

# Linn Energy Turner B #103

## CLOSURE REPORT

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API No. 30-015-26665

LC-029395-B

Release Date: 12-10-2012, 07-02-2013

Unit Letter B, Section 20, Township 17 South, Range 31 East

April 29, 2014

**Prepared by:**

Environmental Department  
Diversified Field Service, Inc.

3412 N. Dal Paso  
Hobbs, NM 88240

Phone: (575)964-8394 Fax: (575)393-8396

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# Turner B #103

## 1 INTRODUCTION

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Linn Energy (Linn) has retained Diversified Field Service, Inc. (DFSI) to address environmental issues for the site detailed herein.

The site is located southwest of Maljamar NM, in Eddy County. The leak sites resulted from two simultaneous leaks. The cumulative impact was 27 bbls. of produced water and crude oil. The first of which was as the result of freeze and rupture in a flow line. The initial form C-141 was submitted to the NMOCD January 07, 2011. As result of remediation efforts for a former leak on the Linn Energy site, Turner B #8 a line was struck near the Turner B #103 by Diversified Field Services (hereinafter referred to as DFSI) personnel. The later incident was recorded and submitted on the form C-141 to NMOCD on July 17, 2013, whereby the volume of produced water impact was 15 bbls., impacting pasture area with a fine mist (Appendix I).

## 2 SITE ACTIVITIES

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### Spill 1:

On March 10, 2014 DFSI personnel collected surface soil samples from the initial spill site which encompassed a 17,335 sq. ft. area (Figure). There was a total of 18 sample points established. The samples were submitted to a commercial laboratory for chloride, TPH, and BTEX analyses (Appendix IV).

Simultaneous soil field testing revealed low Chloride and Hydrocarbon levels at 1 to 2 ft. below ground surface (bgs) (Figure). Chlorides analyses received from the commercial lab revealed acceptable levels, in that all sample points were between 175 mg/kg and 450 mg/kg at 2ft. bgs.

### Spill 2:

On April 07, 2014, DFSI personnel delineated the site for the second spill event. The area impacted was approximately 2,206 sq. ft. Therefore, it was determined to establish four (4) sample points, whereby all positions returned acceptable levels Chloride at surface. Lab confirmations of chloride results were at levels of <16 at 2 ft. bgs. to 448 mg/kg at 4ft. bgs on SP4. TPH totaled less than 10.0 mg/kg GRO and less than 10.0 mg/kg DRO, and BTEX totaled less than 0.300 mg/kg in all samples. Photographs of site activities can be viewed in Appendix II.

On April 08, 2014 DFSI submitted a request to remediate the site to NMOCD and NM BLM, whereby it was determined that all aforementioned surface samples returned analyses of Diversified Field Service, Inc.

Chlorides levels that were below closure levels of 1000 ppm. Hence, the site would be strictly re-seeded per BLM guidelines and reevaluated at a later date. Therefore, on April 11, 2013, DFSI personnel re-seeded the site with 150 lbs. of Lesser Prairie Chicken seed mix, restoring it to its natural state.

### 3 CONCLUSION

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According to the U.S. Geological Survey and the NM Office of the State Engineer, depth to groundwater in the area averages greater than 263 ft. bgs (Appendix III). Based on the removal of soils containing elevated chloride and visual staining at the site, DFSI, on behalf of Linn, submits the final form C-141's (Appendix V) and respectfully requests the closures of the regulatory file for the site.

# Site Diagram

Linn, Turner B 103  
Eddy County, NM  
Drafted By: Lance Crenshaw, 3-27-14

0 0.0075 0.015 0.03 Miles

Spill #2 area:  
2.206 sq. ft.

## Legend

### Misc\_points

#### Types

- ⚡ Electrical Box
- ⚡ Power Pole
- ◇ Headers
- Injection
- ⬡ Pumpjacks
- Tanks
- Valves
- ⬡ Other
- △ sample\_pts
- ☆ Source

### Pipeline

#### Type

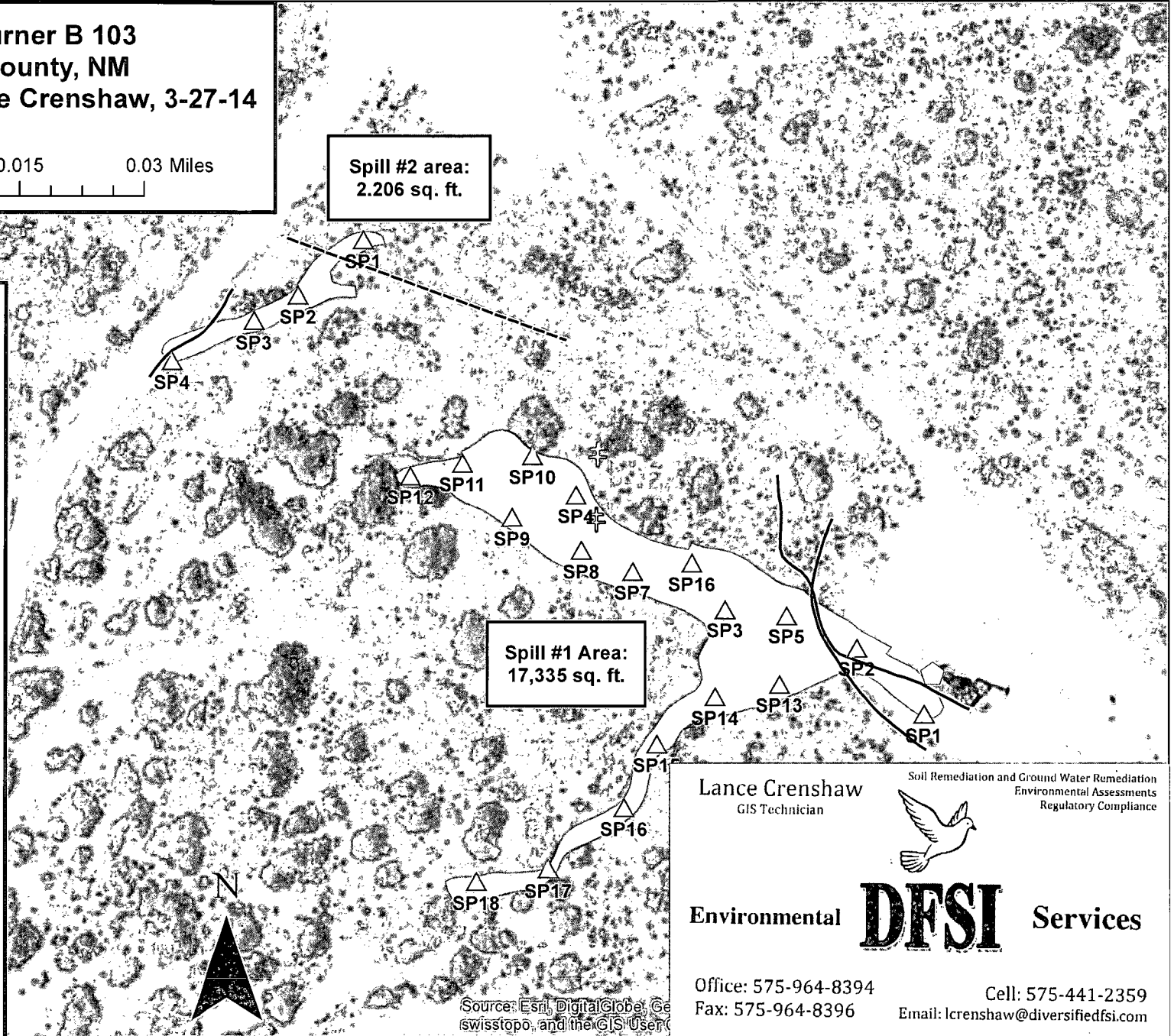
- Above Ground Line
- - - Buried Line

### Spill

- <all other values>

### Spill\_Media

- Oil and Produced H2O
- Oil
- Other
- Produced Water



Lance Crenshaw  
GIS Technician

Soil Remediation and Ground Water Remediation  
Environmental Assessments  
Regulatory Compliance



Environmental **DFS** Services

Office: 575-964-8394  
Fax: 575-964-8396

Cell: 575-441-2359  
Email: lcrenshaw@diversifiedfsi.com

Source: Esri, DigitalGlobe, Geo  
swisstopo, and the GIS User

# Appendix I

INITIAL FORM C-141

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Diversified Field Service, Inc.  
3412 N. Dal Paso  
Hobbs, NM 88240  
(575) 964-8394

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1620 Rio Brazos Road, Aztec, NM 87410  
District IV  
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 October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form.

Release Notification and Corrective Action

11KMW 1101936672

OPERATOR

X Initial Report ☐ Final Report

Name of Company Linn Operating 369324	Contact Dennis Potter	
Address 13694 Lovington hwy, Loco Hills, N.M. 88255	Telephone No. 505-206-7673	
Facility Name Turner B #103 30-015-36665	Facility Type Producing well	
Surface Owner BLM	Mineral Owner BLM	Lease No. LC-029395-B

LOCATION OF RELEASE

Unit Letter B	Section 20	Township 17S	Range 31E	Feet from the 1300'	North/South Line North Line	Feet from the 2590'	East/West Line West Line	County Eddy
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Latitude 32.82372 Longitude 103.88751

NATURE OF RELEASE

Type of Release Oil and produced water	Volume of Release 12 bbls	Volume Recovered 9 bbls
Source of Release flow line	Date and Hour of Occurrence 12/10/2010 am	Date and Hour of Discovery 12/10/2010 10:00 am
Was Immediate Notice Given? X Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? BLM/Terry Gregston	
By Whom? Dennis Potter	Date and Hour 12/10/2010 11:00am	
Was a Watercourse Reached? <input type="checkbox"/> Yes X No	If YES, Volume Impacting the Watercourse.	

Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

The flow line at the Turner B #103 froze and plugged off, the flow line ruptured near the pumping unit. The well was shut-in and the flow line was repaired. A vacuum truck was brought to the location and free fluids were recovered.

RECEIVED

JAN 07 2011

NMOCD ARTESIA

Describe Area Affected and Cleanup Action Taken.\*

The affected area was the location on the southside of the pumping unit est. to be 90' long x 15' wide. The release ran off the location in two narrow flow paths est. to be 250' long x 2' wide and 300' long x 2' wide. The impacted soil on the location was excavated and hauled to Lea Land LLC. A total of 10 cu. yds of impacted soil were hauled to Lea Land LLC. Talon/LPE has been contracted to collect soil samples and construct a work plan for the correction of the release.

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>Dennis J. Potter</i>	OIL CONSERVATION DIVISION	
Printed Name: Dennis Potter	Signed By: <i>Mike Deane</i>	
Production Specialist	Approved by District Supervisor:	
E-mail Address: dpotter@linncnrgy.com	Approval Date: 3/9/11	Expiration Date:
Date: 12/27/2010	Conditions of Approval:	Attached <input type="checkbox"/>
505- Phone: 206-7673	Remediation per OCD Rules & Guidelines. SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:	

\* Attach Additional Sheets If Necessary

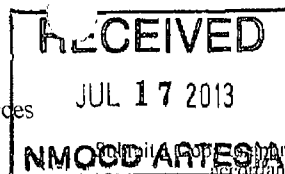
4/9/11

2 RP. 565

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, 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 October 10, 2003

Oil operators must submit appropriate District Office in accordance with 19.15.29 NMAC

### Release Notification and Corrective Action

**Operator:** ☒ Initial Report ☐ Final Report

Name of Company: Linn Operating <b>269324</b>	Contact: Gary Wink
Address: 2130 W. Bender Hobbs, NM 88240	Telephone No.: 575-738-1739
Facility Name: Turner B 103	Facility Type: Oil producer
Surface Owner: Federal	Mineral Owner:
API No.: 3001526665	

### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	20	17S	31E	1300	North	1370	East	Eddy

Latitude: 32.8237284410225 Longitude: -103.887811333549

### NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 15 bbls	Volume Recovered: 0
Source of Release: 2" poly flow line	Date and Hour of Occurrence: 07/02/2013 8:30am	Date and Hour of Discovery: 07/02/2013 8:30am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? M. Bratcher- NM OCD	
By Whom? Gary Wink	Date and Hour 07/17/2013	
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.*: 2" poly flow line was run over by trakhoe being used by Diversified while excavating contaminated soil from a previous leak. This cut a 2" gap in line releasing gas and a small amount a water, no oil.		
Describe Area Affected and Cleanup Action Taken.*: Flow line was immediately shut in and leak was repaired. Approximately 15 gal. of water was released. Diversified picked up contaminated soil and stock piled on plastic for future removal.		

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC 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 NMOC 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, NMOC 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>Gary W. Wink</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Gary W. Wink	Approved by District Supervisor Signed By <i>M. Bratcher</i>	
Title: Production Foreman	Approval Date: <b>JUL 18 2013</b>	Expiration Date:
E-mail Address: gawink@linenergy.com	Conditions of Approval: Remediation per OCD Rule & Guidelines, & like approval by BLM. SUBMIT REMEDIATION	Attached <input type="checkbox"/>
Date: 07/17/2013 Phone: 575-390-3477		

\* Attach Additional Sheets If Necessary

PROPOSAL NO LATER THAN:  
*August 18, 2013*

**2RP-1735**



# Appendix II

## SITE PHOTOGRAPHS

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Diversified Field Service, Inc.  
3412 N. Dal Paso  
Hobbs, NM 88240  
(575) 964-8394

# Linn Energy Turner B #103

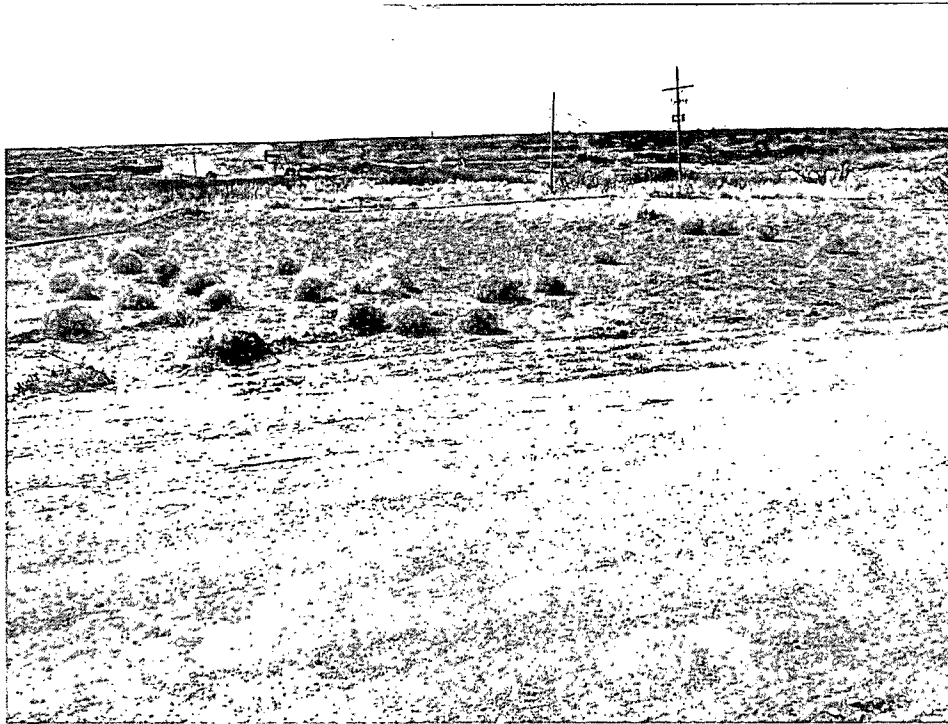
Unit Letter B, Section 20, T17S R31E



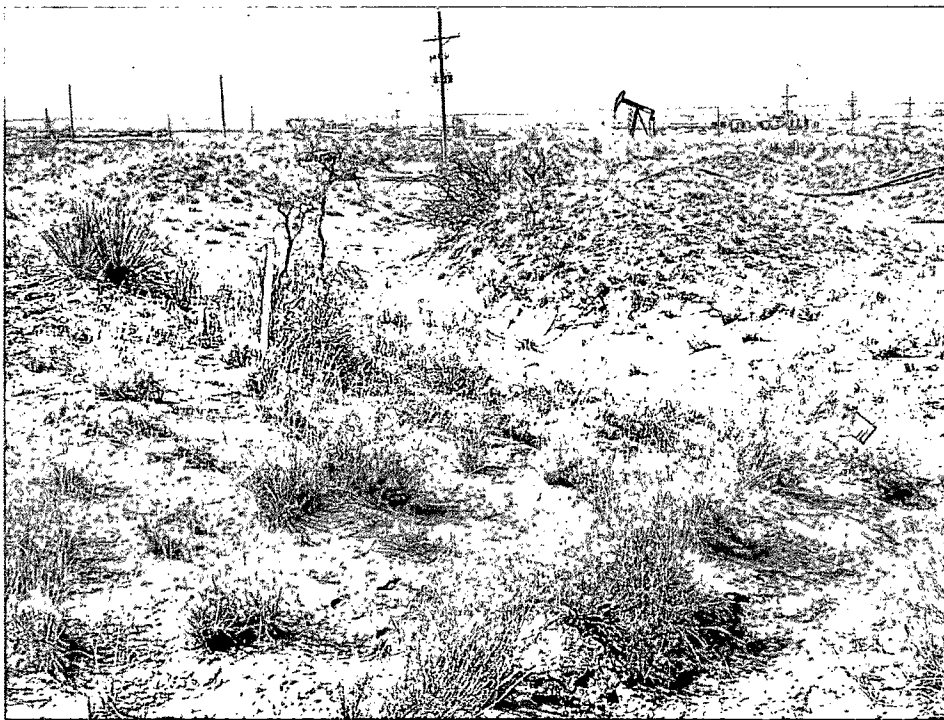
Sign Marking Location 03/07/14



Initial spill area 03/07/14



Impacted pad and pasture area 03/07/14



Impacted pasture with sample points 03/21/14



2<sup>nd</sup> spill site pasture area at completion of seeding 04/28/14

# Appendix III

## GROUNDWATER DATA

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Diversified Field Service, Inc.  
3412 N. Dal Paso  
Hobbs, NM 88240  
(575) 964-8394

# GROUND WATER SEARCH

Linn Energy Turner B #103

UL: B Sec: 20 T: 17S R: 31E

Groundwater Depth: 236 ft. averaged

○ = NM Office of the State Engineer

● = U.S. Geological Survey (unknown well)

⊗ = Site Location

Date: 04/24/14

By: Rebecca Pons

	16S 30E	288'○ 314'○ 16S 31E 295'○	65' 260'○ 248'○ 275'○ 254'○ 16S 32E 210'○ 215'○ 210'○ 221'○ 200'○	
	17S 30E	17S 31E ⊗	132'○ 17S 32E	
	18S 30E 44'○	98'○ 18S 31E	65'○ 430'○ 18S 32E 460'○	



## *New Mexico Office of the State Engineer* **Water Column/Average Depth to Water**

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No records found.

PLSS Search:

Township. 16S      Range 30E

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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.

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# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

(A CLW##### in the  
POD suffix indicates the  
POD has been replaced  
& no longer serves a  
water right file.)

