



# Linn Energy Skelly Unit #007

## REMEDIATION WORK PLAN

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API No. 30-015-05327

Release Date: 06/22/2014

Unit Letter E, Section 21, Township 17 South, Range 31 East

January 27, 2016

**Prepared by:**

Lance Crenshaw, Project Manager

Environmental Department

Diversified Field Service, Inc.

3412 N. Dal Paso

Hobbs, NM 88240

Phone: (575)964-8394

Fax: (575)393-8396

Mike Bratcher  
Environmental Specialist  
NM Oil Conservation District-Division 2  
811 S. First St.  
Artesia, NM 88210

**RE: Linn, Skelly Unit #007 – Remediation Work Plan**  
UL/E, Section 21, T17S, R31E  
API No. 30-015-05327

Mr. Bratcher,

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

The site is located east of Loco Hills NM, in Eddy County. The leak site resulted from a flow line failure. The impacted area is in the pasture measuring approximately 12' x 14'. Approximately 20 gallons of produced water was released, and 10 gallons of oil. Nothing was recovered. A site map is attached. A C-141 was drafted on June 24, 2014.

### **Site Assessment and Delineation**

On January 21, 2016, DFSI personnel sampled three sample points of the spill area. The samples were tested for chloride levels as well as BTEX. The BTEX samples were performed using a Mini Rae Photoionization Detector (PID). The field samples that field tested below state/BLM requirements were taken to Cardinal Labs of Hobbs for confirmation. The results are attached.

DFSI has conducted a groundwater study of the area and has determined that according to the Conoco-Phillips depth to groundwater map, the average depth to groundwater for this area is 300 foot below ground surface. Therefore, no eminent danger of groundwater impact or threat to life is anticipated.

### **Conclusion**

After careful review DFSI, on behalf of Linn Energy, would like to propose the following:

Since the field and lab samples tested clean down to 3' BGS, DFSI proposes to till and reseed the spill area with a BLM/NMOCD approved seed mix.

Following the approval of the above plan, DFSI will submit all proper closure documentation to the NMOCD and BLM in accordance to the State and Federal Guidelines set forth.

Please feel free to contact me with any questions concerning this remediation plan request.

Sincerely,



Michael Burton  
Environmental Operations Director  
Diversified Field Service, Inc.  
206 West Snyder  
Hobbs, NM 88240  
Office: (575)964-8394  
Mobile: (575)390-5454  
Fax: (575)964-8396  
Email: Mburton@diversifiedfsi.com

cc Shelly Tucker

Attachments: Initial Form C-141  
Site/Sample Map  
Sample Data  
Lab Analytical Data

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 Unit 007	Facility Type: Oil Producer

Surface Owner: Federal	Mineral Owner:	API No.: 30-015-05327
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**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	21	17S	31E	1874	North	766	West	Eddy

**Latitude:** 32.8221609146629 **Longitude:** -103.880819823708

**NATURE OF RELEASE**

Type of Release: Produced Water / Oil	Volume of Release: 20 gal / 10 gal	Volume Recovered: 0 / 0
Source of Release: 3" polyline	Date and Hour of Occurrence: 06/22/2014	Date and Hour of Discovery: 06/22/2014 12:00pm
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Jennifer Van Curen- BLM	
By Whom? Brian Wall	Date and Hour 06/23/2014 1515	
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.\*: Chevron pumper called about a discharge from a flow line, we walked the line and discovered it to be ours, from well number 7, put a 3" clamp on the line and shut off wells 7,14, and 15 (all flowing through the same line) and made sure leak stopped (see pictures).

Describe Area Affected and Cleanup Action Taken.\* : Spill is an oval measuring 12' by 14' with no oil or concentration of fluid standing on the ground extending north from the release point, a small crack in the line of unknown origin.

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><u>OIL CONSERVATION DIVISION</u></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: 06/24/2014 Phone: 806-367-0645		

\* Attach Additional Sheets If Necessary

# Site Diagram

**Linn, Skelly Unit #007**  
**UL/E, Sec. 21 T17S R31E**  
**Eddy County, NM**  
**Drafted By: Lance Crenshaw, 1-27-16**

0 0.00175 0.0035 0.007 Miles

**Spill Area:**  
**550 sq. ft.**

## Legend

### Misc\_points

#### Types

-  Electrical Box
-  Power Pole
-  Headers
-  Injection
-  Pumpjacks
-  Tanks
-  Valves
-  Other
-  Soil Bores
-  sample\_pts
-  Source

