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Soil Assessment and Remediation Work Plan:

Pinochle BNP State Com #2H
API # 30-015-38316 – 2RP-4372

Prepared For:

Zane Kurtz
EOG Resources, Inc.
5509 Champions Drive
Midland, Texas 79706

Prepared By:

TALON/LPE
408 W. Texas Avenue
Artesia, New Mexico 88210

October 27, 2017

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

Subject: **Soil Assessment and Remediation Work Plan**
Pinochel BNP State Com #2H
API # 30-015-38318 – 2RP-4372

Dear Mr. Bratcher,

EOG Resources, Inc. (EOG) 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 Pinochel BNP State Com #2H is located approximately twenty-five (25) miles southeast of Carlsbad, New Mexico. The legal location for this release is Unit Letter D, Section 22, Township 25 South and Range 28 East in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.12088 North and -104.08259 West. Site plans are 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 Karro fine sandy loam with 0 to 3 percent slopes. The local geology consists of the Rustler Formation, Paleozoic Age sedimentary deposits, comprised of siltstone, gypsum, sandstone, dolomite and hard caliches. 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 96' below ground surface (BGS). See [Appendix II](#) for the referenced groundwater data.

Therefore the ranking for this site is a **10** based on the following:

Depth to ground water	50' - 100'
Wellhead Protection Area	>1000'
Distance to surface water body	>1000'

Based upon the site ranking of **10**, NMOCD Recommended Remedial Action Levels (RRAL) are 50 mg/kg for BTEX, 10 mg/kg for Benzene, 1,000 mg/kg for TPH and 600 mg/kg for total chlorides.

Incident Description and Initial Remedial Actions

On August 29, 2017, a 4-inch poly transition line ruptured inside of a tinhorn causing a release of 135 barrels of produced water on location. All fluids were contained on the well pad. A vac truck was called to the location and recovered 130 barrels of fluid. An emergency OneCall was placed and Talon mobilized personnel and equipment to remove the impacted material in order to prevent the deeper migration into the soil. Site plans are presented in [Appendix I](#) which illustrate the impacted areas.

On September 6, 2017 Talon mobilized personnel to begin the site assessment and soil sampling activities for the construction of a work plan. On October 2, 2017 Talon personnel returned to the site to perform further horizontal delineation sampling utilizing a hand auger for the completion of the work plan. The analytical results are presented below.

Laboratory Results

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

Flow path

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	0.0	<0.300	23200	<10	<10
	1.0	--	7860	--	--
	2.0	--	9330	--	--
	3.0	--	368	--	--
	4.0	--	64	--	--
S-2	0.0	<0.300	5600	<10	<10
	1.0	--	3280	--	--
	2.0	--	1760	--	--
	3.0	--	560	--	--
	4.0	--	224	--	--
S-3	0.0	<0.300	24000	<10	<10
	1.0	--	192	--	--
S-4	0.0	--	16	--	--
S-5	0.0	--	32	--	--
S-6	0.0	--	64	--	--
S-7	0.0	--	48	--	--
S-8	0.0	--	32	--	--
S-9	0.0	--	16	--	--

--Analyte Not Tested

Bell hole

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
Bottom	4.0	<0.300	16000	<10	<10
North sidewall	2.0	<0.300	4080	<10	<10
East sidewall	2.0	<0.300	10400	<10	<10
South sidewall	2.0	<0.300	12400	<10	<10
West sidewall	2.0	<0.300	5730	<10	<10
HA-1	0.0	--	176	--	--
	1.0	--	96	--	--
	2.0	--	160	--	--
	3.0	--	1070	--	--
	4.0	--	800	--	--
HA-2	0.0	--	32	--	--
	1.0	--	16	--	--
	2.0	--	32	--	--
	3.0	--	48	--	--
	4.0	--	80	--	--
HA-3	0.0	--	48	--	--
	1.0	--	<16	--	--
	2.0	--	16	--	--
	3.0	--	<16	--	--
	4.0	--	32	--	--

--Analyte Not Tested

Proposed Remedial Actions

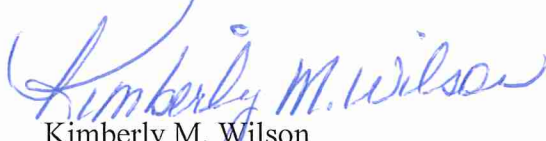
- The impacted soil on location in the vicinity of S-1 and S-2 will be excavated to a depth of 2.5-feet deep and a confirmation sample from the bottom of the excavation will be obtained.
- The impacted soil on location in the vicinity of S-3 will be excavated to a depth of 0.5-feet deep and a confirmation sample from the bottom of the excavation will be obtained.
- Field titrations for total chlorides will be used to guide the bell hole excavation. As this impacted area is directly in the pipeline ROW, further vertical delineation samples were not able to be safely obtained during the site assessment. Confirmation samples will be obtained from the west side wall and bottom of excavation during remediation activities. The analytical results will be presented to NMOCD for review prior to backfilling.

