



Linn Energy JL Keel B #84

REMEDIATION WORK PLAN

API No. 30-015-28551

Release Date: Unknown date reported 3/6/2014

Unit Letter H, Section 05, Township 17 South, Range 31 East

RP# 2RP-1683

November 11, 2015

Prepared by:

Lance Crenshaw, Project Manager
Environmental Department
Diversified Field Service, Inc.
206 W. Snyder
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 Energy JL Keel B #084 – Remediation Work Plan**
UL/H, Section 05, T17S, R31E
API No. 30-015-28551

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 northeast of Loco Hills NM, in Eddy County. The leak site resulted from a pin hole in the poly flow line. The source of the leak was never determined. Approx. 20 bbls of produced water and 1 bbl of oil was released. Nothing was recovered. A C-141 was submitted to the NMOCD on June 6th, 2013 (2RP-2209).

Site Assessment and Delineation

On April 2, 2014 DFSI ordered an Arch Survey from Boone Arch Surveys. At that time the site was found to be negative of any artifacts. On July 7th, 2014 DFSI employees delineated the site, which three sample points were taken. All of the sample points were confirmed below the reportable levels. See attached.

DFSI has conducted a groundwater study of the area and has determined that according to the New Mexico Office of the State Engineer there is no record of groundwater in the immediate vicinity of this section. However for the surrounding areas the average depth to groundwater is 236 ft. bgs. 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:

Till and blend the affected area. Re contour the pasture and fix any erosion issues.
Seed with an approved BLM seed mixture.

Following the approval of this plan and after the remediation has taken place, 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 W. Snyder
Hobbs, NM 88240
Office: (575)964-8394
Mobile: (575)390-5454
Fax: (575)964-8396
Email: mburton@diversifiedfsi.com

cc Shelly Tucker
NM Bureau of Land Management

Attachments:

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

Arch Survey

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

RECEIVED

JUN 11 2013

Form C-141
Revised October 10, 2003

Submit to appropriate District Office in
conformance with 19.15.29 NMAC

NMOCD ARTESIA

Release Notification and Corrective Action

nJMW 1316839427

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Linn Operating 2169324	Contact: Gary Wink
Address: 2130 W Bender Hobbs, NM 88240	Telephone No.: 575-738-1739
Facility Name: JL KEEL B #84	Facility Type: Oil Producer

Surface Owner: Federal	Mineral Owner: Federal	API No.: 3001528551
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LOCATION OF RELEASE

Unit Letter H	Section 05	Township 17S	Range 31E	Feet from the 2598	North/South Line North	Feet from the 1293	East/West Line East	County Eddy
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Latitude: 32.86356 Longitude: -103.88678

NATURE OF RELEASE

Type of Release: Produced Water / Oil	Volume of Release: 20 bbls/ 1 bbl	Volume Recovered: 0 / 0
Source of Release: 3" poly line- pin hole	Date and Hour of Occurrence: 06/03/2013 6am	Date and Hour of Discovery: 06/03/2013 6am
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? M. Bratcher - NM OCD	
By Whom? Gary Wink	Date and Hour 06/06/2013 9:00 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.*:

Describe Cause of Problem and Remedial Action Taken.*: while running route I noticed that there was a black spot out on pasture drove to location and found 3" poly line that was leaking and had a pin hole.

Describe Area Affected and Cleanup Action Taken.*: leak sprayed an area of 60x50, immediately put clamp on line to prevent it from leaking more. there was no fluid standing on ground, this leak occurred about 50 yards west of injection well #45, leak covered both north and south of lease road.

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: Gary W. Wink	OIL CONSERVATION DIVISION	
Printed Name: Gary W. Wink	Approved by District Supervisor:	Signed By: Mike Bratcher
Title: Production Foreman	Approval Date: JUN 17 2013	Expiration Date:
E-mail Address: gawink@linenergy.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 06/10/2013 Phone: 575-390-3477		

