

Closure Report

Site Description

Site Name:	Loving Falcon 28 #001H
Company:	COG Operating LLC
Legal Description:	U/L H, Section 28, T23S, R28E
County:	Eddy County, NM
GPS Coordinates:	N 32.27849° W 104.08459°

Release Data

Date of Release:	08/24/2017
Type of Release:	Oil and produced water
Source of Release:	Tank Battery
Volume of Release:	1 bbl oil, 9 bbls produced water
Volume Recovered:	0 bbls

Remediation Specifications

Remediation Parameters:	Excavate the areas around SP1-SP4 to a depth of 4 ft. Surface scrape the area of SP15 and SP16. No remediation activities necessary in the remaining areas. Backfill the site with clean soil.	
Remediation Activities:	September/October 2017	
Plan Sent to OCD:	n/a	Verbal permission from Mike Bratcher
OCD Approval of Plan:	n/a	Verbal permission from Mike Bratcher
Plan Sent to SLO:	n/a	n/a
SLO Approval of Plan:	n/a	n/a

Supporting Documentation

Initial C-141	Signed 08/29/2017
Final C-141	Upon completion
Site Diagram	September 2017
Groundwater Plot	<50'
TOPO Maps	September 2017
Lab Summary	08/29/2017-08/30/2017
Lab Analysis	08/29/2017-08/30/2017
Correspondence	Request and approval of remediation plan via email

Request for Closure

Based on the completion of the remediation plan, BBC requests closure approval from NMOCD.

Cliff Brunson, President of BBC International Inc.

10/20/2017

NM OIL CONSERVATION

ARTESIA DISTRICT

AUG 29 2017

Form C-141

Revised August 8, 2011

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

RECEIVED

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

Release Notification and Corrective Action

0801724233484 *Production* *217955* OPERATOR ☒ Initial Report ☐ Final Report

Name of Company: COG Operating LLC OGRID # 229137	Contact: Robert McNeill
Address: 600 West Illinois Avenue, Midland TX 79701	Telephone No. 432-683-7443
Facility Name: Loving Falcon 28 #001H	Facility Type: Tank Battery

Surface Owner: Private	Mineral Owner: Private	API No. 30-015-37000
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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
H	28	23S	28E	1980	North	530	East	Eddy

Latitude 32.2779961 Longitude -104.0855331

NATURE OF RELEASE

Type of Release: Oil and Produced Water	Volume of Release: 1 bbl. Oil & 9 bbls. PW	Volume Recovered: 0 bbl. Oil & 0 bbl. PW
Source of Release: FWKO	Date and Hour of Occurrence: August 24, 2017 5:00 pm	Date and Hour of Discovery: August 24, 2017 5:00 pm
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" 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.*		
The release was due to a gasket failure on the FWKO. The gasket was replaced.		
Describe Area Affected and Cleanup Action Taken.*		
The release was overspray within a pasture and crop land. Concho will have the spill area sampled to delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.		
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>Rebecca Haskell</i>	OIL CONSERVATION DIVISION	
Printed Name: Rebecca Haskell	Signed By: <i>Mike B...</i>	
Title: Senior HSE Coordinator	Approved by Environmental Specialist:	
E-mail Address: rhaskell@concho.com	Approval Date: 8/30/17	Expiration Date: N/A
Date: August 29, 2017 Phone: 432-683-7443	Conditions of Approval: See attached	Attached: ARP-4367

* Attach Additional Sheets If Necessary

www.emnrd.state.nm.us
Current forms are available on our website and should be used when filing regulatory documents.

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 8/29/17 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number RRP 4367 has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District 2 office in ARTESIA on or before 9/29/17. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

- Nominal detection limits for field and laboratory analyses must be provided.

- Composite sampling is not generally allowed.

- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

- Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

- If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

- Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold

OCD Environmental Bureau Chief

1220 South St. Francis Drive

Santa Fe, New Mexico 87505

505-476-3465

jim.griswold@state.nm.us

Bratcher, Mike, EMNRD

From: Rebecca Haskell <RHaskell@concho.com>
Sent: Tuesday, August 29, 2017 3:49 PM
To: Weaver, Crystal, EMNRD
Cc: Bratcher, Mike, EMNRD
Subject: (C-141 Initial) Loving Falcon 28 #001H 8/24/17 (30-015-37000)
Attachments: Loving Falcon 28 #001H Initial C-141 8-24-17 (30-015-37000).pdf

Ms. Weaver,

Please find the attached Initial C-141 for your consideration. If you have any questions or concerns please contact me.

Thank You,

Becky Haskell
Senior HSE Coordinator
COG Operating LLC
600 W Illinois Avenue | Midland, TX 79701
Direct: 432-818-2372 | Main: 432.683.7443
Cell: 432-556-5130
rhaskell@concho.com



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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: Loving Falcon 28 #001H	Facility Type: Tank Battery	
Surface Owner: Private	Mineral Owner: Private	API No. 30-015-37000

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	28	23S	28E	1980	North	530	East	Eddy County, NM

Latitude N 32.27849° Longitude W 104.08459°

NATURE OF RELEASE

Type of Release: Oil and Produced water	Volume of Release: 1 bbl oil, 9 bbls produced water	Volume Recovered: 0 bbls
Source of Release: FWKO	Date and Hour of Occurrence 08/24/2017 @ 5:00 pm	Date and Hour of Discovery 08/24/2017 @ 5:00 pm
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" 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 due to a gasket failure on the FWKO. The gasket was replaced.

Describe Area Affected and Cleanup Action Taken.*

This release was overspray within a pasture and crop land.. Verbal approval from Mike Bratcher of NMOCD was granted to proceed with remediation as part of the emergency response to the leak.