- All contaminated soil will be transported to Lea Land, LLC, a NMOCD approved disposal facility.
- The excavated area will be backfilled with new caliche and machine compacted. 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

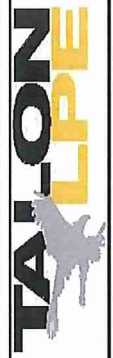
APPENDIX I

SITE MAP



Figure 1 Site Map
EOG Pinochle BNP State Com #2H
Eddy County, New Mexico

Date: 10/30/2017
Scale: Not to Scale
Drawn By: RPD



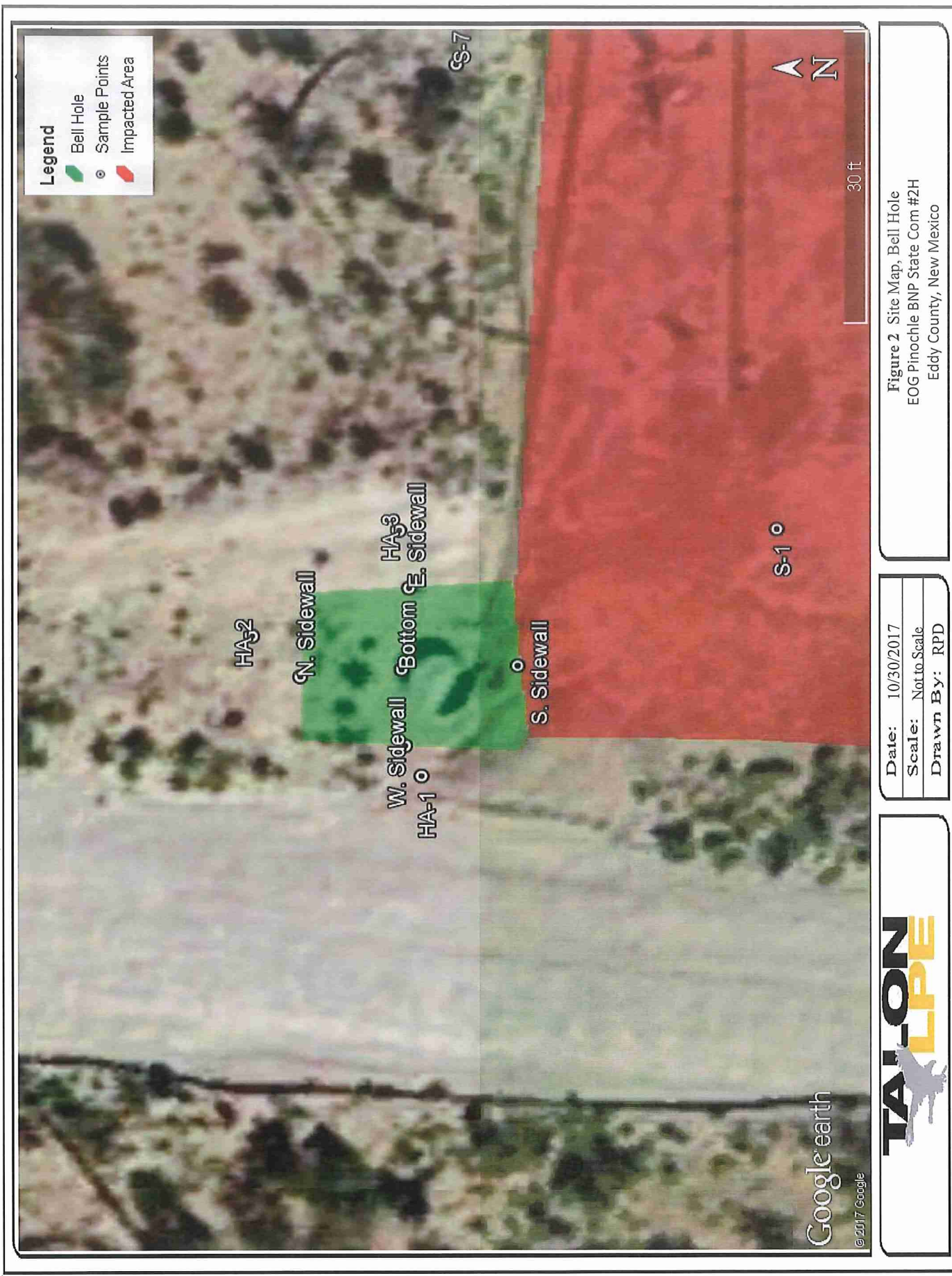


Figure 2 Site Map, Bell Hole
EOG Pinochle BNP State Com #2H
Eddy County, New Mexico

Date: 10/30/2017
Scale: Not to Scale
Drawn By: RPD



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 Code	Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
C 01522	C		ED			1	22	25S	28E	586843	3554004*	423	150		
C 01573 POD1	C		ED	3	1	4	20	25S	28E	584144	3553361	2575	176	96	80
Average Depth to Water:														96 feet	
Minimum Depth:														96 feet	
Maximum Depth:														96 feet	

Record Count:2

UTMNAD83 Radius Search (in meters):

Easting (X): 586542

Northing (Y): 3554302

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.