* Attach Additional Sheets If Necessary

Remediation per OCD Rule &
Guidelines. SUBMIT REMEDIATION

PROPOSAL NO LATER THAN:
July 17, 2013

2RP-1683

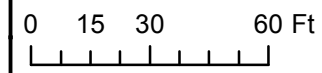
Site Diagram

Linn, JL Keel B 84






UL/H, Sec. 5, T17S R31E

Eddy, NM

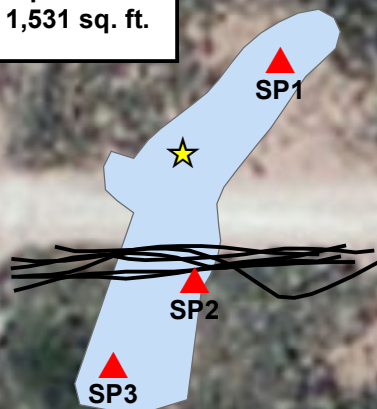
Drafted By: Lance Crenshaw, 3-3-14



Legend

-  Sample Points
-  Source
-  Above Ground Line
-  Buried Line
-  Spill

**Spill Area:
1,531 sq. ft.**



Landowner: BLM

Depth to Groundwater: 236 ft

Lance Crenshaw
GIS Technician

Soil Remediation and Ground Water Remediation
Environmental Assessments
Regulatory Compliance



Environmental

DFSI

Services

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

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

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community





Linn Energy JL Keel B #84

PHOTO PAGE

6/5/2013



7/7/2014

SP Date: 7/7/2014
Rel Date:

[illegible]

	Lab Confirmation Sample
	Field Sampling
	Needs Delineation and confirmation samples

July 14, 2014

BRIAN WALL

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: J. L. KEEL B #84

Enclosed are the results of analyses for samples received by the laboratory on 07/08/14 15:38.

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.

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: 07/08/2014
 Reported: 07/14/2014
 Project Name: J. L. KEEL B #84
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 07/07/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kathy Perez

Sample ID: SP. 1 @ 2' (H402076-01)

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/11/2014	ND	1.52	76.0	2.00	21.5	
Toluene*	<0.050	0.050	07/11/2014	ND	1.52	76.0	2.00	21.9	
Ethylbenzene*	<0.050	0.050	07/11/2014	ND	1.50	74.9	2.00	22.4	
Total Xylenes*	<0.150	0.150	07/11/2014	ND	4.68	77.9	6.00	20.7	
Total BTX	<0.300	0.300	07/11/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 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	32.0	16.0	07/10/2014	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	07/10/2014	ND	194	96.8	200	7.65	
DRO >C10-C28	<10.0	10.0	07/10/2014	ND	213	106	200	9.76	

Surrogate: 1-Chlorooctane 89.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 92.4 % 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: 07/08/2014
 Reported: 07/14/2014
 Project Name: J. L. KEEL B #84
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 07/07/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kathy Perez

Sample ID: SP. 2 @ 2 (H402076-02)

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/11/2014	ND	1.52	76.0	2.00	21.5		
Toluene*	<0.050	0.050	07/11/2014	ND	1.52	76.0	2.00	21.9		
Ethylbenzene*	<0.050	0.050	07/11/2014	ND	1.50	74.9	2.00	22.4		
Total Xylenes*	<0.150	0.150	07/11/2014	ND	4.68	77.9	6.00	20.7		
Total BTEx	<0.300	0.300	07/11/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 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	07/10/2014	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	07/10/2014	ND	194	96.8	200	7.65	
DRO >C10-C28	<10.0	10.0	07/10/2014	ND	213	106	200	9.76	

Surrogate: 1-Chlorooctane 87.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 89.1 % 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: 07/08/2014
 Reported: 07/14/2014
 Project Name: J. L. KEEL B #84
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 07/07/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kathy Perez

Sample ID: SP. 3 @ 2' (H402076-03)

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/11/2014	ND	1.52	76.0	2.00	21.5	
Toluene*	<0.050	0.050	07/11/2014	ND	1.52	76.0	2.00	21.9	
Ethylbenzene*	<0.050	0.050	07/11/2014	ND	1.50	74.9	2.00	22.4	
Total Xylenes*	<0.150	0.150	07/11/2014	ND	4.68	77.9	6.00	20.7	
Total BTX	<0.300	0.300	07/11/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	32.0	16.0	07/10/2014	ND	400	100	400	7.69	

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	07/10/2014	ND	194	96.8	200	7.65	
DRO >C10-C28	<10.0	10.0	07/10/2014	ND	213	106	200	9.76	

