



## DELINEATION WORKPLAN

### COG – GERONIMO FEDERAL #001 (Leak Date: 7/19/16)

RP # 1RP-4369  
API # 30-025-30645

**APPROVED**

By Olivia Yu at 10:08 am, Jun 13, 2017

NMOCD approves of the delineation workplan and proposed remediation for 1RP-4369.

This delineation workplan and remediation proposal addresses the release associated with RP # 1RP-4396.

The following information includes:

1. Scaled digital site map with spill area demarcated and leak point identified along with sample point locations and areas of remediation at appropriate depths.
2. GPS information for sample points and sample methodology
3. Depth to groundwater information (i.e., pdf of OSE search results and/or copy of Chevron groundwater trend map).
4. Laboratory analysis results summary table and original laboratory analysis reports
5. A copy of the initial C-141
6. Potentially other pertinent information as necessary for site specific purposes.

***Based on the information included in this package and the NMOCD guidelines, the following remediation is proposed:***

***COG will excavate the spill area as depicted on the following site diagram. The entire leak area will be excavated to a depth of 2 feet then install a liner and backfill. Since this is a working facility, this is all that can be removed due to safety concerns around the production equipment.***

***If this plan is not acceptable, then COG respectfully requests a deferment until this facility is closed.***

The entire site will then be backfilled with clean soil and revegetated (if warranted) to the standards of the appropriate regulatory agency or private surface owner.

All excavated materials will be disposed of at an NMOCD-approved disposal facility.



# COG, Geronimo Federal #001

Leak Date: 07/19/2016  
Lea County, NM  
AP# 30-025-30645  
1RP-4396

## Legend

- East Sample
- Sample Points, drilled
- Leak Point
- North Sample
- Sample Points, Hand Auger
- South Sample
- Spill Area
- West Sample