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: 	OIL CONSERVATION DIVISION		
Printed Name: Rebecca Haskell	Approved by Environmental Specialist:		
Title: Senior HSE Coordinator	Approval Date:	Expiration Date:	
E-mail Address: rhaskell@concho.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: October 20, 2017	Phone: (432) 683-7443		

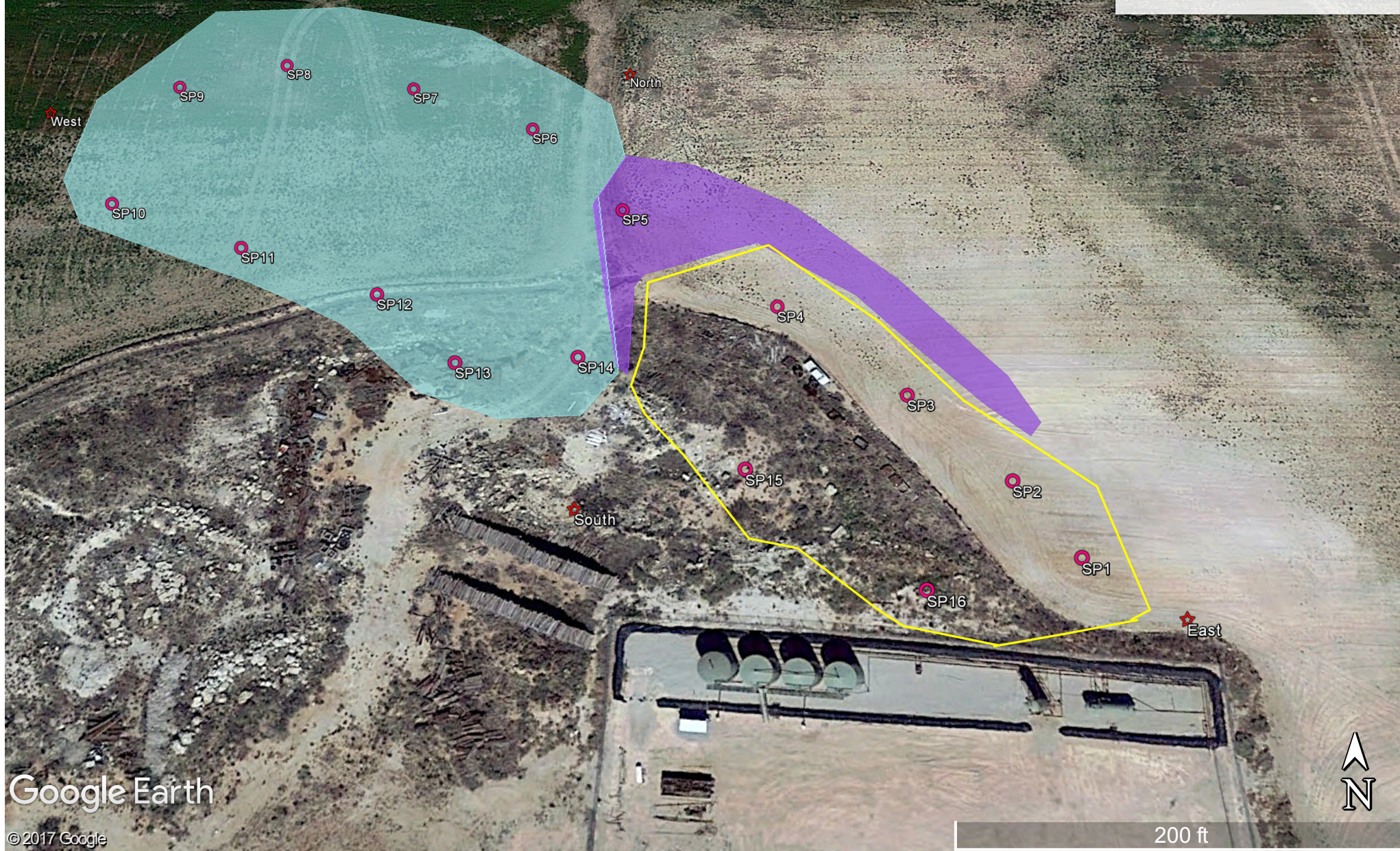
* Attach Additional Sheets If Necessary

COG, Loving Falcon 28 Fee #001H

Leak date: 08/25/2017
Eddy County, NM

Legend

- ★ Cardinal sample points
- Leak Area (COG)
- Light Mist area
- Sample points
- Overspray area



