



## DELINEATION WORKPLAN

### CHEVRON – LOVINGTON PADDOCK UNIT (Leak Date: 12/25/16)

**RP # 1RP-4567  
API # 30-025-03833**

This delineation workplan and remediation proposal addresses the release associated with RP # 1RP-4567.

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:***

***CHEVRON will excavate the spill area as depicted on the following site diagram. The leak area near SP1 and SP2 will be excavated to a depth of 6 inches. The leak area around SP3 and SP4 will be excavated to a depth of 1 foot.***

The entire site will then be backfilled with clean soil and the area off location near SP3 and SP4 will be revegetated 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.

**APPROVED**

***By Olivia Yu at 3:44 pm, Jan 31, 2018***

NMOCD approves of the delineation completed for 1RP-4567 and the proposed remediation with these conditions: bottom and sidewall/edge confirmation samples at no greater than 50 ft. apart. One sample must be located at the border between SP1/2 & SP3/4.



# Chevron, Lovington Paddock Unit

Leak date: 12/25/2016

Lea County, NM

API# 30-025-03833

1RP-4567

## Legend

- 1 ft Excavation
- 6 in Excavation
- East Sample
- Sample points, hand auger
- Leak Point
- North Sample
- South Sample
- Spill Area
- West Sample





## Chevron, Lovington Paddock Unit

### Sample Points, Hand Auger

SP1, GPS POINT: N 32.85841 W-103.30094

SP2, GPS POINT: N 32.85853 W-103.30103

SP3, GPS POINT: N 32.85857 W-103.30086

SP4, GPS POINT: N 32.85861 W-103.30076

NORTH SAMPLE, GPS POINT: N 32.85868 W-103.30078

SOUTH SAMPLE, GPS POINT: N 32.85837 W-103.30092

EAST SAMPLE, GPS POINT: N 32.85853 W-103.30064

WEST SAMPLE, GPS POINT: N 32.58545 W-103.30104





# 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															Water
		Sub-	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Column		
POD Number	Code	basin															
<a href="#">L_02331</a>		L	LE	4	4	01	17S	36E	658933	3636888*	<input type="checkbox"/>	0	105	48	57		
<a href="#">L_10633 POD5</a>		L	LE	2	4	4	01	17S	36E	659032	3636987*	<input type="checkbox"/>	140	228	120	108	
<a href="#">L_10633 S2</a>	R	L	LE			4	13	17S	36E	659032	3636987*	<input type="checkbox"/>	140	196	80	116	
<a href="#">L_10633 S4</a>		L	LE	2	4	4	01	17S	36E	659032	3636987*	<input type="checkbox"/>	140	204	110	94	
<a href="#">L_10633 POD4</a>		L	LE	1	4	4	01	17S	36E	658832	3636987*	<input type="checkbox"/>	141	209	80	129	
<a href="#">L_10633 S3</a>		L	LE	4	4	4	01	17S	36E	659032	3636787*	<input type="checkbox"/>	141	188	80	108	