(R=POD has  
been replaced,  
O=orphaned,  
C=the file is  
closed) (quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	POD Sub- Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
<u>L 03435</u>	L	LE		1	1	05	16S	31E		602954	3646955*			
<u>L 03852</u>	R	L	LE	2	2	2	14	16S	31E	609126	3643913*	370	314	56
<u>L 03852 POD4</u>	L	LE		3	4	3	13	16S	31E	609744	3642516*	333	299	34
<u>L 03852 POD5</u>	L	LE		3	2	13	16S	31E		610238	3643427*	328	295	33
<u>L 03852 X</u>	R	L	LE	4	4	4	13	16S	31E	610749	3642526*	333	299	34
<u>L 03852 X2</u>	L	LE		3	2	2	13	16S	31E	610535	3643733*	330	287	43
<u>L 04671</u>	L	LE		1	1	2	12	16S	31E	610114	3645538*	340	288	52
<u>L 10203</u>	L	LE		4	4	3	14	16S	31E	608334	3642495*	310		
<u>L 10206</u>	L	LE		2	2	23	16S	31E		609045	3642204*	280		

Average Depth to Water: 297 feet

Minimum Depth: 287 feet

Maximum Depth: 314 feet

Record Count: 9

PLSS Search:

Township 16S

Range 31E

\*UTM location was derived from PLSS - see Help

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# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum)					(R=POD has been replaced and no longer serves this file, C=the file is closed)		(quarters are 1=NW 2=NE 3=SW 4=SE)		(quarters are smallest to largest) (NAD83 UTM in meters)	
File Nbr	Sub	basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source
3435	L	PRO	0	LOWE DRILLING COMPANY	LE	L 03435				Shallow
							q q q			
							6416 4		Sec Tws Rng	
									X Y	
									602954 3646955	

Record Count: 1

POD Search:

POD Number: L 03435

Sorted by: File Number

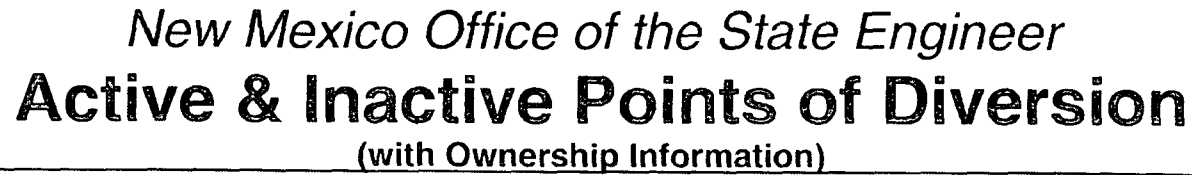
TM location was derived from PLSS - see Help

3 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, usability, or suitability for any particular purpose of the data.

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ACTIVE & INACTIVE POINTS OF DIVERSION



File Nbr	(acre ft per annum)				County	POD Number	C=the file is closed)	(quarters are smallest to largest) (NAD83 UTM in meters)									
	Sub basin	Use	Diversion	Owner				Code	Grant	Source	q 6416	q 4	Sec	Tws	Rng	X	Y
1852	L	MUN		375 CITY OF CARLSBAD	LE	<u>L 03852</u>	R	Shallow	2	2	2	14	16S	31E	609126	3643913*	↗
					LE	<u>L 03852 POD4</u>		Shallow	3	4	3	13	16S	31E	609744	3642516*	↗
					LE	<u>L 03852 POD5</u>	R	Shallow		3	2	13	16S	31E	610238	3643427*	↗
					LE	<u>L 03852 POD6</u>				3	2	13	16S	31E	610390	3643476	↗
					LE	<u>L 03852 X</u>	R	Shallow	4	4	4	13	16S	31E	610749	3642526*	↗
					LE	<u>L 03852 X2</u>		Shallow	3	2	2	13	16S	31E	610535	3643733*	↗

### ACTIVE & INACTIVE POINTS OF DIVERSIFICATION



# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

(with Ownership Information)

		(acre ft per annum)																	
File Nbr	Sub	basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q	6416 4	Sec	Tws	Rng	X	Y		
671	L	PRO		0	JOHN H. TRIGG	LE	L 04671			Shallow	1 1 2	12	16S	31E	610114	3645538*			

(R=POD has been replaced  
and no longer serves this file, (quarters are 1=NW 2=NE 3=SW 4=SE)  
C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in meters)

Record Count: 1

### POD Search:

POD Number: L 04671

Sorted by: File Number

M location was derived from PLSS - see Help

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18/13 2:32 PM



# 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 (quarters are 1=NW 2=NE 3=SW 4=SE)  
closed) (quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD	Sub-	Q Q Q	64	16	4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
L 02381	L	LE	3	1	13	16S	32E			619086	3643515*	308	215	93
L 02434	L	LE			01	16S	32E			619661	3646531*	337		
L 02449	L	LE			01	16S	32E			619661	3646531*	330	265	65
L 02617	L	LE	4	4	02	16S	32E			618656	3645924*	322	270	52
L 02752	L	LE	1	3	26	16S	32E			617521	3639880*	324	280	44
L 02846	L	LE	4	2	11	16S	32E			617956	3645413*	328	275	53
L 02954	L	LE	2	4	03	16S	32E			617043	3646310*	120	65	55
L 02993	L	LE	3	3	2	15	16S	32E		616572	3643391*	100		
L 03631	L	LE	1	2	02	16S	32E			618240	3647126*	315	250	65
L 04930	L	LE		1	23	16S	32E			617698	3642092*	307	210	97
L 05494	L	LE			36	16S	32E			619758	3638489*	303	200	103
L 06557	L	LE	1	4	21	16S	32E			615089	3641466*	295	210	85
L 06807	L	LE	1	4	4	09	16S	32E		615356	3644383*	290	248	42
L 07823	L	LE	2	2	2	16	16S	32E		615561	3643981*	269	247	22
L 08084	L	LE	1	1	1	16	16S	32E		614157	3643970*	317	260	57
L 08084 POD4	L	LE		2	26	16S	32E			618522	3640492*	303	233	70
L 08084 POD5	L	LE	4	1	4	26	16S	32E		618425	3639788*	296	165	131
L 08084 S3	L	LE		2	26	16S	32E			618522	3640492*	305	205	100
L 08241	L	LE	4	4	02	16S	32E			618656	3645924*	316		
L 10204	L	LE	4	2	2	04	16S	32E		615524	3646993*	319		
L 10205	L	LE	4	1	08	16S	32E			613038	3645066*	330		
L 11189	L	LE	1	1	4	04	16S	32E		614932	3646391*	350		

\*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



# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

(with Ownership Information)

WR File Nbr	Sub	basin	Use	Diversion	Owner	County	POD Number	Code Grant	Source	q q q	Sec	Tws	Rng	X
L 02381	L	PRO		0	GULF REFINING COMPANY	LE	L 02381		Shallow	6416 4	3 1	13	16S 32E	619086 36435

Record Count: 1

POD Search:

POD Number: L 02381

Sorted by: File Number

\*UTM location was derived from PLSS - see Help

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ACTIVE & INACTIVE POINTS OF DIVERSION



# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file. (quarters are 1=NW 2=NE 3=SW 4=SE)  
C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code Grant	Source	q q q	Sec	Tws	Rng	X
L 02449	L	PRO		0 PLYMOUTH OIL COMPANY	LE	L 02449		Shallow	6416 4	01	16S	32E	619661 36465

**Record Count:** 1

### POD Search:

POD Number: L 02449

**Sorted by:** File Number

\*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.

12/18/13 2:34 PM

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ACTIVE & INACTIVE POINTS OF DIVERSION



# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

(with Ownership Information)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code Grant	Source	q q q	6416 4	Sec	Tws	Rng	X
<u>L 02617</u>	L	PRO	0	GULF OIL CORPORATION	LE	<u>L 02617</u>		Shallow	4	4	02	16S	32E	618656 36459

(acre ft per annum)

(R=POD has been replaced and no longer serves this file, C=the file is closed) (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in met

**Record Count:** 1

**POD Search:**

**POD Number:** L 02617

**Sorted by:** File Number

\*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.



# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum)					(R=POD has been replaced and no longer serves this file, C=the file is closed)		(quarters are 1=NW 2=NE 3=SW 4=SE)		(quarters are smallest to largest) (NAD83 UTM in me	
WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q
L 02752	L	DOL	3	W W WILLIAMS	LE	L 02752			Shallow	6416 4 1 3 26 16S 32E 617521 36391

**Record Count:** 1

**POD Search:**

**POD Number:** L 02752

**Sorted by:** File Number

\*UTM location was derived from PLSS - see Help

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ACTIVE & INACTIVE POINTS OF DIVERSION





# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

(with Ownership Information)

WR File Nbr	Sub	basin	Use	Diversion	Owner	County	POD Number	Code Grant	Source	6416 4	Sec	Tws	Rng	X
L 02846	L	PRO		0	CONTINENTAL OIL COMPANY	LE	L 02846		Shallow	4	2	1	11	16S 32E 617956 36454

(R=POD has been replaced and no longer serves this file. (quarters are 1=NW 2=NE 3=SW 4=SE)  
C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in meters)

Record Count: 1

POD Search:

POD Number: L 02846

Sorted by: File Number

\*UTM location was derived from PLSS - see Help

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# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum)

(R=POD has been replaced and no longer serves this file. (quarters are 1=NW 2=NE 3=SW 4=SE)  
C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in met)

WR File Nbr	Sub	basin	Use	Diversion	Owner	County	POD Number	Code Grant	Source	q q q	6416 4	Sec	Tws	Rng	X
L 02954	L	PRO	0	SCHOENFELD-HUNTER-KITCH DRG	LE	L 02954			Shallow	2	4	03	16S	32E	617043 36463

Record Count: 1

POD Search:

POD Number: L 02954

Sorted by: File Number

\*UTM location was derived from PLSS - see Help

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# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced  
and no longer serves this file, (quarters are 1=NW 2=NE 3=SW 4=SE)  
C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in me

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code Grant	Source	6416 4	Sec	Tws	Rng	X
<u>L 03631</u>	L	PRO		0 MAGNOLIA PETROLEUM COMPANY	LE	<u>L 03631</u>		Shallow	1	2	02	16S 32E	618240 36471

**Record Count:** 1

**POD Search:**

POD Number: L 03631

**Sorted by:** File Number

\*UTM location was derived from PLSS - see Help

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# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum)					(R=POD has been replaced and no longer serves this file, C=the file is closed)		(quarters are 1=NW 2=NE 3=SW 4=SE)		(quarters are smallest to largest)		(NAD83 UTM in me	
WR File Nbr	Sub	basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q	X
L 04930	L	STK		3	JULIA WILLIAMS	LE	L 04930			Shallow	6416 4 1 23 16S 32E	617698 36420

**Record Count:** 1

**POD Search:**

**POD Number:** L 04930

**Sorted by:** File Number

\*UTM location was derived from PLSS - see Help

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ACTIVE & INACTIVE POINTS OF DIVERSION



# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

(with Ownership Information)

										(R=POD has been replaced and no longer serves this file. (quarters are 1=NW 2=NE 3=SW 4=SE) C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in me									
(acre ft per annum)																			
Sub										q q q									
WR File Nbr		basin	Use	Diversion	Owner	County		POD Number		Code Grant		Source		6416 4	Sec	Tws	Rng	X	
L 05494		L	COM		165 CITY OF CARLSBAD	LE		L 05494				Shallow			36	16S	32E	619758 3638.	



# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced  
and no longer serves this file. (quarters are 1=NW 2=NE 3=SW 4=SE)  
C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in me

WR File Nbr	Sub	basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q	q	q	Sec	Tws	Rng	X
L 06557	L	STK			3 TAYLOR CATTLE COMPANY	LE	L 06557			Shallow	1	4	21	16S	32E	615089	3641

**Record Count:** 1

**POD Search:**

**POD Number:** L 06557

**Sorted by:** File Number

\*UTM location was derived from PLSS - see Help

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ACTIVE & INACTIVE POINTS OF DIVI



# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

(with Ownership Information)

WR File Nbr	Sub	basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q	Sec	Tws	Rng	X	
L 06807		L	PRO		0 SHARP DRILLING COMPANY	LE	L 06807			Shallow	1	4	4	09	16S 32E	615356 3644:

(R=POD has been replaced and no longer serves this file. (quarters are 1=NW 2=NE 3=SW 4=SE)  
C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in me

Record Count: 1

POD Search:

POD Number: L 06807

Sorted by: File Number

\*UTM location was derived from PLSS - see Help

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ACTIVE & INACTIVE POINTS OF DIVERSION



# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

(with Ownership Information)

WR File Nbr	Sub	basin	Use	Diversion	Owner	County	POD Number	Code Grant	Source	q q q	Sec	Tws	Rng	X
L 07823	L	PRO			O E R WEST ENGINEERING	LE	L 07823		Shallow	2	2	2	16	16S 32E 615561 36439

(acre ft per annum)

(R=POD has been replaced and no longer serves this file, C=the file is closed) (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in met)

Record Count: 1

POD Search:

POD Number: L 07823

Sorted by: File Number

\*UTM location was derived from PLSS - see Help

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(R=POD has been replaced  
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C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in me

## ACTIVE & INACTIVE POINTS OF DIVI



# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

(with Ownership Information)

WR File Nbr	Sub	basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q	Sec	Tws	Rng	X
L 08084	L	COM	750	MOR-WEST CORPORATION	LE	L 08084 S3				Shallow	6416 4	2	26	16S 32E	618522 36404

(R=POD has been replaced and no longer serves this file. (quarters are 1=NW 2=NE 3=SW 4=SE)  
C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in meters)

**Record Count:** 1

**POD Search:**

POD Number: L 08084 S3

**Sorted by:** File Number

\*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.

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ACTIVE & INACTIVE POINTS OF DIVERSION

Average Depth to Water: 224 feet

Minimum Depth: 65 feet

Maximum Depth: 280 feet

Record Count: 22

PLSS Search:

Township: 16S      Range: 32E



## *New Mexico Office of the State Engineer* **Water Column/Average Depth to Water**

---

No records found.

PLSS Search:

Township 17S      Range 30E

---

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## New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the  
POD suffix indicates the  
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& no longer serves a  
water right file.)

(R=POD has  
been replaced,  
O=orphaned,

C=the file is (quarters are 1=NW 2=NE 3=SW 4=SE)  
closed) (quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD	Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
RA 11590 POD1				ED	2	1	3	32	17S	31E	603315	3628545	158		
RA 11590 POD3				ED	3	1	2	32	17S	31E	603932	3629260	60		
RA 11590 POD4				ED	4	1	1	32	17S	31E	603308	3629253	55		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 3

PLSS Search:

Township 17S

Range 31E

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## New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the  
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(R=POD has  
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O=orphaned,

C=the file is  
closed)

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

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

(In feet)

POD Number	POD		Q Q Q				Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
	Sub- Code	basin	64	16	4	4								
<u>L 04019</u>	L	LE	4	3	4	02	17S	32E	618468	3636166*		182		
<u>L 04020</u>	L	LE	3	3	4	02	17S	32E	618268	3636166*		200		
<u>L 04021</u>	R	L	3	4	4	02	17S	32E	618670	3636170*		190		
<u>L 04021 POD3</u>	L	LE		3	4	03	17S	32E	616761	3636252*		247		
<u>L 04021 S</u>	L	LE	2	4	4	03	17S	32E	617262	3636354*		260		
<u>L 13047 POD1</u>	L	LE				11	17S	32E	618187	3635254*		140		
<u>L 13050 POD1</u>	L	LE	2	2	1	10	17S	32E	616463	3635945*		156	132	24
<u>RA 08855</u>		LE	4	1	1	10	17S	32E	616061	3635742*		158		
<u>RA 09505</u>		LE	2	2	1	10	17S	32E	616462	3635944		147		
<u>RA 09505 S</u>		LE	2	2	1	10	17S	32E	616463	3635945*		144		
<u>RA 10175</u>		LE		2	1	28	17S	32E	614814	3631005*		158		
<u>RA 11684 POD1</u>		LE	1	1	4	11	17S	32E	618216	3635124		275		
<u>RA 11684 POD2</u>		LE	1	1	4	11	17S	32E	618313	3635248		275		
<u>RA 11684 POD3</u>		LE	3	3	1	11	17S	32E	618262	3635371		275		
<u>RA 11684 POD4</u>		LE	1	3	2	11	17S	32E	618334	3635521		275		
<u>RA 11684 POD5</u>		LE	3	1	4	11	17S	32E	618353	3635047		275		
<u>RA 11734 POD1</u>		LE	2	2	1	10	17S	32E	616556	3635929		165		

Average Depth to Water: 132 feet

Minimum Depth: 132 feet

Maximum Depth: 132 feet

Record Count: 17

PLSS Search:

Township: 17S

Range: 32E

\*UTM location was derived from PLSS - see Help

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*New Mexico Office of the State Engineer*  
**Active & Inactive Points of Diversion**  
(with Ownership Information)

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No PODs found.

POD Search:

POD Number: L 13050 1



## 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 (quarters are 1=NW 2=NE 3=SW 4=SE)  
closed) (quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
<u>CP 00818</u>			LE	1	4	26	18S	30E		599289	3620364*	240		
<u>CP 00819</u>			LE	2	4	32	18S	30E		594878	3618720*	150		
<u>L 01978</u>	L		LE	1	3	23	18S	30E		598469	3621964*	65	44	21

Average Depth to Water: 44 feet

Minimum Depth: 44 feet

Maximum Depth: 44 feet

Record Count: 3

PLSS Search:

Township 18S

Range 30E

\*UTM location was derived from PLSS - see Help

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# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, (quarters are 1=NW 2=NE 3=SW 4=SE)  
C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in me'

WR File Nbr	Sub	basin	Use	Diversion	Owner	County	POD Number	Code Grant	Source	q q q	Sec	Tws	Rng	X
L 01978	L	DOM		3	L A JOHNSON	LE	L 01978		Shallow	6416 4	1 3	23	18S 30E	598469 36215

Record Count: 1

POD Search:

POD Number: L 01978

Sorted by: File Number

\*UTM location was derived from PLSS - see Help

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ACTIVE & INACTIVE POINTS OF DIVI



# New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the  
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POD has been replaced  
& no longer serves a  
water right file.)

(R=POD has  
been replaced,  
O=orphaned,  
C=the file is

closed) (quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD	Sub-	Q	Q	Q	Code	basin	County	64	16	4	Sec	Tws	Rng	X	Y	Depth	Depth	Water
																	Well	Water	Column
L 11092		L	LE	2	3	15	18S	31E	606849	3623669*							160	98	62

Average Depth to Water: 98 feet

Minimum Depth: 98 feet

Maximum Depth: 98 feet

Record Count: 1

PLSS Search:

Township 18S

Range 31E

\*UTM location was derived from PLSS - see Help

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# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum)						(R=POD has been replaced and no longer serves this file. (quarters are 1=NW 2=NE 3=SW 4=SE) C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in met									
Sub						q q q									
WR File Nbr	basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	6416	4	Sec	Tws	Rng	X
L 11092	L	DOM		3 NEW HOPE BAPTIST	LE	L 11092			Shallow	2	3	15	18S	31E	606849 36236

Record Count: 1

POD Search:

POD Number: L 11092

Sorted by: File Number

\*UTM location was derived from PLSS - see Help

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ACTIVE & INACTIVE POINTS OF DIVERSION



## New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the  
POD suffix indicates the  
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& no longer serves a  
water right file.)