COG, Loving Falcon 28 #001H

Sample points, hand auger

SP1, N 32.27860 W-104.08531

SP2, N 32.27871 W-104.08540

SP3, N 32.27885 W-104.08556

SP4, N 32.27900 W-104.08578

SP5, N 32.27918 W-104.08605

SP6, N 32.27934 W-104.08623

SP7, N 32.27943 W-104.08646

SP8, N 32.27948 W-104.08672

SP9, N 32.27943 W-104.08692

SP10, N 32.27919 W-104.08699

SP11, N 32.27911 W-104.08673

SP12, N 32.27902 W-104.08648

SP13, N 32.27890 W-104.08633

SP14, N 32.27891 W-104.08612

SP15, N 32.27872 W-104.08584

SP16, N 32.27855 W-104.08556

NORTH, N 32.27946 W-104.08605

SOUTH, N 32.27867 W-104.08605

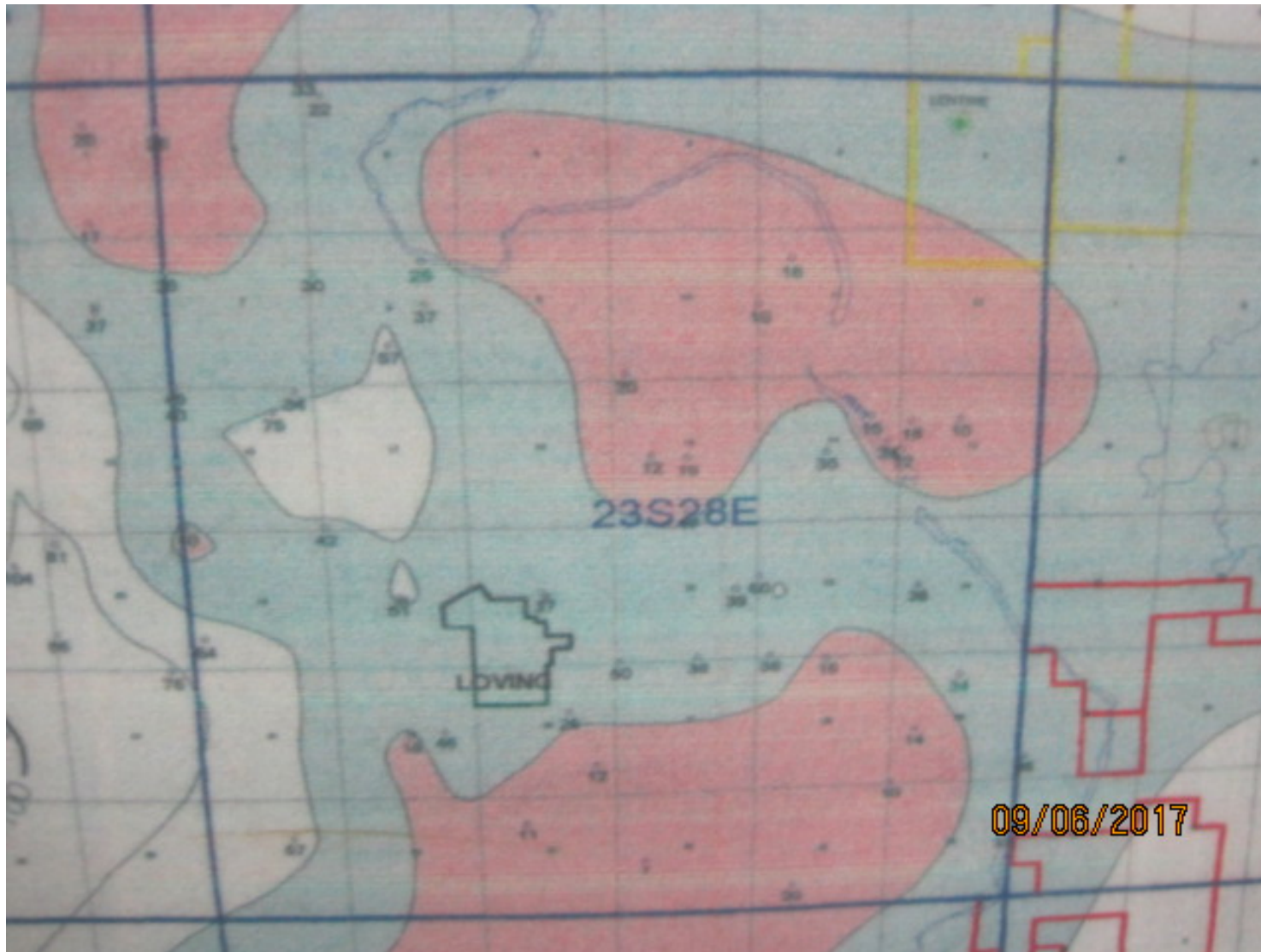
EAST, N 32.27851 W-104.08516

WEST, N 32.27938 W-104.08715

COG, Loving Falcon 28 #001H

U/L H, Section 28, T23S, R28E

Groundwater: <50'





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	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
C_01472		C	ED	2	3	2	28	23S	28E	585730	3571652	<input type="text"/>	355	162	10 152
C_01938		C	ED		2	4	28	23S	28E	586085	3571205*	<input type="text"/>	406	80	3 77
C_00340		C	ED		1	1	27	23S	28E	586483	3572022*	<input type="text"/>	573	117	18 99
C_03732 POD1		C	ED	1	3	3	27	23S	28E	586321	3570929	<input type="text"/>	721	171	10 161
C_00641		C	ED	2	2	1	27	23S	28E	586986	3572126*	<input type="text"/>	1039	115	40 75
C_00327		CUB	ED	3	2	4	21	23S	28E	585974	3572728*	<input type="text"/>	1122	212	
C_01870		C	ED		4	3	22	23S	28E	586885	3572432*	<input type="text"/>	1147	105	48 57
C_03974 POD1		C	ED	2	2	1	27	23S	28E	587087	3572220	<input type="text"/>	1174	75	43 32
C_00024	O		ED			3	22	23S	28E	586682	3572629*	<input type="text"/>	1181	242	48 194
C_00519		C	ED	2	1	1	28	23S	28E	584970	3572100*	<input type="text"/>	1215	250	
C_00869			ED	3	3	4	22	23S	28E	587188	3572335*	<input type="text"/>	1321	360	
C_02796			ED		2	3	22	23S	28E	586882	3572838*	<input type="text"/>	1464	200	
C_00539		C	ED	3	3	3	21	23S	28E	584767	3572308*	<input type="text"/>	1489	28	6 22
C_00716		C	ED				21	23S	28E	585471	3573012*	<input type="text"/>	1528	140	69 71
C_03432 POD1		C	ED	1	2	2	27	23S	28E	587527	3572162	<input type="text"/>	1546	115	75 40
C_00650		C	ED	1	3	3	21	23S	28E	584767	3572508*	<input type="text"/>	1592	32	12 20
C_01232		C	ED	2	3	1	34	23S	28E	586592	3570095*	<input type="text"/>	1599	150	
C_00481		C	ED	3	2	1	33	23S	28E	585182	3570283*	<input type="text"/>	1604	225	190 35
C_01487			ED	3	4	1	22	23S	28E	586779	3573142*	<input type="text"/>	1681	150	38 112

Average Depth to Water: **43 feet**

Minimum Depth: **3 feet**

Maximum Depth: **190 feet**

Record Count: 19

UTMNAD83 Radius Search (in meters):

Easting (X): 586083

Northing (Y): 3571611

Radius: 1700

*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.

