

December 18, 2012

Mr. Mike Bratcher **NMOCD District 2** 811 S. 1<sup>st</sup> Street

Artesia, NM 88210

Subject:

DEC 2 0 2012

NMOCD ARTESIA

AMARILLO 92I North Bivins Amarillo. Texas 79107 Phone 806.467.0607 Fax 806.467.0622

ARTESIA

408 West Texas Ave. Artesia, New Mexico 88210 Phone 575.746.8768 Fax 575.746.8905

**AUSTIN** 

9II West Anderson Lane Suite 202 Austin, Texas 78757 Phone 5I2.989.3428 Fax 5I2.989.3487

HOBBS

318 East Taylor Street Hobbs, New Mexico 88240 Phone 575.393.4261 Fax 575.393.4658

MIDLAND

290I State Hwy 349 Midland, Texas 79706 Phone 432.522.2133 Fax 432.522.2180

SAN ANTONIO

II Commercial Place Schertz, Texas 78!54 Phone 2IO.265.8025 Fax 2IO.568.2!9!

TULSA 525 South Main Street Suite 535 Tulsa, Oklahoma 74103 Phone 918.742.0871 Fax 918.382.0232

The referenced groundwater data is prese

Depth to ground water >100'
Wellhead Protection Area >1000'
Distance to surface water body >1000'

The ranking for this site is 0 based on the as following:

Apache 25 No. 8 SWD

**Devon Energy Corporation** 

Soil Assessment and Remediation Work Plan

API # 30-015-33439

Dear Mr. Bratcher,

Devon Energy Corporation has contracted Talon/LPE (Talon) to perform soil assessment and remediation services for the Apache 25 No. 8 SWD release. Talon's site assessment, soil sampling results and proposed work plan to perform remediation activities consist of the following:

#### **Incident Date**

October 13, 2012

#### **Background Information**

The Apache 25 No. 8 SWD is located approximately sixty-eight (68) miles southeast of Artesia, New Mexico. The legal location for the site is Section 25, Township 22 South and Range 30 East in Eddy County, New Mexico. More specifically, the latitude and longitude for the release are 32.363568 North and -103.832053 West.

According to the soil survey provided by the United States Department of Agriculture National Resources Conservation Services, the soil in this area is made up of Kermit-Berino Fine Sands with 0 to 3 percent slopes. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology is Quaternary in age and is comprised of eolian sands and piedmont deposits which include silty soils under lain with hard caliche. Drainage courses in this area are normally dry. The New Mexico State Engineer web site indicates the nearest ground water data to be in S29-T22S-R31E. The ground water in Section 29 is reported to be at depth of 413' below ground surface (bgs). The referenced groundwater data is presented in Appendix I.

Toll Free: 866.742.0742 www.talonlpe.com

ENVIRONMENTAL CONSULTING

ENGINEERING DRILLING

CONSTRUCTION

SPILL MANAGEMENT

**GENERAL CONTRACTING** 

#### **Incident Description**

A water pump at the Apache 25 No. 8 SWD malfunctioned causing the water tanks to overflow into the lined containment area resulting in a 520 barrel produced water release. The water pump was re-set and returned back to service. A vacuum truck was immediately called to the location and recovered 520 barrels of produced water.

An area of dead vegetation was noted to the northeast of the tank battery during the BLM inspection. This is thought to be a result of historical run-off from the battery and well location. A site plan is attached.

#### **Sampling Activities**

On November 7, 2012 Talon mobilized personnel to begin soil sampling for the construction of a work plan. Grab soil samples were collected utilizing a hand auger from the surface of the impacted area to a depth of 2-feet deep.

On December 4, 2012 Talon returned to the site to collect additional soil samples utilizing a backhoe. Grab soil samples were collected from a depth of 3-feet to 7.5-feet deep.

The soil samples were collected by Talon personnel wearing clean nitrile gloves. The samples were placed into a laboratory provided sample containers and transported to Cardinal Laboratories in Hobbs, New Mexico for analysis. The chlorides were analyzed per method SM4500Cl-B. The complete laboratory reports are attached as Appendix II.

