

June 21, 2018

Olivia Yu  
Oil Conservation Division, District 1  
1625 N. French Dr.  
Hobbs, NM 88240

Ryan Mann  
New Mexico State Land Office  
1001 S. Atkinson  
Roswell, NM 88230

**Re: Work Plan  
Wild Cobra 1 State SWD #001  
API #: 30-025-40933  
RP#: 1RP-4894  
Unit Letter I Section 12, Township 19S, Range 34E  
Lea County, NM**

**APPROVED**

**By CHernandez at 4:38 pm, Jul 19, 2018**

NMOCD approves of the delineation completed for 1RP-4894 and the proposed remediation plan with these clarifications:  
1) Bottom and sidewall confirmation samples no greater than 50 ft apart.  
2) Mark confirmation sample locations on a scaled map with GPS coordinates.  
3) Include photo documentation of delineation and remediation in subsequent report.

Ms. Yu/Mr. Mann,

COG Operating, LLC (COG) is pleased to submit for your consideration the following remediation work plan for the Wild Cobra 1 State SWD #001. This plan is in response to a produced water release that occurred on December 11, 2017. Subsequent to the release a C-141 initial report was submitted to the New Mexico Oil Conservation Division (NMOCD) and New Mexico State Land Office (NMSLO) on December 14, 2017.

## BACKGROUND

The Wild Cobra 1 State SWD #001 release is located in Unit Letter I, Section 12, Township 19 South, and Range 34 East in Lea County, New Mexico. More specifically the latitude and longitude for this release are 32.672014 North and -103.50558 West.

On December 11, 2017, a four (4) inch flowline was damaged resulting in the release of approximately thirty (30) barrels (bbls) of produced water. The fluid was released into the pasture and zero (0) bbls were recovered.

On April 24, 2018, a site assessment and soil sampling were conducted in order to define the impacted area. A site diagram is included in Appendix I. The analytical results from the soil sampling activities are summarized in the table below.

## GROUNDWATER AND SITE RANKING

According to the New Mexico Office of the State Engineer (NMOSE) groundwater in the project vicinity is approximately eighty (80) feet below ground surface (BGS) (Appendix II). No water well or surface water was observed within one-thousand (1,000) feet of the release site. Therefore the site ranking for this release is ten (10) based on the following:

Depth to groundwater	50-100-feet
Distance to surface water body	>1000-feet
Wellhead Protection Area	>1000-feet

## ANALYTICAL RESULTS

Sample ID	Date	Chloride mg/Kg	Benzene mg/Kg	BTEX mg/Kg	TPH mg/Kg
T-1 0'	4/24/2018	73,600	<0.050	<0.300	45.5
T-1 1'	4/24/2018	6,560	<0.050	<0.300	<10.0
T-1 2'	4/24/2018	4,800	-	-	-
T-1 3'	4/24/2018	2,520	-	-	-
T-1 4'	4/24/2018	256	-	-	-
T-1 4'	4/24/2018	211*	-	-	-
North 0'	4/24/2018	<10.0	<0.050	<0.300	<10.0
South 0'	4/24/2018	<10.0	<0.050	<0.300	<10.0
East 0'	4/24/2018	<10.0	<0.050	<0.300	<10.0
West 0'	4/24/2018	<10.0	<0.050	<0.300	<10.0

Chloride samples analyzed using method 4500-C1-B

(\*)Chloride results confirmed using method EPA300.0

(-)Analysis not requested

## **PROPOSED REMEDIAL ACTIONS**

- The impacted area will be excavated to a depth of 4-feet BGS.
- All of the excavated material will be hauled to an NMOCD approved solid waste disposal facility.
- Confirmation sidewall samples will be taken in all four cardinal directions to ensure that all of the impacted material was removed.
- Upon receipt of acceptable results from the proposed confirmation soil sampling event the excavation will be backfilled with clean “like” material and contoured to match the surrounding terrain.

## **REVEGETATION PLAN**

Upon completion of the remediation the excavation will be backfill with clean “like” material. The surface will be left in a rough condition to approximate natural surface deviations. The site will be mechanically seeded with the New Mexico State Land Office (NMSLO) Shallow (SH) seed mixture. The site will be periodically monitored for revegetation and the development of noxious weeds. Should the site fail to re-vegetate or noxious weeds develop COG will contact NMSLO for a mitigation strategy.

