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Soil Assessment and Remediation Work Plan

Algerita 32 State Com #1

API # 30-015-35339 – **2RP-3345**

Talon Project No. 700794.227.01

Prepared For:

Devon Energy Production

6488 Seven Rivers Hwy

Artesia, New Mexico 88210

Prepared By:

Kimberly M. Wilson

TALON/LPE

408 W. Texas Avenue

Artesia, New Mexico 88210

August 30, 2017

Mr. Mike Bratcher
NMOCD District 2
811 S. 1st Street
Artesia, NM 88210

Subject: **Soil Assessment and Remediation Work Plan**
Algerita 32 State Com #1
API # 30-015-35339 – 2RP-3345

Dear Mr. Bratcher,

Devon Corporation has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above referenced location. The results of our soil assessment and proposed remediation activities consist of the following.

Site Information

The Algerita 32 State Com #1 is located approximately forty-two (42) miles southwest of Artesia, New Mexico. The legal location for this release is Unit Letter M, Section 32, Township 22 South and Range 26 East in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.34283 North and -104.32000 West. A site plan is presented in [Appendix I](#).

According to the soil survey provided by the United States Department of Agriculture Natural Resources Conservation Service, the soil in this area is made up of Reagan loam with 0 to 3 percent slopes. The local surface and shallow geology, Quaternary Age sedimentary deposits, is comprised of alluvium and eolian sands which includes silty soils under lain by gypsum and hard. Drainage courses in this area are normally dry.

Ground Water and Site Ranking

The New Mexico State Engineer web site indicates the nearest ground water is 367' below ground surface (BGS). See [Appendix II](#) for the referenced groundwater data.

Therefore the ranking for this site is a **0** based on the following:

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

Based upon the site ranking of **0**, NMOCD Recommended Remedial Action Levels (RRAL) are 50 mg/kg for BTEX, 10 mg/kg for Benzene, 5,000 mg/kg for TPH and 1,000 mg/kg for total chlorides is the recommended guidelines.

Incident Description and Initial Remedial Actions

On October 15, 2015 the 3-phase separator malfunctioned causing 8 barrels of produced water and 2 barrels of oil to be released on location. The battery was shut-in until repairs could be made. All fluids remained on location and 6 barrels of produced water and 1 barrel of oil were recovered. A site plan is presented in [Appendix I](#) which illustrates the impacted area.

Talon mobilized personnel to begin the site assessment and soil sampling activities for the construction of a work plan.

Remediation activities have already begun and the impacted area was hand-excavated to a depth of 4-deep around the facilities equipment and flow lines. On site field titrations for chlorides were used to guide the excavation. The separator battery has been relocated.

On August 9, 2017 an air rotary drill rig was mobilized for vertical delineation of the impacted area. Laboratory results are presented below.

Field Titration Results

Table 1

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1 Bottom	4'	--	8649	--	--
S-1 N. Sidewall		--	2836	--	--
S-1 S. Sidewall		--	709	--	--
S-1 E. Sidewall		--	992	--	--
S-1 W. Sidewall			212		
S-2 Bottom	4'	--	2481	--	--
S-2 N. Sidewall		--	3899	--	--
S-2 S. Sidewall		--	709	--	--
S-3 Bottom	4'	--	992	--	--
S-3 S. Sidewall		--	567	--	--
S-3 E. Sidewall		--	354	--	--

Laboratory Results

See [Appendix III](#) for complete report of laboratory results.

Drilling

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
B-1	5'	--	96	--	--
	10'	--	48	--	--
	15'	--	48	--	--
	20'	--	48	--	--
B-2	5'	<0.300	1250	<10	<10
	10'	<0.300	672	<10	<10
	15'	<0.300	1200	<10	<10
	20'	--	352	--	--
	25'	--	64	--	--
	30'	--	48	--	--
	35'	--	32	--	--
	40'	--	32	--	--

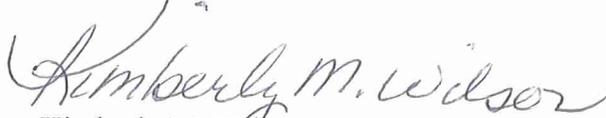
Proposed Remedial Actions

- Please note that the impacted area is vertically delineated.
- The remaining impacted soil within the impacted areas will be excavated to a depth of 4.0-feet deep.
- Sidewall confirmation samples will be obtained and the results forwarded to NMOCD for permission to backfill the excavated area.
- A liner will be installed in the separator battery area (S-1, B-2) at a depth of 4-feet deep.
- All contaminated soil will be transported to Lea Land, LLC, a NMOCD approved disposal facility.
- The excavated area will be backfilled with new caliche. Once the backfilling activities are complete the work area will be contoured to match the surrounding location.
- A final closure report documenting all remedial actions will be provided to the NMOCD Artesia Office along with a Final C-141 Form.