9/19/17 2:12 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

**NM OIL CONSERVATION
ARTESIA DISTRICT**

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

AUG 29 2017

Form C-141
Revised April 3, 2017

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

NAB1725029111

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	EOG Resources, Inc. 25575	Contact	Zane Kurtz
Address	5509 Champions Drive, Midland, TX 79706	Telephone No.	432-425-2023
Facility Name	Pinochle BNP State Com #2H	Facility Type	Oil Well and Battery
Surface Owner	EOG	Mineral Owner	EOG
		API No.	30-015-38316

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	22	25S	28E	660	FNL	330	FWL	Eddy

Latitude 32.209 Longitude -104.0826 NAD83

NATURE OF RELEASE

Type of Release	Produced Water	Volume of Release	135 bbls	Volume Recovered	130 bbls
Source of Release	4" poly transition ruptured inside tinhorn	Date and Hour of Occurrence	8/29/2017	Date and Hour of Discovery	0900
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Mike Bratcher and Crystal Weaver, NMOCD Amber Groves, NM State Lands, Shelly Tucker, BLM		
By Whom?	Zane Kurtz	Date and Hour	08/29/2017	1100	
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.* N/A

Describe Cause of Problem and Remedial Action Taken.*

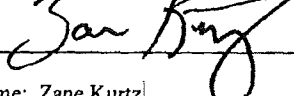
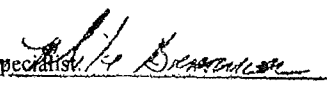
Lease op discovered a 4" poly transition inside of a tinhorn leaking produced water. The entire release was contained on the pad. Approximately 135 bbls were released and 130 bbls were recovered. An emergency one call is being placed today so that we can remove the impacted (wet) area before it goes deeper into the ground. The impacted material will be disposed of at a NM approved landfill. An assessment will follow with soil samples collected and a work plan will be produced based on the soil analytical and submitted to the NMOCD and State Lands for approval. Soil samples will be run for BTEX, TPH, and Chlorides.

****Surface is apparently State Lands and the bottom hole is BLM.**

Describe Area Affected and Cleanup Action Taken.*

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.

OIL CONSERVATION DIVISION

Signature: 	Approved by Environmental Specialist: 	
Printed Name: Zane Kurtz	Approval Date: <u>9/10/17</u>	Expiration Date: <u>N/A</u>
Title: Sr. Environmental Rep.	Conditions of Approval: <u>See attached</u>	
E-mail Address: zane_kurtz@egoresources.com	Attached <input type="checkbox"/> <u>2RP-4372</u>	
Date: 8/29/2017 Phone: 432-425-2023		

* Attach Additional Sheets If Necessary

8/29/17 AB

APPENDIX III
LABORATORY RESULTS

September 13, 2017

SHELDON HITCHCOCK

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: PINOCHLE BMP ST COM 24

Enclosed are the results of analyses for samples received by the laboratory on 09/06/17 15:35.

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
 SHELDON HITCHCOCK
 408 W. TEXAS AVE.
 ARTESIA NM, 88210
 Fax To: (575) 745-8905

 Received: 09/06/2017
 Reported: 09/13/2017
 Project Name: PINOCHLE BMP ST COM 24
 Project Number: 700438.199.01 - EOG -Y
 Project Location: D-22-25S-28E

 Sampling Date: 09/06/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: BOTTOM 4' (H702367-01)

BTX 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	09/12/2017	ND	1.63	81.4	2.00	0.180	
Toluene*	<0.050	0.050	09/12/2017	ND	1.71	85.7	2.00	2.03	
Ethylbenzene*	<0.050	0.050	09/12/2017	ND	1.89	94.3	2.00	1.28	
Total Xylenes*	<0.150	0.150	09/12/2017	ND	5.70	94.9	6.00	1.09	
Total BTX	<0.300	0.300	09/12/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 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	16000	16.0	09/07/2017	ND	432	108	400	0.00	

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	09/07/2017	ND	198	98.9	200	7.70	
DRO >C10-C28	<10.0	10.0	09/07/2017	ND	205	103	200	8.35	

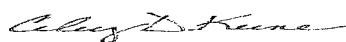
Surrogate: 1-Chlorooctane 86.5 % 28.3-164

Surrogate: 1-Chlorooctadecane 93.5 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	09/06/2017	Sampling Date:	09/06/2017
Reported:	09/13/2017	Sampling Type:	Soil
Project Name:	PINOCHLE BMP ST COM 24	Sampling Condition:	Cool & Intact
Project Number:	700438.199.01 - EOG -Y	Sample Received By:	Jodi Henson
Project Location:	D-22-25S-28E		

Sample ID: NORTH SIDE WALL (H702367-02)

BTX 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	09/12/2017	ND	1.63	81.4	2.00	0.180	
Toluene*	<0.050	0.050	09/12/2017	ND	1.71	85.7	2.00	2.03	
Ethylbenzene*	<0.050	0.050	09/12/2017	ND	1.89	94.3	2.00	1.28	
Total Xylenes*	<0.150	0.150	09/12/2017	ND	5.70	94.9	6.00	1.09	
Total BTX	<0.300	0.300	09/12/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 99.4 % 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	4080	16.0	09/07/2017	ND	432	108	400	0.00	