Should you have any questions or concerns please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Sheldon Hitchcock". The signature is written in a cursive style.

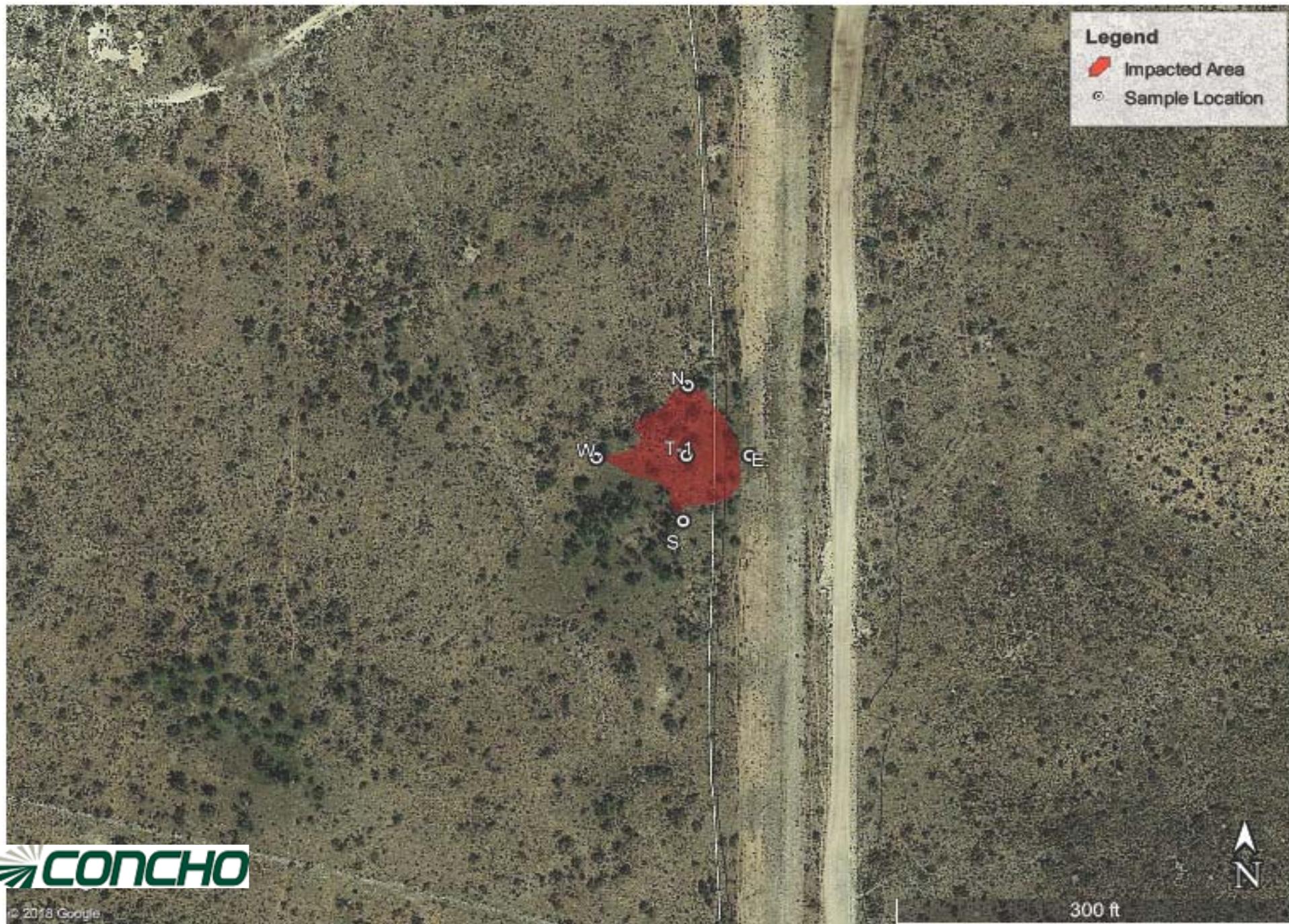
Sheldon L. Hitchcock  
HSE Coordinator  
[shitchcock@concho.com](mailto:shitchcock@concho.com)

Enclosed:

- Appendix I: Site Diagram
- Appendix II: Groundwater Data
- Appendix III: Initial C-141 (Copy)
- Appendix IV: Analytical Reports and Chain-of-Custody Forms