9/1/17 5:01 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

Public Land Survey System (PLSS)

Q64:Q16: SEQ4: NESec: 28Tws: 23SRng: 28E

State Plane Coordinate System - NAD27

X:ftY:ftZone:

State Plane Coordinate System - NAD83

X:ftY:ftZone:

Degrees/Minutes/Seconds

Longitude (X):Degrees: °Minutes: 'Seconds: "

Latitude (Y):Degrees: °Minutes: 'Seconds: "

UTM - NAD27

Easting (X):mtrs Northing (Y):mtrs Zone:

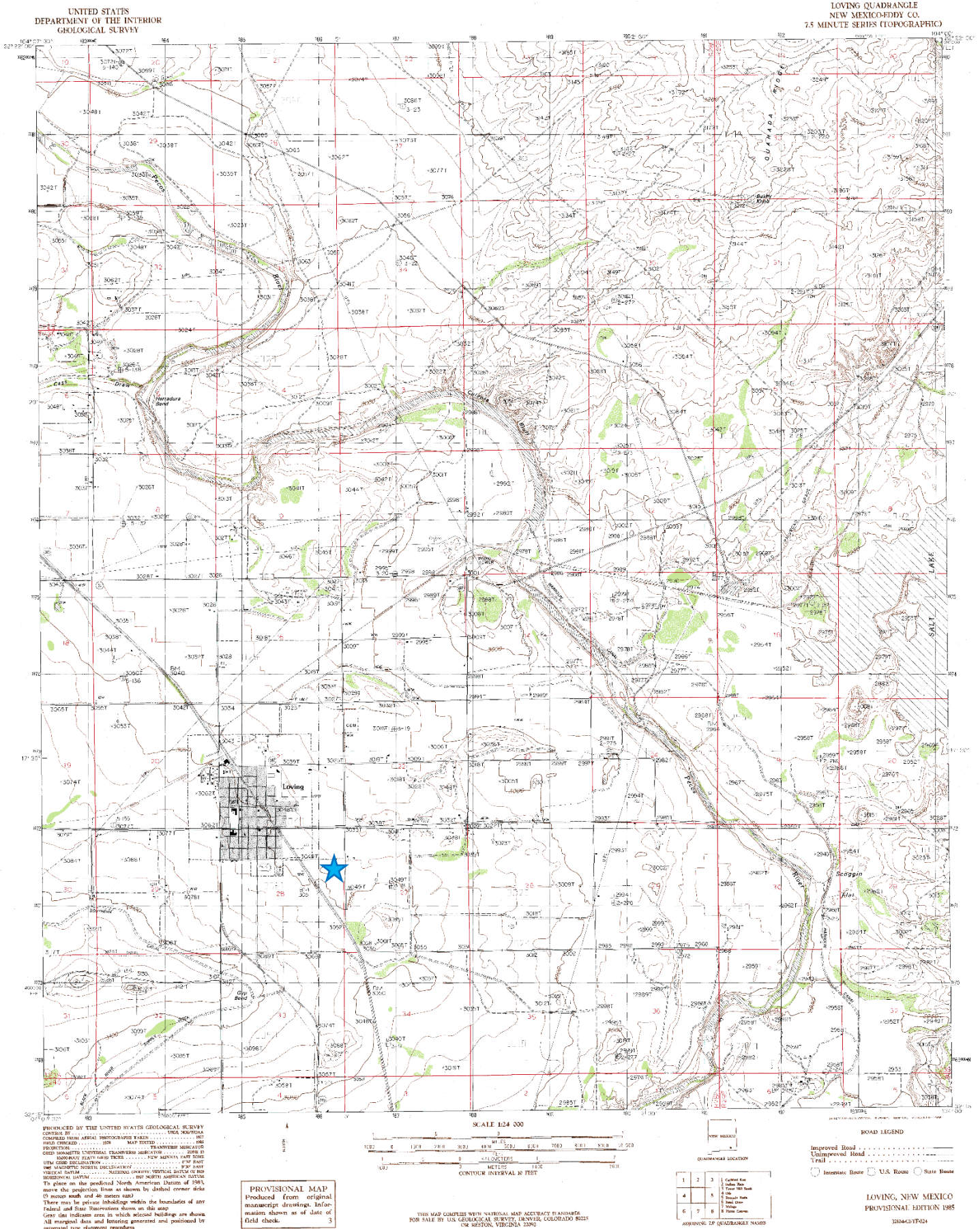
SUBMIT

All Conversion Results are displayed as NAD 1983 UTM Zone 13

Easting (X):586083.0mtrsNorthing (Y):3571611.0mtrs

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

COG, Loving Falcon 28 #1H



[illegible]

Laboratory Analytical Results Summary
Loving Falcon Fee #001H

		Sample	SP1 @ SURFACE	SP1 @ 1'	SP1 @ 2'	SP1 @ 3'	SP1 @ 4'	SP1 @ 5'
Analyte	Method	Date	8/29/17	8/29/17	8/29/17	8/29/17	8/29/17	8/29/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a
Toluene	BTEX 8021B		0.131	<0.050	n/a	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		0.104	<0.050	n/a	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		0.359	<0.150	n/a	n/a	n/a	n/a
Total BTEX	BTEX 8021B		0.564	<0.300	n/a	n/a	n/a	n/a
Chloride	SM4500CI-B		464	368	432	758	528	656
GRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a	n/a
DRO	TPH 8015M		151	<10.0	n/a	n/a	n/a	n/a
EXT DRO	TPH 8015M		28.2	<10.0	n/a	n/a	n/a	n/a

		Sample	SP2 @ SURFACE	SP2 @ 1'	SP2 @ 2'	SP2 @ 3'	SP2 @ 4'	SP2 @ 5'
Analyte	Method	Date	8/29/17	8/29/17	8/29/17	8/29/17	8/29/17	8/29/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	n/a	n/a	n/a	n/a
Chloride	SM4500CI-B		208	368	352	608	720	800
GRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a	n/a
DRO	TPH 8015M		251	<10.0	n/a	n/a	n/a	n/a
EXT DRO	TPH 8015M		68.3	13.5	n/a	n/a	n/a	n/a

		Sample	SP3 @ Surface	SP3 @ 5'
Analyte	Method	Date	8/29/17	8/29/17
			mg/Kg	mg/Kg
Chloride	SM4500CI-B		32	96

		Sample	SP4 @ Surface	SP4 @ 5'
Analyte	Method	Date	8/29/17	8/29/17
			mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	n/a
Toluene	BTEX 8021B		<0.050	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a
Total BTEX	BTEX 8021B		<0.300	n/a
Chloride	SM4500CI-B		<16.0	144
GRO	TPH 8015M		<10.0	n/a
DRO	TPH 8015M		<10.0	n/a
EXT DRO	TPH 8015M		<10.0	n/a

		Sample	SP5 @ Surface	SP5 @ 5'
Analyte	Method	Date	8/29/17	8/29/17
			mg/Kg	mg/Kg
Chloride	SM4500CI-B		160	144