COG, Geronimo Federal #001

Sample Points, Hand Auger

SP1, N 32.62201 W-103.70852

SP2, N 32.62189 W-103.70853

SP3, N 32.62199 W-103.70862

North Sample, N 32.62208 W-103.70855

South Sample, N 32.62182 W-103.70859

East Sample, N 32.62194 W-103.70848

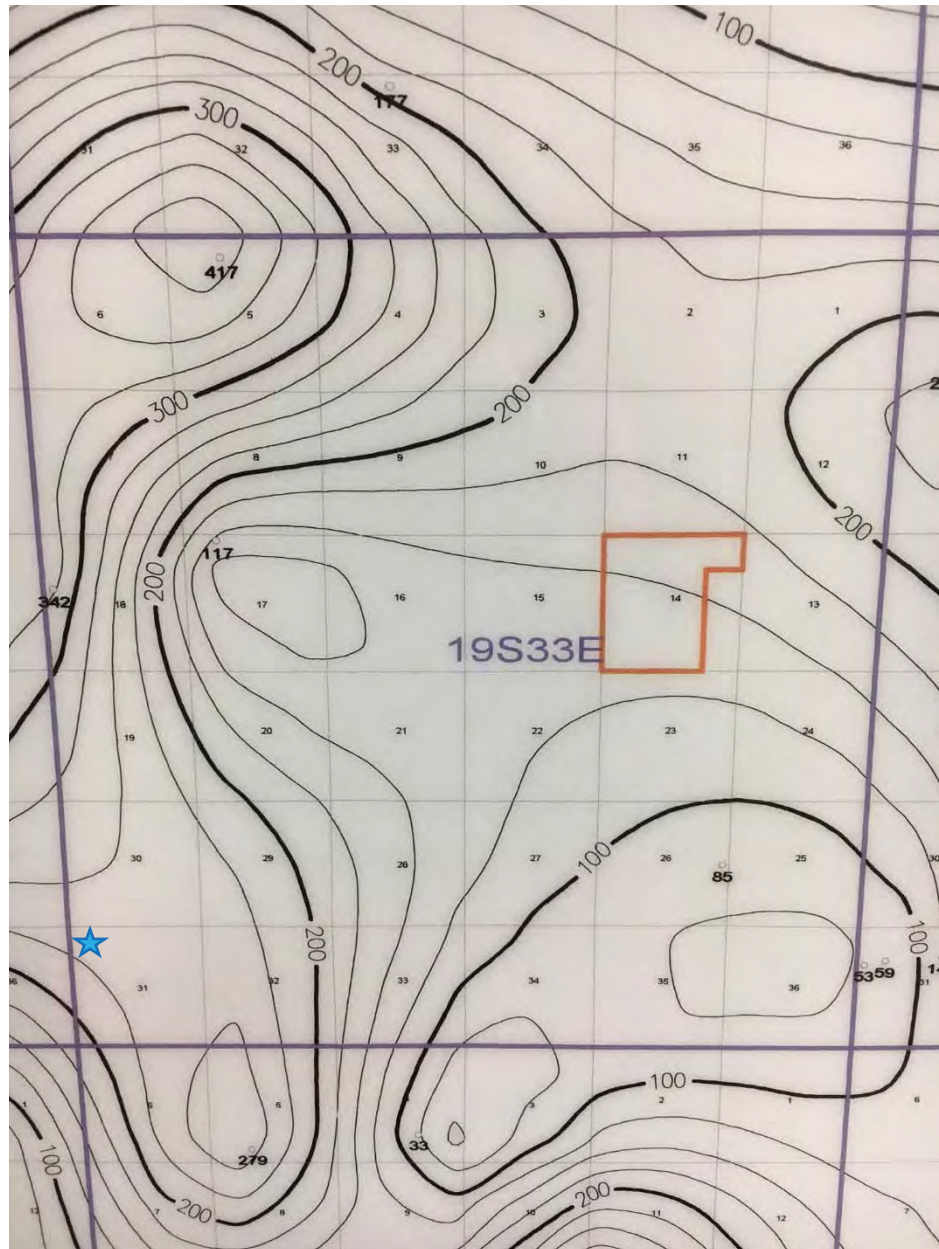
West Sample, N 32.62194 W-103.70867

Sample Points, Drilled

SB1, N 32.62200 W-103.70852

SB2, N 32.62189 W-103.70852

**COG, Geronimo Federal #001**  
**U/L D, Section 31, T19S, R33E**  
**Groundwater: 250'**





# *New Mexico Office of the State Engineer*

## Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

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

**Easting (X):** 621115

**Northing (Y):** 3610138

**Radius:** 1700

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.

4/21/17 3:13 PM

WATER COLUMN/ AVERAGE  
DEPTH TO WATER

Public Land Survey System (PLSS)

Q64:

Q16:

NW

Q4:

NW

Sec:

31

Tws:

19S

Rng:

33E

State Plane Coordinate System - NAD27

X:

0

ft

Y:

0

ft

Zone:

State Plane Coordinate System - NAD83

X:

0

ft

Y:

0

ft

Zone:

Degrees/Minutes/Seconds

Longitude (X):

Degrees:

0

°

Minutes:

0

'

Seconds:

0

"

Latitude (Y):

Degrees:

0

°

Minutes:

0

'

Seconds:

0

"

UTM - NAD27

Easting (X):

0

mtrs

Northing (Y):

0

mtrs

Zone:

SUBMIT

All Conversion Results are displayed as NAD 1983 UTM Zone 13

Easting (X):

621115.0

mtrs

Northing (Y):

3610138.0

mtrs

~~ Please keep screen open to copy UTM values for Reports. ~~

Laboratory Analytical Results Summary  
Geronimo Federal #001

Analyte	Method	Sample Date	T1 @ Surface 9/16/16 mg/Kg	T-1 (1') 9/16/16 mg/Kg	T-1 (2') 9/16/16 mg/Kg	T-1 (3') 9/16/16 mg/Kg	T-1 (4') 9/16/16 mg/Kg	T-1 (5') 9/16/16 mg/Kg	T-1 (6') 9/16/16 mg/Kg	T-1 (7') 9/16/16 mg/Kg	T-1 (8') 9/16/16 mg/Kg	T-1 (9') 9/16/16 mg/Kg	T-1 (10') 9/16/16 mg/Kg
Benzene	BTEX 8021B		mg/Kg <0.050	mg/Kg <0.050	mg/Kg <0.050	mg/Kg NA	mg/Kg NA	mg/Kg NA	mg/Kg NA	mg/Kg NA	mg/Kg NA	mg/Kg NA	mg/Kg NA
Toluene	BTEX 8021B		0.09	<0.050	<0.050	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	BTEX 8021B		0.063	<0.050	<0.050	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	NA	NA	NA	NA	NA	NA	NA	NA
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	SM4500Cl-B		3080	2920	2160	4880	3680	2640	3120	5920	5440	6260	6660
GRO	TPH 8015M		<10.0	<10.0	<10.0	NA	NA	NA	NA	NA	NA	NA	NA
DRO	TPH 8015M		119	11	30.5	NA	NA	NA	NA	NA	NA	NA	NA

Laboratory Analytical Results Summary  
Geronimo Federal #001

		Sample	SP1 @ 1'	SP1 @ 3'	SP1 @ 5'	SP1 @ 7'	SP1 @ 9'	SP1 @ 12'
Analyte	Method	Date	1/16/17	1/16/17	1/16/17	1/16/17	1/16/17	1/16/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	SM4500Cl-B		4480	3080	4720	4400	7600	4480