Should you have any questions or if further information is required, please do not hesitate to contact our office at (575)-746-8768

Respectfully submitted,

TALON/LPE



Kimberly M. Wilson
Project Manager



David J. Adkins
District Manager

Attachments:

- Appendix I Site Plan
- Appendix II Groundwater Data & Initial C-141
- Appendix III Laboratory Results

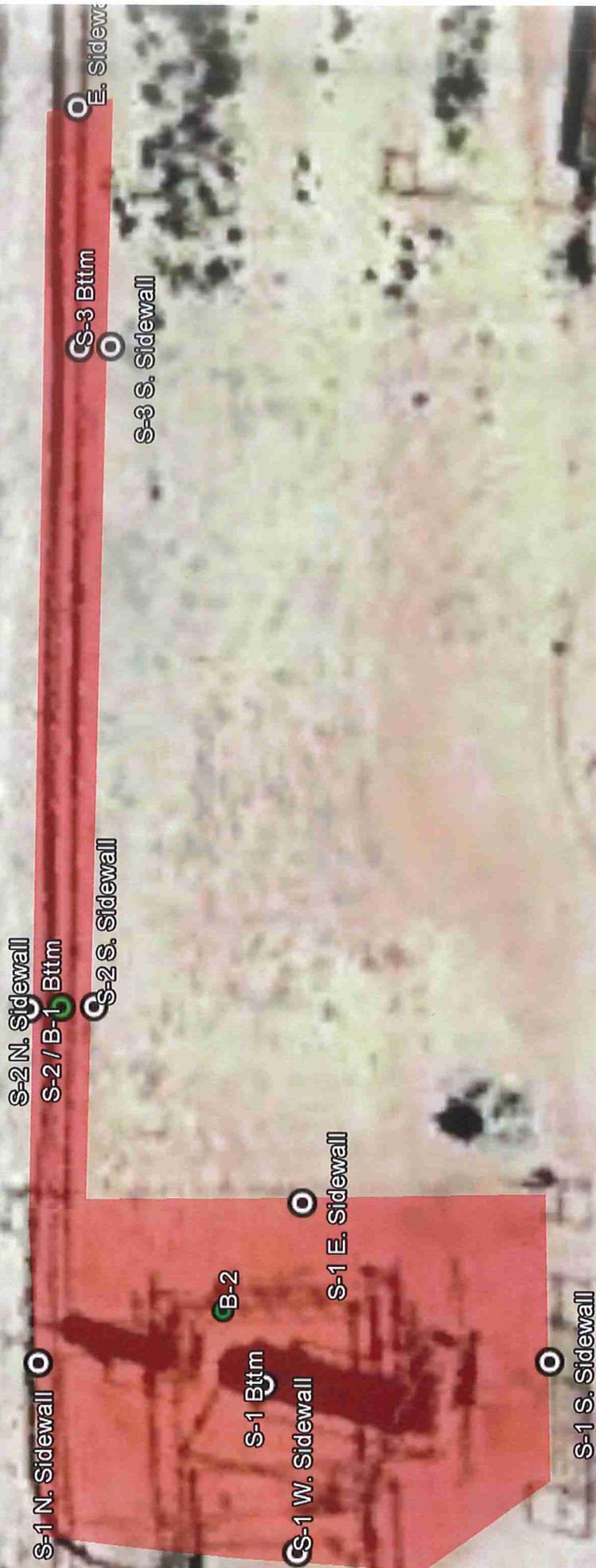
APPENDIX I

SITE MAP

Algerita 32 St. #1

Legend

- Impacted Area
- Sample Locations



40 ft

APPENDIX II
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 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 01445	C	ED	4	1	3	31	22S	26E	562356	3578903*	1508	389	367	22	
C 02855	CUB	ED	1	1	2	32	22S	26E	564529	3579996*	1525	127			
C 02822	C	ED	2	3	1	33	22S	26E	565543	3579584*	1948	300			
C 01788	C	ED	4	2	4	30	22S	26E	563521	3580571*	1962	170	150	20	
C 02964	C	ED	3	3	2	33	22S	26E	566149	3579390*	2428	319			
C 01979	C	ED	1	3	30	22S	26E	562239	3580605*	2539	591	442	149		
C 01192	C	ED	2	4	33	22S	26E	566664	3579084*	2858	100				
C 02168	C	ED	1	3	1	28	22S	26E	565337	3581231*	2996	206	140	66	

Average Depth to Water: **274 feet**

Minimum Depth: **140 feet**

Maximum Depth: **442 feet**

Record Count: 8

Basin/County Search:

County: Eddy

UTMNAD83 Radius Search (in meters):

Easting (X): 563841

Northing (Y): 3578635

Radius: 3000

*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.

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

NAB1529340702

OPERATOR <input checked="" type="checkbox"/> Initial Report <input type="checkbox"/> Final Report	
Name of Company Devon Energy Production <i>10/31</i>	Contact Daniel Suniga, Production Foreman
Address 6488 Seven Rivers Hwy Artesia, NM 88220	Telephone No. 575-390-5850
Facility Name Algerita 32 State Com 1	Facility Type Oil
Surface Owner State	Mineral Owner State
API No. 30-015-35339	

LOCATION OF RELEASE

Unit Letter M	Section 32	Township 22S	Range 26E	Feet from the 660	North/South Line FSL	Feet from the 1160	East/West Line FWL	County Eddy
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Latitude: 32.34283

Longitude: -104.32000

NATURE OF RELEASE