		Sample	SP6 @ Surface	SP6 @ 5'
Analyte	Method	Date	8/30/17	8/30/17
			mg/Kg	mg/Kg
Chloride	SM4500CI-B		32	144

		Sample	SP7 @ Surface	SP7 @ 5'
Analyte	Method	Date	8/30/17	8/30/17
			mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	n/a
Toluene	BTEX 8021B		<0.050	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a
Total BTEX	BTEX 8021B		<0.300	n/a
Chloride	SM4500CI-B		32	144
GRO	TPH 8015M		<10.0	n/a
DRO	TPH 8015M		<10.0	n/a
EXT DRO	TPH 8015M		<10.0	n/a

		Sample	SP8 @ Surface	SP8 @ 5'
Analyte	Method	Date	8/30/17	8/30/17
			mg/Kg	mg/Kg
Chloride	SM4500CI-B		16	192

		Sample	SP9 @ Surface	SP9 @ 5'
Analyte	Method	Date	8/30/17	8/30/17
			mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	n/a
Toluene	BTEX 8021B		<0.050	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a
Total BTEX	BTEX 8021B		<0.300	n/a
Chloride	SM4500CI-B		48	112
GRO	TPH 8015M		<10.0	n/a
DRO	TPH 8015M		<10.0	n/a
EXT DRO	TPH 8015M		<10.0	n/a

		Sample	SP10 @ Surface	SP10 @ 5'
Analyte	Method	Date	8/30/17	8/30/17
			mg/Kg	mg/Kg
Chloride	SM4500CI-B		48	128

		Sample	SP11 @ Surface	SP11 @ 5'
Analyte	Method	Date	8/30/17	8/30/17
			mg/Kg	mg/Kg
Chloride	SM4500CI-B		64	80

		Sample	SP12 @ Surface	SP12 @ 5'
Analyte	Method	Date	8/30/17	8/30/17
			mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	n/a
Toluene	BTEX 8021B		<0.050	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a
Total BTEX	BTEX 8021B		<0.300	n/a
Chloride	SM4500CI-B		80	272
GRO	TPH 8015M		<10.0	n/a
DRO	TPH 8015M		<10.0	n/a
EXT DRO	TPH 8015M		<10.0	n/a

		Sample	SP13 @ Surface	SP13 @ 5'
Analyte	Method	Date	8/30/17	8/30/17
			mg/Kg	mg/Kg
Chloride	SM4500CI-B		96	64

		Sample	SP14 @ Surface	SP14 @ 5'
Analyte	Method	Date	8/30/17	8/30/17
			mg/Kg	mg/Kg
Chloride	SM4500CI-B		64	64

		Sample	SP15 @ Surface	SP15 @ 5'
Analyte	Method	Date	8/30/17	8/30/17
			mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	n/a
Toluene	BTEX 8021B		<0.050	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a
Total BTEX	BTEX 8021B		<0.300	n/a
Chloride	SM4500CI-B		128	96
GRO	TPH 8015M		<10.0	n/a
DRO	TPH 8015M		469	n/a
EXT DRO	TPH 8015M		136	n/a

		Sample	SP16 @ Surface	SP16 @ 5'
Analyte	Method	Date	8/30/17	8/30/17
			mg/Kg	mg/Kg
Chloride	SM4500CI-B		128	112

Cardinal points		Sample	North @ Surface	East @ Surface	West @ Surface	South @ Surface
Analyte	Method	Date	8/30/17	8/30/17	8/30/17	8/30/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	SM4500CI-B		32	16	32	16



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

September 01, 2017

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: LOVING FALCON 28-1H

Enclosed are the results of analyses for samples received by the laboratory on 08/31/17 13:45.

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.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

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: 08/31/2017
Reported: 09/01/2017
Project Name: LOVING FALCON 28-1H
Project Number: NONE GIVEN
Project Location: COG - LOVING NM

Sampling Date: 08/29/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP1 @ SURFACE (H702329-01)

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	09/01/2017	ND	2.03	102	2.00	0.0670	
Toluene*	0.131	0.050	09/01/2017	ND	2.01	101	2.00	1.41	
Ethylbenzene*	0.104	0.050	09/01/2017	ND	2.13	107	2.00	0.143	
Total Xylenes*	0.359	0.150	09/01/2017	ND	6.46	108	6.00	0.327	
Total BTX	0.594	0.300	09/01/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 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	464	16.0	09/01/2017	ND	448	112	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	08/31/2017	ND	181	90.3	200	0.585	
DRO >C10-C28	151	10.0	08/31/2017	ND	195	97.5	200	1.99	
EXT DRO >C28-C36	28.2	10.0	08/31/2017	ND					

Surrogate: 1-Chlorooctane 91.0 % 28.3-164

Surrogate: 1-Chlorooctadecane 106 % 34.7-157

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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:	08/31/2017	Sampling Date:	08/29/2017
Reported:	09/01/2017	Sampling Type:	Soil
Project Name:	LOVING FALCON 28-1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - LOVING NM		

Sample ID: SP1 @ 1' (H702329-02)

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	09/01/2017	ND	2.03	102	2.00	0.0670	
Toluene*	<0.050	0.050	09/01/2017	ND	2.01	101	2.00	1.41	
Ethylbenzene*	<0.050	0.050	09/01/2017	ND	2.13	107	2.00	0.143	
Total Xylenes*	<0.150	0.150	09/01/2017	ND	6.46	108	6.00	0.327	
Total BTX	<0.300	0.300	09/01/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 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	368	16.0	09/01/2017	ND	448	112	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	08/31/2017	ND	181	90.3	200	0.585	
DRO >C10-C28	<10.0	10.0	08/31/2017	ND	195	97.5	200	1.99	
EXT DRO >C28-C36	<10.0	10.0	08/31/2017	ND					

Surrogate: 1-Chlorooctane 92.5 % 28.3-164

Surrogate: 1-Chlorooctadecane 105 % 34.7-157

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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:	08/31/2017	Sampling Date:	08/29/2017
Reported:	09/01/2017	Sampling Type:	Soil
Project Name:	LOVING FALCON 28-1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - LOVING NM		

