

# Linn Energy Skelly #273

## CLOSURE REPORT

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BLM Event #NU14008MB

API No. 30-015-29239

Release Date: 9/30/2013

Unit Letter G, Section 28, Township 17 South, Range 31 East

December 19, 2013

**Prepared by:**

Environmental Department  
Diversified Field Service, Inc.

3412 N. Dal Paso

Hobbs, NM 88240

Phone: (575)964-8394

Fax: (575)393-8396

# Table of Contents

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- 1 Introduction
- 2 Site Activities
- 3 Conclusion

Figure – Site Diagram with Sample Data

## APPENDICES

Appendix I – Initial Form C-141

Appendix II – Site Photographs

Appendix III – Groundwater Data

Appendix IV – Laboratory Analyses

# Skelly #273

## 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 west of Maljamar NM, in Eddy County. The site resulted from a produced water and oil leak at the stuffing box. The leak released fluids onto the well pad. The packing was repaired, and standing fluids were recovered. A form C-141 was submitted to the BLM on October 23, 2013 (Appendix I).

## 2 SITE ACTIVITIES

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On October 31, 2013, DFSI personnel collected surface soil samples from the site (Figure). The samples were field screened for chloride and showed elevated levels in all of the sample points. On November 11, 2013 DFSI field personnel returned to the site and conducted simultaneous field testing by hand auger revealing low chloride and hydrocarbon levels at 1 to 6 ft. below ground surface (bgs). Chloride levels indicated a reduction at 208 mg/kg at 6 ft. bgs near the well head on the pad. The samples were submitted to a commercial laboratory for chloride, TPH, and BTEX analyses (Appendix IV)

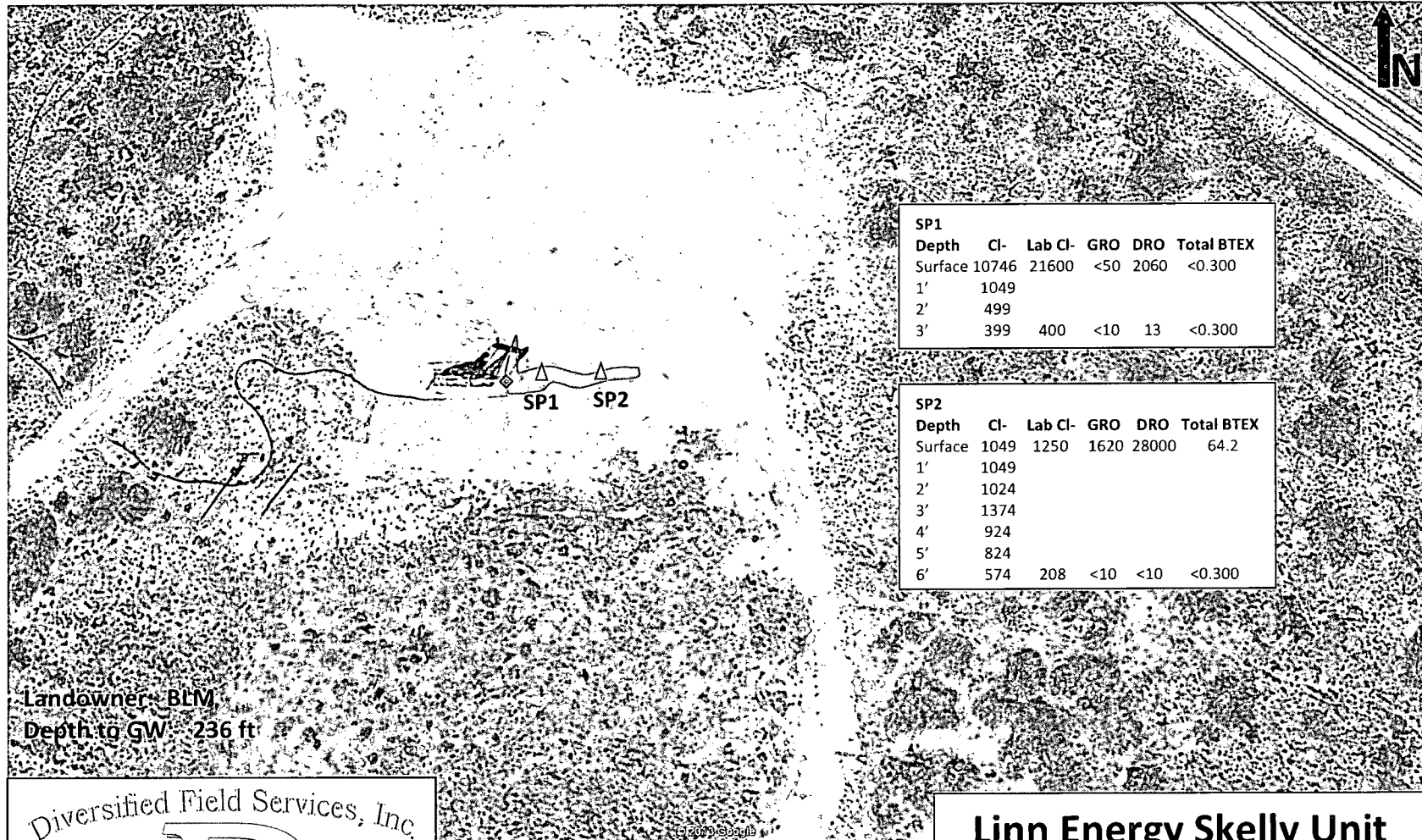
On November 13, 2013, a BLM representative approved backfill of the excavation. Impacted soils were excavated throughout the entire leak area and removed to a NMOCD approved disposal facility. The excavated area on the well pad was backfilled and capped with imported caliche. DFSI personnel bladed and leveled the site. Photographs of site activities can be viewed in Appendix II.

