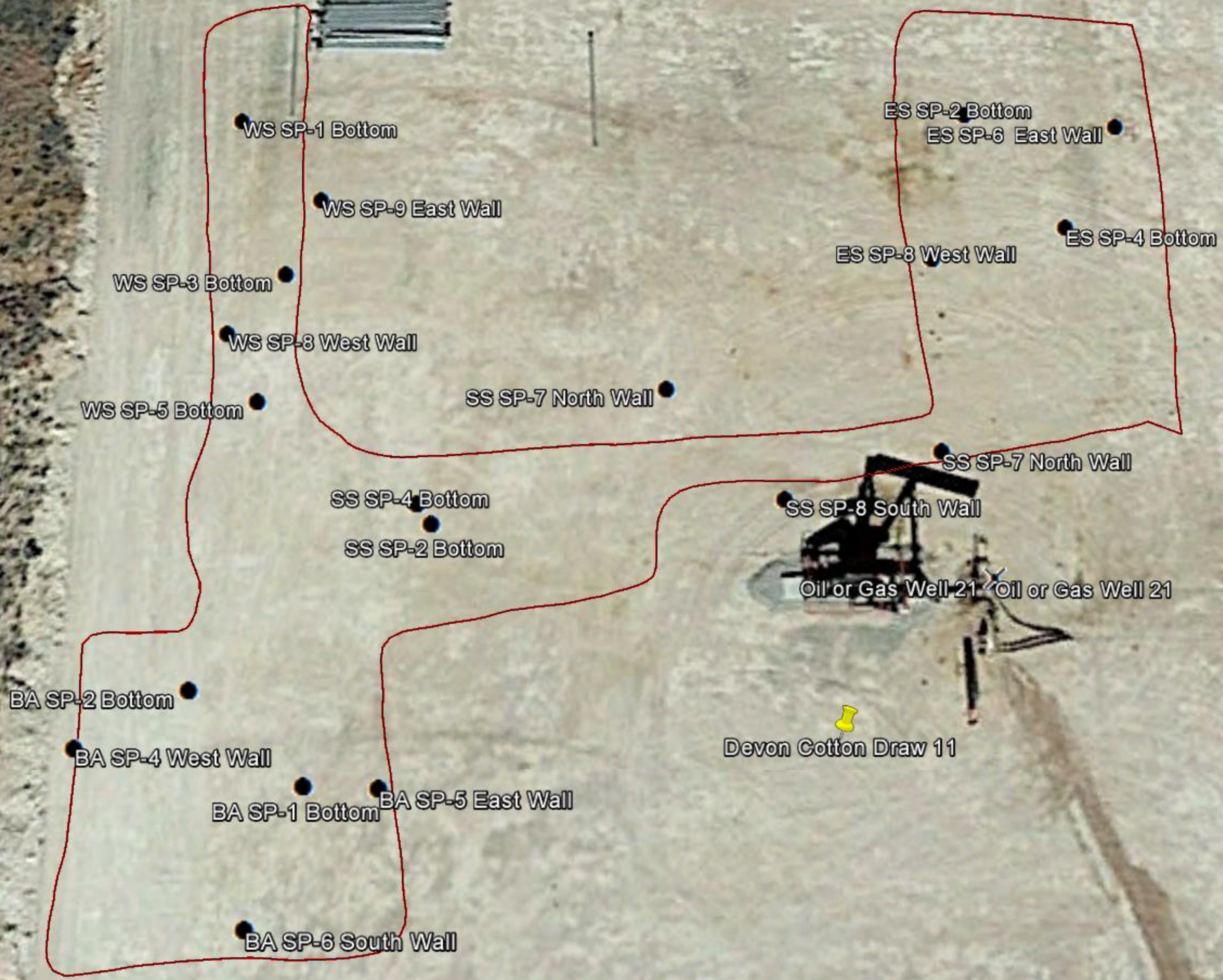
Devon Cotton Draw 11 Fed 2H



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Google earth





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Google earth



# **Appendix A**

## **Groundwater Research**





# 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	Depth Well	Depth Water	Water Column
<a href="#">C 02250</a>			ED	3	1	4	21	25S	31E	614912	3553620*	400	390	10
<a href="#">C 02568</a>			ED	4	3	1	01	25S	31E	619103	3558892*	1025		
<a href="#">C 02569</a>			ED	4	4	2	02	25S	31E	618699	3558891*	1016		
<a href="#">C 02570</a>			ED	4	2	4	02	25S	31E	618704	3558489*	895		
<a href="#">C 02571</a>			ED	4	1	2	02	25S	31E	618292	3559294*	860		
<a href="#">C 02572</a>			ED	4	2	2	02	25S	31E	618695	3559294*	852		
<a href="#">C 02573</a>			ED	1	4	2	02	25S	31E	618499	3559091*			
<a href="#">C 02574</a>			ED	1	1	2	02	25S	31E	618092	3559494*			
<a href="#">C 03830 POD1</a>		CUB	ED	4	2	4	02	25S	31E	618632	3558432	450		

Average Depth to Water: **390 feet**

Minimum Depth: **390 feet**

Maximum Depth: **390 feet**

Record Count: 9

### Basin/County Search:

County: Eddy

### PLSS Search:

Township: 25S

Range: 31E

\*UTM location was derived from PLSS - see Help

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 B**

### **Analytical**

June 25, 2015

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: COTTON DRAW #163

Enclosed are the results of analyses for samples received by the laboratory on 06/25/15 8:11.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

 Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

 Received: 06/25/2015  
 Reported: 06/25/2015  
 Project Name: COTTON DRAW #163  
 Project Number: ALF-15-007  
 Project Location: LEA COUNTY, NM

 Sampling Date: 06/04/2015  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: AH-1 SURFACE (H501647-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10400	16.0	06/25/2015	ND	448	112	400	7.41	

**Sample ID: AH-1 1' (H501647-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4560	16.0	06/25/2015	ND	448	112	400	7.41	

**Sample ID: AH-1 2' (H501647-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4160	16.0	06/25/2015	ND	448	112	400	7.41	

**Sample ID: AH-2 SURFACE (H501647-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	20400	16.0	06/25/2015	ND	448	112	400	7.41	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Safety & Environmental Solutions  
Bob Allen  
703 East Clinton  
Hobbs NM, 88240  
Fax To: (575) 393-4388

Received: 06/25/2015  
Reported: 06/25/2015  
Project Name: COTTON DRAW #163  
Project Number: ALF-15-007  
Project Location: LEA COUNTY, NM

Sampling Date: 06/04/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: AH-2 1' (H501647-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4240	16.0	06/25/2015	ND	448	112	400	7.41	

**Sample ID: AH-2 2' (H501647-06)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6080	16.0	06/25/2015	ND	448	112	400	7.41	

**Sample ID: AH-2 3' (H501647-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4800	16.0	06/25/2015	ND	448	112	400	7.41	

**Sample ID: AH-3 SURFACE (H501647-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10200	16.0	06/25/2015	ND	448	112	400	7.41	

**Sample ID: AH-3 1' (H501647-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4160	16.0	06/25/2015	ND	448	112	400	7.41	

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 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

 Received: 06/25/2015  
 Reported: 06/25/2015  
 Project Name: COTTON DRAW #163  
 Project Number: ALF-15-007  
 Project Location: LEA COUNTY, NM

 Sampling Date: 06/04/2015  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: AH-3 2' (H501647-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4960	16.0	06/25/2015	ND	448	112	400	7.41		

**Sample ID: AH -3 3' (H501647-11)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6080	16.0	06/25/2015	ND	448	112	400	7.41		

**Sample ID: AH-4 SURFACE (H501647-12)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4960	16.0	06/25/2015	ND	448	112	400	7.41	

**Sample ID: AH-4 1' (H501647-13)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1600	16.0	06/25/2015	ND	448	112	400	7.41		

**Sample ID: AH-4 2' (H501647-14)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3320	16.0	06/25/2015	ND	416	104	400	3.92		

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Celey D. Keene, Lab Director/Quality Manager



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Fax To: (575) 393-4388

Received: 06/25/2015  
Reported: 06/25/2015  
Project Name: COTTON DRAW #163  
Project Number: ALF-15-007  
Project Location: LEA COUNTY, NM

Sampling Date: 06/04/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: AH-4 3' (H501647-15)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8720	16.0	06/25/2015	ND	416	104	400	3.92	

**Sample ID: AH-4 4' (H501647-16)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8640	16.0	06/25/2015	ND	416	104	400	3.92	

**Sample ID: AH-5 SURFACE (H501647-17)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1310	16.0	06/25/2015	ND	416	104	400	3.92	

**Sample ID: AH-5 1' (H501647-18)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	06/25/2015	ND	416	104	400	3.92	

**Sample ID: AH-5 2' (H501647-19)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	06/25/2015	ND	416	104	400	3.92	

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 Project Number: ALF-15-007  
 Project Location: LEA COUNTY, NM

 Sampling Date: 06/04/2015  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: AH-5 3' (H501647-20)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	06/25/2015	ND	416	104	400	3.92		

**Sample ID: AH-6 SURFACE (H501647-21)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1640	16.0	06/25/2015	ND	416	104	400	3.92	

**Sample ID: AH-6 1' (H501647-22)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	06/25/2015	ND	416	104	400	3.92		

**Sample ID: AH-6 2' (H501647-23)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2240	16.0	06/25/2015	ND	416	104	400	3.92	

**Sample ID: AH-6 3' (H501647-24)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1170	16.0	06/25/2015	ND	416	104	400	3.92	

Cardinal Laboratories

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Reported: 06/25/2015  
Project Name: COTTON DRAW #163  
Project Number: ALF-15-007  
Project Location: LEA COUNTY, NM

Sampling Date: 06/04/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: AH-6 4' (H501647-25)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1660	16.0	06/25/2015	ND	416	104	400	3.92		

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Celey D. Keene, Lab Director/Quality Manager



**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager







ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240  
(505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ANALYSIS REQUEST

BILL TO

Company Name: Safety & Environmental Solutions, Inc.

Project Manager: Bob Allen

Address: 703 East Clinton

City: Hobbs State: NM Zip: 88240

Phone #: 575-397-0510 Fax #: 575-393-4388

Project #: ALF-15-007 Project Owner: AEPHAB

Project Name: Cotton Draw 163

Project Location: Deer County

Sampler Name: SSA. Barry

For Lab Use Only

Lab I.D.

Sample I.D.

Lab I.D.		Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chlorine
#501647	ATT-3	3 ft	5	1			6					6		06/04	1240	88
	ATT-4	Surface	5	1			6					6		06/04	1315	88
	ATT-4	1 ft	5	1			6					6		06/04	1320	88
	ATT-4	2 ft	5	1			6					6		06/04	1335	88
	ATT-4	3 ft	5	1			6					6		06/04	1340	88
	ATT-4	4 ft	5	1			6					6		06/04	1350	88
	ATT-5	Surface	5	1			6					6		06/04	1400	88
	ATT-5	1 ft	5	1			6					6		06/04	1415	88
	ATT-5	2 ft	5	1			6					6		06/04	1435	88
	ATT-5	3 ft	5	1			6					6		06/04	1440	88

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice.