Sample ID: SP1 @ 2' (H702329-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	09/01/2017	ND	448	112	400	0.00	

Sample ID: SP1 @ 3' (H702329-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	768	16.0	09/01/2017	ND	448	112	400	0.00	

Sample ID: SP1 @ 4' (H702329-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	528	16.0	09/01/2017	ND	448	112	400	0.00	

Sample ID: SP1 @ 5' (H702329-06)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	656	16.0	09/01/2017	ND	448	112	400	0.00	

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Analytical Results For:

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

Received:	08/31/2017	Sampling Date:	08/29/2017
Reported:	09/01/2017	Sampling Type:	Soil
Project Name:	LOVING FALCON 28-1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - LOVING NM		

Sample ID: SP2 @ SURFACE (H702329-07)

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	09/01/2017	ND	2.03	102	2.00	0.0670	
Toluene*	<0.050	0.050	09/01/2017	ND	2.01	101	2.00	1.41	
Ethylbenzene*	<0.050	0.050	09/01/2017	ND	2.13	107	2.00	0.143	
Total Xylenes*	<0.150	0.150	09/01/2017	ND	6.46	108	6.00	0.327	
Total BTX	<0.300	0.300	09/01/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 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	208	16.0	09/01/2017	ND	448	112	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	08/31/2017	ND	181	90.3	200	0.585	
DRO >C10-C28	251	10.0	08/31/2017	ND	195	97.5	200	1.99	
EXT DRO >C28-C36	68.3	10.0	08/31/2017	ND					

Surrogate: 1-Chlorooctane 88.1 % 28.3-164

Surrogate: 1-Chlorooctadecane 97.2 % 34.7-157

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Cliff Brunson
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Hobbs NM, 88241
Fax To: (575) 397-0397

Received:	08/31/2017	Sampling Date:	08/29/2017
Reported:	09/01/2017	Sampling Type:	Soil
Project Name:	LOVING FALCON 28-1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - LOVING NM		

Sample ID: SP2 @ 1' (H702329-08)

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	09/01/2017	ND	2.03	102	2.00	0.0670	
Toluene*	<0.050	0.050	09/01/2017	ND	2.01	101	2.00	1.41	
Ethylbenzene*	<0.050	0.050	09/01/2017	ND	2.13	107	2.00	0.143	
Total Xylenes*	<0.150	0.150	09/01/2017	ND	6.46	108	6.00	0.327	
Total BTX	<0.300	0.300	09/01/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 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	368	16.0	09/01/2017	ND	448	112	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	08/31/2017	ND	181	90.3	200	0.585	
DRO >C10-C28	<10.0	10.0	08/31/2017	ND	195	97.5	200	1.99	
EXT DRO >C28-C36	13.5	10.0	08/31/2017	ND					

Surrogate: 1-Chlorooctane 91.5 % 28.3-164

Surrogate: 1-Chlorooctadecane 105 % 34.7-157

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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: 08/31/2017
 Reported: 09/01/2017
 Project Name: LOVING FALCON 28-1H
 Project Number: NONE GIVEN
 Project Location: COG - LOVING NM

 Sampling Date: 08/29/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP2 @ 2' (H702329-09)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	09/01/2017	ND	448	112	400	0.00	

Sample ID: SP2 @ 3' (H702329-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	608	16.0	09/01/2017	ND	448	112	400	0.00	

Sample ID: SP2 @ 4' (H702329-11)

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	09/01/2017	ND	448	112	400	0.00	

Sample ID: SP2 @ 5' (H702329-12)

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	09/01/2017	ND	448	112	400	0.00		

Sample ID: SP3 @ SURFACE (H702329-13)

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	09/01/2017	ND	448	112	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: 08/31/2017
Reported: 09/01/2017
Project Name: LOVING FALCON 28-1H
Project Number: NONE GIVEN
Project Location: COG - LOVING NM

Sampling Date: 08/29/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP3 @ 5' (H702329-14)

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	09/01/2017	ND	448	112	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:	08/31/2017	Sampling Date:	08/29/2017
Reported:	09/01/2017	Sampling Type:	Soil
Project Name:	LOVING FALCON 28-1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - LOVING NM		

Sample ID: SP4 @ SURFACE (H702329-15)

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	09/01/2017	ND	2.03	102	2.00	0.0670	
Toluene*	<0.050	0.050	09/01/2017	ND	2.01	101	2.00	1.41	
Ethylbenzene*	<0.050	0.050	09/01/2017	ND	2.13	107	2.00	0.143	
Total Xylenes*	<0.150	0.150	09/01/2017	ND	6.46	108	6.00	0.327	
Total BTX	<0.300	0.300	09/01/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 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	<16.0	16.0	09/01/2017	ND	448	112	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	09/01/2017	ND	181	90.3	200	0.585	
DRO >C10-C28	<10.0	10.0	09/01/2017	ND	195	97.5	200	1.99	
EXT DRO >C28-C36	<10.0	10.0	09/01/2017	ND					

Surrogate: 1-Chlorooctane 91.2 % 28.3-164

Surrogate: 1-Chlorooctadecane 99.1 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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Cliff Brunson
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Fax To: (575) 397-0397

Received:	08/31/2017	Sampling Date:	08/29/2017
Reported:	09/01/2017	Sampling Type:	Soil
Project Name:	LOVING FALCON 28-1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - LOVING NM		

Sample ID: SP4 @ 5' (H702329-16)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	09/01/2017	ND	448	112	400	0.00	

Sample ID: SP5 @ SURFACE (H702329-17)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	09/01/2017	ND	448	112	400	0.00	

Sample ID: SP5 @ 5' (H702329-18)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	09/01/2017	ND	448	112	400	3.64	

Sample ID: SP6 @ SURFACE (H702329-19)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/01/2017	ND	448	112	400	3.64	

Sample ID: SP6 @ 5' (H702329-20)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	09/01/2017	ND	448	112	400	3.64	

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Analytical Results For:

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

Received:	08/31/2017	Sampling Date:	08/30/2017
Reported:	09/01/2017	Sampling Type:	Soil
Project Name:	LOVING FALCON 28-1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - LOVING NM		