Surrogate: 1-Chlorooctane 88.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 92.2 % 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

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: LIND ENERGY Project Manager: Brian Well Address: City: State: Zip: Phone #: Fax #: Project #: Project Owner: Project Name: Project Location: Steele G 84 Sampler Name: Michael Alva <small>FOR LAB USE ONLY</small>				BILL TO P.O. #: Company: Lind Energy Attn: Brian Well Address: City: State: Zip: Phone #: Fax #:			
Lab I.D. H402075		Sample I.D.		ANALYSIS REQUEST			
Relinquished By: <i>[Signature]</i> Date: 7/14/14 Time: 3:08		Received By: <i>[Signature]</i> Date: 7/14/14 Time: 9:00		REMARKS:			
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 540 #54		Sample Condition Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> CHECKED BY: <i>[Signature]</i>		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #: Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Fax #: E-mail Results To: Ngladden@diversifiedfsi.com Rpons@diversifiedfsi.com Tjennings@diversifiedfsi.com			

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 analysis. 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.

NMCRIS No.: 130149

NMCRIS INVESTIGATION ABSTRACT FORM (NIAF)

1. NMCRIS Activity No.: 130149	2a. Lead Agency: US Bureau of Land Management Carlsbad Field Office	2b. Other Agency(ies):	3. Lead Agency Report No.:
4. Title of Report: A Class III Archaeological Survey for Diversified Field Services, Inc.'s J.L. Keel B # 84 Spill Clean-Up Author(s) Hill, Rebecca and Joshua Broxson			5. Type of Report <input checked="" type="checkbox"/> Negative <input type="checkbox"/> Positive
6. Investigation Type <input type="checkbox"/> Research Design <input checked="" type="checkbox"/> Archaeological Survey/Inventory <input type="checkbox"/> Architectural Survey/Inventory <input type="checkbox"/> Test Excavation <input type="checkbox"/> Excavation <input type="checkbox"/> Collections/Non-Field Study <input type="checkbox"/> Compliance Decision Based on Previous Inventory <input type="checkbox"/> Overview/Lit Review <input type="checkbox"/> Monitoring <input type="checkbox"/> Ethnographic Study <input type="checkbox"/> Site/Property Specific Visit <input type="checkbox"/> Historic Structures Report <input type="checkbox"/> Other			
7. Description of Undertaking (what does the project entail?): A pedestrian cultural resources survey was conducted on 26 March 2014 for Diversified Field Services, Inc.'s J.L. Keel B # 84 Spill Clean-Up. The spill lies in Eddy County, NM, on federal lands managed by the Bureau of Land Management/Carlsbad Field Office (BLM/CFO) in Section 5 (SW¼NE¼) of T17S R31E. The spill area measures 3,919.8 sq. ft. or 0.09 acres and crosses a lease road just east of the J.L. Keel B #45 well pad and northwest of the J.L. Keel B #84 well pad. The survey was conducted using 15 m (50 ft.) parallel transects across the spill area and 100 ft. beyond creating a 100 ft. cultural buffer around and including the spill area. The survey area measures 60,104.52 sq. ft. or 1.38 acres. One isolated occurrence was noted during the survey. Isolated occurrences are not eligible for the National Register of Historic Places and no treatment is recommended.			
[] Continuation			
8. Dates of Investigation: from: 26-Mar-2014 to: 26-Mar-2014		9. Report Date: 28-Mar-2014	
10. Performing Agency/Consultant: Boone Arch Services of NM, LLC Principal Investigator: Rebecca L. Hill Field Supervisor: Rebecca L. Hill Field Personnel Names: Rebecca L. Hill Historian / Other:			
11. Performing Agency/Consultant Report No.: BASNM 03-14-59			
12. Applicable Cultural Resource Permit No(s): BLM Permit No.: 190-2920-12-S			

NMCRIS No.: 130149

13. Client/Customer (project proponent):

Diversified Field Services, Inc.