# APPENDIX I

# Wild Cobra 1 State SWD #001



# APPENDIX II



# 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
<a href="#">L 06731</a>	L	LE		3	2	2	12	19S	34E	639844	3616727*	712	120	80	40

Average Depth to Water: **80 feet**  
 Minimum Depth: **80 feet**  
 Maximum Depth: **80 feet**

**Record Count:** 1

**Basin/County Search:**

**County:** Lea

**UTMNAD83 Radius Search (in meters):**

**Easting (X):** 639956

**Northing (Y):** 3616023

**Radius:** 800

\*UTM location was derived from PLSS - see Help

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

# APPENDIX III

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 April 3, 2017

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

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

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company: COG Operating LLC	Contact: Robert McNeill
Address: 600 West Illinois Avenue, Midland TX 79701	Telephone No. 432-683-7443
Facility Name: Wild Cobra 1 State SWD #001	Facility Type: Tank Battery

Surface Owner: State	Mineral Owner: State	API No. 30-025-40933
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**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
I	12	19S	34E					Lea

Latitude 32.672014 Longitude -103.50558

**NATURE OF RELEASE**

Type of Release: Produced Water	Volume of Release: 30 bbls PW	Volume Recovered: 0 bbls PW
Source of Release: Flowline	Date and Hour of Occurrence: 12-11-2017 12:35 PM	Date and Hour of Discovery: 12-11-2017 12:35 PM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Ms. Yu NMOCD/Ms. Groves NMSLO	
By Whom? Sheldon Hitchcock	Date and Hour: 12-11-17 2:23 PM	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

**RECEIVED**  
By Olivia Yu at 9:55 am, Dec 18, 2017

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

The release was caused by a damaged flowline and impacted the pasture adjacent to the lease road at the above referenced location. The damaged portion of the flowline has been replaced.

Describe Area Affected and Cleanup Action Taken.\*

This release occurred in the pasture. Concho will have the spill area evaluated for any possible impact from the release and will present a remediation work plan to the NMOCD for approval prior to any significant remediation work.

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: 		<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Dakota Neel		Approved by Environmental Specialist: 	
Title: HSE Coordinator	Approval Date: 12/18/2017	Expiration Date:	
E-mail Address: dneel2@concho.com	Conditions of Approval: see attached directive	Attached <input checked="" type="checkbox"/>	
Date: December 14, 2017	Phone: 575-746-2010		

\* Attach Additional Sheets If Necessary

1RP-4894

nOY1735236012

pOY1735236392

# APPENDIX IV



May 03, 2018

SHELDON HITCHCOCK

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: WILD COBRA ST. SWD #001

Enclosed are the results of analyses for samples received by the laboratory on 04/25/18 12:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/lab_accred_certif.html).

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

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

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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:**COG OPERATING  
P. O. BOX 1630  
ARTESIA NM, 88210Project: WILD COBRA ST. SWD #001  
Project Number: NONE GIVEN  
Project Manager: SHELDON HITCHCOCK  
Fax To: NONEReported:  
03-May-18 14:59

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
T-1 0'	H801143-01	Soil	24-Apr-18 09:00	25-Apr-18 12:00
T-1 1'	H801143-02	Soil	24-Apr-18 09:05	25-Apr-18 12:00
T-1 2'	H801143-03	Soil	24-Apr-18 09:10	25-Apr-18 12:00
T-1 3'	H801143-04	Soil	24-Apr-18 09:15	25-Apr-18 12:00
T-1 4'	H801143-05	Soil	24-Apr-18 09:20	25-Apr-18 12:00

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 COG OPERATING  
 P. O. BOX 1630  
 ARTESIA NM, 88210

 Project: WILD COBRA ST. SWD #001  
 Project Number: NONE GIVEN  
 Project Manager: SHELDON HITCHCOCK  
 Fax To: NONE

 Reported:  
 03-May-18 14:59

**T-1 0'**  
**H801143-01 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Inorganic Compounds**

<b>Chloride</b>	<b>73600</b>		16.0	mg/kg	4	8042611	AC	28-Apr-18	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	8042707	MS	27-Apr-18	8021B	
Toluene*	<0.050		0.050	mg/kg	50	8042707	MS	27-Apr-18	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	8042707	MS	27-Apr-18	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	8042707	MS	27-Apr-18	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	8042707	MS	27-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			110 %	72-148		8042707	MS	27-Apr-18	8021B	