		Sample	SP2 @ 1'	SP2 @ 3'	SP2 @ 5'	SP2 @ 7'	SP2 @ 9'	SP2 @ 12'
Analyte	Method	Date	1/16/17	1/16/17	1/16/17	1/16/17	1/16/17	1/16/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	SM4500Cl-B		7300	4400	3840	4800	6500	6160

		Sample	SP3 @ 1'	SP3 @ 3'	SP3 @ 5'
Analyte	Method	Date	1/16/17	1/16/17	1/16/17
			mg/Kg	mg/Kg	mg/Kg
Chloride	SM4500Cl-B		4960	4400	32



Laboratory Analytical Results Summary  
Geronimo Federal #001

		Sample	SB1 @ 15'	SB1 @ 21'	SB1 @ 25'	SB1 @ 29'	SB1 @ 35'	SB1 @ 43'	SB1 @ 45'	SB1 @ 47'	SB1 @ 49'	SB1 @ 51'	SB1 @ 53'	SB1 @ 58'
Analyte	Method	Date	4/6/17	4/6/17	4/6/17	4/6/17	4/6/17	4/6/17	4/6/17	4/6/17	4/6/17	4/6/17	4/6/17	4/6/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	SM4500Cl-B		5060	3280	2800	1880	2880	3080	704	720	736	1310	272	288

		Sample	SB2 @ 15'	SB2 @ 19'	SB2 @ 24'	SB2 @ 32'	SB2 @ 35'	SB2 @ 43'	SB2 @ 48'	SB2 @ 51'	SB2 @ 53'	SB2 @ 58'
Analyte	Method	Date	4/6/17	4/6/17	4/6/17	4/6/17	4/6/17	4/6/17	4/6/17	4/6/17	4/6/17	4/6/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	SM4500Cl-B		5730	3520	6130	3520	2720	2000	1570	784	256	272

		Sample	NORTH SAMPLE
Analyte	Method	Date	4/6/17
			mg/Kg
Chloride	SM4500Cl-B		288

		Sample	EAST SAMPLE
Analyte	Method	Date	4/6/17
			mg/Kg
Chloride	SM4500Cl-B		272

		Sample	SOUTH SAMPLE
Analyte	Method	Date	4/6/17
			mg/Kg
Chloride	SM4500Cl-B		288

		Sample	WEST SAMPLE
Analyte	Method	Date	4/6/17
			mg/Kg
Chloride	SM4500Cl-B		272

September 22, 2016

DAKOTA NEEL

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: GERONIMO FEDERAL #001

Enclosed are the results of analyses for samples received by the laboratory on 09/16/16 15:45.

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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

COG OPERATING  
DAKOTA NEEL  
P. O. BOX 1630  
ARTESIA NM, 88210  
Fax To: NONE

Received: 09/16/2016  
Reported: 09/22/2016  
Project Name: GERONIMO FEDERAL #001  
Project Number: NONE GIVEN  
Project Location: LEA COUNTY, NM

Sampling Date: 09/16/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: T-1 SURFACE (H602081-01)**

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	09/21/2016	ND	2.14	107	2.00	2.58	
<b>Toluene*</b>	<b>0.090</b>	0.050	09/21/2016	ND	2.19	109	2.00	1.65	
<b>Ethylbenzene*</b>	<b>0.063</b>	0.050	09/21/2016	ND	2.10	105	2.00	1.16	
Total Xylenes*	<0.150	0.150	09/21/2016	ND	6.29	105	6.00	1.14	
Total BTEX	<0.300	0.300	09/21/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 98.5 % 73.6-140

Chloride, SM4500CI-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>3080</b>	16.0	09/22/2016	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	09/19/2016	ND	186	93.2	200	5.01	
<b>DRO &gt;C10-C28</b>	<b>119</b>	10.0	09/19/2016	ND	204	102	200	4.06	

Surrogate: 1-Chlorooctane 79.8 % 35-147

Surrogate: 1-Chlorooctadecane 99.4 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

COG OPERATING  
DAKOTA NEEL  
P. O. BOX 1630  
ARTESIA NM, 88210  
Fax To: NONE

Received:	09/16/2016	Sampling Date:	09/16/2016
Reported:	09/22/2016	Sampling Type:	Soil
Project Name:	GERONIMO FEDERAL #001	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: T-1 (1') (H602081-02)**

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	09/21/2016	ND	2.14	107	2.00	2.58		
Toluene*	<0.050	0.050	09/21/2016	ND	2.19	109	2.00	1.65		
Ethylbenzene*	<0.050	0.050	09/21/2016	ND	2.10	105	2.00	1.16		
Total Xylenes*	<0.150	0.150	09/21/2016	ND	6.29	105	6.00	1.14		
Total BTEX	<0.300	0.300	09/21/2016	ND						