Contact: Natalie Gladden

Address: 3412 N. Dal Paso, Hobbs, NM 88240

Phone: 575-602-1786

14. Client/Customer Project No.:

15. Land Ownership Status (must be indicated on project map):

Land Owner (By Agency)

Acres Surveyed Acres in APE

US Bureau of Land Management Carlsbad Field Office	1.38	0.09
TOTALS	1.38	0.09

16. Records Search(es):

Date(s) of HPD/ARMS File Review: 21 Mar 2014	Name of Reviewer(s): M. Jones	
Date(s) of Other Agency File Review: 21 Mar 2014	Name of Reviewer(s): M. Jones	Agency: BLM/CFO

17. Survey Data:

a. Source Graphics ☐ NAD 27 ☒ NAD 83 **Note: NAD 83 is the NMCRIS standard.**

☒ USGS 7.5' (1:24,000) topo map ☐ Other topo map, Scale:

☒ GPS Unit Accuracy ☒ <1.0m ☐ 1-10m ☐ 10-100m ☐ >100m

☐ Aerial Photo(s)

Other Source Graphic(s):

b. USGS 7.5' Topographic Map Name

USGS Quad Code

Loco Hills, NM	32103-G8
----------------	----------

c. County(ies): EDDY

d. Nearest City or Town: Loco Hills, NM

e. Legal Description:

Township (N/S)

Range (E/W)

Section

17S	31E	5
-----	-----	---

Projected legal description? ☐ Yes ☒ No ☐ Unplatted

f. Other Description (e.g. well pad footages, mile markers, plats, land grant name, etc.):

[] Continuation

18. Survey Field Methods:

Intensity:

☒ 100% coverage

☐ <100% coverage

NMCRIS No.: 130149

Configuration: ☒ block survey units ☐ linear survey units (l x w):

☐ other survey units (specify):

Scope: ☒ non-selective (all sites/properties recorded) ☐ selective/thematic (selected sites/properties recorded)

Coverage Method: ☐ systematic pedestrian coverage

☐ other method (describe):

Survey Interval (m): 15 Crew Size: 1 Fieldwork Dates: from: 26-Mar-2014 to: 26-Mar-2014

Survey Person Hours: 0.40 Recording Person Hours: 0.00 Total Hours: 0.40

Additional Narrative:

The spill area lies within ¼ mile of five previously recorded archaeological sites: LAs 71204, 86183, 108207, 109303, and 109375. The spill is at a distance sufficient to avoid impacting these sites. For detailed descriptions of these sites, see Table 1 on page 5.

[] Continuation

19. Environmental Setting (NRCS soil designation; vegetative community; elevation; etc.):

According to the Natural Resources Conservation Service' online database, the spill area soils consist of Kermit-Berino fine sands, 0 to 3 percent slopes. Kermit soils are designated as "deep sand" and typically support giant dropseed grasslands with an even distribution of shinnery oak and soapweed yucca. Berino soils are designated as "loamy" and typically support black and blue grama and tobosa grasslands with an even yet sparse distribution of shrubs such as yucca, mesquite, American tarbush, cholla, and creosote. The current vegetative community consists of soapweed yucca, mesquite, shinnery oak, winterfat, and desert grasses. The spill straddles a lease road among high dunes. The spill is situated approximately 4.5 miles southwest of Mescalero Ridge and 4 miles northwest of Taylor Draw. The Pecos River lies approximately 25 miles to the west. The elevation ranges from 3,880 ft. to 3,890 ft. above mean sea level.

[] Continuation

20.a. Percent Ground Visibility: 70%

b. Condition of Survey Area (grazed, bladed, undistributed, etc.):

The survey area includes an existing lease road and is just east of the J.L. Keel B #45 well pad and northwest of the J.L. Keel B #84 well pad.

[] Continuation

21. CULTURAL RESOURCE FINDINGS

☐ Yes, see next report section

☒ No, discuss why:

One isolated occurrence was noted during the survey. For a detailed description, see Table 2 on page 5.