(R=POD has  
been replaced,  
O=orphaned,

C=the file is  
closed)

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

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

(In feet)

POD Number	POD Sub- Code	basin	County	Q Q Q			Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
				64	16	4								
<u>CP 00566</u>			LE	4	4	1	04	18S	32E	614960	3627280*	133	65	68
<u>CP 00672</u>			LE	4	4	07	18S	32E	612475	3624947*	524	430	94	
<u>CP 00672 CLW475398</u>	O		LE	4	4	07	18S	32E	612475	3624947*	540	460	80	
<u>CP 00677</u>			LE	1	1	26	18S	32E	617750	3621373*	700			

Average Depth to Water: 318 feet

Minimum Depth: 65 feet

Maximum Depth: 460 feet

Record Count: 4

PLSS Search:

Township 18S

Range 32E

\*UTM location was derived from PLSS - see Help

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# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, (quarters are 1=NW 2=NE 3=SW 4=SE)  
 C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in meters)

		(acre ft per annum)													
WR File Nbr		Sub basin Use Diversion Owner		County POD Number		Code Grant		Source		6416 4		Sec Tws Rng		X	
CP 00566		DOM 3 B.E. FRIZZELL		LE CP 00566				Shallow		4 4 1		04 18S 32E		614960 36272	

**Record Count:** 1

**POD Search:**

POD Number: CP 00566

**Sorted by:** File Number

\*UTM location was derived from PLSS - see Help

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WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD	Number	Code	Grant	Source	C=the file is closed)					(quarters are smallest to largest)		(NAD83 UTM in meters)
											q	q	q	q	q	q	q	
											6416	4	Sec	Tws	Rng		X	
CP 00672		STK		3 VIRGIL LINAM ESTATE	LE	CP	00672			Shallow	4	4	07	18S	32E		612475 36249	

**Sorted by: File Number**

### ACTIVE & INACTIVE POINTS OF DIVE



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*New Mexico Office of the State Engineer*  
**Active & Inactive Points of Diversion**  
(with Ownership Information)

---

No PODs found.

**POD Search:**

POD Number: CP 00672 CLW475398



# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced  
and no longer serves this file. (quarters are 1=NW 2=NE 3=SW 4=SE)  
C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in met

WR File Nbr	Sub basin Use Diversion Owner	County POD Number	Code Grant	Source	q q q	Sec	Tws	Rng	X
CP 00677	PRO 0 T X O PROD.	LE CP 00677		6416 4	1 1	26	18S	32E	617750 36213

Record Count: 1

POD Search:

POD Number: CP 00677

Sorted by: File Number

\*UTM location was derived from PLSS - see Help

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ACTIVE & INACTIVE POINTS OF DIVE



# Appendix IV

## LABORATORY ANALYSES

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Diversified Field Service, Inc.  
3412 N. Dal Paso  
Hobbs, NM 88240  
(575) 964-8394



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

---

March 24, 2014

BRIAN WALL

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: TURNER B #103

Enclosed are the results of analyses for samples received by the laboratory on 03/17/14 16:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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:**

 LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

 Received: 03/17/2014  
 Reported: 03/24/2014  
 Project Name: TURNER B #103  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 03/17/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 5 @ 4' (H400803-01)**

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	03/19/2014	ND	2.01	101	2.00	0.775	
Toluene*	<0.050	0.050	03/19/2014	ND	1.92	96.0	2.00	0.201	
Ethylbenzene*	<0.050	0.050	03/19/2014	ND	1.88	94.1	2.00	0.709	
Total Xylenes*	<0.150	0.150	03/19/2014	ND	5.43	90.5	6.00	0.115	
Total BTEX	<0.300	0.300	03/19/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	03/19/2014	ND	416	104	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	03/19/2014	ND	225	112	200	5.05	
DRO >C10-C28	<10.0	10.0	03/19/2014	ND	213	106	200	2.35	

Surrogate: 1-Chlorooctane 124 % 65.2-140

Surrogate: 1-Chlorooctadecane 123 % 63.6-154

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

 Received: 03/17/2014  
 Reported: 03/24/2014  
 Project Name: TURNER B #103  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 03/17/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 6 @ 4' (H400803-02)**

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	03/19/2014	ND	2.01	101	2.00	0.775	
Toluene*	<0.050	0.050	03/19/2014	ND	1.92	96.0	2.00	0.201	
Ethylbenzene*	<0.050	0.050	03/19/2014	ND	1.88	94.1	2.00	0.709	
Total Xylenes*	<0.150	0.150	03/19/2014	ND	5.43	90.5	6.00	0.115	
Total BTEX	<0.300	0.300	03/19/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	03/19/2014	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: ms					

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	03/19/2014	ND	225	112	200	5.05	
DRO >C10-C28	<10.0	10.0	03/19/2014	ND	213	106	200	2.35	

Surrogate: 1-Chlorooctane 108 % 65.2-140

Surrogate: 1-Chlorooctadecane 114 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

Received: 03/17/2014  
 Reported: 03/24/2014  
 Project Name: TURNER B #103  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

Sampling Date: 03/17/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 7 @ 4' (H400803-03)**

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	03/19/2014	ND	2.01	101	2.00	0.775	
Toluene*	<0.050	0.050	03/19/2014	ND	1.92	96.0	2.00	0.201	
Ethylbenzene*	<0.050	0.050	03/19/2014	ND	1.88	94.1	2.00	0.709	
Total Xylenes*	<0.150	0.150	03/19/2014	ND	5.43	90.5	6.00	0.115	
Total BTEX	<0.300	0.300	03/19/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 105 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	03/19/2014	ND	416	104	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	03/20/2014	ND	225	112	200	5.05	
DRO >C10-C28	<10.0	10.0	03/20/2014	ND	213	106	200	2.35	

Surrogate: 1-Chlorooctane 117 % 65.2-140

Surrogate: 1-Chlorooctadecane 121 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

 Received: 03/17/2014  
 Reported: 03/24/2014  
 Project Name: TURNER B #103  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 03/17/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 8 @ 6' (H400803-04)**

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	03/19/2014	ND	2.01	101	2.00	0.775	
Toluene*	<0.050	0.050	03/19/2014	ND	1.92	96.0	2.00	0.201	
Ethylbenzene*	<0.050	0.050	03/19/2014	ND	1.88	94.1	2.00	0.709	
Total Xylenes*	<0.150	0.150	03/19/2014	ND	5.43	90.5	6.00	0.115	
Total BTEX	<0.300	0.300	03/19/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 103 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	03/19/2014	ND	416	104	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	03/20/2014	ND	225	112	200	5.05	
DRO >C10-C28	<10.0	10.0	03/20/2014	ND	213	106	200	2.35	

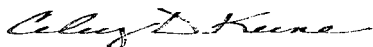
Surrogate: 1-Chlorooctane 117 % 65.2-140

Surrogate: 1-Chlorooctadecane 119 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

 Received: 03/17/2014  
 Reported: 03/24/2014  
 Project Name: TURNER B #103  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 03/17/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 9 @ 4' (H400803-05)**

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/19/2014	ND	2.01	101	2.00	0.775		
Toluene*	<0.050	0.050	03/19/2014	ND	1.92	96.0	2.00	0.201		
Ethylbenzene*	<0.050	0.050	03/19/2014	ND	1.88	94.1	2.00	0.709		
Total Xylenes*	<0.150	0.150	03/19/2014	ND	5.43	90.5	6.00	0.115		
Total BTEX	<0.300	0.300	03/19/2014	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/19/2014	ND	416	104	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	03/20/2014	ND	225	112	200	5.05	
DRO >C10-C28	<10.0	10.0	03/20/2014	ND	213	106	200	2.35	

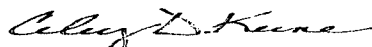
Surrogate: 1-Chlorooctane 107 % 65.2-140

Surrogate: 1-Chlorooctadecane 114 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

 Received: 03/17/2014  
 Reported: 03/24/2014  
 Project Name: TURNER B #103  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 03/17/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 10 @ 4' (H400803-06)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/19/2014	ND	2.01	101	2.00	0.775	
Toluene*	<0.050	0.050	03/19/2014	ND	1.92	96.0	2.00	0.201	
Ethylbenzene*	<0.050	0.050	03/19/2014	ND	1.88	94.1	2.00	0.709	
Total Xylenes*	<0.150	0.150	03/19/2014	ND	5.43	90.5	6.00	0.115	
Total BTEX	<0.300	0.300	03/19/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	03/19/2014	ND	416	104	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	03/20/2014	ND	225	112	200	5.05	
DRO >C10-C28	<10.0	10.0	03/20/2014	ND	213	106	200	2.35	


Surrogate: 1-Chlorooctane 107 % 65.2-140

Surrogate: 1-Chlorooctadecane 112 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Notes and Definitions**

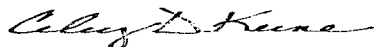
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received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

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Cardinal Laboratories

\*=Accredited Analyte

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Celest D. Keene, Lab Director/Quality Manager



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <u>Linn Energy</u>				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>															
Project Manager: <u>Brian Wall</u>				P.O. #:																			
Address:				Company: <u>Linn Energy</u>																			
City:		State:		Zip:		Attn: <u>Brian Wall</u>																	
Phone #:		Fax #:		Address:																			
Project #:		Project Owner:		City:																			
Project Name: <u>new sp. ponds due to migration + no visible spill</u>				State:																Zip:			
Project Location: <u>Turner B 103 Eddy Co NM</u>				Phone #:																			
Sampler Name: <u>Robbie</u>				Fax #:																			
FOR LAB USE ONLY				MATRIX				PRESERV.				SAMPLING											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE	ICE / COOL	OTHER:	DATE	TIME	CL	TPH	BTX						
<u>H400803</u>																							
1	<u>sp. 5 @ 4'</u>	<u>8</u>	<u>1</u>			<u>X</u>				<u>X</u>			<u>3/7/14</u>	<u>9:35</u>	<u>X</u>	<u>X</u>	<u>X</u>						
2	<u>sp. 6 @ 4'</u>	<u>8</u>	<u>1</u>			<u>X</u>				<u>X</u>			<u>3/7/14</u>	<u>10:18</u>	<u>X</u>	<u>X</u>	<u>X</u>						
3	<u>sp. 7 @ 4'</u>	<u>8</u>	<u>1</u>			<u>X</u>				<u>X</u>			<u>3/7/14</u>	<u>10:54</u>	<u>X</u>	<u>X</u>	<u>X</u>						
4	<u>sp. 8 @ 6'</u>	<u>8</u>	<u>1</u>			<u>X</u>				<u>X</u>			<u>3/7/14</u>	<u>13:59</u>	<u>X</u>	<u>X</u>	<u>X</u>						
5	<u>sp. 9 @ 4'</u>	<u>8</u>	<u>1</u>			<u>X</u>				<u>X</u>			<u>3/7/14</u>	<u>15:00</u>	<u>X</u>	<u>X</u>	<u>X</u>						
6	<u>sp. 10 @ 4'</u>	<u>8</u>	<u>1</u>			<u>X</u>				<u>X</u>			<u>3/7/14</u>	<u>15:37</u>									