PLATE NOTE: Chain of Custody and Delivered Containers clearly and legibly marked with the name of the client for the sample. All claims including those for negligence and any other claims shall be deemed waived unless made in writing and received by Cardinal within 90 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished By: SSA. Barry  
Date: 06/25/15  
Time: 0800

Received By: Judy Garcia  
Date: 06/25/15  
Time: 8:11

Relinquished By: SSA. Barry  
Date: 06/25/15  
Time: 8:11

Temp. Sample Condition  
Cool ☒ Intact ☒  
Yes ☐ No ☐  
Checked By: (initials)  
23.4°C

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.

#54





# ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240  
(505) 393-2326 Fax (505) 393-2476

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page \_\_\_\_ of \_\_\_\_

### ANALYSIS REQUEST

### BILL TO

Company Name: Safety & Environmental Solutions, Inc.

Project Manager: Bob Allen

Address: 703 East Clinton

City: Hobbs State: NM Zip: 88240

Phone #: 575-397-0510 Fax #: 575-393-4388

Project #: AT-15-007 Project Owner: ARPA

Project Name: Cotton Draw 163

Project Location: Lee County

Sampler Name: Don Jerry

FOR USE ONLY

Lab I.D. Sample I.D.

#501647

21 ATT-6 Surface  
22 ATT-6 1st  
23 ATT-6 2nd  
24 ATT-6 3rd  
25 ATT-6 4th

(G)RAB OR (C)OMP.	
# CONTAINERS	
GROUNDWATER	
WASTEWATER	
SOIL	
OIL	
SLUDGE	
OTHER :	
ACID/BASE:	
ICE / COOL	
OTHER :	

DATE	TIME
06/04/14	1450
06/04/14	1455
06/04/14	1515
06/04/14	1520
06/04/14	1530

X5X7X C66666

PLEASE NOTE: Laboratory and field personnel shall adhere to the following procedures for any chain of custody while tested in solidified or fluid state. The amount paid by the client for the analysis, all claims including those for negligence and any other claims whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated releases or otherwise.

Sampler Relinquished:

Reinquinished By: Don Jerry

Date: 06/05/15  
Time: 8:11

Received By: Judy Garcia

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

23.4c

Temp.

Sample Condition  
Cool Inlet Yes ☒ No ☐

CHECKED BY: [Signature]

PHONE RESULT: ☐ Yes ☐ No  
FAX RESULT: ☐ Yes ☐ No  
REMARKS: Just

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 2.45% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.

#54



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

August 18, 2015

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: DEVON COTTON DRAW 163

Enclosed are the results of analyses for samples received by the laboratory on 08/18/15 9:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

Safety & Environmental Solutions  
Bob Allen  
703 East Clinton  
Hobbs NM, 88240  
Fax To: (575) 393-4388

Received:	08/18/2015	Sampling Date:	08/14/2015
Reported:	08/18/2015	Sampling Type:	Soil
Project Name:	DEVON COTTON DRAW 163	Sampling Condition:	Cool & Intact
Project Number:	ALF-15-007	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY		

**Sample ID: BH-1 8' (H502150-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	08/18/2015	ND	416	104	400	0.00	

**Sample ID: BH-1 10' (H502150-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	464	16.0	08/18/2015	ND	416	104	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

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\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



October 29, 2015

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: DEVON COTTON DRAW 163

Enclosed are the results of analyses for samples received by the laboratory on 10/26/15 8:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	10/26/2015	Sampling Date:	10/20/2015
Reported:	10/29/2015	Sampling Type:	Soil
Project Name:	DEVON COTTON DRAW 163	Sampling Condition:	Cool & Intact
Project Number:	ALF-15-007	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY		

**Sample ID: WS SP-1 BOTTOM 4' (H502775-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	10/26/2015	ND	432	108	400	3.77	

**Sample ID: WS SP-3 BOTTOM 4' (H502775-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	10/26/2015	ND	432	108	400	3.77	

**Sample ID: WS SP-5 BOTTOM 4' (H502775-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	10/26/2015	ND	432	108	400	3.77	

**Sample ID: WS SP-8 WEST WALL (H502775-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	10/26/2015	ND	432	108	400	3.77	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

 Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	10/26/2015	Sampling Date:	10/20/2015
Reported:	10/29/2015	Sampling Type:	Soil
Project Name:	DEVON COTTON DRAW 163	Sampling Condition:	Cool & Intact
Project Number:	ALF-15-007	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY		

**Sample ID: WS SP-9 EAST WALL (H502775-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	10/26/2015	ND	432	108	400	3.77	

**Sample ID: SS SP-2 BOTTOM 4' (H502775-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4640	16.0	10/26/2015	ND	432	108	400	3.77	

**Sample ID: SS SP-4 BOTTOM 4' (H502775-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/26/2015	ND	432	108	400	3.77	

**Sample ID: SS SP-7 NORTH WALL (H502775-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/26/2015	ND	432	108	400	3.77	

**Sample ID: SS SP-8 SOUTH WALL (H502775-09)**

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	10/29/2015	ND	416	104	400	3.92		

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Safety & Environmental Solutions  
Bob Allen  
703 East Clinton  
Hobbs NM, 88240  
Fax To: (575) 393-4388

Received:	10/26/2015	Sampling Date:	10/21/2015
Reported:	10/29/2015	Sampling Type:	Soil
Project Name:	DEVON COTTON DRAW 163	Sampling Condition:	Cool & Intact
Project Number:	ALF-15-007	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY		