Surrogate: 4-Bromofluorobenzene (PIL) 101 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2920	16.0	09/22/2016	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	09/20/2016	ND	186	93.2	200	5.01	
DRO >C10-C28	11.0	10.0	09/20/2016	ND	204	102	200	4.06	

Surrogate: 1-Chlorooctane 85.8 % 35-147

Surrogate: 1-Chlorooctadecane 102 % 28-171

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

COG OPERATING  
DAKOTA NEEL  
P. O. BOX 1630  
ARTESIA NM, 88210  
Fax To: NONE

Received: 09/16/2016  
Reported: 09/22/2016  
Project Name: GERONIMO FEDERAL #001  
Project Number: NONE GIVEN  
Project Location: LEA COUNTY, NM

Sampling Date: 09/16/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: T-1 (2') (H602081-03)**

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	09/21/2016	ND	2.14	107	2.00	2.58	
Toluene*	<0.050	0.050	09/21/2016	ND	2.19	109	2.00	1.65	
Ethylbenzene*	<0.050	0.050	09/21/2016	ND	2.10	105	2.00	1.16	
Total Xylenes*	<0.150	0.150	09/21/2016	ND	6.29	105	6.00	1.14	
Total BTEX	<0.300	0.300	09/21/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 98.7 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2160	16.0	09/22/2016	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	09/20/2016	ND	186	93.2	200	5.01	
DRO >C10-C28	30.5	10.0	09/20/2016	ND	204	102	200	4.06	

Surrogate: 1-Chlorooctane 83.7 % 35-147

Surrogate: 1-Chlorooctadecane 98.9 % 28-171

**Sample ID: T-1 (3') (H602081-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4880	16.0	09/22/2016	ND	432	108	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

COG OPERATING  
DAKOTA NEEL  
P. O. BOX 1630  
ARTESIA NM, 88210  
Fax To: NONE

Received:	09/16/2016	Sampling Date:	09/16/2016
Reported:	09/22/2016	Sampling Type:	Soil
Project Name:	GERONIMO FEDERAL #001	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: T-1 (4') (H602081-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3680	16.0	09/22/2016	ND	432	108	400	0.00		

**Sample ID: T-1 (5') (H602081-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2640	16.0	09/22/2016	ND	432	108	400	0.00	

**Sample ID: T-1 (6') (H602081-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3120	16.0	09/22/2016	ND	432	108	400	0.00	

**Sample ID: T-1 (7') (H602081-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5920	16.0	09/22/2016	ND	432	108	400	0.00	

**Sample ID: T-1 (8') (H602081-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5440	16.0	09/22/2016	ND	432	108	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

COG OPERATING  
DAKOTA NEEL  
P. O. BOX 1630  
ARTESIA NM, 88210  
Fax To: NONE

Received: 09/16/2016  
Reported: 09/22/2016  
Project Name: GERONIMO FEDERAL #001  
Project Number: NONE GIVEN  
Project Location: LEA COUNTY, NM

Sampling Date: 09/16/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: T-1 (9') (H602081-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6260	16.0	09/22/2016	ND	432	108	400	0.00	

**Sample ID: T-1 (10') (H602081-11)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6660	16.0	09/22/2016	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

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\* = Accredited Analyte

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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

P3 1062

Company Name: COG Operating LLC		P.O. #:		BILL TO										ANALYSIS REQUEST																															
Project Manager: Dakota Neel		Company: COG Operating LLC																																											
Address: 2208 West Main		Attn: Robert McNeill																																											
City: Artesia		Address: 600 W Illinois																																											
State: NM		City: Midland																																											
Zip: 88210		State: TX																																											
Phone #: 432-215-2783		Zip: 79701																																											
Fax #: 432-221-0388		Phone #: (432) 221-0388																																											
Project #:		Fax #:																																											
Project Name: Grenadine Federal #001		Project Owner:																																											
Project Location: Lea 10 W		Sample Name: River Pacific																																											
FOR LAB USE ONLY		Matrix		PRESERV.		SAMPLING																																							
Lab I.D. HWD2081		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME		BTX		TPH		Chloride											
1 T-1 Surface				X		X		X		X		X		X		X		X		X		X		X		X		X		X		X													
2 T-1 (1')				X		X		X		X		X		X		X		X		X		X		X		X		X		X		X													
3 T-1 (2')				X		X		X		X		X		X		X		X		X		X		X		X		X		X		X													
4 T-1 (3')				X		X		X		X		X		X		X		X		X		X		X		X		X		X		X													
5 T-1 (4')				X		X		X		X		X		X		X		X		X		X		X		X		X		X		X													
6 T-1 (5')				X		X		X		X		X		X		X		X		X		X		X		X		X		X		X													
7 T-1 (6')				X		X		X		X		X		X		X		X		X		X		X		X		X		X		X													
8 T-1 (7')				X		X		X		X		X		X		X		X		X		X		X		X		X		X		X													
9 T-1 (8')				X		X		X		X		X		X		X		X		X		X		X		X		X		X		X													
10 T-1 (9')				X		X		X		X		X		X		X		X		X		X		X		X		X		X		X													
PLEASE NOTE: Liability and Damage: 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 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 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: [Signature]		Date: 9/10/16		Received By: [Signature]		Date: 9/10/16		Time: 9:45		Sample Condition: Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>		CHECKED BY: [Signature]		REMARKS:		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #:		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Fax #:		Send Results to: dneel2@concho.com																							
Delivered By: (Circle One)		Sampler - UPS - Bus - Other:		5.22		#75																																							





### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 9 of 9

January 27, 2017

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: GERONIMO FEDERAL #001

Enclosed are the results of analyses for samples received by the laboratory on 01/23/17 11:52.

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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

BBC International, Inc.  
Cliff Brunson  
P.O. Box 805  
Hobbs NM, 88241  
Fax To: (575) 397-0397

Received: 01/23/2017  
Reported: 01/27/2017  
Project Name: GERONIMO FEDERAL #001  
Project Number: NONE GIVEN  
Project Location: COG - LEA COUNTY, NM

Sampling Date: 01/16/2017  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SP 1 @ 1' (H700146-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4480	16.0	01/24/2017	ND	432	108	400	3.64	

**Sample ID: SP 1 @ 3' (H700146-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3080	16.0	01/24/2017	ND	432	108	400	3.64	

**Sample ID: SP 1 @ 5' (H700146-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4720	16.0	01/24/2017	ND	432	108	400	3.64	

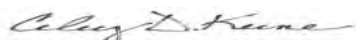
**Sample ID: SP 1 @ 7' (H700146-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4400	16.0	01/24/2017	ND	432	108	400	3.64	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

BBC International, Inc.  
Cliff Brunson  
P.O. Box 805  
Hobbs NM, 88241  
Fax To: (575) 397-0397

Received:	01/23/2017	Sampling Date:	01/16/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	GERONIMO FEDERAL #001	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG - LEA COUNTY, NM		

**Sample ID: SP 1 @ 9' (H700146-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7600	16.0	01/24/2017	ND	432	108	400	3.64		

**Sample ID: SP 1 @ 12' (H700146-06)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4480	16.0	01/25/2017	ND	416	104	400	3.77	QM-07

**Sample ID: SP 2 @ 1' (H700146-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7300	16.0	01/25/2017	ND	416	104	400	3.77	

**Sample ID: SP 2 @ 3' (H700146-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4400	16.0	01/25/2017	ND	416	104	400	3.77		

**Sample ID: SP 2 @ 5' (H700146-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3840	16.0	01/25/2017	ND	416	104	400	3.77	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

BBC International, Inc.  
Cliff Brunson  
P.O. Box 805  
Hobbs NM, 88241  
Fax To: (575) 397-0397

Received:	01/23/2017	Sampling Date:	01/16/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	GERONIMO FEDERAL #001	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG - LEA COUNTY, NM		

**Sample ID: SP 2 @ 7' (H700146-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4800	16.0	01/25/2017	ND	416	104	400	3.77		

**Sample ID: SP 2 @ 9' (H700146-11)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6500	16.0	01/25/2017	ND	416	104	400	3.77	

**Sample ID: SP 2 @ 12' (H700146-12)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6160	16.0	01/25/2017	ND	416	104	400	3.77	

**Sample ID: SP 3 @ 1' (H700146-13)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4960	16.0	01/25/2017	ND	416	104	400	3.77		

**Sample ID: SP 3 @ 3' (H700146-14)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4400	16.0	01/25/2017	ND	416	104	400	3.77		

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

BBC International, Inc.  
Cliff Brunson  
P.O. Box 805  
Hobbs NM, 88241  
Fax To: (575) 397-0397

Received:	01/23/2017	Sampling Date:	01/16/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	GERONIMO FEDERAL #001	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG - LEA COUNTY, NM		

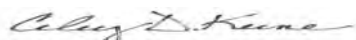
**Sample ID: SP 3 @ 5' (H700146-15)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	01/25/2017	ND	416	104	400	3.77		

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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





# ARDINAL LABORATORIES

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1082

Company Name: BBC International, Inc.