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Relinquished By: <u>[Signature]</u>	Date: <u>3/7/14</u>	Received By: <u>Jodi Henson</u>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: <u>4:45</u>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:	
	Time:		<u>bwail@linenergy.com</u>	
Delivered By: (Circle One)	Sample Condition	CHECKED BY:	<u>agladhen@diversifiedfsi.com</u>	
Sampler - UPS - Bus - Other:	Cool <input type="checkbox"/> Intact <input type="checkbox"/>	<u>[Signature]</u>	<u>malves@diversifiedfsi.com</u>	
	Yes <input type="checkbox"/> No <input type="checkbox"/>			

March 24, 2014

BRIAN WALL

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: TURNER B #103

Enclosed are the results of analyses for samples received by the laboratory on 03/17/14 16:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/lab_accred_certif.html).

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

Method EPA 552.2	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:**

LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

Received: 03/17/2014  
 Reported: 03/24/2014  
 Project Name: TURNER B #103  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

Sampling Date: 03/15/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP. 1 @ 20' (H400804-01)**

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	03/19/2014	ND	2.01	101	2.00	0.775	
Toluene*	<0.050	0.050	03/19/2014	ND	1.92	96.0	2.00	0.201	
Ethylbenzene*	<0.050	0.050	03/19/2014	ND	1.88	94.1	2.00	0.709	
Total Xylenes*	<0.150	0.150	03/19/2014	ND	5.43	90.5	6.00	0.115	
Total BTEX	<0.300	0.300	03/19/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 103 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	864	16.0	03/19/2014	ND	416	104	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	03/20/2014	ND	197	98.7	200	0.404	
DRO >C10-C28	<10.0	10.0	03/20/2014	ND	192	95.9	200	0.866	

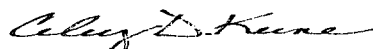
Surrogate: 1-Chlorooctane 108 % 65.2-140

Surrogate: 1-Chlorooctadecane 107 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

 Received: 03/17/2014  
 Reported: 03/24/2014  
 Project Name: TURNER B #103  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 03/15/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP. 2 @ 6' (H400804-02)**

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	03/19/2014	ND	2.01	101	2.00	0.775		
Toluene*	<0.050	0.050	03/19/2014	ND	1.92	96.0	2.00	0.201		
Ethylbenzene*	<0.050	0.050	03/19/2014	ND	1.88	94.1	2.00	0.709		
Total Xylenes*	<0.150	0.150	03/19/2014	ND	5.43	90.5	6.00	0.115		
Total BTEX	<0.300	0.300	03/19/2014	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 103 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	03/19/2014	ND	416	104	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	03/20/2014	ND	197	98.7	200	0.404	
DRO >C10-C28	<10.0	10.0	03/20/2014	ND	192	95.9	200	0.866	


Surrogate: 1-Chlorooctane 116 % 65.2-140

Surrogate: 1-Chlorooctadecane 117 % 63.6-154

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

 Received: 03/17/2014  
 Reported: 03/24/2014  
 Project Name: TURNER B #103  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 03/15/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP. 4 @ 13' (H400804-03)**

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	03/19/2014	ND	2.01	101	2.00	0.775	
Toluene*	<0.050	0.050	03/19/2014	ND	1.92	96.0	2.00	0.201	
Ethylbenzene*	<0.050	0.050	03/19/2014	ND	1.88	94.1	2.00	0.709	
Total Xylenes*	<0.150	0.150	03/19/2014	ND	5.43	90.5	6.00	0.115	
Total BTEX	<0.300	0.300	03/19/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 103 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	656	16.0	03/20/2014	ND	400	100	400	3.92	

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	03/20/2014	ND	197	98.7	200	0.404	
DRO >C10-C28	<10.0	10.0	03/20/2014	ND	192	95.9	200	0.866	

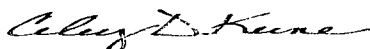
Surrogate: 1-Chlorooctane 109 % 65.2-140

Surrogate: 1-Chlorooctadecane 117 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

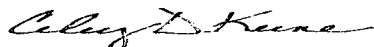
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received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

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Celest D. Keene, Lab Director/Quality Manager



## Page 6 of 6

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

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April 02, 2014

BRIAN WALL

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: TURNER B #103

Enclosed are the results of analyses for samples received by the laboratory on 03/26/14 14:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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).

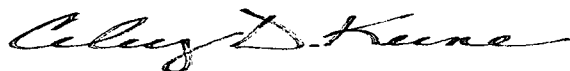
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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,



Caley D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

 Received: 03/26/2014  
 Reported: 04/02/2014  
 Project Name: TURNER B #103  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 03/19/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 12 @ 12' (H400900-01)**

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	04/02/2014	ND	2.60	130	2.00	9.41	
Toluene*	<0.050	0.050	04/02/2014	ND	2.46	123	2.00	9.27	
Ethylbenzene*	<0.050	0.050	04/02/2014	ND	2.40	120	2.00	9.28	
Total Xylenes*	<0.150	0.150	04/02/2014	ND	6.84	114	6.00	9.37	
Total BTEX	<0.300	0.300	04/02/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 111 % 89.4-126

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	03/28/2014	ND	416	104	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	03/28/2014	ND	233	117	200	2.35	
DRO >C10-C28	<10.0	10.0	03/28/2014	ND	221	110	200	2.39	

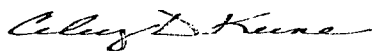
Surrogate: 1-Chlorooctane 84.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 90.3 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

Received: 03/26/2014  
 Reported: 04/02/2014  
 Project Name: TURNER B #103  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

Sampling Date: 03/19/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 13 @ 4' (H400900-02)**

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	04/02/2014	ND	2.60	130	2.00	9.41	
Toluene*	<0.050	0.050	04/02/2014	ND	2.46	123	2.00	9.27	
Ethylbenzene*	<0.050	0.050	04/02/2014	ND	2.40	120	2.00	9.28	
Total Xylenes*	<0.150	0.150	04/02/2014	ND	6.84	114	6.00	9.37	
Total BTEX	<0.300	0.300	04/02/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 111 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	03/28/2014	ND	416	104	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	03/28/2014	ND	233	117	200	2.35	
DRO >C10-C28	<10.0	10.0	03/28/2014	ND	221	110	200	2.39	

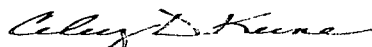
Surrogate: 1-Chlorooctane 93.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 98.3 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

 Received: 03/26/2014  
 Reported: 04/02/2014  
 Project Name: TURNER B #103  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 03/19/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 15 @ 4' (H400900-03)**

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	04/02/2014	ND	2.60	130	2.00	9.41	
Toluene*	<0.050	0.050	04/02/2014	ND	2.46	123	2.00	9.27	
Ethylbenzene*	<0.050	0.050	04/02/2014	ND	2.40	120	2.00	9.28	
Total Xylenes*	<0.150	0.150	04/02/2014	ND	6.84	114	6.00	9.37	
Total BTEx	<0.300	0.300	04/02/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 109 % 89.4-126

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	03/28/2014	ND	416	104	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	03/28/2014	ND	233	117	200	2.35	
DRO >C10-C28	<10.0	10.0	03/28/2014	ND	221	110	200	2.39	

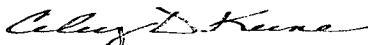
Surrogate: 1-Chlorooctane 90.8 % 65.2-140

Surrogate: 1-Chlorooctadecane 89.3 % 63.6-154

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

 Received: 03/26/2014  
 Reported: 04/02/2014  
 Project Name: TURNER B #103  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 03/20/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 16 @ 4' (H400900-04)**

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	04/02/2014	ND	2.60	130	2.00	9.41	
Toluene*	<0.050	0.050	04/02/2014	ND	2.46	123	2.00	9.27	
Ethylbenzene*	<0.050	0.050	04/02/2014	ND	2.40	120	2.00	9.28	
Total Xylenes*	<0.150	0.150	04/02/2014	ND	6.84	114	6.00	9.37	
Total BTEX	<0.300	0.300	04/02/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/28/2014	ND	416	104	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	03/28/2014	ND	233	117	200	2.35	
DRO >C10-C28	<10.0	10.0	03/28/2014	ND	221	110	200	2.39	

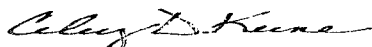
Surrogate: 1-Chlorooctane 84.6 % 65.2-140

Surrogate: 1-Chlorooctadecane 87.3 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

 Received: 03/26/2014  
 Reported: 04/02/2014  
 Project Name: TURNER B #103  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 03/20/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 17 @ 4' (H400900-05)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/02/2014	ND	2.60	130	2.00	9.41	
Toluene*	<0.050	0.050	04/02/2014	ND	2.46	123	2.00	9.27	
Ethylbenzene*	<0.050	0.050	04/02/2014	ND	2.40	120	2.00	9.28	
Total Xylenes*	<0.150	0.150	04/02/2014	ND	6.84	114	6.00	9.37	
Total BTEX	<0.300	0.300	04/02/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 111 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/28/2014	ND	416	104	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	03/28/2014	ND	233	117	200	2.35	
DRO >C10-C28	<10.0	10.0	03/28/2014	ND	221	110	200	2.39	