**Sample ID: ES SP-2 BOTTOM 4' (H502775-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	480	16.0	10/29/2015	ND	416	104	400	3.92		

**Sample ID: ES SP-4 BOTTOM 4' (H502775-11)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	10/29/2015	ND	416	104	400	3.92	

**Sample ID: ES SP-6 EAST WALL (H502775-12)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	10/29/2015	ND	416	104	400	3.92		

**Sample ID: ES SP-8 WEST WALL (H502775-13)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	10/29/2015	ND	416	104	400	3.92		

**Sample ID: BA SP-1 BOTTOM 4' (H502775-14)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	10/29/2015	ND	416	104	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	10/26/2015	Sampling Date:	10/22/2015
Reported:	10/29/2015	Sampling Type:	Soil
Project Name:	DEVON COTTON DRAW 163	Sampling Condition:	Cool & Intact
Project Number:	ALF-15-007	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY		

**Sample ID: BA SP-2 BOTTOM 4' (H502775-15)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3400	16.0	10/29/2015	ND	416	104	400	3.92		

**Sample ID: BA SP-4 WEST WALL (H502775-16)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/29/2015	ND	416	104	400	3.92	

**Sample ID: BA SP-5 EAST WALL (H502775-17)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	10/29/2015	ND	416	104	400	3.92	

**Sample ID: BA SP-6 SOUTH WALL (H502775-18)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	10/29/2015	ND	416	104	400	3.92		

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

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RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

(505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 2

Company Name: Safety & Environmental Solutions, Inc.		P.O. #:		BILL TO		ANALYSIS REQUEST	
Project Manager: Bob Allen		Company: Same					
Address: 703 East Clinton		Attn:					
City: Hobbs		State: NM		Zip: 88240			
Phone #: 575-397-0510		Fax #: 575-393-4388		Address:			
Project #: AFE-15-007		Project Owner: AFE-15-007		City:			
Project Name: Devon Cotton Draw (63)		State:		Zip:			
Project Location: EDDY County		Phone #:					
Sampler Name: SOSA Jerry		Fax #:					
For Lab Use Only		PRESERV.		SAMPLING			
Lab I.D.		Sample I.D.					
H302115							
		(G)RAB OR (C)OMP.					
		# CONTAINERS					
		GROUNDWATER					
		WASTEWATER					
		SOIL					
		OIL					
		SLUDGE					
		OTHER :					
		ACID/BASE:					
		ICE / COOL					
		OTHER :					
		DATE		TIME			
1		10/20		1300		X	
2		10/20		1340		X	
3		10/20		1405		X	
4		10/20		1450		X	
5		10/20		1505		X	
6		10/21		0910		X	
7		10/21		0930		X	
8		10/21		0950		X	
9		10/21		1015		X	
10		10/21		0910		X	
11		10/21		0930		X	
12		10/21		0950		X	
13		10/21		1015		X	
14		10/21		0910		X	
15		10/21		0930		X	
16		10/21		0950		X	
17		10/21		1015		X	
18		10/21		0910		X	
19		10/21		0930		X	
20		10/21		0950		X	
21		10/21		1015		X	
22		10/21		0910		X	
23		10/21		0930		X	
24		10/21		0950		X	
25		10/21		1015		X	
26		10/21		0910		X	
27		10/21		0930		X	
28		10/21		0950		X	
29		10/21		1015		X	
30		10/21		0910		X	
31		10/21		0930		X	
32		10/21		0950		X	
33		10/21		1015		X	
34		10/21		0910		X	
35		10/21		0930		X	
36		10/21		0950		X	
37		10/21		1015		X	
38		10/21		0910		X	
39		10/21		0930		X	
40		10/21		0950		X	
41		10/21		1015		X	
42		10/21		0910		X	
43		10/21		0930		X	
44		10/21		0950		X	
45		10/21		1015		X	
46		10/21		0910		X	
47		10/21		0930		X	
48		10/21		0950		X	
49		10/21		1015		X	
50		10/21		0910		X	
51		10/21		0930		X	
52		10/21		0950		X	
53		10/21		1015		X	
54		10/21		0910		X	
55		10/21		0930		X	
56		10/21		0950		X	
57		10/21		1015		X	
58		10/21		0910		X	
59		10/21		0930		X	
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61		10/21		1015		X	
62		10/21		0910		X	
63		10/21		0930		X	
64		10/21		0950		X	
65		10/21		1015		X	
66		10/21		0910		X	
67		10/21		0930		X	
68		10/21		0950		X	
69		10/21		1015		X	
70		10/21		0910		X	
71		10/21		0930		X	
72		10/21		0950		X	
73		10/21		1015		X	
74		10/21		0910		X	
75		10/21		0930		X	
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77		10/21		1015		X	
78		10/21		0910		X	
79		10/21		0930		X	
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82		10/21		0910		X	
83		10/21		0930		X	
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85		10/21		1015		X	
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93		10/21		1015		X	
94		10/21		0910		X	
95		10/21		0930		X	
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98		10/21		0910		X	
99		10/21		0930		X	
100		10/21		0950		X	
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102		10/21		0910		X	
103		10/21		0930		X	
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106		10/21		0910		X	
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110		10/21		0910		X	
111		10/21		0930		X	
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113		10/21		1015		X	
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117		10/21		1015		X	
118		10/21		0910		X	
119		10/21		0930		X	
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122		10/21		0910		X	
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126		10/21		0910		X	
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128		10/21		0950		X	
129		10/21		1015		X	
130		10/21		0910		X	
131		10/21		0930		X	
132		10/21		0950		X	
133		10/21		1015		X	
134		10/21		0910		X	
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146		10/21		0910		X	
147		10/21		0930		X	
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149		10/21		1015		X	
150		10/21		0910		X	
151		10/21		0930		X	
152		10/21		0950		X	
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155		10/21		0930		X	
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162		10/21		0910		X	
163		10/21		0930		X	
164		10/21		0950		X	
165		10/21		1015		X	
166		10/21		0910		X	
167		10/21		0930		X	
168		10/21		0950		X	
169		10/21		1015		X	
170		10/21		0910		X	
171		10/21		0930		X	
172		10/21		0950		X	
173		10/21		1015		X	
174		10/21		0910		X	
175		10/21		0930		X	
176		10/21		0950		X	
177		10/21		1015		X	
178		10/21		0910		X	
179		10/21		0930		X	
180		10/21		0950		X	
181		10/21		1015		X	
182		10/21		0910		X	
183		10/21		0930		X	
184		10/21		0950		X	
185		10/21		1015		X	
186		10/21		0910		X	
187		10/21		0930		X	
188		10/21		0950		X	
189		10/21		1015		X	
190		10/21		0910		X	
191		10/21		0930		X	
192		10/21		0950		X	
193		10/21		1015		X	
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195		10/21		0930		X	
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197		10/21		1015		X	
198		10/21		0910		X	
199		10/21		0930		X	
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201		10/21		1015		X	
202		10/21		0910		X	
203		10/21		0930		X	
204		10/21		0950		X	
205		10/21		1015		X	
206		10/21		0910		X	
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211		10/21		0930		X	
212		10/21		0950		X	
213		10/21		1015		X	
214		10/21		0910		X	
215		10/21		0930		X	
216		10/21		0950		X	
217		10/21		1015		X	
218		10/21		0910		X	
219		10/21		0930		X	
220		10/21		0950		X	
221		10/21		1015		X	
222		10/21		0910		X	
223		10/21		0930		X	
224		10/21		0950		X	
225		10/21		1015		X	
226		10/21		0910		X	
227		10/21		0930		X	
228		10/21		0950		X	
229		10/21		1015		X	
230		10/21		0910		X	
231		10/21		0930			