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	09/07/2017	ND	198	98.9	200	7.70	
DRO >C10-C28	<10.0	10.0	09/07/2017	ND	205	103	200	8.35	

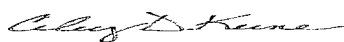
Surrogate: 1-Chlorooctane 83.6 % 28.3-164

Surrogate: 1-Chlorooctadecane 86.1 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	09/06/2017	Sampling Date:	09/06/2017
Reported:	09/13/2017	Sampling Type:	Soil
Project Name:	PINOCHLE BMP ST COM 24	Sampling Condition:	Cool & Intact
Project Number:	700438.199.01 - EOG -Y	Sample Received By:	Jodi Henson
Project Location:	D-22-25S-28E		

Sample ID: EAST SIDE WALL (H702367-03)

BTX 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	09/12/2017	ND	1.63	81.4	2.00	0.180	
Toluene*	<0.050	0.050	09/12/2017	ND	1.71	85.7	2.00	2.03	
Ethylbenzene*	<0.050	0.050	09/12/2017	ND	1.89	94.3	2.00	1.28	
Total Xylenes*	<0.150	0.150	09/12/2017	ND	5.70	94.9	6.00	1.09	
Total BTX	<0.300	0.300	09/12/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 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	10400	16.0	09/07/2017	ND	432	108	400	0.00	

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	09/07/2017	ND	198	98.9	200	7.70	
DRO >C10-C28	<10.0	10.0	09/07/2017	ND	205	103	200	8.35	

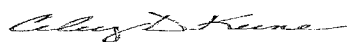
Surrogate: 1-Chlorooctane 93.8 % 28.3-164

Surrogate: 1-Chlorooctadecane 94.6 % 34.7-157

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 09/06/2017
 Reported: 09/13/2017
 Project Name: PINOCHLE BMP ST COM 24
 Project Number: 700438.199.01 - EOG -Y
 Project Location: D-22-25S-28E

 Sampling Date: 09/06/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SOUTH SIDE WALL (H702367-04)

BTX 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	09/12/2017	ND	1.63	81.4	2.00	0.180	
Toluene*	<0.050	0.050	09/12/2017	ND	1.71	85.7	2.00	2.03	
Ethylbenzene*	<0.050	0.050	09/12/2017	ND	1.89	94.3	2.00	1.28	
Total Xylenes*	<0.150	0.150	09/12/2017	ND	5.70	94.9	6.00	1.09	
Total BTX	<0.300	0.300	09/12/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 99.8 % 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	12400	16.0	09/07/2017	ND	432	108	400	0.00	

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	09/07/2017	ND	198	98.9	200	7.70	
DRO >C10-C28	<10.0	10.0	09/07/2017	ND	205	103	200	8.35	

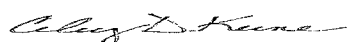
Surrogate: 1-Chlorooctane 99.7 % 28.3-164

Surrogate: 1-Chlorooctadecane 103 % 34.7-157

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 09/06/2017
 Reported: 09/13/2017
 Project Name: PINOCHLE BMP ST COM 24
 Project Number: 700438.199.01 - EOG -Y
 Project Location: D-22-25S-28E

 Sampling Date: 09/06/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: WEST SIDE WALL (H702367-05)

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	09/12/2017	ND	1.63	81.4	2.00	0.180		
Toluene*	<0.050	0.050	09/12/2017	ND	1.71	85.7	2.00	2.03		
Ethylbenzene*	<0.050	0.050	09/12/2017	ND	1.89	94.3	2.00	1.28		
Total Xylenes*	<0.150	0.150	09/12/2017	ND	5.70	94.9	6.00	1.09		
Total BTEX	<0.300	0.300	09/12/2017	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 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	5730	16.0	09/07/2017	ND	432	108	400	0.00	

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	09/07/2017	ND	198	98.9	200	7.70		
DRO >C10-C28	<10.0	10.0	09/07/2017	ND	205	103	200	8.35		

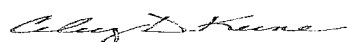
Surrogate: 1-Chlorooctane 91.1 % 28.3-164

Surrogate: 1-Chlorooctadecane 97.5 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

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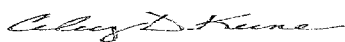
Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

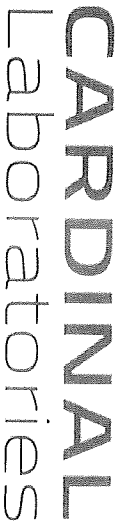
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received 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



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

PG 1013

[illegible]



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

September 11, 2017

SHELDON HITCHCOCK

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: PINOCHLE BMP ST COM 24

Enclosed are the results of analyses for samples received by the laboratory on 09/06/17 15:35.