<a href="#">L_10633 POD6</a>		L	LE	3	4	4	01	17S	36E	658832	3636787*	<input type="checkbox"/>	142	196	80	116	
<a href="#">L_10633 S</a>	R	L	LE			4	13	17S	36E	659026	3637189*	<input type="checkbox"/>	315	228	120	108	
<a href="#">L_02205</a>		L	LE	2	2	12	17S	36E	658939	3636485*	<input type="checkbox"/>	403	110	45	65		
<a href="#">L_10633</a>	R	L	LE			4	13	17S	36E	659026	3637389*	<input type="checkbox"/>	509	209	80	129	
<a href="#">L_02474</a>		L	LE	1	3	06	17S	37E	659331	3637296*	<input type="checkbox"/>	569	100	40	60		
<a href="#">L_01603 POD1</a>		L	LE	1	1	07	17S	37E	659343	3636492*	<input type="checkbox"/>	570	120	39	81		
<a href="#">L_04359 S</a>		L	LE	3	1	1	07	17S	37E	659242	3636391*	<input type="checkbox"/>	585	110	82	28	
<a href="#">L_11558</a>		L	LE	3	1	1	07	17S	37E	659242	3636391*	<input type="checkbox"/>	585	216			
<a href="#">L_04359</a>		L	LE	1	2	1	07	17S	37E	659619	3636595*	<input type="checkbox"/>	745	111	75	36	
<a href="#">L_04359</a>	R	L	LE	1	2	1	07	17S	37E	659619	3636595*	<input type="checkbox"/>	745	111	75	36	
<a href="#">L_04359 POD4</a>		L	LE	1	2	1	07	17S	37E	659619	3636595*	<input type="checkbox"/>	745	222			
<a href="#">L_14207 POD1</a>		L	LE	3	3	2	01	17S	36E	658500	3637679	<input type="checkbox"/>	901	240	100	140	
<a href="#">L_02119</a>		L	LE	1	4	3	01	17S	36E	658024	3636973*	<input type="checkbox"/>	912	130			
<a href="#">L_12562 POD11</a>		L	LE	2	4	2	01	17S	36E	658989	3637831	<input type="checkbox"/>	945	112	97	15	
<a href="#">L_00379</a>		L	LE	1	2	1	12	17S	36E	658031	3636570*	<input type="checkbox"/>	956	110			
<a href="#">L_14207 POD2</a>		L	LE	2	4	1	01	17S	36E	658222	3637712	<input type="checkbox"/>	1088	230	101	129	
<a href="#">L_01963</a>		L	LE	1	1	2	07	17S	37E	660021	3636599*	<input type="checkbox"/>	1125	150	132	18	
<a href="#">L_06395</a>		L	LE	4	1	12	17S	36E	658138	3636069*	<input type="checkbox"/>	1141	112	47	65		
<a href="#">L_00449</a>	R	L	LE	1	1	4	06	17S	37E	660008	3637404*	<input type="checkbox"/>	1192	100	70	30	
<a href="#">L_00449 POD5</a>		L	LE	1	1	4	06	17S	37E	660008	3637404*	<input type="checkbox"/>	1192	247	101	146	
<a href="#">L_00449 POD5</a>	R	L	LE	1	1	4	06	17S	37E	660008	3637404*	<input type="checkbox"/>	1192	247	101	146	
<a href="#">L_01963 S</a>		L	LE	1	2	07	17S	37E	660122	3636500*	<input type="checkbox"/>	1250	128	50	78		
<a href="#">L_04988</a>		L	LE	1	2	01	17S	36E	658510	3638089*	<input type="checkbox"/>	1273	195	55	140		
<a href="#">L_02508</a>		L	LE	2	2	2	01	17S	36E	659013	3638194*	<input type="checkbox"/>	1308	120	40	80	