Project Manager: Cliff Brunson

Address: P.O. Box 805

City: Hobbs

Phone #: 575-397-6388

Project #:

Project Name: GERONIMO FEDERAL #001

Project Location: Lea County, NM

Sampler Name: JEFF ORNELAS

P.O. #:

Company: CDE

Attn: Grubbs

Address:

City:

State: Zip:

Phone #:

Fax #:

### BILL TO

### ANALYSIS REQUEST

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.	SAMPLING										
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :												
H700146	SP1 @ 1'		1									1/16/17	9:01 AM	✓							
	SP1 @ 3'		1									1/16/17	9:22 AM	✓							
	SP1 @ 5'		1									1/16/17	10:15 AM	✓							
	SP1 @ 7'		1									1/16/17	10:49 AM	✓							
	SP1 @ 9'		1									1/16/17	11:20 AM	✓							
	SP1 @ 12'		1									1/16/17	11:50 AM	✓							
	SP2 @ 1'		1									1/16/17	12:44 PM	✓							
	SP2 @ 3'		1									1/16/17	1:11 PM	✓							
	SP2 @ 5'		1									1/16/17	1:28 PM	✓							
	SP2 @ 7'		1									1/16/17	1:35 PM	✓							

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Relinquished By:

Received By:

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

Fax Result: ☐ Yes ☐ No Add'l Fax #:

REMARKS:

Relinquished By:

Received By:

DATE:

Delivered By: (Circle One)

Sample Condition

CHECKED BY: (Initials)

Sampler - UPS - Bus - Other:

Cool Intact

Yes No

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476



# ARDINAL LABORATORIES

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

### BILL TO

### ANALYSIS REQUEST

Company Name: BBC International, Inc.  
Project Manager: Cliff Brunson  
Address: P.O. Box 805  
City: Hobbs  
Phone #: 575-397-6388  
Project #:   
Project Name: GERONIMO FEDERAL #001  
Project Location: Lea County, NM  
Sample Name: JEFF ORNELAS

P.O. #:   
Company: *COG*  
Attn: *Grubbs*  
Address:   
City:   
State:   
Zip:   
Phone #:   
Fax #:   
FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV.	SAMPLING										
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :											
<i>H700146</i>																				
	11	SP2 @ 9'	6																	
	12	SP2 @ 12'	6																	
	13	SP3 @ 1'	6																	
	14	SP3 @ 3'	6																	
	15	SP3 @ 5'	6																	
<i>Lab 11/23/16</i>																				

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Relinquished By: *Vettillo* Date: *11/16/17* Received By: *Jeff Brunson*  
Phone Result: ☐ Yes ☐ No Add'l Phone #:   
Fax Result: ☐ Yes ☐ No Add'l Fax #:   
REMARKS:

Relinquished By: *Vettillo* Date: *11/16/17* Received By: *Jeff Brunson*  
Delivered By: (Circle One) *Cardinal* Sample Condition ☒ Intact ☐ Cool ☐ Yes ☐ No  
Sampler - UPS - Bus - Other: *#75 2.40* CHECKED BY: *Jeff Brunson*

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

April 13, 2017

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: GERONIMO FEDERAL #001

Enclosed are the results of analyses for samples received by the laboratory on 04/10/17 8:25.

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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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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:**

BBC International, Inc.  
Cliff Brunson  
P.O. Box 805  
Hobbs NM, 88241  
Fax To: (575) 397-0397

Received: 04/10/2017  
Reported: 04/13/2017  
Project Name: GERONIMO FEDERAL #001  
Project Number: NONE GIVEN  
Project Location: COG - LEA COUNTY, NM

Sampling Date: 04/06/2017  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SB 1 @ 15' (H700942-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5060	16.0	04/12/2017	ND	432	108	400	0.00	

**Sample ID: SB 1 @ 21' (H700942-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3280	16.0	04/12/2017	ND	432	108	400	0.00	

**Sample ID: SB 1 @ 25' (H700942-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2800	16.0	04/12/2017	ND	432	108	400	0.00	

**Sample ID: SB 1 @ 29' (H700942-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1880	16.0	04/12/2017	ND	432	108	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

BBC International, Inc.  
Cliff Brunson  
P.O. Box 805  
Hobbs NM, 88241  
Fax To: (575) 397-0397

Received: 04/10/2017  
Reported: 04/13/2017  
Project Name: GERONIMO FEDERAL #001  
Project Number: NONE GIVEN  
Project Location: COG - LEA COUNTY, NM

Sampling Date: 04/06/2017  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SB 1 @ 35' (H700942-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2880	16.0	04/12/2017	ND	432	108	400	0.00	