## 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 236 ft. bgs (Appendix III). Based on the removal of soils containing elevated chloride and visual staining at the site, Linn respectfully requests the closure of the regulatory file for the site.

# Site Diagram with Sample Data



SP1					
Depth	CI-	Lab CI-	GRO	DRO	Total BTEX
Surface	10746	21600	<50	2060	<0.300
1'	1049				
2'	499				
3'	399	400	<10	13	<0.300

SP2					
Depth	CI-	Lab CI-	GRO	DRO	Total BTEX
Surface	1049	1250	1620	28000	64.2
1'	1049				
2'	1024				
3'	1374				
4'	924				
5'	824				
6'	574	208	<10	<10	<0.300

Diversified Field Services, Inc.

C.C. & Co, LLC

J & M Welding and Fabrication, Inc.

Diversified Construction

## Legend

- Stained Area (total 250 ft<sup>2</sup>)
- ◇ Leak Source
- △ Sample Point

## Linn Energy Skelly Unit #273

UL/G, Sec 28, T17S R31E

Eddy County, NM

Drafted By: A.C. Ruth, 11/12/13

Not to Scale

# 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  
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 October 10, 2003

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

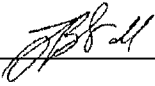
Name of Company: Linn Operating	Contact: Brian Wall	
Address: 2130 W Bender Hobbs, NM 88240	Telephone No.: 575-738-1739	
Facility Name: Skelly # 273	Facility Type: Oil Producer	
Surface Owner: Federal	Mineral Owner:	API No.: 3001529239

**LOCATION OF RELEASE**

Unit Letter G	Section 28	Township 17S	Range 31E	Feet from the 1387	North/South Line North	Feet from the 2529	East/West Line East	County Eddy
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**Latitude:** 32.8090136137923 **Longitude:** -103.874354466203