Type of Release Oil & PW release	Volume of Release 10bbl <i>8bbl PW/2bbl oil</i>	Volume Recovered 7bbls <i>6bbl PW/1bbl oil</i>
Source of Release 30 pound gauge	Date and Hour of Occurrence October 3, 2015 11:30 AM	Date and Hour of Discovery October 3, 2015 11:30 AM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher, OCD	
By Whom? Mike McMahan, Asst. Production Foreman	Date and Hour October 3, 2015 11:40 AM	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse N/A	
If a Watercourse was Impacted, Describe Fully.* N/A	<p>NM OIL CONSERVATION ARTESIA DISTRICT</p> <p>OCT 19 2015</p> <p>RECEIVED</p>	
Describe Cause of Problem and Remedial Action Taken.* The 3-phase separator lost gas psi causing it not to dump properly which over pressured a 30# gauge that broke and released approximately <u>8bbl produced water</u> and <u>2bbl oil</u> out the gauge. The well was immediately shut in and a dike was built to stop the fluid from running off location.		
Describe Area Affected and Cleanup Action Taken.* Approximately <u>8bbl of mixed fluid</u> stayed inside containment and approximately <u>2bbl mixed fluid</u> went into pasture due to a hole in the containment. A vac truck was contacted to start recovering fluid and <u>7bbl mixed fluid</u> was recovered. An environmental agency will be contacted for the clean-up.		
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>Sheila Fisher</i>	OIL CONSERVATION DIVISION	
Printed Name: Sheila Fisher	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Field Admin Support	Approval Date: <i>10/20/15</i>	Expiration Date: <i>N/A</i>
E-mail Address: Sheila.Fisher@dvn.com	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines	
Date: 10/16/15 Phone: 575.748.1829	Attached <input type="checkbox"/>	

* Attach Additional Sheets If Necessary

SUBMIT REMEDIATION PROPOSAL NO
LATER THAN: 11/20/15

2RP-3345

APPENDIX III
LABORATORY RESULTS

August 11, 2017

KIMBERLY WILSON

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: ALGERITA 32 STATE COM #1

Enclosed are the results of analyses for samples received by the laboratory on 08/10/17 12:17.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. 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.