<a href="#">L 11198</a>	L	LE	3	3	3	01	17S	36E	657620	3636766*	<input type="text"/>	1318	186		
<a href="#">L 12823 POD1</a>	L	LE	2	1	2	07	17S	37E	660221	3636599	<input type="text"/>	1320	200		
<a href="#">L 00449 S2</a>	L	LE		4	06		17S	37E	660317	3637104*	<input type="text"/>	1400	243	118	125
<a href="#">L 00449 S2</a>	R	L	LE		4	06	17S	37E	660317	3637104*	<input type="text"/>	1400	243	118	125
<a href="#">L 05486</a>	L	LE	2	3	1	01	17S	36E	657808	3637773*	<input type="text"/>	1431	225	62	163
<a href="#">L 04988 S</a>	L	LE	3	2	1	01	17S	36E	658006	3637982*	<input type="text"/>	1433	182	55	127
<a href="#">L 12562 POD4</a>	L	LE	4	4	2	36	16S	36E	658584	3638296	<input type="text"/>	1451	121	106	15
<a href="#">L 01584 POD1</a>	L	LE		2	1	01	17S	36E	658107	3638083*	<input type="text"/>	1452	110	48	62
<a href="#">L 01371</a>	L	LE	4	3	4	36	16S	36E	658603	3638389*	<input type="text"/>	1536	115	45	70
<a href="#">L 13038 POD4</a>	L	LE	2	3	2	06	17S	37E	660120	3637865	<input type="text"/>	1537	120		
<a href="#">L 02561</a>	L	LE	3	3	3	31	16S	37E	659210	3638403*	<input type="text"/>	1540	137	50	87
<a href="#">L 13038 POD2</a>	L	LE	2	3	2	06	17S	37E	660146	3637865	<input type="text"/>	1557	115		
<a href="#">L 13038 POD3</a>	L	LE	2	3	2	06	17S	37E	660146	3637865	<input type="text"/>	1557	115		
<a href="#">L 13414 POD3</a>	L	LE	2	3	2	06	17S	37E	660143	3637890	<input type="text"/>	1571	110	93	17
<a href="#">L 13414 POD1</a>	L	LE	4	1	2	06	17S	37E	660176	3637917	<input type="text"/>	1614	110	93	17
<a href="#">L 02413</a>	L	LE		4	4	02	17S	36E	657318	3636861*	<input type="text"/>	1615	90	90	0
<a href="#">L 02426</a>	L	LE		4	4	02	17S	36E	657318	3636861*	<input type="text"/>	1615	115	48	67
<a href="#">L 13414 POD2</a>	L	LE	4	1	2	06	17S	37E	660194	3637900	<input type="text"/>	1617	102	93	9
<a href="#">L 11056</a>	L	LE		2	2	07	17S	37E	660525	3636505*	<input type="text"/>	1637	165	62	103
<a href="#">L 13414 POD4</a>	L	LE	2	3	2	06	17S	37E	660248	3637870	<input type="text"/>	1641	110	93	17
<a href="#">L 13038 POD1</a>	L	LE	4	1	2	06	17S	37E	660223	3637928	<input type="text"/>	1657	115		
<a href="#">L 01438</a>	L	LE		3	4	36	16S	36E	658504	3638490*	<input type="text"/>	1658	110	45	65
<a href="#">L 01220 POD1</a>	L	LE		3	3	31	16S	37E	659311	3638504*	<input type="text"/>	1659	120	55	65
<a href="#">L 02481</a>	L	LE	4	4	2	02	17S	36E	657405	3637566*	<input type="text"/>	1671	150	76	74
<a href="#">L 13414 POD5</a>	L	LE	4	1	2	06	17S	37E	660218	3637979	<input type="text"/>	1686	110	93	17

Average Depth to Water: **77 feet**  
Minimum Depth: **39 feet**  
Maximum Depth: **132 feet**

**Record Count:** 55

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

**Easting (X):** 658933

**Northing (Y):** 3636888

**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.

3/22/17 3:45 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

Public Land Survey System (PLSS)

Q64:

Q16:

SE

Q4:

SE

Sec:

01

Tws:

17S

Rng:

36E

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):

658933.0

mtrs

Northing (Y):