**Sample ID: SB 1 @ 43' (H700942-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3080	16.0	04/12/2017	ND	432	108	400	0.00	

**Sample ID: SB 1 @ 45' (H700942-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	704	16.0	04/12/2017	ND	432	108	400	0.00		

**Sample ID: SB 1 @ 47' (H700942-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	04/12/2017	ND	432	108	400	0.00	

**Sample ID: SB 1 @ 49' (H700942-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	04/12/2017	ND	432	108	400	0.00	

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

BBC International, Inc.  
Cliff Brunson  
P.O. Box 805  
Hobbs NM, 88241  
Fax To: (575) 397-0397

Received: 04/10/2017  
Reported: 04/13/2017  
Project Name: GERONIMO FEDERAL #001  
Project Number: NONE GIVEN  
Project Location: COG - LEA COUNTY, NM

Sampling Date: 04/06/2017  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SB 1 @ 51' (H700942-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1310	16.0	04/12/2017	ND	432	108	400	0.00		

**Sample ID: SB 1 @ 53' (H700942-11)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	04/12/2017	ND	432	108	400	0.00	

**Sample ID: SB 1 @ 58' (H700942-12)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	04/12/2017	ND	432	108	400	0.00	

**Sample ID: SB 2 @ 15' (H700942-13)**

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	04/12/2017	ND	432	108	400	0.00	

**Sample ID: SB 2 @ 19' (H700942-14)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3520	16.0	04/12/2017	ND	432	108	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

BBC International, Inc.  
Cliff Brunson  
P.O. Box 805  
Hobbs NM, 88241  
Fax To: (575) 397-0397

Received: 04/10/2017  
Reported: 04/13/2017  
Project Name: GERONIMO FEDERAL #001  
Project Number: NONE GIVEN  
Project Location: COG - LEA COUNTY, NM

Sampling Date: 04/06/2017  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SB 2 @ 24' (H700942-15)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6130	16.0	04/12/2017	ND	432	108	400	0.00		

**Sample ID: SB 2 @ 32' (H700942-16)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3520	16.0	04/12/2017	ND	432	108	400	0.00	

**Sample ID: SB 2 @ 35' (H700942-17)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2720	16.0	04/12/2017	ND	432	108	400	0.00		

**Sample ID: SB 2 @ 43' (H700942-18)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2000	16.0	04/12/2017	ND	432	108	400	0.00		

**Sample ID: SB 2 @ 48' (H700942-19)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1570	16.0	04/12/2017	ND	432	108	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

BBC International, Inc.  
Cliff Brunson  
P.O. Box 805  
Hobbs NM, 88241  
Fax To: (575) 397-0397

Received: 04/10/2017  
Reported: 04/13/2017  
Project Name: GERONIMO FEDERAL #001  
Project Number: NONE GIVEN  
Project Location: COG - LEA COUNTY, NM

Sampling Date: 04/06/2017  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SB 2 @ 51' (H700942-20)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	784	16.0	04/12/2017	ND	432	108	400	0.00		

**Sample ID: SB 2 @ 53' (H700942-21)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	04/12/2017	ND	432	108	400	0.00	

**Sample ID: SB 2 @ 58' (H700942-22)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	04/12/2017	ND	432	108	400	0.00		

**Sample ID: NORTH SAMPLE (H700942-23)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	04/12/2017	ND	432	108	400	0.00	

**Sample ID: EAST SAMPLE (H700942-24)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	04/12/2017	ND	432	108	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

BBC International, Inc.  
Cliff Brunson  
P.O. Box 805  
Hobbs NM, 88241  
Fax To: (575) 397-0397

Received:	04/10/2017	Sampling Date:	04/06/2017
Reported:	04/13/2017	Sampling Type:	Soil
Project Name:	GERONIMO FEDERAL #001	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA COUNTY, NM		

**Sample ID: SOUTH SAMPLE (H700942-25)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	288	16.0	04/12/2017	ND	432	108	400	0.00		

**Sample ID: WEST SAMPLE (H700942-26)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	04/12/2017	ND	432	108	400	0.00		

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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



CARDINAL LABORATORIES

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

143

BILL TO

ANALYSIS REQUEST

Company Name: BBC International, Inc.  
Project Manager: Cliff Brunson

Address: P.O. Box 805  
City: Hobbs

State: NM zip: 88241  
Phone #: 575-397-6388 Fax #: 575-397-0397

Project #: Project Owner:

Project Name: Genommo feed # 001

Project Location: 101 Marland

Sample Name: 101 Marland

FOR LAB USE ONLY  
Lab I.D. Sample I.D.