**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	8042606	MS	27-Apr-18	8015B	
DRO >C10-C28*	<b>45.5</b>		10.0	mg/kg	1	8042606	MS	27-Apr-18	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	8042606	MS	27-Apr-18	8015B	
Surrogate: 1-Chlorooctane			87.4 %	41-142		8042606	MS	27-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			80.2 %	37.6-147		8042606	MS	27-Apr-18	8015B	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 COG OPERATING  
 P. O. BOX 1630  
 ARTESIA NM, 88210

 Project: WILD COBRA ST. SWD #001  
 Project Number: NONE GIVEN  
 Project Manager: SHELDON HITCHCOCK  
 Fax To: NONE

 Reported:  
 03-May-18 14:59

**T-1 1'**  
**H801143-02 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Inorganic Compounds**

<b>Chloride</b>	<b>6560</b>		16.0	mg/kg	4	8043003	AC	01-May-18	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	8042707	MS	27-Apr-18	8021B	
Toluene*	<0.050		0.050	mg/kg	50	8042707	MS	27-Apr-18	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	8042707	MS	27-Apr-18	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	8042707	MS	27-Apr-18	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	8042707	MS	27-Apr-18	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			109 %		72-148	8042707	MS	27-Apr-18	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	8042701	MS	27-Apr-18	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	8042701	MS	27-Apr-18	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	8042701	MS	27-Apr-18	8015B	

<i>Surrogate: 1-Chlorooctane</i>			93.2 %		41-142	8042701	MS	27-Apr-18	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			74.5 %		37.6-147	8042701	MS	27-Apr-18	8015B	
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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 COG OPERATING  
 P. O. BOX 1630  
 ARTESIA NM, 88210

 Project: WILD COBRA ST. SWD #001  
 Project Number: NONE GIVEN  
 Project Manager: SHELDON HITCHCOCK  
 Fax To: NONE

 Reported:  
 03-May-18 14:59

**T-1 2'**
**H801143-03 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Inorganic Compounds**

<b>Chloride</b>	<b>4800</b>		16.0	mg/kg	4	8050102	AC	01-May-18	4500-Cl-B	
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\* = Accredited Analyte

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Caley D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 COG OPERATING  
 P. O. BOX 1630  
 ARTESIA NM, 88210

 Project: WILD COBRA ST. SWD #001  
 Project Number: NONE GIVEN  
 Project Manager: SHELDON HITCHCOCK  
 Fax To: NONE

 Reported:  
 03-May-18 14:59

**T-1 3'**  
**H801143-04 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Inorganic Compounds**

<b>Chloride</b>	<b>2520</b>		16.0	mg/kg	4	8050102	AC	01-May-18	4500-Cl-B	
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Cardinal Laboratories

\*=Accredited Analyte

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Caley D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 COG OPERATING  
 P. O. BOX 1630  
 ARTESIA NM, 88210

 Project: WILD COBRA ST. SWD #001  
 Project Number: NONE GIVEN  
 Project Manager: SHELDON HITCHCOCK  
 Fax To: NONE

 Reported:  
 03-May-18 14:59

**T-1 4'**
**H801143-05 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Inorganic Compounds**

Chloride	256		16.0	mg/kg	4	8050102	AC	01-May-18	4500-Cl-B	
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**Green Analytical Laboratories**
**Soluble (DI Water Extraction)**

Chloride	211		10.0	mg/kg wet	10	B805025	JDA	02-May-18	EPA300.0	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 COG OPERATING  
 P. O. BOX 1630  
 ARTESIA NM, 88210

 Project: WILD COBRA ST. SWD #001  
 Project Number: NONE GIVEN  
 Project Manager: SHELDON HITCHCOCK  
 Fax To: NONE

 Reported:  
 03-May-18 14:59

**Inorganic Compounds - Quality Control**
**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 8042611 - 1:4 DI Water**
**Blank (8042611-BLK1)**