3636888.0

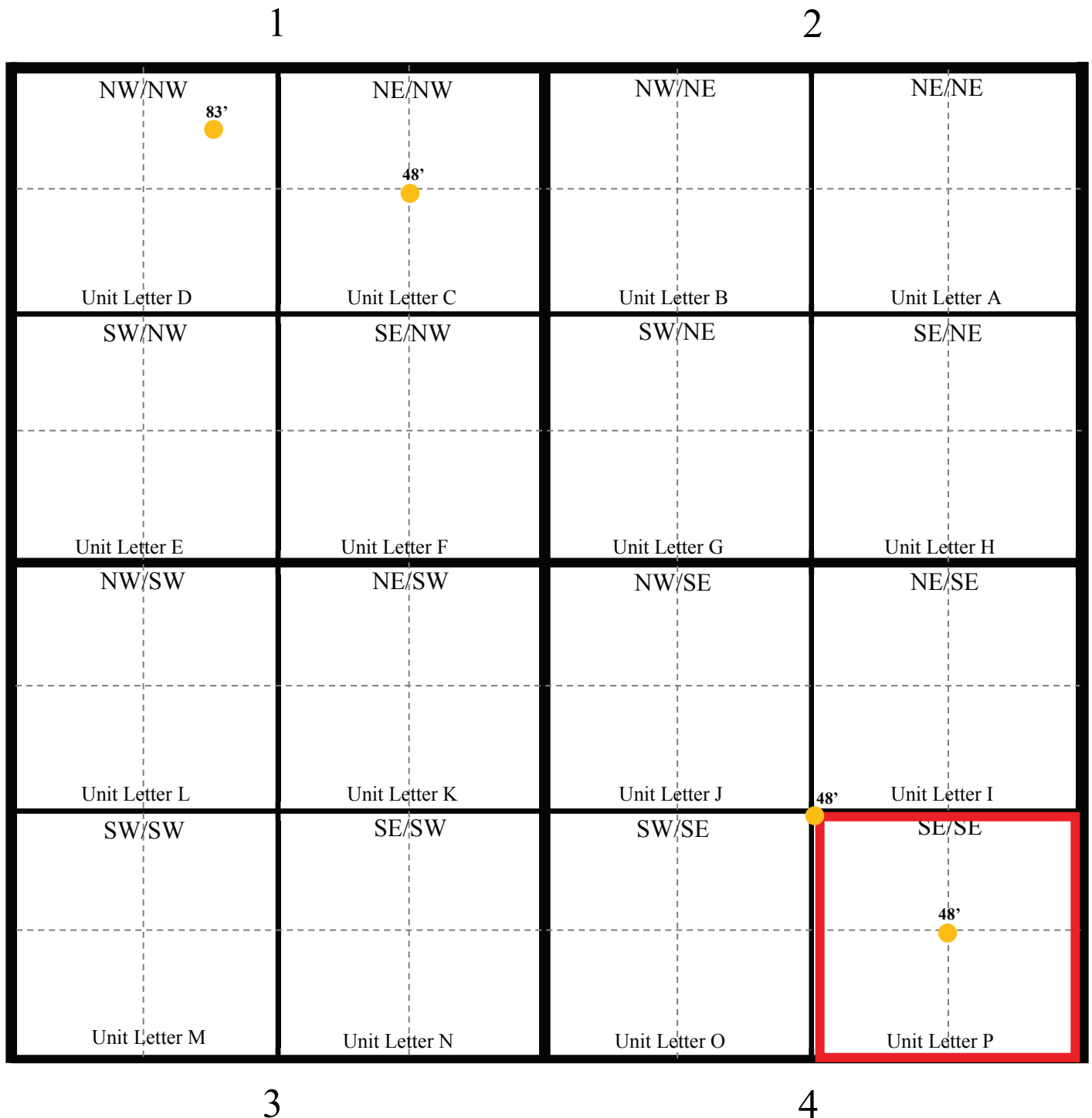
mtrs

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

## Chevron Lovington Paddock Unit

**County** Lea      **Unit Letter** P      **Section** 1      **Township** 17S      **Range** 36E

**Trend Map** 50'-100'





**Laboratory Analytical Results Summary  
Lovington Paddock Unit**

		Sample	SP1 @ SURFACE	SP1 @ 6"	SP1 @ 1'	SP1 @ 5'	SP1 @ 10'
Analyte	Method	Date	2/10/17	2/10/17	2/10/17	1/15/18	1/15/18
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	SM4500Cl-B		4000	544	48	208	208