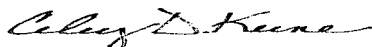
Surrogate: 1-Chlorooctane 83.7 % 65.2-140

Surrogate: 1-Chlorooctadecane 90.6 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

 Received: 03/26/2014  
 Reported: 04/02/2014  
 Project Name: TURNER B #103  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 03/20/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 18 @ 4' (H400900-06)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/02/2014	ND	2.60	130	2.00	9.41	
Toluene*	<0.050	0.050	04/02/2014	ND	2.46	123	2.00	9.27	
Ethylbenzene*	<0.050	0.050	04/02/2014	ND	2.40	120	2.00	9.28	
Total Xylenes*	<0.150	0.150	04/02/2014	ND	6.84	114	6.00	9.37	
Total BTEx	<0.300	0.300	04/02/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 111 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/28/2014	ND	416	104	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	03/28/2014	ND	233	117	200	2.35	
DRO >C10-C28	<10.0	10.0	03/28/2014	ND	221	110	200	2.39	

Surrogate: 1-Chlorooctane 89.8 % 65.2-140

Surrogate: 1-Chlorooctadecane 87.2 % 63.6-154

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

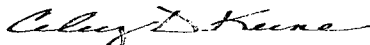
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received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

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Celest D. Keene, Lab Director/Quality Manager





# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Page 9 of 9

Company Name: <u>Linn Energy</u>				BILL TO				ANALYSIS REQUEST																			
Project Manager: <u>Brian Wall</u>				P.O. #:																							
Address:				Company: <u>Linn Energy</u>																							
City: State: Zip:				Attn: <u>Brian Wall</u>																							
Phone #: Fax #:				Address:																							
Project #: Project Owner:				City:																							
Project Name:				State: Zip:																							
Project Location: <u>Turner B 103 Eddy Co, NM</u>				Phone #:																							
Sampler Name: <u>Robbie / Mike</u>				Fax #:																							
FOR LAB USE ONLY																											
Lab I.D.	Sample I.D.	GRAB OR (C)OMP:	# CONTAINERS	MATRIX					PRESERV		SAMPLING																
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE/COOL	OTHER:	DATE	TIME	CL	OTEX	TPH										
H400900																											
1	Sp. 12 @ 2'	Sp	1			X				X			3/19/14	10:29	X	X	X										
2	Sp. 13 @ 4'	Sp	1			X				X			3/19/14	11:02	X	X	X										
3	Sp. 15 @ 4'	Sp	1			X				X			3/19/14	3:46	X	X	X										
4	Sp. 16 @ 4'	Sp	1			X				X			3/20/14	9:33	X	X	X										
5	Sp. 17 @ 4'	Sp	1			X				X			3/20/14	10:31	X	X	X										
6	Sp. 18 @ 4'	Sp	1			X				X			3/20/14	11:20	X	X	X										

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Relinquished By: <u>[Signature]</u>	Date: <u>3/24/14</u>	Received By: <u>Jodi Benson</u>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: <u>2:10</u>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:	
	Time:		<u>bwall@linnenergy.com</u> <u>ngladstein@diversifiedfs.com</u> <u>mvalves@diversifiedfs.com</u> <u>Rpons@diversifiedfs.com</u> <u>Tjennings@diversified.com</u>	
Delivered By: (Circle One)	Sample Condition	CHECKED BY: <u>[Signature]</u>		
Sampler - UPS - Bus - Other:	Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			

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

#54



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

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April 08, 2014

BRIAN WALL

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: TURNER B #103

Enclosed are the results of analyses for samples received by the laboratory on 04/07/14 15:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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:**

 LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

 Received: 04/07/2014  
 Reported: 04/08/2014  
 Project Name: TURNER B #103  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 04/07/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 1 @ 2' (H401053-01)**

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	04/08/2014	ND	2.13	106	2.00	3.71	
Toluene*	<0.050	0.050	04/08/2014	ND	2.17	108	2.00	4.04	
Ethylbenzene*	<0.050	0.050	04/08/2014	ND	2.16	108	2.00	4.18	
Total Xylenes*	<0.150	0.150	04/08/2014	ND	6.29	105	6.00	4.72	
Total BTEX	<0.300	0.300	04/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 114 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	04/08/2014	ND	416	104	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	04/08/2014	ND	188	94.2	200	2.05	
DRO >C10-C28	<10.0	10.0	04/08/2014	ND	206	103	200	1.70	

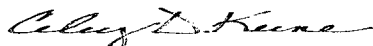
Surrogate: 1-Chlorooctane 113 % 65.2-140

Surrogate: 1-Chlorooctadecane 101 % 63.6-154

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

 Received: 04/07/2014  
 Reported: 04/08/2014  
 Project Name: TURNER B #103  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 04/07/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 2 @ 2' (H401053-02)**

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	04/08/2014	ND	2.13	106	2.00	3.71	
Toluene*	<0.050	0.050	04/08/2014	ND	2.17	108	2.00	4.04	
Ethylbenzene*	<0.050	0.050	04/08/2014	ND	2.16	108	2.00	4.18	
Total Xylenes*	<0.150	0.150	04/08/2014	ND	6.29	105	6.00	4.72	
Total BTEX	<0.300	0.300	04/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 115 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	04/08/2014	ND	416	104	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	04/08/2014	ND	188	94.2	200	2.05	
DRO >C10-C28	<10.0	10.0	04/08/2014	ND	206	103	200	1.70	


Surrogate: 1-Chlorooctane 112 % 65.2-140

Surrogate: 1-Chlorooctadecane 103 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

 Received: 04/07/2014  
 Reported: 04/08/2014  
 Project Name: TURNER B #103  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 04/07/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 3 @ 2' (H401053-03)**

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	04/08/2014	ND	2.13	106	2.00	3.71	
Toluene*	<0.050	0.050	04/08/2014	ND	2.17	108	2.00	4.04	
Ethylbenzene*	<0.050	0.050	04/08/2014	ND	2.16	108	2.00	4.18	
Total Xylenes*	<0.150	0.150	04/08/2014	ND	6.29	105	6.00	4.72	
Total BTEX	<0.300	0.300	04/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 118 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	04/08/2014	ND	416	104	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	04/08/2014	ND	188	94.2	200	2.05	
DRO >C10-C28	<10.0	10.0	04/08/2014	ND	206	103	200	1.70	

Surrogate: 1-Chlorooctane 115 % 65.2-140

Surrogate: 1-Chlorooctadecane 101 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

 Received: 04/07/2014  
 Reported: 04/08/2014  
 Project Name: TURNER B #103  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 04/07/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 4 @ 4' (H401053-04)**

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	04/08/2014	ND	2.13	106	2.00	3.71		
Toluene*	<0.050	0.050	04/08/2014	ND	2.17	108	2.00	4.04		
Ethylbenzene*	<0.050	0.050	04/08/2014	ND	2.16	108	2.00	4.18		
Total Xylenes*	<0.150	0.150	04/08/2014	ND	6.29	105	6.00	4.72		
Total BTEx	<0.300	0.300	04/08/2014	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 116 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	448	16.0	04/08/2014	ND	416	104	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	04/08/2014	ND	188	94.2	200	2.05	
DRO >C10-C28	<10.0	10.0	04/08/2014	ND	206	103	200	1.70	

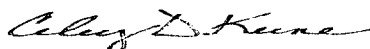
Surrogate: 1-Chlorooctane 113 % 65.2-140

Surrogate: 1-Chlorooctadecane 103 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

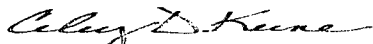
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received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

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---

Celey D. Keene, Lab Director/Quality Manager



## Page 7 of 7

Company Name: Linn Energy Project Manager: Brian Wall				BILL TO				ANALYSIS REQUEST																	
Address:				P.O. #:																					
City: State: Zip:				Company: Linn Energy																					
Phone #: Fax #:				Attn: Brian Wall																					
Project #: Project Owner:				Address:																					
Project Name: "2nd spill"				City:																					
Project Location: Turner B 103 Eddy Co NM				State: Zip:																					
Sampler Name: Michael Alvar				Phone #: Fax #:																					
FOR LAB USE ONLY						MATRIX		PRESERV.		SAMPLING															
Lab I.D.		Sample I.D.		# CONTAINERS		GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER :		ACID/BASE: ICE / COOL OTHER :		DATE TIME															
H401053				1		X		X		4/7/14 1:10		NO NM BEX													
1 sp. 1 @ 2'				1		X		X		4/7/14 1:35															
2 sp. 2 @ 2'				1		X		X		4/7/14 2:00															
3 sp. 3 @ 2'				1		X		X		4/7/14 2:43															
4 sp. 4 @ 4'																									
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Relinquished By: [Signature]				Date: 4/7/14 Time: 3:50				Received By: Jodi Benson				Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No				Add'l Phone #: Add'l Fax #:									
Relinquished By:				Date:				Received By:				REMARKS:				E-mail Results To: Ngladden@diversifiedfsi.com Rpons@diversifiedfsi.com Tjennings@diversifiedfsi.com EUSH!!									
Delivered By: (Circle One)				Time:																					
Sampler - UPS - Bus - Other:				2.4				Sample Condition Cool Intact Yes No Yes No				CHECKED BY: [Signature]													

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



Company Name: Limt Energy  
Location Name: Turner B #103

Date: 3/10/2014  
4/7/2014

SP1	CHL	SP2	CHL	SP3	CHL	SP4	CHL	SP5	CHL	SP6	CHL	SP7	CHL	SP8	CHL	SP9	CHL	SP10	CHL
Surf	299	Surf	274	Surf	274	Surf	224	Surf	300	Surf	250	Surf	175	Surf	275	Surf	150	Surf	150
1'	250	1'	298	1'	224	1'	250	1'	225	1'	175	1'	250	1'	275	1'	175	1'	175
2'	244	2'	229	2'	250	2'	274	2'	200	2'	175	2'	375	2'	400	2'	200	2'	375
3'	475	3'	425	3'	300	3'	575	3'	275	3'	200	3'	400	3'	450	3'	175	3'	350
4'	1175	4'	400	4'	325	4'	550	4'	300	4'	250	4'	450	4'	825	4'	250	4'	400
5'	1749	5'	500	5'	450	5'	450	5'	64	5'	64	5'	224	5'	600	5'	<16	5'	208
6'	1774	6'	400	6'	550	6'	600	6'		6'		6'		6'	475	6'		6'	
7'	1600	7'	96	7'	134	7'	950	7'		7'		7'		7'	272				
8'	2124	Auger Refusal																	
9'	2739																		
10'	2824																		
11'	1375																		
12'	1250																		
13'	975																		
14'	900																		
15'	650																		
16'	750																		
17'	825																		
18'	875																		
19'	1150																		
20'	700																		
20'	864																		

Till the rest of the area to be used.