# ARDINAL LABORATORIES

101 East Maryland, Hobbs, NM 88240  
(505) 393-2326 Fax (505) 393-2476

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 2 of 2

Company Name: Safety & Environmental Solutions, Inc.		P.O. #:		BILL TO		ANALYSIS REQUEST	
Project Manager: Bob Allen		City: Hobbs		State: NM Zip: 88240		Company: Same	
Address: 703 East Clinton		City: Hobbs		State: NM Zip: 88240		Address:	
Phone #: 575-397-0510		Fax #: 575-393-4388		City:		State: Zip:	
Project # AT15007		Project Owner: A. Hendon		City:		State: Zip:	
Project Name: Devon Central Drain 163		Phone #:		Fax #:		DATE	
Sample Name: Eddy County		Matrix:		PRESERV.		SAMPLING	
Sample Name: Serrano		Matrix:		PRESERV.		SAMPLING	
FOR LAB USE ONLY		Matrix:		PRESERV.		SAMPLING	
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS	
				GROUNDWATER		WASTEWATER	
				SOIL		OIL	
				SLUDGE		OTHER:	
				ACID/BASE:		ICE / COOL	
				OTHER:		DATE	
						TIME	
10 ES SP-2 RABON 44		G 1		X		10/21 1210	
11 ES SP-4 RABON 44		G 1		X		10/21 1220	
12 ES SP-6 EASTMAN		G 1		X		10/21 1245	
13 ES SP-8 WESTMAN		G 1		X		10/21 1315	
14 ES SP-1 RABON 44		G 1		X		10/22 1225	
15 ES SP-2 RABON 44		G 1		X		10/22 1235	
16 ES SP-4 WESTMAN		G 1		X		10/22 1330	
17 ES SP-5 EASTMAN		G 1		X		10/22 1345	
18 ES SP-6 EASTMAN		G 1		X		10/22 1405	
19 ES SP-7 EASTMAN		G 1		X		10/22 1405	
20 ES SP-8 EASTMAN		G 1		X		10/22 1405	
21 ES SP-9 EASTMAN		G 1		X		10/22 1405	
22 ES SP-10 EASTMAN		G 1		X		10/22 1405	
23 ES SP-11 EASTMAN		G 1		X		10/22 1405	
24 ES SP-12 EASTMAN		G 1		X		10/22 1405	
25 ES SP-13 EASTMAN		G 1		X		10/22 1405	
26 ES SP-14 EASTMAN		G 1		X		10/22 1405	
27 ES SP-15 EASTMAN		G 1		X		10/22 1405	
28 ES SP-16 EASTMAN		G 1		X		10/22 1405	
29 ES SP-17 EASTMAN		G 1		X		10/22 1405	
30 ES SP-18 EASTMAN		G 1		X		10/22 1405	
31 ES SP-19 EASTMAN		G 1		X		10/22 1405	
32 ES SP-20 EASTMAN		G 1		X		10/22 1405	
33 ES SP-21 EASTMAN		G 1		X		10/22 1405	
34 ES SP-22 EASTMAN		G 1		X		10/22 1405	
35 ES SP-23 EASTMAN		G 1		X		10/22 1405	
36 ES SP-24 EASTMAN		G 1		X		10/22 1405	
37 ES SP-25 EASTMAN		G 1		X		10/22 1405	
38 ES SP-26 EASTMAN		G 1		X		10/22 1405	
39 ES SP-27 EASTMAN		G 1		X		10/22 1405	
40 ES SP-28 EASTMAN		G 1		X		10/22 1405	
41 ES SP-29 EASTMAN		G 1		X		10/22 1405	
42 ES SP-30 EASTMAN		G 1		X		10/22 1405	
43 ES SP-31 EASTMAN		G 1		X		10/22 1405	
44 ES SP-32 EASTMAN		G 1		X		10/22 1405	
45 ES SP-33 EASTMAN		G 1		X		10/22 1405	
46 ES SP-34 EASTMAN		G 1		X		10/22 1405	
47 ES SP-35 EASTMAN		G 1		X		10/22 1405	
48 ES SP-36 EASTMAN		G 1		X		10/22 1405	
49 ES SP-37 EASTMAN		G 1		X		10/22 1405	
50 ES SP-38 EASTMAN		G 1		X		10/22 1405	
51 ES SP-39 EASTMAN		G 1		X		10/22 1405	