		Sample	SP2 @ SURFACE	SP2 @ 6"	SP2 @ 1'	SP2 @ 5'	SP2 @ 10'
Analyte	Method	Date	2/10/17	2/10/17	2/10/17	1/15/18	1/15/18
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	SM4500Cl-B		3840	496	32	128	144

		Sample	SP3 @ SURFACE	SP3 @ 6"	SP3 @ 1'	SP3 @ 5'	SP3 @ 10'
Analyte	Method	Date	2/10/17	2/10/17	2/10/17	1/15/18	1/15/18
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	SM4500Cl-B		10000	784	64	96	192

		Sample	SP4 @ SURFACE	SP4 @ 6"	SP4 @ 1'	SP4 @ 5'	SP4 @ 10'
Analyte	Method	Date	2/10/17	2/10/17	2/10/17	1/15/18	1/15/18
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	SM4500Cl-B		6000	752	<16.0	128	160

		Sample	NORTH @ SURFACE
Analyte	Method	Date	2/10/17
			mg/Kg
Chloride	SM4500Cl-B		<16.0

		Sample	EAST @ SURFACE
Analyte	Method	Date	2/10/17
			mg/Kg
Chloride	SM4500Cl-B		48

		Sample	WEST @ SURFACE
Analyte	Method	Date	2/10/17
			mg/Kg
Chloride	SM4500Cl-B		32

		Sample	SOUTH @ SURFACE
Analyte	Method	Date	2/10/17
			mg/Kg
Chloride	SM4500Cl-B		32

February 17, 2017

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: LOVINGTON PADDOCK UNIT

Enclosed are the results of analyses for samples received by the laboratory on 02/13/17 11:40.

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:	02/13/2017	Sampling Date:	02/10/2017
Reported:	02/17/2017	Sampling Type:	Soil
Project Name:	LOVINGTON PADDOCK UNIT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LOVINGTON, NM		

**Sample ID: SP 1 @ SURFACE (H700361-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4000	16.0	02/16/2017	ND	416	104	400	7.41	

**Sample ID: SP 1 @ 6" (H700361-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	02/16/2017	ND	416	104	400	7.41	

**Sample ID: SP 1 @ 1' (H700361-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/17/2017	ND	448	112	400	3.64	

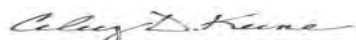
**Sample ID: SP 2 @ SURFACE (H700361-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3840	16.0	02/17/2017	ND	448	112	400	3.64	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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BBC International, Inc.  
Cliff Brunson  
P.O. Box 805  
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Received:	02/13/2017	Sampling Date:	02/10/2017
Reported:	02/17/2017	Sampling Type:	Soil
Project Name:	LOVINGTON PADDOCK UNIT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LOVINGTON, NM		

**Sample ID: SP 2 @ 6" (H700361-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	496	16.0	02/17/2017	ND	448	112	400	3.64		

**Sample ID: SP 2 @ 1' (H700361-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/17/2017	ND	448	112	400	3.64	

**Sample ID: SP 3 @ SURFACE (H700361-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10000	16.0	02/17/2017	ND	448	112	400	3.64	

**Sample ID: SP 3 @ 6" (H700361-08)**

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	02/17/2017	ND	448	112	400	3.64	

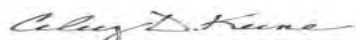
**Sample ID: SP 3 @ 1' (H700361-09)**

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	02/17/2017	ND	448	112	400	3.64	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

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Reported:	02/17/2017	Sampling Type:	Soil
Project Name:	LOVINGTON PADDOCK UNIT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LOVINGTON, NM		

**Sample ID: SP 4 @ SURFACE (H700361-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6000	16.0	02/17/2017	ND	448	112	400	3.64		

**Sample ID: SP 4 @ 6" (H700361-11)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	752	16.0	02/17/2017	ND	448	112	400	3.64		