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:

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

Received:	08/10/2017	Sampling Date:	08/09/2017
Reported:	08/11/2017	Sampling Type:	Soil
Project Name:	ALGERITA 32 STATE COM #1	Sampling Condition:	** (See Notes)
Project Number:	700794.227.01	Sample Received By:	Tamara Oldaker
Project Location:	DEVON - EDDY CO NM		

Sample ID: BH -2 5' (H702105-01)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/11/2017	ND	1.78	89.0	2.00	0.850		
Toluene*	<0.050	0.050	08/11/2017	ND	1.66	82.9	2.00	1.04		
Ethylbenzene*	<0.050	0.050	08/11/2017	ND	1.73	86.3	2.00	0.384		
Total Xylenes*	<0.150	0.150	08/11/2017	ND	5.13	85.5	6.00	0.287		
Total BTEX	<0.300	0.300	08/11/2017	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1250	16.0	08/11/2017	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	08/11/2017	ND	202	101	200	7.53		
DRO >C10-C28	<10.0	10.0	08/11/2017	ND	206	103	200	7.61		

Surrogate: 1-Chlorooctane 91.2 % 28.3-164
Surrogate: 1-Chlorooctadecane 97.0 % 34.7-157

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	08/10/2017	Sampling Date:	08/09/2017
Reported:	08/11/2017	Sampling Type:	Soil
Project Name:	ALGERITA 32 STATE COM #1	Sampling Condition:	** (See Notes)
Project Number:	700794.227.01	Sample Received By:	Tamara Oldaker
Project Location:	DEVON - EDDY CO NM		

Sample ID: BH -2 10' (H702105-02)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/11/2017	ND	1.78	89.0	2.00	0.850		
Toluene*	<0.050	0.050	08/11/2017	ND	1.66	82.9	2.00	1.04		
Ethylbenzene*	<0.050	0.050	08/11/2017	ND	1.73	86.3	2.00	0.384		
Total Xylenes*	<0.150	0.150	08/11/2017	ND	5.13	85.5	6.00	0.287		
Total BTEX	<0.300	0.300	08/11/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	672	16.0	08/11/2017	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	08/11/2017	ND	202	101	200	7.53		
DRO >C10-C28	<10.0	10.0	08/11/2017	ND	206	103	200	7.61		

Surrogate: 1-Chlorooctane 92.4 % 28.3-164
Surrogate: 1-Chlorooctadecane 95.2 % 34.7-157

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	08/10/2017	Sampling Date:	08/09/2017
Reported:	08/11/2017	Sampling Type:	Soil
Project Name:	ALGERITA 32 STATE COM #1	Sampling Condition:	** (See Notes)
Project Number:	700794.227.01	Sample Received By:	Tamara Oldaker
Project Location:	DEVON - EDDY CO NM		

Sample ID: BH -2 15' (H702105-03)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/11/2017	ND	1.78	89.0	2.00	0.850		
Toluene*	<0.050	0.050	08/11/2017	ND	1.66	82.9	2.00	1.04		
Ethylbenzene*	<0.050	0.050	08/11/2017	ND	1.73	86.3	2.00	0.384		
Total Xylenes*	<0.150	0.150	08/11/2017	ND	5.13	85.5	6.00	0.287		
Total BTEX	<0.300	0.300	08/11/2017	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 103 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1200	16.0	08/11/2017	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	08/11/2017	ND	202	101	200	7.53		
DRO >C10-C28	<10.0	10.0	08/11/2017	ND	206	103	200	7.61		

Surrogate: 1-Chlorooctane 92.4 % 28.3-164

Surrogate: 1-Chlorooctadecane 92.9 % 34.7-157

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* = 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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Talon/LPE
Project Manager: Kimberly Wilson
Address: 408 W. Texas Ave.
City: Artesia
State: NM zip: 88210
Phone #: 575-746-8768 Fax #: 575-746-8905
Project #: 760794.027.01 Project Owner: Devon Energy
Project Name: Algerita 32 State Com #1
Project Location: Eddy County
Sampler Name: Robert Durston

P.O. #: _____
Company: Talon/LPE
Attn: _____
Address: _____
City: _____
State: _____ Zip: _____
Phone #: _____
Fax #: _____

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	BTEX	TPH	Chlorides
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
H702105	BH-2	5'	5	1	1	1	1	1	1	8/9/12	2:08p	✓	✓	✓
		10'	5	1	1	1	1	1	1	8/9/12	2:20p	✓	✓	✓
		15'	5	1	1	1	1	1	1	8/9/12	2:32p	✓	✓	✓

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 the client for the analysis. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable analysis. 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.