52 ES SP-40 EASTMAN		G 1		X		10/22 1405	
53 ES SP-41 EASTMAN		G 1		X		10/22 1405	
54 ES SP-42 EASTMAN		G 1		X		10/22 1405	
55 ES SP-43 EASTMAN		G 1		X		10/22 1405	
56 ES SP-44 EASTMAN		G 1		X		10/22 1405	
57 ES SP-45 EASTMAN		G 1		X		10/22 1405	
58 ES SP-46 EASTMAN		G 1		X		10/22 1405	
59 ES SP-47 EASTMAN		G 1		X		10/22 1405	
60 ES SP-48 EASTMAN		G 1		X		10/22 1405	
61 ES SP-49 EASTMAN		G 1		X		10/22 1405	
62 ES SP-50 EASTMAN		G 1		X		10/22 1405	
63 ES SP-51 EASTMAN		G 1		X		10/22 1405	
64 ES SP-52 EASTMAN		G 1		X		10/22 1405	
65 ES SP-53 EASTMAN		G 1		X		10/22 1405	
66 ES SP-54 EASTMAN		G 1		X		10/22 1405	
67 ES SP-55 EASTMAN		G 1		X		10/22 1405	
68 ES SP-56 EASTMAN		G 1		X		10/22 1405	
69 ES SP-57 EASTMAN		G 1		X		10/22 1405	
70 ES SP-58 EASTMAN		G 1		X		10/22 1405	
71 ES SP-59 EASTMAN		G 1		X		10/22 1405	
72 ES SP-60 EASTMAN		G 1		X		10/22 1405	
73 ES SP-61 EASTMAN		G 1		X		10/22 1405	
74 ES SP-62 EASTMAN		G 1		X		10/22 1405	
75 ES SP-63 EASTMAN		G 1		X		10/22 1405	
76 ES SP-64 EASTMAN		G 1		X		10/22 1405	
77 ES SP-65 EASTMAN		G 1		X		10/22 1405	
78 ES SP-66 EASTMAN		G 1		X		10/22 1405	
79 ES SP-67 EASTMAN		G 1		X		10/22 1405	
80 ES SP-68 EASTMAN		G 1		X		10/22 1405	
81 ES SP-69 EASTMAN		G 1		X		10/22 1405	
82 ES SP-70 EASTMAN		G 1		X		10/22 1405	
83 ES SP-71 EASTMAN		G 1		X		10/22 1405	
84 ES SP-72 EASTMAN		G 1		X		10/22 1405	
85 ES SP-73 EASTMAN		G 1		X		10/22 1405	
86 ES SP-74 EASTMAN		G 1		X		10/22 1405	
87 ES SP-75 EASTMAN		G 1		X		10/22 1405	
88 ES SP-76 EASTMAN		G 1		X		10/22 1405	
89 ES SP-77 EASTMAN		G 1		X		10/22 1405	
90 ES SP-78 EASTMAN		G 1		X		10/22 1405	
91 ES SP-79 EASTMAN		G 1		X		10/22 1405	
92 ES SP-80 EASTMAN		G 1		X		10/22 1405	
93 ES SP-81 EASTMAN		G 1		X		10/22 1405	
94 ES SP-82 EASTMAN		G 1		X		10/22 1405	
95 ES SP-83 EASTMAN		G 1		X		10/22 1405	
96 ES SP-84 EASTMAN		G 1		X		10/22 1405	
97 ES SP-85 EASTMAN		G 1		X		10/22 1405	
98 ES SP-86 EASTMAN		G 1		X		10/22 1405	
99 ES SP-87 EASTMAN		G 1		X		10/22 1405	
100 ES SP-88 EASTMAN		G 1		X		10/22 1405	
101 ES SP-89 EASTMAN		G 1		X		10/22 1405	
102 ES SP-90 EASTMAN		G 1		X		10/22 1405	
103 ES SP-91 EASTMAN		G 1		X		10/22 1405	
104 ES SP-92 EASTMAN		G 1		X		10/22 1405	
105 ES SP-93 EASTMAN		G 1		X		10/22 1405	
106 ES SP-94 EASTMAN		G 1		X		10/22 1405	
107 ES SP-95 EASTMAN		G 1		X		10/22 1405	
108 ES SP-96 EASTMAN		G 1		X		10/22 1405	
109 ES SP-97 EASTMAN		G 1		X		10/22 1405	
110 ES SP-98 EASTMAN		G 1		X		10/22 1405	
111 ES SP-99 EASTMAN		G 1		X		10/22 1405	
112 ES SP-100 EASTMAN		G 1		X		10/22 1405	
113 ES SP-101 EASTMAN		G 1		X		10/22 1405	
114 ES SP-102 EASTMAN		G 1		X		10/22 1405	
115 ES SP-103 EASTMAN		G 1		X		10/22 1405	