**Sample ID: SP 4 @ 1' (H700361-12)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	02/17/2017	ND	448	112	400	3.64		

**Sample ID: NORTH @ SURFACE (H700361-13)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	02/17/2017	ND	448	112	400	3.64		

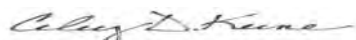
**Sample ID: EAST @ SURFACE (H700361-14)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	02/17/2017	ND	448	112	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:	02/13/2017	Sampling Date:	02/10/2017
Reported:	02/17/2017	Sampling Type:	Soil
Project Name:	LOVINGTON PADDOCK UNIT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LOVINGTON, NM		

**Sample ID: WEST @ SURFACE (H700361-15)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/17/2017	ND	448	112	400	3.64		


**Sample ID: SOUTH @ SURFACE (H700361-16)**

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	02/17/2017	ND	448	112	400	3.64	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**


ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager





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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

<b>Company Name:</b> BBC International, Inc. <b>Project Manager:</b> Cliff Brunson <b>Address:</b> P.O. Box 805 <b>City:</b> Hobbs <b>Phone #:</b> 575-397-6388 <b>State:</b> NM <b>Zip:</b> 88241 <b>Fax #:</b> 575-397-0397		<b>BILL TO</b> <b>P.O. #:</b> <b>Company:</b> <b>Attn:</b> <b>Address:</b> <b>City:</b> <b>State:</b> <b>Zip:</b> <b>Phone #:</b> <b>Fax #:</b>		<b>ANALYSIS REQUEST</b>																																			
<b>Project #:</b> <b>Project Name:</b> Lovington Project Unit <b>Project Location:</b> Lovington, NM <b>Sample Name:</b> 10		<b>Project Owner:</b> Chevron <b>City:</b> <b>State:</b> <b>Zip:</b> <b>Phone #:</b> <b>Fax #:</b>																																					
FOR LAB USE ONLY																																							
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX		PRESERV		SAMPLING																											
H700361		SP 906...		1		1		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME											
11		12		13		14		15		16		17		18		19		20		21		22		23		24		25											
11		12		13		14		15		16		17		18		19		20		21		22		23		24		25											
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11		12		13		14		15		16		17		18		19		20		21		22		23		24		25											
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11		12		13		14		15		16		17		18		19		20		21		22		23		24		25											



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

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January 19, 2018

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: LOVINGTON PADDOCK UNIT

Enclosed are the results of analyses for samples received by the laboratory on 01/16/18 11:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/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,

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:	01/16/2018	Sampling Date:	01/15/2018
Reported:	01/19/2018	Sampling Type:	Soil
Project Name:	LOVINGTON PADDOCK UNIT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LOVINGTON, NM		

**Sample ID: SP 1 @ 5' (H800166-01)**

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	01/18/2018	ND	416	104	400	3.77	

**Sample ID: SP 1 @ 10' (H800166-02)**

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	01/18/2018	ND	416	104	400	3.77	

**Sample ID: SP 2 @ 5' (H800166-03)**

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	01/18/2018	ND	416	104	400	3.77	

**Sample ID: SP 2 @ 10' (H800166-04)**

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	01/18/2018	ND	416	104	400	3.77	

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:	01/16/2018	Sampling Date:	01/15/2018
Reported:	01/19/2018	Sampling Type:	Soil
Project Name:	LOVINGTON PADDOCK UNIT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LOVINGTON, NM		

**Sample ID: SP 3 @ 5' (H800166-05)**

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	01/18/2018	ND	416	104	400	3.77	

**Sample ID: SP 3 @ 10' (H800166-06)**

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	01/18/2018	ND	416	104	400	3.77	

**Sample ID: SP 4 @ 5' (H800166-07)**

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	01/18/2018	ND	416	104	400	7.41	

**Sample ID: SP 4 @ 10' (H800166-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	01/18/2018	ND	416	104	400	7.41	

Cardinal Laboratories

\*=Accredited Analyte

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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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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