### Pipeline

#### Type

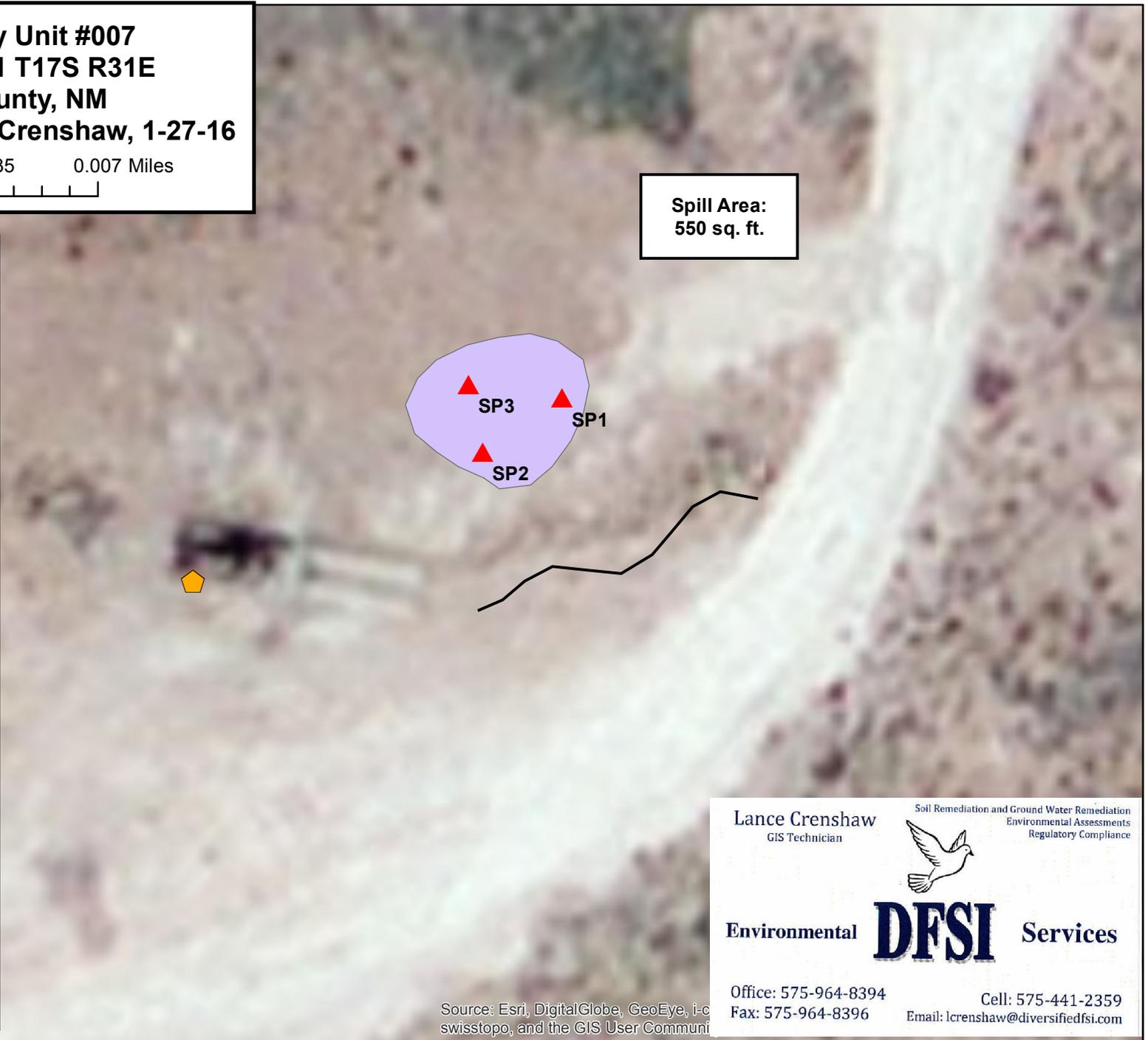
-  Above Ground Line
-  Buried Line

### 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 DFSI Services**

Office: 575-964-8394      Cell: 575-441-2359  
 Fax: 575-964-8396      Email: lcrenshaw@diversifiedfsi.com

Source: Esri, DigitalGlobe, GeoEye, i-c  
 swisstopo, and the GIS User Communi



# Skelly Unit #007

## PHOTO PAGE



Lease sign marking location



Spill area with sample points



Spill area with sample points



Collecting samples via auger



Collecting samples via auger





January 27, 2016

DENNIS POTTER  
LINN OPERATING-HOBBS  
2130 W. BENDER  
HOBBS, NM 88240

RE: SKELLY UNIT #007

Enclosed are the results of analyses for samples received by the laboratory on 01/21/16 13:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene  
Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	01/21/2016	Sampling Date:	01/21/2016
Reported:	01/27/2016	Sampling Type:	Soil
Project Name:	SKELLY UNIT #007	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SAMPLE PT. 1 @ 3' (H600148-01)**