**NATURE OF RELEASE**

Type of Release: Produced Water / Oil	Volume of Release: 1 bbl/3 bbls	Volume Recovered: 0/0
Source of Release: Stuffing Box	Date and Hour of Occurrence: 09/30/2013 7:00am	Date and Hour of Discovery: 09/30/2013 7:00am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Burton- BLM	
By Whom? Brian Wall	Date and Hour 10/03/2013 6:45am	
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.*:		
<div style="text-align: right;"><b>RECEIVED</b> MAR 27 2014 NMOCD ARTESIA</div>		
Describe Cause of Problem and Remedial Action Taken.*: Drove up to well #273 at around 7:00am and found well leaking from stuffing box. Back pressure valve was plugged with with a piece of packing rubber and caused the well to pressure up and blow packing.		
Describe Area Affected and Cleanup Action Taken.* : Called Kenemore for a vaccum truck and a roustabout. Truck picked up about 4 barrels of fluid off of the ground. Roustabout fix the problem. The affected area was about 40 foot east of well head by about 5 foot wide all fluids stayed on well pad.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Signature: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Brian Wall	Approved by District Supervisor:	
Title: Construction Foreman II	Approval Date:	Expiration Date:
E-mail Address: bwall@linenergy.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 10/23/2013 Phone: 806-367-0645		