Sample ID: SP7 @ SURFACE (H702329-21)

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	09/01/2017	ND	2.03	102	2.00	0.0670	
Toluene*	<0.050	0.050	09/01/2017	ND	2.01	101	2.00	1.41	
Ethylbenzene*	<0.050	0.050	09/01/2017	ND	2.13	107	2.00	0.143	
Total Xylenes*	<0.150	0.150	09/01/2017	ND	6.46	108	6.00	0.327	
Total BTX	<0.300	0.300	09/01/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 72-148

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/01/2017	ND	448	112	400	3.64	

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	09/01/2017	ND	181	90.3	200	0.585	
DRO >C10-C28	<10.0	10.0	09/01/2017	ND	195	97.5	200	1.99	
EXT DRO >C28-C36	<10.0	10.0	09/01/2017	ND					

Surrogate: 1-Chlorooctane 89.9 % 28.3-164

Surrogate: 1-Chlorooctadecane 93.5 % 34.7-157

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 Fax To: (575) 397-0397

Received:	08/31/2017	Sampling Date:	08/30/2017
Reported:	09/01/2017	Sampling Type:	Soil
Project Name:	LOVING FALCON 28-1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - LOVING NM		

Sample ID: SP7 @ 5' (H702329-22)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	09/01/2017	ND	448	112	400	3.64	

Sample ID: SP8 @ SURFACE (H702329-23)

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	09/01/2017	ND	448	112	400	3.64	

Sample ID: SP8 @ 5' (H702329-24)

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	09/01/2017	ND	448	112	400	3.64	

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Received:	08/31/2017	Sampling Date:	08/30/2017
Reported:	09/01/2017	Sampling Type:	Soil
Project Name:	LOVING FALCON 28-1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - LOVING NM		

Sample ID: SP9 @ SURFACE (H702329-25)

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	09/01/2017	ND	2.03	102	2.00	0.0670	
Toluene*	<0.050	0.050	09/01/2017	ND	2.01	101	2.00	1.41	
Ethylbenzene*	<0.050	0.050	09/01/2017	ND	2.13	107	2.00	0.143	
Total Xylenes*	<0.150	0.150	09/01/2017	ND	6.46	108	6.00	0.327	
Total BTX	<0.300	0.300	09/01/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 72-148

Chloride, SM4500CI-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/01/2017	ND	448	112	400	3.64	

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	09/01/2017	ND	181	90.3	200	0.585	
DRO >C10-C28	<10.0	10.0	09/01/2017	ND	195	97.5	200	1.99	
EXT DRO >C28-C36	<10.0	10.0	09/01/2017	ND					

Surrogate: 1-Chlorooctane 75.8 % 28.3-164

Surrogate: 1-Chlorooctadecane 84.2 % 34.7-157

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Received:	08/31/2017	Sampling Date:	08/30/2017
Reported:	09/01/2017	Sampling Type:	Soil
Project Name:	LOVING FALCON 28-1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - LOVING NM		

Sample ID: SP9 @ 5' (H702329-26)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	09/01/2017	ND	448	112	400	3.64	

Sample ID: SP10 @ SURFACE (H702329-27)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/01/2017	ND	448	112	400	3.64	

Sample ID: SP10 @ 5' (H702329-28)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	09/01/2017	ND	448	112	400	3.64	

Sample ID: SP11 @ SURFACE (H702329-29)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/01/2017	ND	448	112	400	3.64	

Sample ID: SP11 @ 5' (H702329-30)

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	09/01/2017	ND	448	112	400	3.64	

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Received:	08/31/2017	Sampling Date:	08/30/2017
Reported:	09/01/2017	Sampling Type:	Soil
Project Name:	LOVING FALCON 28-1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - LOVING NM		

Sample ID: SP12 @ SURFACE (H702329-31)

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	09/01/2017	ND	2.03	102	2.00	0.0670	
Toluene*	<0.050	0.050	09/01/2017	ND	2.01	101	2.00	1.41	
Ethylbenzene*	<0.050	0.050	09/01/2017	ND	2.13	107	2.00	0.143	
Total Xylenes*	<0.150	0.150	09/01/2017	ND	6.46	108	6.00	0.327	
Total BTX	<0.300	0.300	09/01/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 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	80.0	16.0	09/01/2017	ND	448	112	400	3.64	

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	09/01/2017	ND	181	90.3	200	0.585	
DRO >C10-C28	<10.0	10.0	09/01/2017	ND	195	97.5	200	1.99	
EXT DRO >C28-C36	<10.0	10.0	09/01/2017	ND					

Surrogate: 1-Chlorooctane 89.9 % 28.3-164

Surrogate: 1-Chlorooctadecane 95.5 % 34.7-157

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Fax To: (575) 397-0397

Received: 08/31/2017
Reported: 09/01/2017
Project Name: LOVING FALCON 28-1H
Project Number: NONE GIVEN
Project Location: COG - LOVING NM

Sampling Date: 08/30/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP12 @ 5' (H702329-32)

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	09/01/2017	ND	448	112	400	3.64		

Sample ID: SP13 @ SURFACE (H702329-33)

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	09/01/2017	ND	448	112	400	3.64	

Sample ID: SP13 @ 5' (H702329-34)

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	09/01/2017	ND	448	112	400	3.64	

Sample ID: SP14 @ SURFACE (H702329-35)

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	09/01/2017	ND	448	112	400	3.64	

Sample ID: SP14 @ 5' (H702329-36)

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	09/01/2017	ND	448	112	400	3.64	

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Hobbs NM, 88241
Fax To: (575) 397-0397

Received:	08/31/2017	Sampling Date:	08/30/2017
Reported:	09/01/2017	Sampling Type:	Soil
Project Name:	LOVING FALCON 28-1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - LOVING NM		

Sample ID: SP15 @ SURFACE (H702329-37)

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	09/01/2017	ND	2.03	102	2.00	0.0670	
Toluene*	<0.050	0.050	09/01/2017	ND	2.01	101	2.00	1.41	
Ethylbenzene*	<0.050	0.050	09/01/2017	ND	2.13	107	2.00	0.143	
Total Xylenes*	<0.150	0.150	09/01/2017	ND	6.46	108	6.00	0.327	
Total BTX	<0.300	0.300	09/01/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 72-148