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	01/26/2016	ND	2.41	121	2.00	5.16	
Toluene*	<0.050	0.050	01/26/2016	ND	2.34	117	2.00	6.00	
Ethylbenzene*	<0.050	0.050	01/26/2016	ND	2.14	107	2.00	6.06	
Total Xylenes*	<0.150	0.150	01/26/2016	ND	6.52	109	6.00	5.02	
Total BTEX	<0.300	0.300	01/26/2016	ND					

*Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.6-140*

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	01/22/2016	ND	432	108	400	3.77	

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	01/26/2016	ND	194	97.2	200	0.683	
<b>DRO &gt;C10-C28</b>	<b>73.2</b>	10.0	01/26/2016	ND	198	99.1	200	1.26	

*Surrogate: 1-Chlorooctane 81.6 % 35-147*
*Surrogate: 1-Chlorooctadecane 90.9 % 28-171*

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	01/21/2016	Sampling Date:	01/21/2016
Reported:	01/27/2016	Sampling Type:	Soil
Project Name:	SKELLY UNIT #007	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SAMPLE PT. 2 @ 3' (H600148-02)**

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	01/26/2016	ND	2.41	121	2.00	5.16		
Toluene*	<0.050	0.050	01/26/2016	ND	2.34	117	2.00	6.00		
Ethylbenzene*	<0.050	0.050	01/26/2016	ND	2.14	107	2.00	6.06		
Total Xylenes*	<0.150	0.150	01/26/2016	ND	6.52	109	6.00	5.02		
Total BTEX	<0.300	0.300	01/26/2016	ND						

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

Chloride, SM4500CI-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	01/22/2016	ND	432	108	400	3.77		

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	01/26/2016	ND	194	97.2	200	0.683		
DRO >C10-C28	<10.0	10.0	01/26/2016	ND	198	99.1	200	1.26		

Surrogate: 1-Chlorooctane 81.4 % 35-147

Surrogate: 1-Chlorooctadecane 82.8 % 28-171

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	01/21/2016	Sampling Date:	01/21/2016
Reported:	01/27/2016	Sampling Type:	Soil
Project Name:	SKELLY UNIT #007	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SAMPLE PT. 3 @ 3' (H600148-03)**

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	01/26/2016	ND	1.99	99.7	2.00	0.268	
Toluene*	<0.050	0.050	01/26/2016	ND	1.93	96.7	2.00	1.66	
Ethylbenzene*	<0.050	0.050	01/26/2016	ND	1.77	88.5	2.00	2.28	
Total Xylenes*	<0.150	0.150	01/26/2016	ND	5.43	90.5	6.00	2.12	
Total BTEX	<0.300	0.300	01/26/2016	ND					

*Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.6-140*

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>16.0</b>	16.0	01/22/2016	ND	432	108	400	3.77	

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	01/26/2016	ND	194	97.2	200	0.683	
<b>DRO &gt;C10-C28</b>	<b>1690</b>	10.0	01/26/2016	ND	198	99.1	200	1.26	

*Surrogate: 1-Chlorooctane 82.0 % 35-147*
*Surrogate: 1-Chlorooctadecane 117 % 28-171*

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

- BS1 Blank spike recovery above laboratory acceptance criteria. Results for analyte potentially biased high.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



# CARDINAL Laboratories

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

### BILL TO

### ANALYSIS REQUEST

Company Name: Lim  
 Project Manager: Dennis Patter  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_  
 Project #: \_\_\_\_\_ Project Owner: \_\_\_\_\_  
 Project Name: Lim  
 Project Location: Stelly Unit 007  
 Sampler Name: Chris Flores  
 P.O. #: \_\_\_\_\_ Company: \_\_\_\_\_  
 Attn: \_\_\_\_\_ Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	Chlorides	TPT	BTEX
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
<u>Hobbs</u>	<u>1 Sample Point 1 @ 3'</u>	<u>G</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>1/21/2016</u>	<u>8:10 AM</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
	<u>2 Sample Point 2 @ 3'</u>	<u>G</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>9:30 AM</u>	<u>10:10 AM</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
	<u>3 Sample Point 3 @ 3'</u>	<u>G</u>	<u>1</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					

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Relinquished By: \_\_\_\_\_ Date: 1/21/2016  
 Relinquished By: \_\_\_\_\_ Time: 1:05  
 Received By: Spatei Henderson  
 Received By: \_\_\_\_\_

Delivered By: (Circle One) UPS  
 Sampler - UPS - Bus - Other: 3.00  
 Sample Condition: Cool  Intact   
 Checked By: \_\_\_\_\_ (Initials)  
 Phone Result:  Yes  No  Add'l Phone #: \_\_\_\_\_  
 Fax Result:  Yes  No  Add'l Fax #: \_\_\_\_\_  
 REMARKS: email to: krenshaw@diversifiedpsi.com  
malves  
mburton  
mpatterson  
cflores

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



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

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No records found.

**PLSS Search:**

**Section(s):** 21

**Township:** 17S

**Range:** 31E