\* Attach Additional Sheets If Necessary

# Appendix II

## SITE PHOTOGRAPHS

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

# Linn Energy Skelly #273

Unit Letter G, Section 28, T17S R31E



Sign marking location

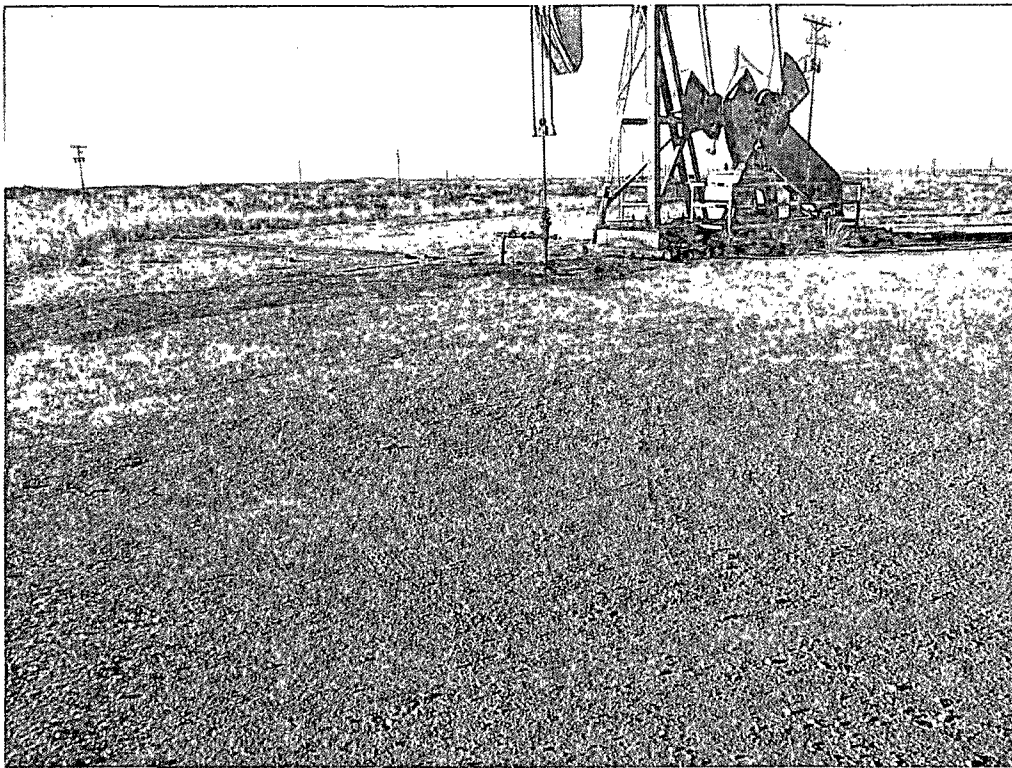
11/02/13



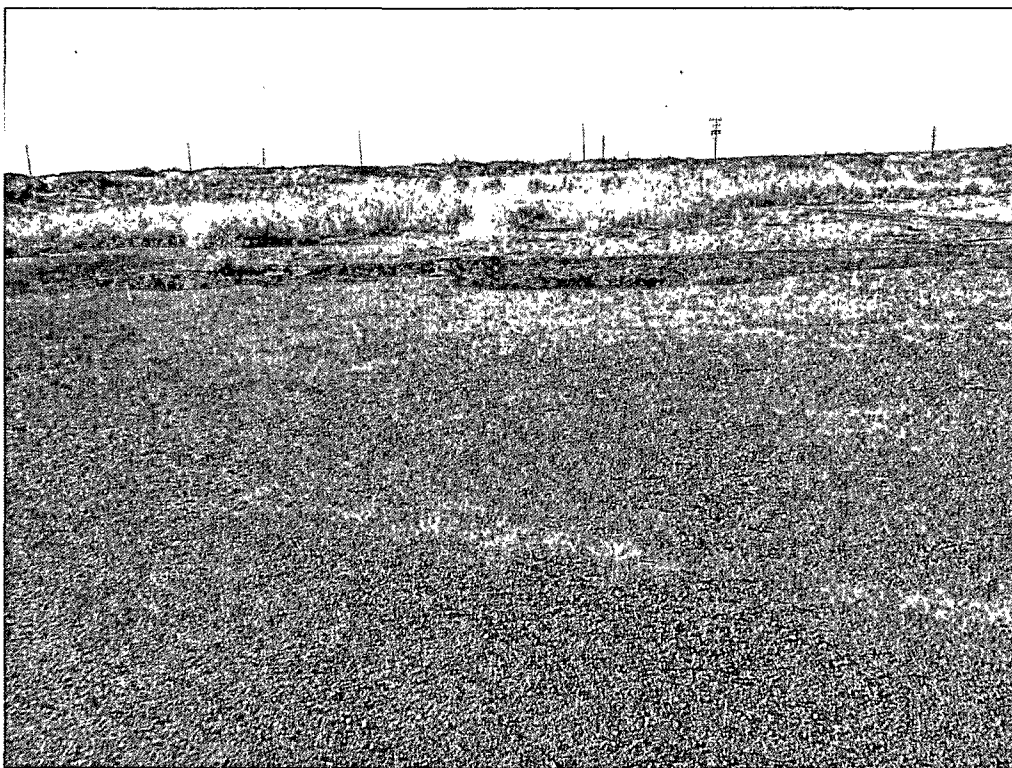
Leak at stuffing box

11/02/12

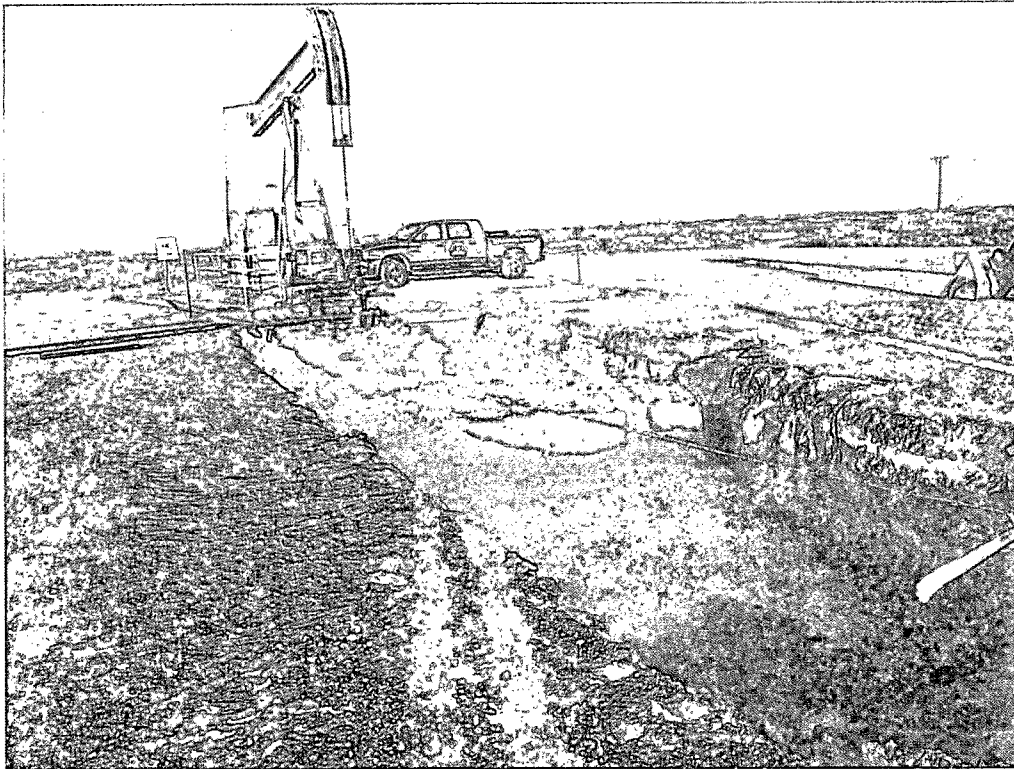




East leg of leak extending from well head 11/12/13



40 ft. East of well head 11/02/13



Site excavation 12/03/13



Site at completion 12/03/13

# Appendix III

## GROUNDWATER DATA

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# GROUND WATER SEARCH

Linn Energy Skelly Unit #273

UL:   G        Sec:   28        T:   17S        R:   31E  

Groundwater Depth:                     236                     ft.

- = NM Office of the State Engineer
- = U.S. Geological Survey (unknown well)
- ✕ = Site Location

Date: 11/12/13

By: Amy Ruth

	16S 30E	288' ○ 314' ○ 16S 31E    295' ○	65' 260' ○ ○ 248' ○ 275' ○ 254' ○ 16S 32E    215' ○ 210' ○ 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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Page 1 of 1

WATER COLUMN/ AVERAGE  
DEPTH TO WATER



# 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		Q Q Q							X	Y	Depth Well	Depth Water	Water Column	
	Sub-Code	basin	County	64	16	4	Sec	Tws	Rng						
<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 Water Column/Average Depth to Water

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

(In feet)

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

\*UTM location was derived from PLSS - see Help

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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**

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No records found.

**PLSS Search:**

Township: 17S      Range: 30E

---

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Page 1 of 1

WATER COLUMN/ AVERAGE  
DEPTH TO WATER



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

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closed) (quarters are smallest to largest)

(NAD83 UTM in meters) (In feet)

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