Prepared &amp; Analyzed: 26-Apr-18

Chloride ND 16.0 mg/kg

**LCS (8042611-BS1)**

Prepared &amp; Analyzed: 26-Apr-18

Chloride 448 16.0 mg/kg 400 112 80-120

**LCS Dup (8042611-BSD1)**

Prepared &amp; Analyzed: 26-Apr-18

Chloride 432 16.0 mg/kg 400 108 80-120 3.64 20

**Batch 8043003 - 1:4 DI Water**
**Blank (8043003-BLK1)**

Prepared &amp; Analyzed: 30-Apr-18

Chloride ND 16.0 mg/kg

**LCS (8043003-BS1)**

Prepared &amp; Analyzed: 30-Apr-18

Chloride 432 16.0 mg/kg 400 108 80-120

**LCS Dup (8043003-BSD1)**

Prepared &amp; Analyzed: 30-Apr-18

Chloride 432 16.0 mg/kg 400 108 80-120 0.00 20

**Batch 8050102 - 1:4 DI Water**
**Blank (8050102-BLK1)**

Prepared &amp; Analyzed: 01-May-18

Chloride ND 16.0 mg/kg

**LCS (8050102-BS1)**

Prepared &amp; Analyzed: 01-May-18

Chloride 416 16.0 mg/kg 400 104 80-120

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 COG OPERATING  
 P. O. BOX 1630  
 ARTESIA NM, 88210

 Project: WILD COBRA ST. SWD #001  
 Project Number: NONE GIVEN  
 Project Manager: SHELDON HITCHCOCK  
 Fax To: NONE

 Reported:  
 03-May-18 14:59

**Inorganic Compounds - Quality Control**
**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 8050102 - 1:4 DI Water**
**LCS Dup (8050102-BSD1)**

Prepared &amp; Analyzed: 01-May-18

Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 COG OPERATING  
 P. O. BOX 1630  
 ARTESIA NM, 88210

 Project: WILD COBRA ST. SWD #001  
 Project Number: NONE GIVEN  
 Project Manager: SHELDON HITCHCOCK  
 Fax To: NONE

 Reported:  
 03-May-18 14:59

**Volatile Organic Compounds by EPA Method 8021 - Quality Control**
**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 8042707 - Volatiles**
**Blank (8042707-BLK1)**

Prepared &amp; Analyzed: 27-Apr-18

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	<i>0.114</i>		<i>mg/kg</i>	<i>0.100</i>		<i>114</i>	<i>72-148</i>			

**LCS (8042707-BS1)**

Prepared &amp; Analyzed: 27-Apr-18

Benzene	1.86	0.050	mg/kg	2.00		93.2	79.5-124			
Toluene	1.93	0.050	mg/kg	2.00		96.7	75.5-127			
Ethylbenzene	1.95	0.050	mg/kg	2.00		97.5	77.7-125			
Total Xylenes	5.77	0.150	mg/kg	6.00		96.2	70.9-124			
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	<i>0.112</i>		<i>mg/kg</i>	<i>0.100</i>		<i>112</i>	<i>72-148</i>			

**LCS Dup (8042707-BSD1)**

Prepared &amp; Analyzed: 27-Apr-18

Benzene	1.80	0.050	mg/kg	2.00		90.0	79.5-124	3.46	6.5	
Toluene	1.86	0.050	mg/kg	2.00		93.0	75.5-127	3.82	7.02	
Ethylbenzene	1.85	0.050	mg/kg	2.00		92.3	77.7-125	5.41	7.83	
Total Xylenes	5.49	0.150	mg/kg	6.00		91.6	70.9-124	4.90	7.78	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	<i>0.112</i>		<i>mg/kg</i>	<i>0.100</i>		<i>112</i>	<i>72-148</i>			

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 COG OPERATING  
 P. O. BOX 1630  
 ARTESIA NM, 88210

 Project: WILD COBRA ST. SWD #001  
 Project Number: NONE GIVEN  
 Project Manager: SHELDON HITCHCOCK  
 Fax To: NONE

 Reported:  
 03-May-18 14:59

**Petroleum Hydrocarbons by GC FID - Quality Control**
**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 8042606 - General Prep - Organics**
**Blank (8042606-BLK1)**

Prepared &amp; Analyzed: 26-Apr-18

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	56.6		mg/kg	50.0		113	41-142			
Surrogate: 1-Chlorooctadecane	46.7		mg/kg	50.0		93.3	37.6-147			