[] Continuation

22. Attachments (check all appropriate boxes):

[x] USGS 7.5 Topographic Map with sites, isolates, and survey area clearly drawn (required)

[x] Copy of NMCRIS Map Check (required)

[] LA Site Forms - new sites (with sketch map & topographic map) if applicable

[] LA Site Forms (update) - previously recorded & un-relocated sites (first 2 pages minimum)

[] Historic Cultural Property Inventory Forms, if applicable

[] List and Description of Isolates, if applicable

[] List and Description of Collections, if applicable

23. Other Attachments:

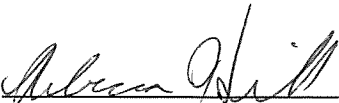
[] Photographs and Log

[x] Other Attachments
(Describe): BLM Map

NMCRIS No.: 130149

24. I certify the information provided above is correct and accurate and meets all applicable agency standards.

Principal Investigator/Qualified Supervisor: Printed Name: Rebecca L. Hill

Signature:  Date: 28 Mar 2014 Title: Principal Investigator

25. Reviewing Agency

Reviewer's Name/Date:

Accepted []

Rejected []

26. SHPO

Reviewer's Name/Date:

HPD Log #:

Date sent to ARMS:

CULTURAL RESOURCE FINDINGS

[fill in appropriate section(s)]

SURVEY RESULTS:

Archaeological Sites discovered and registered: 0

Archaeological Sites discovered and NOT registered: 0

Previously recorded archaeological sites revisited (site update form required): 0

Previously recorded archaeological sites not relocated (site update form required): 0

TOTAL ARCHAEOLOGICAL SITES (visited & recorded): 0

Total isolates recorded: 1

☒ Non-selective isolate recording?

HCPI properties discovered and registered: 0

HCPI properties discovered and NOT registered: 0

Previously recorded HCPI properties revisited: 0

Previously recorded HCPI properties not relocated: 0

TOTAL HCPI PROPERTIES (visited & recorded, including acequias): 0

MANAGEMENT SUMMARY:

One isolated occurrence was noted during the survey. Isolated occurrences are not eligible for the National Register of Historic Places and no treatment is recommended. The spill clean-up is recommended for approval. If cultural materials are encountered during the clean-up process, work should be halted and archaeologists with BLM/CFO should be notified immediately.

[] Continuation

IF REPORT IS NEGATIVE, YOU ARE DONE AT THIS POINT.

SURVEY LA/HCPI NUMBER LOG

Sites/Properties Discovered:

LA/HCPI No. Field/Agency No.

Eligible? (Y/N/U, applicable criteria)

NMCRIS No.: 130149

Previously recorded revisited sites/HCPI properties:

LA/HCPI No. Field/Agency No.

Eligible? (Y/N/U, applicable criteria)

MONITORING LA NUMBER LOG (site form required)

Sites Discovered (site form required):

Previously recorded sites (site update form required):

LA No. Field/Agency No.

LA No. Field/Agency No.

Areas outside known nearby site boundaries monitored? [] Yes

[] No, Explain why:

TESTING & EXCAVATION LA NUMBER LOG (site form required)

Tested LA number(s)

Excavated LA number(s)

Table 1. Previously Recorded Archaeological Sites within ¼ Mile.

LA No.	Cultural/Temporal Affiliation	Eligibility
71204	Archaic/Middle Archaic – Late Archaic (3000 BC – 200 AD) Jornada Mogollon/Late Pithouse to Early Pueblo (750 AD – 1200 AD)	Eligible, D
86183	Jornada Mogollon/Unspecified (200 AD – 1400 AD)	Eligible, D
108207	Jornada Mogollon/Unspecified (200 AD – 1400 AD)	Eligible, D
109303	Jornada Mogollon/Unspecified (200 AD – 1400 AD)	Eligible, D
109375	Jornada Mogollon/Early Pueblo (1100 AD – 1200 AD)	Eligible, D

Table 2. Isolated Occurrences.

IO No.	Description	Easting	Northing
1	Core reduction flake, purple quartzite	604024	3636872

Diversified Field Services, Inc.