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

(In feet)

POD Number	POD		Q Q Q				Rng	X	Y	Depth Well	Depth Water	Water Column
	Sub-	Code	basin	County	64	16	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	LE		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

## Water Column/Average Depth to Water

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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 Water Column/Average Depth to Water

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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
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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(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
<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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# Appendix IV

## LABORATORY ANALYSES

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

November 08, 2013

BRIAN WALL

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: SKELLY UNIT #273

Enclosed are the results of analyses for samples received by the laboratory on 10/31/13 13:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. 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: 10/31/2013  
 Reported: 11/08/2013  
 Project Name: SKELLY UNIT #273  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 10/31/2013  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: SP 1 SURFACE (H302657-01)**

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	11/07/2013	ND	2.20	110	2.00	6.58	
<b>Toluene*</b>	<b>0.072</b>	0.050	11/07/2013	ND	2.24	112	2.00	7.60	
Ethylbenzene*	<0.050	0.050	11/07/2013	ND	2.28	114	2.00	7.83	
Total Xylenes*	<0.150	0.150	11/07/2013	ND	6.83	114	6.00	8.29	
Total BTEX	<0.300	0.300	11/07/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 113 % 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
<b>Chloride</b>	<b>21600</b>	16.0	11/01/2013	ND	400	100	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	<50.0	50.0	11/01/2013	ND	175	87.6	200	8.35	
<b>DRO &gt;C10-C28</b>	<b>2060</b>	50.0	11/01/2013	ND	165	82.6	200	10.0	

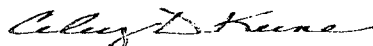
Surrogate: 1-Chlorooctane 77.8 % 65.2-140