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.	SAMPLING	DATE	TIME	ANALYSIS REQUEST
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
1	SB 1 @ 15'	G	1									4-6-17	925	✓
2	@ 21'	G	1									4-6-17	955	✓
3	@ 25'	G	1									4-6-17	1018	✓
4	@ 29'	G	1									4-6-17	1033	✓
5	@ 33'	G	1									4-6-17	1120	✓
6	@ 43'	G	1									4-6-17	1228	✓
7	@ 45'	G	1									4-6-17	1238	✓
8	@ 47'	G	1									4-6-17	108	✓
9	@ 49'	G	1									4-6-17	118	✓
10	@ 51'	G	1									4-6-17	135	✓

CHLORIDE

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Relinquished By: Date: 4-10-17 Time: Received By: Date: 4-10-17 Time:

Relinquished By: Date: 4-10-17 Time: Received By: Date: 4-10-17 Time:

Delivered By: (Circle One) Sample Condition Cool ☒ Intact ☒ Yes ☐ No ☐ Yes ☐ No

Sampler - UPS - Bus - Other: -135

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

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476



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

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2 of 3

**Company Name:** BBC International, Inc.

**Project Manager:** Cliff Brunson

**Address:** P.O. Box 805

**City:** Hobbs

**Phone #:** 575-397-6388

**Project #:**

**Project Name:** GELADO MO FED # 001

**Project Location:**

**Sampler Name:** ROGER ALEXANDER

FOR LAB USE ONLY

**P.O. #:**

**Company:**

**Attn:**

**Address:**

**City:**

**State:** NM **Zip:** 88241

**Phone #:**

**Fax #:**

**State:** NM **Zip:** 88241

**Attn:**

**Address:**

**City:**

**State:** NM **Zip:** 88241

**Phone #:**

**Fax #:**

**Project Name:** GELADO MO FED # 001

**Project Location:**

**Sampler Name:** ROGER ALEXANDER

**FOR LAB USE ONLY**

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.	SAMPLING	DATE	TIME	ANALYSIS REQUEST
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
11	SBIC 53	C 1	1									4-6-17	142	CHLORIDE
12	SBIC 58	C 1	1									4-6-17	151	
13	SBIC 15	C 1	1									4-6-17	205	
14	SBIC 19	C 1	1									4-6-17	223	
15	SBIC 24	C 1	1									4-6-17	246	
16	SBIC 32	C 1	1									4-6-17	321	
17	SBIC 35	C 1	1									4-6-17	331	
18	SBIC 43	C 1	1									4-6-17	346	
19	SBIC 48	C 1	1									4-6-17	352	
20	SBIC 51	C 1	1									4-6-17	400	

**Relinquished By:** \_\_\_\_\_ **Date:** 4-10-17 **Received By:** \_\_\_\_\_ **Date:** 4-10-17

**Relinquished By:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Received By:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Relinquished By:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Received By:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Delivered By:** (Circle One) **Sampler - UPS - Bus - Other:** \_\_\_\_\_

**Time:** 8:25 **Received By:** \_\_\_\_\_ **Time:** \_\_\_\_\_

**Sample Condition:** ☒ Cool ☒ Intact ☐ Yes ☐ No **CHECKED BY:** \_\_\_\_\_ **(Initials)** \_\_\_\_\_

**REMARKS:** \_\_\_\_\_







District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 8, 2011

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

### Release Notification and Corrective Action

#### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: COG Operating LLC	Contact: Robert McNeill	
Address: 600 West Illinois Avenue, Midland TX 79701	Telephone No. 432-683-7443	
Facility Name: GERONIMO FEDERAL #001	Facility Type: Battery	
Surface Owner:	Mineral Owner: Federal	API No. 30-025-30645

#### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	31	19S	33E	660'	North	660'	West	Lea

Latitude/Longitude 32.6221809,-103.708992

#### NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 18 bbls PW	Volume Recovered: 15 bbls PW
Source of Release: Hole in tank	Date and Hour of Occurrence: 7/19/2016 unknown	Date and Hour of Discovery: 7/19/2016 9:00 am
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.*  This release was caused by a hole in the bottom of the tank. A vacuum truck was dispatched to recover all standing fluid.		
Describe Area Affected and Cleanup Action Taken.*  This release occurred in an unlined facility and was contained within the earthen berm. Concho will have the spill site sampled to delineate any possible contamination from the release and we 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: <i>Amanda T. Davis</i>	<u>OIL CONSERVATION DIVISION</u>	
Printed Name: Amanda Trujillo Davis	Approved by Environmental Specialist:	
Title: Senior Environmental Coordinator	Approval Date:	Expiration Date:
E-mail Address: atrujillo@concho.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: July 27, 2016 Phone: 575-748-6940		

\* Attach Additional Sheets If Necessary