116 ES SP-104 EASTMAN		G 1		X		10/22 1405	
117 ES SP-105 EASTMAN		G 1		X		10/22 1405	
118 ES SP-106 EASTMAN		G 1		X		10/22 1405	
119 ES SP-107 EASTMAN		G 1		X		10/22 1405	
120 ES SP-108 EASTMAN		G 1		X		10/22 1405	
121 ES SP-109 EASTMAN		G 1		X		10/22 1405	
122 ES SP-110 EASTMAN		G 1		X		10/22 1405	
123 ES SP-111 EASTMAN		G 1		X		10/22 1405	
124 ES SP-112 EASTMAN		G 1		X		10/22 1405	
125 ES SP-113 EASTMAN		G 1		X		10/22 1405	
126 ES SP-114 EASTMAN		G 1		X		10/22 1405	
127 ES SP-115 EASTMAN		G 1		X		10/22 1405	
128 ES SP-116 EASTMAN		G 1		X		10/22 1405	
129 ES SP-117 EASTMAN		G 1		X		10/22 1405	
130 ES SP-118 EASTMAN		G 1		X		10/22 1405	
131 ES SP-119 EASTMAN		G 1		X		10/22 1405	
132 ES SP-120 EASTMAN		G 1		X		10/22 1405	
133 ES SP-121 EASTMAN		G 1		X		10/22 1405	
134 ES SP-122 EASTMAN		G 1		X		10/22 1405	
135 ES SP-123 EASTMAN		G 1		X		10/22 1405	
136 ES SP-124 EASTMAN		G 1		X		10/22 1405	
137 ES SP-125 EASTMAN		G 1		X		10/22 1405	
138 ES SP-126 EASTMAN		G 1		X		10/22 1405	
139 ES SP-127 EASTMAN		G 1		X		10/22 1405	
140 ES SP-128 EASTMAN		G 1		X		10/22 1405	
141 ES SP-129 EASTMAN		G 1		X		10/22 1405	
142 ES SP-130 EASTMAN		G 1		X		10/22 1405	
143 ES SP-131 EASTMAN		G 1		X		10/22 1405	
144 ES SP-132 EASTMAN		G 1		X		10/22 1405	
145 ES SP-133 EASTMAN		G 1		X		10/22 1405	
146 ES SP-134 EASTMAN		G 1		X		10/22 1405	
147 ES SP-135 EASTMAN		G 1		X		10/22 1405	
148 ES SP-136 EASTMAN		G 1		X		10/22 1405	
149 ES SP-137 EASTMAN		G 1		X		10/22 1405	
150 ES SP-138 EASTMAN		G 1		X		10/22 1405	
151 ES SP-139 EASTMAN		G 1		X		10/22 1405	
152 ES SP-140 EASTMAN		G 1		X		10/22 1405	
153 ES SP-141 EASTMAN		G 1		X		10/22 1405	
154 ES SP-142 EASTMAN		G 1		X		10/22 1405	
155 ES SP-143 EASTMAN		G 1		X		10/22 1405	
156 ES SP-144 EASTMAN		G 1		X		10/22 1405	
157 ES SP-145 EASTMAN		G 1		X		10/22 1405	
158 ES SP-146 EASTMAN		G 1		X		10/22 1405	
159 ES SP-147 EASTMAN		G 1		X		10/22 1405	
160 ES SP-148 EASTMAN		G 1		X		10/22 1405	
161 ES SP-149 EASTMAN		G 1		X		10/22 1405	
162 ES SP-150 EASTMAN		G 1		X		10/22 1405	
163 ES SP-151 EASTMAN		G 1		X		10/22 1405	
164 ES SP-152 EASTMAN		G 1		X		10/22 1405	
165 ES SP-153 EASTMAN		G 1		X		10/22 1405	
166 ES SP-154 EASTMAN		G 1		X		10/22 1405	
167 ES SP-155 EASTMAN		G 1		X		10/22 1405	
168 ES SP-156 EASTMAN		G 1		X		10/22 1405	
169 ES SP-157 EASTMAN		G 1		X		10/22 1405	
170 ES SP-158 EASTMAN		G 1		X		10/22 1405	
171 ES SP-159 EASTMAN		G 1		X		10/22 1405	
172 ES SP-160 EASTMAN		G 1		X		10/22 1405	
173 ES SP-161 EASTMAN		G 1		X		10/22 1405	
174 ES SP-162 EASTMAN		G 1		X		10/22 1405	
175 ES SP-163 EASTMAN		G 1		X		10/22 1405	
176 ES SP-164 EASTMAN		G 1		X		10/22 1405	
177 ES SP-165 EASTMAN							