#### **Analytical Results**

Analytical results received from Cardinal Laboratories are summarized below:

November 13, 2012

<u>Sample</u>	<u>Depth</u>	Chlorides mg/kg
S-1	0.25' 0.5' 0.75' 1' 2'	5200 6080 6800 7200 8080

#### December 13, 2012

Sample	<u>Depth</u>	Chlorides mg/kg
S-1	3'	416
	4'	608
	6.5'	256
	7.5'	304

#### **Summary**

- Ground water in the project vicinity is 413-feet below land surface according to the New Mexico State Engineers Database.
- Based on the depth to groundwater, it is unlikely that the impacts identified from this release will pose a threat to groundwater after proposed remediation activities are complete.

#### **Proposed Remedial Actions**

- The impacted soil will be excavated to a depth of 2-feet deep. The impacted soil will be transported to an NMOCD approved solid waste disposal facility.
- The excavated area will be backfilled to grade using new material transported from a local borrow pit. The area will be contoured to match the surrounding location.
- The area will be seeded using the BLM approved seed mixture for the area.

If we can provide additional information or be of further assistance please contact our office at 575,746,8768.

Respectfully submitted,

TALON/LPE

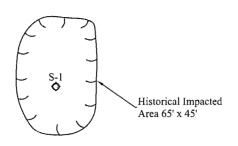
Mike Stubblefield

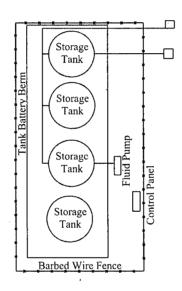
minels wellhill

Project Manager

David J. Adkins District Manager

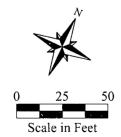
### SITE MAP





Gas Well

Lease Road



Legend

- Sample Location



Date: 12/19/2012

Scale: 1'' = 50'

Drawn By: TJS

Apache 25 No. 8 SWD Devon Energy Corporation Eddy County, New Mexico Figure 1 - Site Plan

# APPENDIX I GROUNDWATER DATA INITIAL C-141



## 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		Q	Q	Q			0 ,	`		,	Damatia.	Danth Mateu
POD Number	Code Subbasin	County					Tws	Rng	Х	Υ		•	Depth Water Water Column
C 02637		ED	1	3	3	24	22S	30E	608950	3582377*	1585	759	
C 02950 EXPL		ED	4	2	4	23	22S	30E	608740	3582576*	1644	845	
C 03221 EXPLORE		EĐ	1	2	1	30	228	31E	610995	3581935*	1680	651	
C 02749		ED	1	1	1	18	228	31E	610556	3585146*	1793	640	
<u>C 02750</u>		ED	1	1	1	18	228	31E	610556	3585146*	1793	741	
C 02751		ED	1	1	1	18	22S	31E	610556	3585146*	1793	637	
C 02683		ED	3	1	1	20	228	31E	612184	3583356*	2019	840	
<u>C 02413</u>		ED	1	2	1	20	22S	31E	612586	3583560*	2426	737	
<u>C 02748</u>		ED	1	2	3	17	22S	31E	612576	3584364*	2598	3856	
C 02759		ED	1	2	1	29	228	31E	612604	3581952*	2834	795	
C 02758		ED	3	2	1	29	22S	31E	612604	3581752*	2941	661	
C 02762		ED	3	2	1	29	22S	31E	612604	3581752*	2941	672	
C 02763		ED	3	2	1	29	22S	31E	612604	3581752*	2941	660	
C 02753		ED	1	4	4	20	22S	31E	613404	3582362*	3400	851	
C 02986		ED	1	4	4	20	228	31E	613404	3582362*	3400	71	
C 02990		ED	1	4	4	20	22S	31E	613404	3582362*	3400	71	
C 02684		ED	4	2	2	20	228	31E	613590	3583368*	3425	1060	
C 02639		ED	4	4	4	17	22S	31E	613585	3583770*	3440	3928	
C 02755		ED	4	4	2	20	228	31E	613595	3582966*	3456	1040	
<u>C 02418</u>		ED	3	2	3	29	228	31E	612613	3580948*	3461	617	413 204
C 02419		ED	3	2	3	29	228	31E	612613	3580948*	3461	225	
C 02989		ED	3	4	4	20	228	31E	613404	3582162*	3466	54	

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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 October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