<b>Company Name:</b> BBC International, Inc.		<b>P.O. #:</b>		<b>BILL TO</b>										<b>ANALYSIS REQUEST</b>									
<b>Project Manager:</b> Cliff Brunson		<b>Company:</b>																					
<b>Address:</b> P.O. Box 805		<b>Attn:</b>																					
<b>City:</b> Hobbs	<b>State:</b> NM	<b>Zip:</b> 88241																					
<b>Phone #:</b> 575-397-6388	<b>Fax #:</b> 575-397-0397	<b>Address:</b>																					
<b>Project #:</b>	<b>Project Owner:</b> Chevron	<b>City:</b>																					
<b>Project Name:</b> Livingston Product Unit	<b>State:</b>	<b>Zip:</b>																					
<b>Project Location:</b> Livingston	<b>Phone #:</b>																						
<b>Sampler Name:</b> Cliff Brunson	<b>Fax #:</b>																						

FOR LAB USE ONLY		LAB I.D.		Sample I.D.		(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.	SAMPLING	DATE	TIME												
								GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :													
H8001d0	1	SP1eS	/o	C-1	X										X		1-15	1030	X										
	2	SP2eS	/o	C-1	X										X		1-15	1111	X										
	3	SP3eS	/o	C-1	X										X		1-15	1145	X										
	4	SP4eS	/o	C-1	X										X		1-15	130	X										
	5	SP5eS	/o	C-1	X										X		1-15	222	X										
	6	SP6eS	/o	C-1	X										X		1-15	245	X										
	7	SP7eS	/o	C-1	X										X		1-15	401	X										

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<b>Relinquished By:</b> [Signature]	<b>Date:</b> 7-16-15	<b>Received By:</b> [Signature]	<b>Time:</b> 11:50
<b>Relinquished By:</b> [Signature]	<b>Date:</b>	<b>Received By:</b> [Signature]	<b>Time:</b>

<b>Delivered By:</b> (Circle One) <b>#75</b>	<b>Sample Condition</b>	<b>CHECKED BY:</b> [Signature]
<b>Sampler - UPS - Bus - Other:</b> <b>2.50 / 2.250</b>	<input checked="" type="checkbox"/> Cool <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No	[Signature]

<b>REMARKS:</b>	<b>Phone Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>Add'l Phone #:</b>
	<b>Fax Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>Add'l Fax #:</b>

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	Chevron USA Inc.	Contact	Josepha DeLeon
Address	6301 Deauville Blvd., Midland, TX 79706	Telephone No.	cell: 432-425-1528 wk: 575-263-0424
Facility Name:	Lovington Paddock Unit	Facility Type:	Battery

Surface Owner:	N/A	Mineral Owner:	New Mexico	API No.	300250833
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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
P	1	17S	36E	660	South	660	East	Lea

### NATURE OF RELEASE

Type of Release:	Produced Water Spill	Volume of Release:	16.36 barrels of produced water	Volume Recovered	13 barrels of produced water
Source of Release:	Steel Line	Date and Hour of Occurrence	12/25/2016; 09:00 AM	Date and Hour of Discovery	12/25/2016; 09:00 AM
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Maxey Brown		
By Whom?	Date and Hour: 12/25/2016; verbal via phone call				
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\*

N/A

Describe Cause of Problem and Remedial Action Taken.\*


Produced water spill undergrown from injection trunk/lateral steel line.

Describe Area Affected and Cleanup Action Taken.\*

Isolated lease to repair steel line. Vacuum truck extracted standing liquid. Recovered 13 barrels produced water. Remediation plan will follow.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

### OIL CONSERVATION DIVISION

Signature: 	Approved by Environmental Specialist:		
Printed Name: Josepha DeLeon			
Title: HES Specialist, Environmental Compliance Support	Approval Date:	Expiration Date:	
E-mail Address: jdx@chevron.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 01/3/2017	Phone: 575-263-0424		

\* Attach Additional Sheets If Necessary