Surrogate: 1-Chlorooctadecane 83.8 % 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: 10/31/2013  
 Reported: 11/08/2013  
 Project Name: SKELLY UNIT #273  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 10/31/2013  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: SP 2 SURFACE (H302657-02)**

BTEX 8021B		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<1.00	1.00	11/07/2013	ND	2.20	110	2.00	6.58	
Toluene*	5.02	1.00	11/07/2013	ND	2.24	112	2.00	7.60	
Ethylbenzene*	17.8	1.00	11/07/2013	ND	2.28	114	2.00	7.83	
Total Xylenes*	41.4	3.00	11/07/2013	ND	6.83	114	6.00	8.29	
Total BTEX	64.2	6.00	11/07/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 143 % 89.4-126

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1250	16.0	11/01/2013	ND	400	100	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	1620	100	11/01/2013	ND	175	87.6	200	8.35	
DRO >C10-C28	28000	100	11/01/2013	ND	165	82.6	200	10.0	

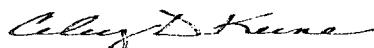
Surrogate: 1-Chlorooctane 182 % 65.2-140

Surrogate: 1-Chlorooctadecane 990 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

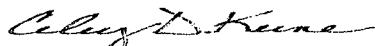
S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND	Analyte NOT DETECTED at or 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



## Page 5 of 5

[illegible]

Relinquished By:		Date:	Received By:	Phone Result:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
10/31/13		Time:	Jodi Benson	Fax Result:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
1:50				REMARKS:		
Relinquished By:		Date:	Received By:			
		Time:				
Delivered By: (Circle One)		Sample Condition		CHECKED BY:		
Sampler - UPS - Bus - Other:		Cool Intact		(Initials)		
9.80		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

November 11, 2013

BRIAN WALL

LINN ENERGY

RR1, BOX 24 B

KINGFISHER, OK 73750

RE: SKELLY UNIT #273

Enclosed are the results of analyses for samples received by the laboratory on 11/06/13 16:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. 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).

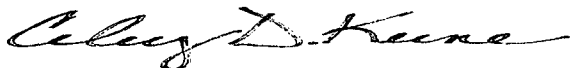
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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 ENERGY  
 BRIAN WALL  
 RR1, BOX 24 B  
 KINGFISHER OK, 73750  
 Fax To: (405) 375-6693

 Received: 11/06/2013  
 Reported: 11/11/2013  
 Project Name: SKELLY UNIT #273  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 11/06/2013  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 1 @ 3' (H302715-01)**

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	11/10/2013	ND	1.96	97.9	2.00	2.18	
Toluene*	<0.050	0.050	11/10/2013	ND	1.97	98.6	2.00	2.94	
Ethylbenzene*	<0.050	0.050	11/10/2013	ND	1.99	99.7	2.00	3.11	
Total Xylenes*	<0.150	0.150	11/10/2013	ND	5.89	98.2	6.00	3.70	
Total BTEX	<0.300	0.300	11/10/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 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	400	16.0	11/08/2013	ND	416	104	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	11/08/2013	ND	192	96.2	200	0.759	
DRO >C10-C28	13.0	10.0	11/08/2013	ND	195	97.6	200	1.32	

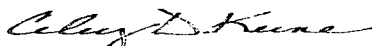
Surrogate: 1-Chlorooctane 91.2 % 65.2-140

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 ENERGY  
 BRIAN WALL  
 RR1, BOX 24 B  
 KINGFISHER OK, 73750  
 Fax To: (405) 375-6693

 Received: 11/06/2013  
 Reported: 11/11/2013  
 Project Name: SKELLY UNIT #273  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 11/06/2013  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 2 @ 6' (H302715-02)**