**LCS (8042606-BS1)**

Prepared &amp; Analyzed: 26-Apr-18

GRO C6-C10	202	10.0	mg/kg	200		101	76.5-133			
DRO >C10-C28	199	10.0	mg/kg	200		99.7	72.9-138			
Total TPH C6-C28	402	10.0	mg/kg	400		100	78-132			
Surrogate: 1-Chlorooctane	49.6		mg/kg	50.0		99.2	41-142			
Surrogate: 1-Chlorooctadecane	44.8		mg/kg	50.0		89.6	37.6-147			

**LCS Dup (8042606-BSD1)**

Prepared &amp; Analyzed: 26-Apr-18

GRO C6-C10	204	10.0	mg/kg	200		102	76.5-133	0.819	20.6	
DRO >C10-C28	199	10.0	mg/kg	200		99.3	72.9-138	0.456	20.6	
Total TPH C6-C28	403	10.0	mg/kg	400		101	78-132	0.188	18	
Surrogate: 1-Chlorooctane	48.4		mg/kg	50.0		96.8	41-142			
Surrogate: 1-Chlorooctadecane	42.3		mg/kg	50.0		84.6	37.6-147			

**Batch 8042701 - General Prep - Organics**
**Blank (8042701-BLK1)**

Prepared &amp; Analyzed: 27-Apr-18

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	48.4		mg/kg	50.0		96.8	41-142			
Surrogate: 1-Chlorooctadecane	40.8		mg/kg	50.0		81.5	37.6-147			

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 COG OPERATING  
 P. O. BOX 1630  
 ARTESIA NM, 88210

 Project: WILD COBRA ST. SWD #001  
 Project Number: NONE GIVEN  
 Project Manager: SHELDON HITCHCOCK  
 Fax To: NONE

 Reported:  
 03-May-18 14:59

**Petroleum Hydrocarbons by GC FID - Quality Control**
**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 8042701 - General Prep - Organics**
**LCS (8042701-BS1)**

Prepared &amp; Analyzed: 27-Apr-18

GRO C6-C10	208	10.0	mg/kg	200	104	76.5-133				
DRO >C10-C28	204	10.0	mg/kg	200	102	72.9-138				
Total TPH C6-C28	412	10.0	mg/kg	400	103	78-132				
<i>Surrogate: 1-Chlorooctane</i>	<i>49.0</i>		mg/kg	<i>50.0</i>	<i>98.1</i>	<i>41-142</i>				
<i>Surrogate: 1-Chlorooctadecane</i>	<i>45.6</i>		mg/kg	<i>50.0</i>	<i>91.3</i>	<i>37.6-147</i>				

**LCS Dup (8042701-BSD1)**

Prepared &amp; Analyzed: 27-Apr-18

GRO C6-C10	209	10.0	mg/kg	200	104	76.5-133	0.405	20.6		
DRO >C10-C28	204	10.0	mg/kg	200	102	72.9-138	0.173	20.6		
Total TPH C6-C28	413	10.0	mg/kg	400	103	78-132	0.290	18		
<i>Surrogate: 1-Chlorooctane</i>	<i>49.1</i>		mg/kg	<i>50.0</i>	<i>98.2</i>	<i>41-142</i>				
<i>Surrogate: 1-Chlorooctadecane</i>	<i>45.6</i>		mg/kg	<i>50.0</i>	<i>91.1</i>	<i>37.6-147</i>				

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 COG OPERATING  
 P. O. BOX 1630  
 ARTESIA NM, 88210

 Project: WILD COBRA ST. SWD #001  
 Project Number: NONE GIVEN  
 Project Manager: SHELDON HITCHCOCK  
 Fax To: NONE

 Reported:  
 03-May-18 14:59

**Soluble (DI Water Extraction) - Quality Control**
**Green Analytical Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B805025 - General Prep - Wet Chem**
**Blank (B805025-BLK1)**

Prepared &amp; Analyzed: 02-May-18

Chloride	ND	10.0	mg/kg wet							
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**LCS (B805025-BS1)**

Prepared &amp; Analyzed: 02-May-18

Chloride	233	10.0	mg/kg wet	250		93.0	85-115			
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**LCS Dup (B805025-BSD1)**

Prepared &amp; Analyzed: 02-May-18

Chloride	233	10.0	mg/kg wet	250		93.3	85-115	0.335	20	
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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 Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