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
SHELDON HITCHCOCK
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:	09/06/2017	Sampling Date:	09/06/2017
Reported:	09/11/2017	Sampling Type:	Soil
Project Name:	PINOCHLE BMP ST COM 24	Sampling Condition:	Cool & Intact
Project Number:	700438.199.01	Sample Received By:	Jodi Henson
Project Location:	D-22-25S-28E		

Sample ID: S-1 0' (H702366-01)

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	09/09/2017	ND	1.78	88.9	2.00	0.593		
Toluene*	<0.050	0.050	09/09/2017	ND	1.83	91.7	2.00	1.19		
Ethylbenzene*	<0.050	0.050	09/09/2017	ND	1.98	98.8	2.00	1.15		
Total Xylenes*	<0.150	0.150	09/09/2017	ND	5.95	99.1	6.00	0.811		
Total BTEX	<0.300	0.300	09/09/2017	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	23200	16.0	09/07/2017	ND	432	108	400	0.00		

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	09/07/2017	ND	198	98.9	200	7.70	
DRO >C10-C28	<10.0	10.0	09/07/2017	ND	205	103	200	8.35	

Surrogate: 1-Chlorooctane 96.4 % 28.3-164

Surrogate: 1-Chlorooctadecane 102 % 34.7-157

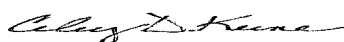
Sample ID: S-1 1' (H702366-02)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7860	16.0	09/07/2017	ND	432	108	400	0.00		

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	09/06/2017	Sampling Date:	09/06/2017
Reported:	09/11/2017	Sampling Type:	Soil
Project Name:	PINOCHLE BMP ST COM 24	Sampling Condition:	Cool & Intact
Project Number:	700438.199.01	Sample Received By:	Jodi Henson
Project Location:	D-22-25S-28E		

Sample ID: S-1 2' (H702366-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9330	16.0	09/07/2017	ND	432	108	400	0.00	

Sample ID: S-1 3' (H702366-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	09/07/2017	ND	432	108	400	0.00	

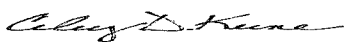
Sample ID: S-1 4' (H702366-05)

Chloride, SM4500Cl-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	09/07/2017	ND	432	108	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	09/06/2017	Sampling Date:	09/06/2017
Reported:	09/11/2017	Sampling Type:	Soil
Project Name:	PINOCHLE BMP ST COM 24	Sampling Condition:	Cool & Intact
Project Number:	700438.199.01	Sample Received By:	Jodi Henson
Project Location:	D-22-25S-28E		

Sample ID: S-2 0' (H702366-06)

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	09/09/2017	ND	1.78	88.9	2.00	0.593		
Toluene*	<0.050	0.050	09/09/2017	ND	1.83	91.7	2.00	1.19		
Ethylbenzene*	<0.050	0.050	09/09/2017	ND	1.98	98.8	2.00	1.15		
Total Xylenes*	<0.150	0.150	09/09/2017	ND	5.95	99.1	6.00	0.811		
Total BTEx	<0.300	0.300	09/09/2017	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 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	5600	16.0	09/07/2017	ND	432	108	400	0.00		

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	09/07/2017	ND	198	98.9	200	7.70		
DRO >C10-C28	<10.0	10.0	09/07/2017	ND	205	103	200	8.35		

Surrogate: 1-Chlorooctane 94.0 % 28.3-164

Surrogate: 1-Chlorooctadecane 96.5 % 34.7-157

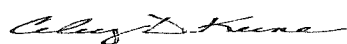
Sample ID: S-2 1' (H702366-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3280	16.0	09/07/2017	ND	432	108	400	0.00		

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	09/06/2017	Sampling Date:	09/06/2017
Reported:	09/11/2017	Sampling Type:	Soil
Project Name:	PINOCHLE BMP ST COM 24	Sampling Condition:	Cool & Intact
Project Number:	700438.199.01	Sample Received By:	Jodi Henson
Project Location:	D-22-25S-28E		

Sample ID: S-2 2' (H702366-08)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1760	16.0	09/07/2017	ND	432	108	400	0.00	

Sample ID: S-2 3' (H702366-09)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	560	16.0	09/07/2017	ND	432	108	400	0.00		

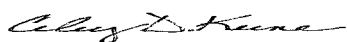
Sample ID: S-2 4' (H702366-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	09/07/2017	ND	432	108	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 09/06/2017
 Reported: 09/11/2017
 Project Name: PINOCHLE BMP ST COM 24
 Project Number: 700438.199.01
 Project Location: D-22-25S-28E

 Sampling Date: 09/06/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: S-3 0' (H702366-12)

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	09/09/2017	ND	1.78	88.9	2.00	0.593		
Toluene*	<0.050	0.050	09/09/2017	ND	1.83	91.7	2.00	1.19		
Ethylbenzene*	<0.050	0.050	09/09/2017	ND	1.98	98.8	2.00	1.15		
Total Xylenes*	<0.150	0.150	09/09/2017	ND	5.95	99.1	6.00	0.811		
Total BTEX	<0.300	0.300	09/09/2017	ND						

Surrogate: 4-Bromofluorobenzene (PIL) 101 % 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	24000	16.0	09/07/2017	ND	432	108	400	0.00		