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	11/10/2013	ND	1.96	97.9	2.00	2.18	
Toluene*	<0.050	0.050	11/10/2013	ND	1.97	98.6	2.00	2.94	
Ethylbenzene*	<0.050	0.050	11/10/2013	ND	1.99	99.7	2.00	3.11	
Total Xylenes*	<0.150	0.150	11/10/2013	ND	5.89	98.2	6.00	3.70	
Total BTEX	<0.300	0.300	11/10/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 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	208	16.0	11/08/2013	ND	416	104	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	11/08/2013	ND	192	96.2	200	0.759	
DRO >C10-C28	<10.0	10.0	11/08/2013	ND	195	97.6	200	1.32	

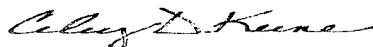
Surrogate: 1-Chlorooctane 95.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 95.6 % 63.6-154

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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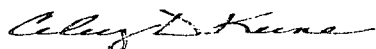
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received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

---

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Celey D. Keene, Lab Director/Quality Manager





# 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 Hall</u>		P.O. #:																										
Address:		Company:																										
City: State: Zip:		Attn:																										
Phone #: Fax #:		Address:																										
Project #: Project Owner:		City:																										
Project Name: <u>Skelly unit # 273</u>		State: Zip:																										
Project Location:		Phone #:																										
Sampler Name: <u>Miguel Gomez</u>		Fax #:																										
FOR LAB USE ONLY	Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX				PRESERV.	SAMPLING																		
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	DATE	TIME													
	<u>H302715</u>	<u>15210-3</u>	<u>6</u>	<u>1</u>			<u>Y</u>				<u>X</u>			<u>11-6-13</u>	<u>7:20</u>	<u>X</u>	<u>X</u>	<u>X</u>										
	<u>25210-6</u>	<u>25210-6</u>	<u>6</u>	<u>1</u>			<u>Y</u>				<u>X</u>			<u>11-6-13</u>	<u>8:35</u>	<u>X</u>	<u>X</u>	<u>X</u>										

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: <u>Miguel Gomez</u>	Date: <u>11/6/13</u>	Received By: <u>Jodi Benson</u>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: <u>4:50</u>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:	
	Time:		<u>Bwall@linenergy.com</u>	
Delivered By: (Circle One)	Sample Condition	CHECKED BY:	<u>ARuth@diversifiedsi.com</u>	
Sampler - UPS - Bus - Other:	Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>	<u>[Signature]</u>		
	<input type="checkbox"/> Yes <input type="checkbox"/> No			

# Appendix V

FINAL FORM C-141

---

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

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	600	Telephone No.	575-738-1739
Facility Name	Skelly #273	Facility Type:	Oil Producer

Surface Owner	Federal	Mineral Owner		API No.	30-015-29239
---------------	---------	---------------	--	---------	--------------

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy
G	28	17S	31E	1387	North	2529	East	

**Latitude** 32.8090136137923 **Longitude** -103.874354466203

**NATURE OF RELEASE**

Type of Release Spill: Produced Water/Oil	Volume of Release 1bbl/3bbls	Volume Recovered 0
Source of Release Stuffing Box	Date and Hour of Occurrence 09/30/2013 7:00 AM	Date and Hour of Discovery 09/30/2013 7:00 AM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Burton-BLM	
By Whom? Brian Wall	Date and Hour 10/03/2013 6:45 AM	
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

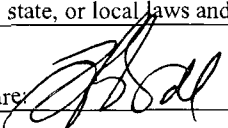
**Describe Cause of Problem and Remedial Action Taken.\***

Drove up to well #273 at around 7:00 AM and found well leaking from the stuffing box. Back pressure valve was plugged with a piece of packing rubber that caused the well to pressure up and blow packing.

**Describe Area Affected and Cleanup Action Taken.\***

Spill affected well pad area. Vacuum truck picked up standing fluids. The spill was delineated by Diversified Field Services, Inc. Impacted soils were removed to a NMOCD approved disposal facility. Confirmation samples were then submitted to a commercial lab for analyses. Backfill of the excavation was approved by the BLM. The excavation was backfilled and bladed.

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

Signature: 	<b>OIL CONSERVATION DIVISION</b>		
Printed Name: 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: 12/19/13	Phone: 806-367-0645		

Attach Additional Sheets If Necessary

2RP-2539