Relinquished By: _____
Date: _____
Time: _____
Received By: _____
Date: _____
Time: _____

Phone Result: Yes No Add'l Phone #:
Fax Result: Yes No Add'l Fax #:
REMARKS: _____

Delivered By: (Circle One) 14.9%
Cool Intact: Yes No
Sample Condition: Yes No
Sampler - UPS - Bus - Other: Connected 15.15%
Checked By: (Initials) _____
Date: _____

REMARKS: _____
RUBH



August 15, 2017

KIMBERLY WILSON

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: ALGERITA 32 STATE COM #1

Enclosed are the results of analyses for samples received by the laboratory on 08/14/17 15:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. 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.

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:

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

Received:	08/14/2017	Sampling Date:	08/09/2017
Reported:	08/15/2017	Sampling Type:	Soil
Project Name:	ALGERITA 32 STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	700794.227.01	Sample Received By:	Jodi Henson
Project Location:	DEVON - EDDY CO NM		

Sample ID: BH -2 20' (H702142-01)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	352	16.0	08/15/2017	ND	416	104	400	3.77		

Sample ID: BH -2 25' (H702142-02)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	08/15/2017	ND	416	104	400	3.77		

Sample ID: BH -2 30' (H702142-03)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	08/15/2017	ND	416	104	400	3.77		

Sample ID: BH -2 35' (H702142-04)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	08/15/2017	ND	416	104	400	3.77		

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	08/14/2017	Sampling Date:	08/09/2017
Reported:	08/15/2017	Sampling Type:	Soil
Project Name:	ALGERITA 32 STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	700794.227.01	Sample Received By:	Jodi Henson
Project Location:	DEVON - EDDY CO NM		

Sample ID: BH -2 40' (H702142-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	08/15/2017	ND	416	104	400	3.77		

Sample ID: BH -1 5' (H702142-06)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	08/15/2017	ND	416	104	400	3.77		

Sample ID: BH -1 10' (H702142-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	08/15/2017	ND	416	104	400	3.77		

Sample ID: BH -1 15' (H702142-08)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	08/15/2017	ND	416	104	400	3.77		

Sample ID: BH -1 20' (H702142-09)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	08/15/2017	ND	416	104	400	3.77		

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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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Celey D. Keene, Lab Director/Quality Manager

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Talon/LPE		P.O. #: 700794, 227.01		ANALYSIS REQUEST	
Project Manager: Kimberly Wilson		Company: Talon/LPE			
Address: 408 W. Texas Ave.		Attn:			
City: Artesia	State: NM	Zip: 88210			
Phone #: 575-746-8768	Fax #: 575-746-8905	Address:			
Project #: 700794, 227.01	Project Owner: Devon Energy	City:	State:	Zip:	
Project Name: Devon Alberta 32 St. Area 1	Project Location: Edley County	Phone #:			
Sampler Name: David Jenkins	FOR LAB USE ONLY	Fax #:			

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:			
H702142	BH-2	20'	1							8/9/17		
	BH-2	25'	1							8/9		
	BH-2	30'	1							8/9		
	BH-2	35'	1							8/9		
	BH-2	40'	1							8/9		
	BH-1	5'	1							8/9		
	BH-1	10'	1							8/9		
	BH-1	15'	1							8/9		
	BH-1	20'	1							8/9		

PLEASE NOTIFY Laboratory and sampling Contractor immediately for any other activity which may be required for the amount paid by this client for the sample. All safety handling issues for collection and any other items whatsoever shall be detailed upon initial meeting and received by Cardinal within 30 days after completion of the analysis. In the event that Cardinal has issues for resolution on subsequent dates, including without limitation, hazardous materials, 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, agreed use of whether such claim is based upon any of the above stated causes of action.

Retrieved By: *Kimberly Wilson*
 Date: 8/14/17
 Time: 1:30 PM

Delivered By: (Circle One) *UPS* 492
 Sampler - UPS - Bus - Other: *Contracted S.152*

Sample Condition: Intact Broken
 Yes No

Checked By: *[Signature]*

REMARKS: *RVS tt pls*

* Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326