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	09/07/2017	ND	198	98.9	200	7.70		
DRO >C10-C28	<10.0	10.0	09/07/2017	ND	205	103	200	8.35		

Surrogate: 1-Chlorooctane 82.8 % 28.3-164

Surrogate: 1-Chlorooctadecane 91.2 % 34.7-157

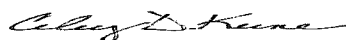
Sample ID: S-3 1' (H702366-13)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	09/07/2017	ND	432	108	400	0.00	

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

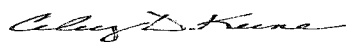
Notes and Definitions

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

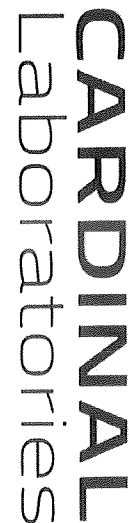
Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



1 of 3

Page 8 of 10

changes to (575) 393-2326
corrected: 25.



CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

BILL TO

ANALYSIS REQUEST

Company Name:	Valon LPE	P.O. #:	
Project Manager:	S. Hitchcock	Company:	EOG
Address:	408 W. Texas	Attn:	Zan Kurtz
City:	Cortesia	State:	NM
Phone #:	575-446-8768	Fax #:	
Project #:	700438.199.01	Project Owner:	EOG
Project Name:	Pinechle and 5 th corner	City:	
Project Location:	0-22-35.18E	State:	Zip:
Sample Name:	S. Hitchcock	Phone #:	
		Fax #:	

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.					DATE	TIME										
		# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL												
H702366	5-2	6					9-6-14	11:15	TPH									
11	5-3	1					11:45		BTEX									
12	5-3	1					11:50		Chlorides									
13	5-3	1					11:55											
14	5-3	1					12:00											
15	5-3	1					12:05											
16	5-3	1					12:10											
17	5-3	1					12:15											
18	5-3	1					12:20											
19	5-3	1					12:25											
20	5-3	1																

PLEASE NOTE: Liability and Damages. Cardinal's liability and clients exclusive remedy for any claim arising under this contract or tort shall be limited to the amount paid by the client to the analyses. 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 service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation business interruption, 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: 9/16/14
Time: 3:35

Received By: [Signature]

Relinquished By:

Date: 9/16/14
Time: 3:35

Received By: [Signature]

Delivered By: (Circle One)	4:45	Sample Condition	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other: #75	4:20	Cool <input type="checkbox"/> Intact <input type="checkbox"/>	
		Yes <input type="checkbox"/> No <input type="checkbox"/>	

Phone Result: ☐ Yes ☐ No Add'l Phone #:

Fax Result: ☐ Yes ☐ No Add'l Fax #:

REMARKS:

Stop CI = 250 mg/kg

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326 corrected 9/15/14

1 of 33



CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

BILL TO

ANALYSIS REQUEST

Company Name: <u>Talon LPE</u>	P.O. #:
Project Manager: <u>S. Hitchcock</u>	Company: <u>EOG</u>
Address: <u>4108 W. Texas</u>	Attn: <u>Zene Kautz</u>
City: <u>Antesic</u>	State: <u>NM</u> Zip:
Phone #: <u>575-446-8268</u>	Fax #:
Project #: <u>700498.149.01</u>	Project Owner: <u>EOG</u>
Project Name: <u>Hinchelle Bldg 5r Conn</u>	City:
Project Location: <u>0-22-255.18E</u>	State: Zip:
Sampler Name: <u>S. Hitchcock</u>	Phone #:
	Fax #:

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

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

MATRIX

PRESERV

SAMPLING

DATE TIME

1102946	5-3	10'	6	1	X	X	4-6-17	1230	TPH										
20	5-3	17'	1	1	X	X	1	1235	BTEX										
21	5-3	14'	1	1	X	X	1	1240	Chlorides										
22	5-3	14'	1	1	X	X	1	1240											

PLEASE NOTE: Liability and Damages, Cardinal's liability and clients 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 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 rendered by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:

Date: 4/6/17 Received By:

Relinquished By: Shelly Neen

Date: 4/6/17 Received By: Shelly Neen

Time:

Delivered By: (Circle One)

Sampler - UPS - Bus - Other: #75

4.450
4.200

Sample Condition
Cool ☒ Intact ☒
Yes ☒ No ☒

CHECKED BY: [Signature]

Phone Result: ☐ Yes ☐ No ☐ Add'l Phone #:
Fax Result: ☐ Yes ☐ No ☐ Add'l Fax #:

REMARKS:

Stop CI - 250 mg/kg

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

Revised 7.250

October 09, 2017

DAVID ADKINS

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: PINOCHLE BNP ST COM 2 H

Enclosed are the results of analyses for samples received by the laboratory on 10/04/17 12:25.