## **Appendix C**

### **Photo Documentation**

**Devon Energy**  
**Cotton Draw 11 Federal #2H**  
**API 30-015-39375**



Sign marking location 05-12-15



SE corner looking north



NW corner looking SE



Spill Run looking SW



Surface impact 05-12-15



Excavated area NW corner looking East



**Devon Energy**  
**Cotton Draw 11 Federal #2H**  
**API 30-015-39375**



Soil Bore 08-14-15



Soil Bore Hole 08-14-15



Bore Hole Backfilled 08-14-15



Excavated area 10-22-15



Excavated area 10-22-15



Excavated area 10-22-15



**Devon Energy**  
**Cotton Draw 11 Federal #2H**  
**API 30-015-39375**



Liner Installation 10-23-15



Liner Installation 10-23-15



Liner Installation 10-23-15



Liner Completion 10-26-15



Liner Completion 10-26-15



Excavated area 10-22-15



**Devon Energy**  
**Cotton Draw 11 Federal #2H**  
**API 30-015-39375**



NW Corner looking SE completion 10-27-15



Facing West at completion 10-27-15



Facing south at completion 10-27-15



SE Corner lookin north completion 10-27-15



Looking southeast at completion 10-27-15



Facing South at completion 10-27-15

## **Appendix D**

### **C-141**



**NM OIL CONSERVATION**  
ARTESIA DISTRICT

MAY 05 2015

Form C-141  
Revised August 8, 2011

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

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

**Release Notification and Corrective Action**

**NAB1515228638**

**OPERATOR**

☒ Initial Report    ☐ Final Report

Name of Company: <b>Devon Energy Production Co LP (6137)</b>	Contact: <b>Brian Kuh, Devon Foreman</b>
Address: <b>PO Box 250 Artesia, NM 88211</b>	Telephone No. <b>575- 513-9136</b>
Facility Name: <b>Cotton Draw 11 Fed 2H</b>	Facility Type: <b>Well location - Poseidon Tank</b>
Surface Owner: <b>Federal</b>	Mineral Owner: <b>Federal</b> API No. <b>30-015-39375</b>

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
<b>C</b>	<b>11</b>	<b>25S</b>	<b>31E</b>	<b>330</b>	<b>North</b>	<b>1980</b>	<b>West</b>	<b>Eddy</b>

Latitude: 32deg 9' 4.648" N    Longitude: 103deg 45' 3.002" W

**NATURE OF RELEASE**

Type of Release: <b>Produced Water</b>	Volume of Release: <b>7.5 bbls</b>	Volume Recovered: <b>5 bbl +</b>
Source of Release: <b>Poseidon Tank on location</b>	Date and Hour of Occurrence: <b>4/29/15, 7:00 PM</b>	Date and Hour of Discovery: <b>4/29/15, 7:00 PM</b>
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? <b>(OCD-Mike Bratcher    BLM-Jeff Robertson)</b>	
By Whom? <b>Brian Kuh, Devon Foreman</b>	Date and Hour: <b>(5/4/15, 10:45 AM)</b>	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. <b>N/A</b>	

If a Watercourse was Impacted, Describe Fully.\*

N/A

Describe Cause of Problem and Remedial Action Taken.\*

A small hole on the underside of the Poseidon tank may have been caused by a power washer which caused the initial leak, then another hole was discovered in the secondary containment caused by an anchor. Vacuum trucks were used to recover the produced water.

Describe Area Affected and Cleanup Action Taken.\*

The rest of the water in the tank was transferred to another tank at the Trionyx location so the hole may be mended. Vacuum trucks were used to recover the produced water. Alfredo's will take soil samples once the tank has been moved and remediation will take place accordingly.

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>Denise Menoud</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: <b>Denise Menoud</b>	Approved by Environmental Specialist: <i>Mike Bratcher</i>	
Title: <b>Field Admin Support</b>	Approval Date: <b>4/11/15</b>	Expiration Date: <b>N/A</b>
E-mail Address: <b>Denise.Menoud@dmn.com</b>	Conditions of Approval:	Attached <input type="checkbox"/>
Date: <b>5/4/2015</b> Phone: <b>575-746-5544</b>	<b>Remediation per O.C.D. Rules &amp; Guidelines</b>	

\* Attach Additional Sheets If Necessary

**SUBMIT REMEDIATION PROPOSAL NO**

**LATER THAN: 6/2/15**

**2RP-3021**

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

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

Form C-141  
Revised August 8, 2011

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	Devon Energy Production	Contact	Brett Fulks
Address	6488 Seven Rivers Hwy Artesia, NM 88220	Telephone No.	575-513-5819
Facility Name	Cotton Draw 11 Federal #2H	Facility Type	OIL

Surface Owner	BLM	Mineral Owner	BLM	API No.	30-015-39375
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### LOCATION OF RELEASE

2RP-3021

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	11	25S	31E	330	North	1980	West	EDDY

Latitude: 32.151232 Longitude: -103.750816

### NATURE OF RELEASE

Type of Release Spill	Produced Water	Volume of Release:	7.5 bbls	Volume Recovered:	5 bbls
Source of Release:	Poseidon Tank	Date and Hour of Occurrence	04/29/2015 7:00 PM	Date and Hour of Discovery	04/29/15 7:00 PM
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	OCD-Mike Bratcher BLM- Jeff Robertson		
By Whom?	Brian Kuh, Devon Foreman	Date and Hour	5/4/2015 10:45 AM		
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.\*

A small hole on the underside of the Poseidon tank may have been caused by a power washer which in turn caused the initial leak, then another hole was discovered in the secondary containment caused by an anchor. Vacuum trucks were utilized to recover the produced water.

Describe Area Affected and Cleanup Action Taken.\* A vacuum truck was utilized to recover fluid. SESI has remediated the site in accordance with NMOCD Guidelines.

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>Jeanette Barron</i>	<u>OIL CONSERVATION DIVISION</u>		
Printed Name: Jeanette Barron			
Title: Field Admin Support	Approval Date:	Expiration Date:	
E-mail Address: Jeanette.barron@dvn.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 11/06/2015 Phone: 575.748.1813			

\* Attach Additional Sheets If Necessary