SP11	CHL	SP12	CHL	SP13	CHL	SP14	CHL	SP15	CHL	SP16	CHL	SP17	CHL	SP18	CHL	SP19	CHL	SP20	CHL
Surf	175	Surf	175	Surf	200	Surf	175	Surf	175	Surf	250	Surf	175	Surf	200				
1'	250	1'	300	1'	175	1'	175	1'	225	1'	225	1'	200	1'	200				
2'	450	2'	325	2'	450	2'	350	2'	250	2'	300	2'	175	2'	250				
3'	700	3'	725	3'	425	3'	1025	3'	200	3'	225	3'	200	3'	200				
4'	1150	4'	900	4'	525	4'	900	4'	275	4'	200	4'	225	4'	200				
5'	1025	5'	875	4'	380	5'	2459	4'	144	4'	<16	4'	<16	4'	<16				
Auger Refusal																			
		6'	675			6'	4624												
		7'	800			7'	3149												
		8'	900			8'	2749												
		9'	750			9'	1949												
		10'	1125			10'	2149												
		11'	900			11'	1849												
		12'	650			12'	1799												
		12	736			13'	1899												
						14'	2049												
						15'	1649												
Auger Refusal																			

Second Spill

SP1	CHL	SP2	CHL	SP3	CHL	SP4	CHL	SP24	CHL	SP25	CHL	SP26	CHL	SP27	CHL	SP28	CHL	SP29	CHL	SP30	CHL
Surface	274	Surface	274	Surface	699	Surface	499														
1'	274	1'	274	1'	524	1'	974														
2'	285	2'	299	2'	524	2'	1124														
2'	0.16	2'	48	2'	400	3'	624														
						4'	549														
						4'	448														

Lab Confirmation Sample  
Field Sampling  
Needs Delineation and confirmation samples

# Appendix V

## CORRESPONDENCE

---

Diversified Field Service, Inc.  
3412 N. Dal Paso  
Hobbs, NM 88240  
(575) 964-8394

## Rebecca Pons

---

**From:** Natalie Gladden  
**Sent:** Tuesday, April 08, 2014 2:45 PM  
**To:** Mike Burton (mburton@blm.gov)  
**Cc:** Wall, Fred; Michael Patterson; Rebecca Pons; Traci Jennings; Stephen McGhee  
**Subject:** FW: Linn Energy Turner B #103 - Remediation Plan

Thanks Mike,

We will get on this re-seeding project. LPC seed?

*Natalie Gladden*

ENVIRONMENTAL DIRECTOR  
DFSI ENVIRONMENTAL SERVICES  
CELL: 575-602-1786  
OFFICE: 575-964-8394  
FAX: 575-964-8396  
EMAIL: [ngladden@diversifiedfsi.com](mailto:ngladden@diversifiedfsi.com)

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**From:** Burton, Michael [mailto:mburton@blm.gov]  
**Sent:** Tuesday, April 08, 2014 2:32 PM  
**To:** Natalie Gladden  
**Subject:** Re: Linn Energy Turner B #103 - Remediation Plan

Natalie,

Because all surface samples are below our closure levels of 1000ppm. I will request this site not be excavated. Re-seed the area with the BLM seed mix #2 or LPC seed mix. In 1 growing season this site can be reevaluated to determine if additional measures need to be taken. The operator will be required to monitor this site for vegetation stability.

Thanks

**Mike Burton**  
**BLM-CFO**  
**Environmental Protection Specialist**  
**575-234-2226 office**  
**575-361-3574 cell**  
**[mburton@blm.gov](mailto:mburton@blm.gov)**

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herein, is prohibited. If you have received this email in error, please immediately notify the sender by return email and delete this email from your system. Thank you.

On Tue, Apr 8, 2014 at 10:22 AM, Natalie Gladden <[ngladden@diversifiedfsi.com](mailto:ngladden@diversifiedfsi.com)> wrote:

Please find the attached work plan for the remediation needed on the Linn Energy Turner B #103. Thank you in advance for your time in this matter.

Have a great day!

*Natalie Gladden*

ENVIRONMENTAL DIRECTOR

DFSI ENVIRONMENTAL SERVICES

CELL: 575-602-1786

OFFICE: 575-964-8394

FAX: 575-964-8396

EMAIL: [ngladden@diversifiedfsi.com](mailto:ngladden@diversifiedfsi.com)

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# Appendix VI

FINAL FORM C-141

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Diversified Field Service, Inc.  
3412 N. Dal Paso  
Hobbs, NM 88240  
(575) 964-8394

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

State of New Mexico  
Energy Minerals and Natural Resources

Form C-141  
Revised August 8, 2011

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

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

**Release Notification and Corrective Action**

**OPERATOR**

☐ Initial Report ☒ Final Report

Name of Company: Linn Operating, Inc.	Contact: Brian Wall	
Address: 2130 W. Bender Hobbs, NM 88240	Telephone No. 575-738-1739	
Facility Name: Turner B #103	Facility Type: Oil Production	
Surface Owner Federal	Mineral Owner Federal	API No. 30-015-26665

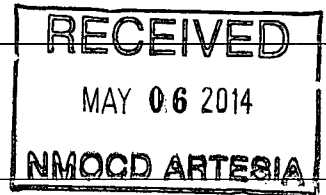
**LOCATION OF RELEASE**

Unit Letter B	Section 20	Township 17S	Range 31E	Feet from the 1300	North/South Line North	Feet from the 1370	East/West Line East	County Eddy
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Latitude 32.8237284410225 Longitude -103.887811333549

**NATURE OF RELEASE**

Type of Release: Produced Water	Volume of Release 15 bbl.	Volume Recovered 0
Source of Release: 2" poly flow line	Date and Hour of Occurrence 07/02/2013 8:30 AM	Date and Hour of Discovery 07/02/2013 8:30 AM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher NMOCD	
By Whom?	Date and Hour 10/15/13 11:45 A.M.	
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.* NA		
Describe Cause of Problem and Remedial Action Taken.* A 2" poly flow line was struck by a trakhoe being used by diversified while excavating contaminated soil from a previous leak. This resulted in a 2" cut in the line that released gas and a small amount of water, however no oil was released.		
Describe Area Affected and Cleanup Action Taken.* The flow line was immediately shut in and repaired. There was an impact of 15 gal. of produced water. DFSI removed the impacted soil to an NMOCD approved facility. On April 10, 2001 the site was seeded and restored to its natural state per BLM guidelines.		
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: Fred B Wall	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Brian Wall	Approved by Environmental Specialist:	
Title: Construction Foreman II	Approval Date:	Expiration Date:
E-mail Address: bwall@linenergy.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 03/25/2014 Phone: 806-367-0645		



\* Attach Additional Sheets If Necessary

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: Linn Operating, Inc.	Contact: Brian Wall	
Address: 2130 W. Bender Hobbs, NM 88240	Telephone No. 575-738-1739	
Facility Name: Turner B #103	Facility Type: Oil Production	
Surface Owner Federal	Mineral Owner Federal	API No. 30-015-26665

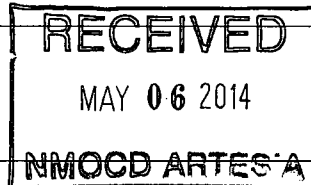
**LOCATION OF RELEASE**

Unit Letter B	Section 20	Township 17S	Range 31E	Feet from the 1300	North/South Line North	Feet from the 1370	East/West Line East	County Eddy
------------------	---------------	-----------------	--------------	-----------------------	---------------------------	-----------------------	------------------------	-------------

Latitude 32.8237284410225 Longitude -103.887811333549

**NATURE OF RELEASE**

Type of Release: Oil and Produced Water	Volume of Release 12 bbls.	Volume Recovered 9 bbls
Source of Release: flow line	Date and Hour of Occurrence 12/10/2010 A.M.	Date and Hour of Discovery 12/10/2010 10:00 A.M.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? BLM Terry Gregston	
By Whom?	Date and Hour: 12/10/2010 11:00 A.M.	
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.\*  
NA

Describe Cause of Problem and Remedial Action Taken.\*  
The flow line at the Turner B #103 froze and plugged off a flow line ruptured near the pumping unit. The well was shut in and the flow line was repaired. A vacuum truck was utilized to recover the free standing fluids.

Describe Area Affected and Cleanup Action Taken.\*  
The affected area was the location on the Southside of the pumping unit east to be 90' long X 19' wide. The release ran off the location in two narrow flow paths east. The spill area mapped was 17,335 sq. ft. of impact. All impacted soil was removed to an NMOCD approved facility. The impacted pasture area was remediated and re-seeded according to BLM guidelines.

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: Fred B Wall	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Brian Wall	Approved by Environmental Specialist:	
Title: Construction Foreman II	Approval Date:	Expiration Date:
E-mail Address: bwall@linenergy.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 04/25/2014 Phone: 806-367-0645		

\* Attach Additional Sheets If Necessary