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

Received:	10/04/2017	Sampling Date:	10/02/2017
Reported:	10/09/2017	Sampling Type:	Soil
Project Name:	PINOCHLE BNP ST COM 2 H	Sampling Condition:	Cool & Intact
Project Number:	700438.199.01	Sample Received By:	Tamara Oldaker
Project Location:	D-22-25S-28E		

Sample ID: HA -1 0' (H702690-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	10/05/2017	ND	416	104	400	3.77	

Sample ID: HA -1 1' (H702690-02)

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	10/05/2017	ND	416	104	400	3.77	

Sample ID: HA -1 2' (H702690-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	10/05/2017	ND	416	104	400	3.77	

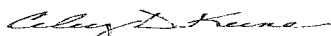
Sample ID: HA -1 3' (H702690-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1070	16.0	10/05/2017	ND	416	104	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 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 claim 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, Lab Director/Quality Manager

Analytical Results For:

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

Received:	10/04/2017	Sampling Date:	10/02/2017
Reported:	10/09/2017	Sampling Type:	Soil
Project Name:	PINOCHLE BNP ST COM 2 H	Sampling Condition:	Cool & Intact
Project Number:	700438.199.01	Sample Received By:	Tamara Oldaker
Project Location:	D-22-25S-28E		

Sample ID: HA -1 4' (H702690-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	800	16.0	10/05/2017	ND	416	104	400	3.77	

Sample ID: HA -2 0' (H702690-06)

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	10/05/2017	ND	416	104	400	3.77	

Sample ID: HA -2 1' (H702690-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/05/2017	ND	416	104	400	3.77	

Sample ID: HA -2 2' (H702690-08)

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	10/05/2017	ND	416	104	400	3.77	

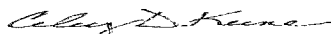
Sample ID: HA -2 3' (H702690-09)

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	10/05/2017	ND	416	104	400	3.77	

Cardinal Laboratories

* = Accredited Analyte

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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:	10/04/2017	Sampling Date:	10/02/2017
Reported:	10/09/2017	Sampling Type:	Soil
Project Name:	PINOCHLE BNP ST COM 2 H	Sampling Condition:	Cool & Intact
Project Number:	700438.199.01	Sample Received By:	Tamara Oldaker
Project Location:	D-22-25S-28E		

Sample ID: HA -2 4' (H702690-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	10/05/2017	ND	416	104	400	3.77	

Sample ID: HA -3 0' (H702690-11)

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	10/05/2017	ND	416	104	400	3.77	

Sample ID: HA -3 1' (H702690-12)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/05/2017	ND	416	104	400	3.77	

Sample ID: HA -3 2' (H702690-13)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/05/2017	ND	416	104	400	3.77	

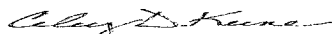
Sample ID: HA -3 3' (H702690-14)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/05/2017	ND	416	104	400	3.77	

Cardinal Laboratories

*=Accredited Analyte

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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:	10/04/2017	Sampling Date:	10/02/2017
Reported:	10/09/2017	Sampling Type:	Soil
Project Name:	PINOCHLE BNP ST COM 2 H	Sampling Condition:	Cool & Intact
Project Number:	700438.199.01	Sample Received By:	Tamara Oldaker
Project Location:	D-22-25S-28E		

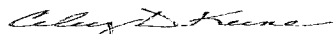
Sample ID: HA -3 4' (H702690-15)

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	10/05/2017	ND	416	104	400	3.77	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

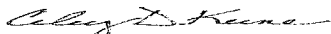
Notes and Definitions

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

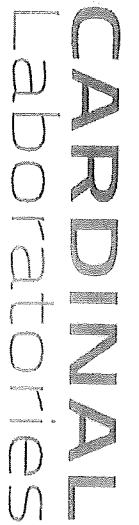
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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Talon/LPE		BILL TO		ANALYSIS REQUEST	
Project Manager: DAVD ADKINS		PO# Jane Kuntz			
Address: 408 W. Texas Ave.		Company: Talon/LPE			
City: Artesia		Attn: EOG			
Phone #: 575-746-8768		Address: 5509 Chapman			
Fax #: 575-746-8905		City: Midland			
Project #: 700438.199.01		State: TX Zip: 79706			
Project Name: Pavoile RND ST. CW 2 H		Phone #:			
Project Location: Eddy CO NM		Fax #:			
Sampler Name: D. ADKINS					
FOR LAB USE ONLY					
Lab I.D.	Sample I.D.	MATRIX		PRESERV.	SAMPLING
H70269D		(G)RAB OR (C)OMP.			
		# CONTAINERS			
		GROUNDWATER			
		WASTEWATER			
		SOIL			
		OIL			
		SLUDGE			
		OTHER :			
		ACID/BASE:			
		ICE / COOL			
		OTHER :			
		DATE		TIME	
1	HA-1	0'	5	1	1/26/17
2	HA-1	1'			
3	HA-1	2'			
4	HA-1	3'			
5	HA-1	4'			
6	HA-2	0'			
7	HA-2	1'			
8	HA-2	2'			
9	HA-2	3'			
10	HA-2	4'			
LAB 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 services. 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 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 rendered by Cardinal, regardless of whether such claim is based upon any of the above stated remedies or otherwise.					
Relinquished By: [Signature]		Date: 10-4-17		Received By: [Signature]	
Relinquished By:		Date:		Received By:	
Time:		Time:		Time:	
Delivered By: (Circle One) #75		Sample Condition		CHECKED BY: [Signature]	
Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Sampler - UPS - Bus - Other:		No <input type="checkbox"/> Yes <input type="checkbox"/>			
3350 B.102					
REMARKS:		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #: P-1012			
		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Fax #:			



CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Talon/LPE

Project Manager: DAVD ADKINS

Address: 408 W. Texas Ave.