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Type of Release: Spill - Volume of Release: 520 bbls Volume Recovered: 520 bbls  Source of Release: water pump malfunction Date and Hour of Occurrence: Date and Hour of Discovery													
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		$\boxtimes$	Yes [	No D Not R	equired	Daniel Sur	iga, Production F	oreman				ĺ	
By Whom? J	erry VanN	atta, Lease Op	erator				lour: 10/14/2012,				*		
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☐ Yes ☒ No  If a Watercourse was Impacted, Describe Fully.* N/A  RECEIVED													
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I hereby certi	fy that the	information gi	iven above	is true and comp	lete to t	he best of my	knowledge and u	ndersta	nd that purs	suant to NM	OCD rules a	nd	
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Remediation per OCD Rules & Guidelines. SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:

### APPENDIX II LABORATORY RESULTS



November 13, 2012

DAVID ADKINS

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: APACHE 25 #8

Enclosed are the results of analyses for samples received by the laboratory on 11/08/12 15:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. 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 <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited accredited analytes are denoted solved.

Cardinal Laboratories is accreditated 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.

Celeg D. Keine

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:

TALON LPE DAVID ADKINS 408 W. TEXAS AVE. ARTESIA NM, 88210

Fax To:

(575) 745-8905

Received:

11/08/2012

Reported:

11/13/2012

Project Name:

APACHE 25 #8

Project Number:

700794.055.01

Project Location:

NONE GIVEN

Sampling Date:

11/07/2012

Sampling Type:

Soil

Sampling Condition:

\*\* (See Notes)

Sample Received By:

Jodi Henson

#### Sample ID: S-1 0.25' (H202730-01)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5200	16.0	11/13/2012	ND	432	108	400	3.77	
Sample ID: S-1 0.5' (H20	02730-02)	•							
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6080	16.0	11/13/2012	ND	432	108	400	3.77	

#### Sample ID: S-1 0.75' (H202730-03)

Chloride, SM4500CI-B	mg/	'kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6800	16.0	11/13/2012	ND	432	108	400	3.77	

#### Sample ID: S-1 1.0' (H202730-04)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7200	16.0	11/13/2012	ND	432	108	400	3.77	

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All dialins, including those for negligence and any other cause whatsoever shall be deemed valved unless made in writing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such claims is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg & Keine



#### Analytical Results For:

TALON LPE DAVID ADKINS 408 W. TEXAS AVE. ARTESIA NM, 88210

Fax To:

(575) 745-8905

Received: Reported:

11/08/2012

11/13/2012

Project Name: Project Number: APACHE 25 #8 700794.055.01

Project Location:

NONE GIVEN

Sampling Date:

11/07/2012

Sampling Type:

Soil

Sampling Condition:

\*\* (See Notes)

Sample Received By:

Jodi Henson

#### Sample ID: S-1 2.0' (H202730-05)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8080	16.0	11/13/2012	ND	432	108	400	3.77	

Cardinal Laboratories \*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in withing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such claims be based upon any of the above stated reasons or otherwise. Results relate only to the samples (identified above. This reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keine

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. Keine



#### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Warland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

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December 13, 2012

DAVID ADKINS

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: APACHE 25 #8 SWD

Enclosed are the results of analyses for samples received by the laboratory on 12/07/12 13:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. 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 <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited accredited accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited accredit

Cardinal Laboratories is accreditated 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.

Celey D. Keine

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:

TALON LPE
DAVID ADKINS
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:

12/07/2012

Reported:

12/13/2012

Project Name: Project Number: APACHE 25 #8 SWD 700794.055.01

Project Location:

700794.055.01

SEC. 25 - T22S - R30E

Sampling Date:

12/04/2012

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

#### Sample ID: S - 1 3' (H202950-01)

Chloride, SM4500Cl-B	, mg,	/kg	Analyze	d By: AP				`	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	12/12/2012	ND	448	112	400	3.64	
Sample ID: S - 1 4' (H20	2950-02)								
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP			· · · · · · · · · · · · · · · · · · ·		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	608	16.0	12/12/2012	ND	448	112	400	3.64	
Sample ID: S - 1 6.5' (H	202950-03)								
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	12/12/2012	ND	448	112	400	3.64	
Sample ID: S - 1 7.5' (H	202950-04)								
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	12/12/2012	ND	448	112	400	3.64	

#### Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed welved unless made in writing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such claims is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene



#### **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 & Keene



#### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

Company Name: Talon   LAE Project Manager: David AdKins										В	ILL TO		Ħ				ANA	LYSI	SR	QUE	ST			
Project Manage	r: David AdKins							P.(	O. #.				1							1				
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