**BILL TO**

**ANALYSIS REQUEST**

**Company Name:** Concho Resources  
**Project Manager:** Sheldon Hitchcock  
**Address:** 2407 Pecos Avenue  
**City:** Artesia **State:** NM **Zip:** 88210  
**Phone #:** 575-703-6475 **Fax #:**  
**Project #:**  
**Project Name:** Wild Cobble St. SWD #002  
**Project Location:** Lea Co. NM  
**Sampler Name:** S. Hitchcock  
**FOR LAB USE ONLY**

**P.O. #:**  
**Company:** COG  
**Attn:** Robert McNeill  
**Address:**  
**City:**  
**State:** **Zip:**  
**Phone #:**  
**Fax #:**

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.			DATE	TIME	ANALYSIS
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :			
HS01142	T-0'	G	1	/	/	/	/	/	/	/	/	4/24/18	9:00	TPH Extended 8015M	
	T-1'	G	1	/	/	/	/	/	/	/	/		9:05	BTEX 8021b	
	T-2'	G	1	/	/	/	/	/	/	/	/		9:10	Chlorides (see Remarks)	
	T-3'	G	1	/	/	/	/	/	/	/	/		9:15	Chlorides CEPA 300 added	
	T-4'	G	1	/	/	/	/	/	/	/	/		9:20	5/1/18	

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**Reinquished By:** Sheldon Peris  
**Date:** 4/25/18  
**Time:** 12:00  
**Received By:** Brittany Fell  
**Date:**  
**Time:**

**Delivered By: (Circle One)**  
 Sample Condition:  Cool  Intact  
 Yes  No  
**Checked By:** [Signature]  
**Delivered By:** UPS - Bus - Other: 4:70 / 4:65c  
**Sample Condition:**  Cool  Intact  
 Yes  No

REMARKS: Stop CI if S 600 w/1b run EPA 300 on final sample

**From:** [Hernandez, Christina, EMNRD](#)  
**To:** ["Sheldon Hitchcock"](#); [Yu, Olivia, EMNRD](#); [Mann, Ryan](#)  
**Cc:** [Robert McNeill](#); [Rebecca Haskell](#); [Dakota Neel](#); [DeAnn Grant](#)  
**Subject:** RE: (Work Plan) Wild Cobra 1 State SWD #001 (30-025-40933) 12-11-2017 (1RP-4894)  
**Date:** Thursday, July 19, 2018 4:51:00 PM  
**Attachments:** [\(Work Plan\) Wild Cobra 1 State SWD #001 \(30-025-40933\) 12-11-2017 \(1RP-4894\) final.pdf](#)

---

Dear Mr. Hitchcock:

NMOCD approves of the delineation completed for 1RP-4894 and the proposed remediation with these clarifications:

1. Sidewall AND bottom confirmation samples taken in the impacted pasture area and must be no greater than 75 ft apart.
2. On an appropriately scaled map, demarcate confirmation sample locations with GPS coordinates.
3. Include dated photo documentation of delineation and remediation in the subsequent report.

Like approval from NMSLO required.

Thanks,

Christina Hernandez  
EMNRD-OCD  
Environmental Specialist  
1625 N. French Drive  
Hobbs, NM 88240  
575-393-6161 x111  
[Christina.Hernandez@state.nm.us](mailto:Christina.Hernandez@state.nm.us)

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

---

**From:** Sheldon Hitchcock <SLHitchcock@concho.com>  
**Sent:** Thursday, June 21, 2018 12:56 PM  
**To:** Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>; Hernandez, Christina, EMNRD <Christina.Hernandez@state.nm.us>; Mann, Ryan <rmann@slo.state.nm.us>  
**Cc:** Robert McNeill <RMcNeill@concho.com>; Rebecca Haskell <RHaskell@concho.com>; Dakota Neel <DNeel2@concho.com>; DeAnn Grant <agrants@concho.com>  
**Subject:** (Work Plan) Wild Cobra 1 State SWD #001 (30-025-40933) 12-11-2017 (1RP-4894)

Ms. Yu/Mr. Mann,

Please find the attached work plan for the Wild Cobra 1 State SWD #001 release that occurred on December 11, 2017. If you have any questions or concerns please do not hesitate to contact me.

Thank you,

Sheldon L. Hitchcock  
HSE Coordinator  
COG Operating LLC  
2407 Pecos Avenue | Artesia, NM 88210  
Cell: 575-703-6475 | Office: 575-746-2010  
[slhitchcock@concho.com](mailto:slhitchcock@concho.com)



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