City: Artesia State: NM zip: 88210

Phone #: 575-746-8768 Fax #: 575-746-8905

Project #: 700438.199.01 Project Owner: EOG

Project Name: Pinedale BNP St dom 2H

Project Location: Eddy Co NM

Sampler Name: P-ADKINS

FOR LAB USE ONLY

BILL TO

P.O. #: Zane Kurtz

Company: Talon/LPE

Attn: EOG

Address: 5509 Champion

City: Midland

State: TX zip: 79706

Phone #:

Fax #:

ANALYSIS REQUEST

Lab I.D. Sample I.D.

HTD269D

11

12

13

14

15

HA-3

HA-3

HA-3

HA-3

HA-3

0

1

2

3

4

G

E

E

E

E

#

1

1

1

1

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER:

ACID/BASE:

ICE / COOL

OTHER:

DATE

TIME

12/2/17

1

1

1

1

Chlorides

1

1

1

1

Relinquished By:

Signature

Date: 12-4-17

Time: 12:25

Received By:

Signature

Date:

Time:

Phone Result: ☐ Yes ☐ No Add'l Phone #:

Fax Result: ☐ Yes ☐ No Add'l Fax #:

REMARKS:

P. 2672

Delivered By: (Circle One) UPS 75

Sampler - UPS - Bus - Other:

3.350/3.10

3.350/3.10

Sample Condition

Cool Intact

Pres Yes

No

CHECKED BY:

Signature

Initials

Signature



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

October 09, 2017

DAVID ADKINS

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: PINOCHLE BNP ST COM 2 H

Enclosed are the results of analyses for samples received by the laboratory on 10/04/17 12:05.

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

Received:	10/04/2017	Sampling Date:	10/02/2017
Reported:	10/09/2017	Sampling Type:	Soil
Project Name:	PINOCHLE BNP ST COM 2 H	Sampling Condition:	Cool & Intact
Project Number:	700438.199.01	Sample Received By:	Tamara Oldaker
Project Location:	D-22-25S-28E		

Sample ID: S-4 0' (H702691-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	10/05/2017	ND	416	104	400	3.77		

Sample ID: S-5 0' (H702691-02)

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	10/05/2017	ND	416	104	400	3.77		

Sample ID: S-6 0' (H702691-03)

Chloride, SM4500Cl-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	10/05/2017	ND	416	104	400	3.77	

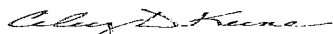
Sample ID: S-7 0' (H702691-04)

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	10/05/2017	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
DAVID ADKINS
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:	10/04/2017	Sampling Date:	10/02/2017
Reported:	10/09/2017	Sampling Type:	Soil
Project Name:	PINOCHLE BNP ST COM 2 H	Sampling Condition:	Cool & Intact
Project Number:	700438.199.01	Sample Received By:	Tamara Oldaker
Project Location:	D-22-25S-28E		

Sample ID: S-8 0' (H702691-05)

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	10/05/2017	ND	416	104	400	3.77	

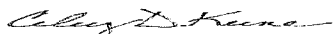
Sample ID: S-9 0' (H702691-06)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/05/2017	ND	416	104	400	3.77	

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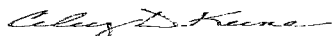
Notes and Definitions

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



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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Talon/PE
Project Manager: ADKID ADKWS

Address: 408 W. Texas Ave.
City: Atesia State: NM Zip: 88210

Phone #: 575-746-8768 Fax #: 575-746-8905

Project #: 700438.199.01 Project Owner: EOG

Project Name: Pinnacle BNP St Com 214

Project Location: Edley Co, NM

Sample Name: D-ADKWS

FOR LAB USE ONLY

Lab ID: H702691

Sample ID: S-4 0

2 S-5 0

3 S-6 0

5 S-7 0

6 S-8 0

7 S-9 0

BILL TO

Pa #: 806

Company: Talon/PE

Attn: Bare Kuntz

Address: 5509 Chaparral

City: Jalisco

State: TX Zip: 79706

Phone #:

Fax #:

ANALYSIS REQUEST

Chlorides

DATE TIME

10/2/17 08:10

08:20

08:30

08:40

08:50

09:00

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Relinquished By: ADKID

Date: 10/1/17

Time: 12:05

Received By: Jalisco

Date: 10/1/17

Time: 12:05

Phone Result: ☐ Yes ☐ No Add'l Phone #:

Fax Result: ☐ Yes ☐ No Add'l Fax #:

REMARKS:

Delivered By: (Circle One) 75

Sampler - UPS - Bus - Other: 3.350/3.10

Sample Condition

Cool / Intact

☒ Yes ☐ No

CHECKED BY:

(Initials)

ADKID