Chloride, SM4500CI-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	09/01/2017	ND	448	112	400	3.64	

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	09/01/2017	ND	181	90.3	200	0.585	
DRO >C10-C28	469	10.0	09/01/2017	ND	195	97.5	200	1.99	
EXT DRO >C28-C36	136	10.0	09/01/2017	ND					

Surrogate: 1-Chlorooctane 100 % 28.3-164

Surrogate: 1-Chlorooctadecane 107 % 34.7-157

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Fax To: (575) 397-0397

Received: 08/31/2017
Reported: 09/01/2017
Project Name: LOVING FALCON 28-1H
Project Number: NONE GIVEN
Project Location: COG - LOVING NM

Sampling Date: 08/30/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP15 @ 5' (H702329-38)

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	09/01/2017	ND	448	112	400	3.64		

Sample ID: SP16 @ SURFACE (H702329-39)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	09/01/2017	ND	448	112	400	3.64	

Sample ID: SP16 @ 5' (H702329-40)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	09/01/2017	ND	448	112	400	3.64		

Sample ID: NORTH @ SURFACE (H702329-41)

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	09/01/2017	ND	448	112	400	3.64	

Sample ID: EAST @ SURFACE (H702329-42)

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	09/01/2017	ND	448	112	400	3.64	

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Fax To: (575) 397-0397

Received:	08/31/2017	Sampling Date:	08/30/2017
Reported:	09/01/2017	Sampling Type:	Soil
Project Name:	LOVING FALCON 28-1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - LOVING NM		

Sample ID: WEST @ SURFACE (H702329-43)

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	09/01/2017	ND	448	112	400	3.64		

Sample ID: SOUTH @ SURFACE (H702329-44)

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	09/01/2017	ND	448	112	400	3.64	

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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



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(505) 393-2326 FAX (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: BBC International, Inc.		BILL TO		ANALYSIS REQUEST									
---------------------------------------	--	----------------	--	-------------------------	--	--	--	--	--	--	--	--	--

Project Manager: Cliff Brunson		P.O. #:											
Address: P.O. Box 805		Company:											
City: Hobbs		Attn: COC											
Phone #: 575-397-6388		Address:											
State: NM Zip: 88241		City:											
Fax #: 575-397-0397		State:											
Project #: Project Owner: COC		Zip:											
Project Name: Loping Felcon 20-14		Phone #:											
Project Location: Loping, NM		Fax #:											
Sampler Name: J.D.													

FOR LAB USE ONLY		(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV	SAMPLING										
Lab I.D.	Sample I.D.			GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :												
H10238A	SP105K		1			X						DATE	TIME	TPH Extended	BTEX	CL-					
1	SP105K		1			X						029	030	X	X	X					
2	SP105K		1			X							038	X	X	X					
3	SP105K		1			X							045	X	X	X					
4	SP105K		1			X							052	X	X	X					
5	SP105K		1			X							915	X	X	X					
6	SP105K		1			X							933	X	X	X					
7	SP105K		1			X							1000	X	X	X					
8	SP105K		1			X							1005	X	X	X					
9	SP105K		1			X							1021	X	X	X					
10	SP105K		1			X							1033	X	X	X					

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Relinquished By: J.D. Brunson		Date: 3/17		Received By: J.D. Brunson		Time: 1:45		Date: 3/17		Time: 1:45		Sample Condition		CHECKED BY: (Initials)		REMARKS:	
Delivered By: (Circle One) -L.4.40		Cool		Intact		Yes		No		Yes		No		Yes		No	
Sampler - UPS - Bus - Other: -L.4.50		Cool		Intact		Yes		No		Yes		No		Yes		No	

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2/5

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: COL

Project Name: Loying Falcon 28-14

Project Location: Loying Falcon

Sample Name: VU

P.O. #:
Company:
Attn:

Address:
City:

State: Zip:

Phone #:
Fax #:

FOR LAB USE ONLY

Lab I.D. Sample I.D.

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.										DATE	TIME																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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Relinquished By: [Signature] Date: 8-31-17 Received By: [Signature] Date: 8-31-17

Relinquished By: [Signature] Date: 8-31-17 Received By: [Signature] Date: 8-31-17

Delivered By: (Circle One) -L-46
Sampler - UPS - Bus - Other: [Signature] -L-15e

Sample Condition: Cool ☒ Intact ☒
Checked By: [Signature] (Initials) T-475
REMARKS: PUSH

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

3/5

BILL TO

ANALYSIS REQUEST

Company Name: BBC International, Inc.		P.O. #:	
Project Manager: Cliff Brunson		Company:	
Address: P.O. Box 805		Attn:	
City: Hobbs		Address:	
State: NM Zip: 88241		City:	
Phone #: 575-397-6388 Fax #: 575-397-0397		State: Zip:	
Project #:		Phone #:	
Project Name: Louisa Falcon 20-1H		Fax #:	
Project Location: Louisa Falcon			
Sampler Name: V.O.			

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 :					ACID/BASE:	ICE / COOL	OTHER :	TPH	BTEX	CL	
4102329	SP705UL	C-1	1	X								0.30	1045	X	X	X				
22	SP003UL	C-1	1	X									1112	X	X	X				
23	SP003UL	C-1	1	X									1140	X	X	X				
24	SP003UL	C-1	1	X									1149	X	X	X				
25	SP003UL	C-1	1	X									1149	X	X	X				
26	SP003UL	C-1	1	X									1205	X	X	X				
27	SP003UL	C-1	1	X									1205	X	X	X				
28	SP003UL	C-1	1	X									1205	X	X	X				
29	SP003UL	C-1	1	X									1205	X	X	X				
30	SP003UL	C-1	1	X									1205	X	X	X				

Relinquished By: V.O.	Date: 3-1-17	Received By: [Signature]	Time: 1:45
Delivered By: (Circle One) -6.42	Sample Condition: Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>	Checked By: [Signature]	Time: 7:47
Sampler - UPS - Bus - Other: [Signature]	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #:	REMARKS: RUSH	

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]





