J.L. Keel B #84

Spill Clean-Up

BASNM No.: 03-14-59

NMCRIS No.: 130149

Loco Hills

32103-G8

T17S R31E S 5

Proposed Project Area

1:24,000

1 inch = 2,000 feet

1 centimeter = 240 meters



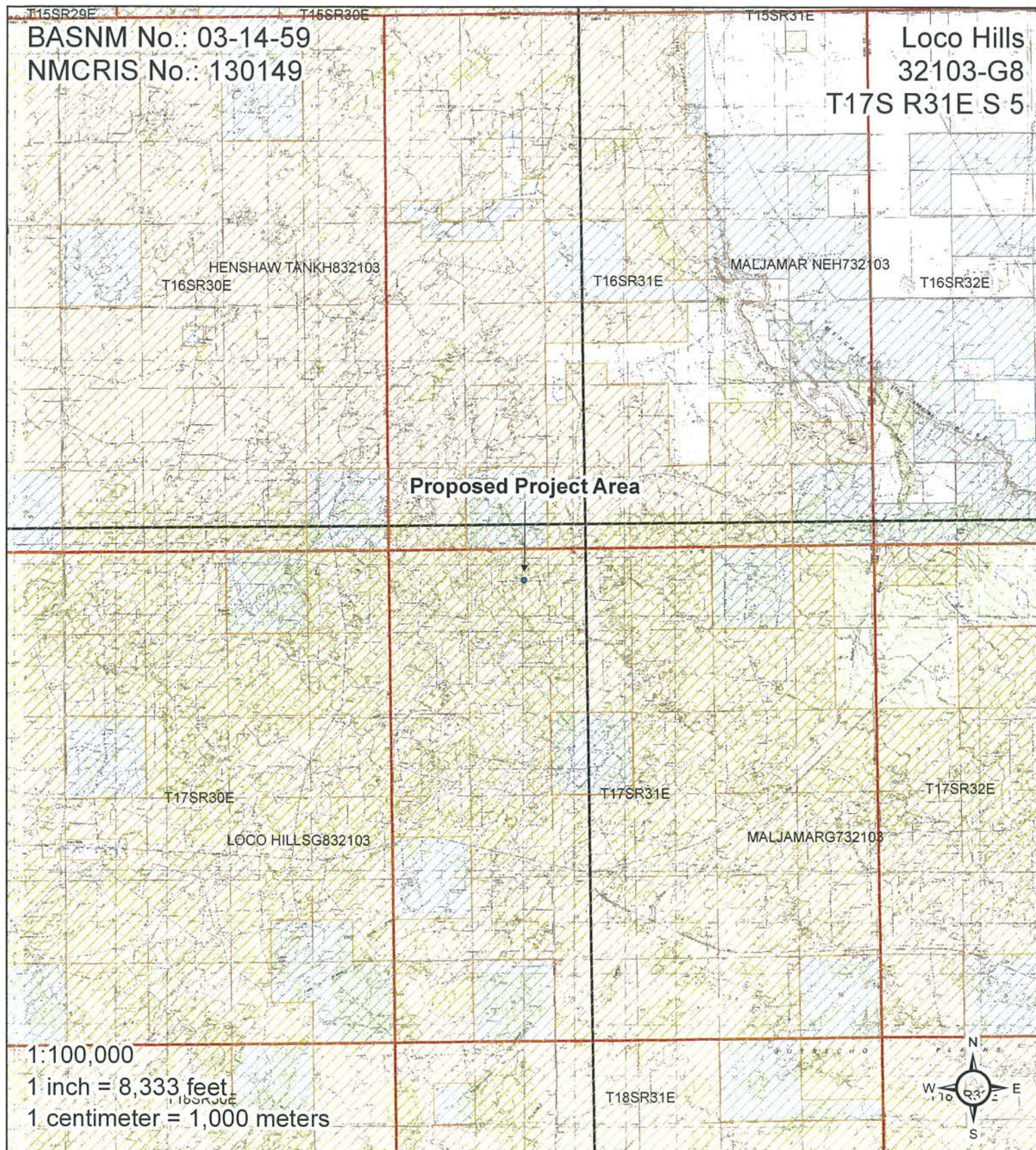
Legend

- | | | | | | |
|-------------------------|------------------|-------|-----------------------|-----------------|--------------------------|
| ■ Proposed Project Area | ■ BLM | ■ DOE | ■ BOI | ■ Private | ■ NM State Game and Fish |
| ■ BOR | ■ Forest Service | ■ NPS | ■ NM State Trust Land | ■ NM State Park | |

Diversified Field Services, Inc.

J.L. Keel B #84

Spill Clean-Up



Legend

- | | | | | | |
|-------------------------|------------------|-------|-----------------------|-----------------|--------------------------|
| ■ Proposed Project Area | ■ BLM | ■ DOE | ■ BOI | ■ Private | ■ NM State Game and Fish |
| ■ BOR | ■ Forest Service | ■ NPS | ■ NM State Trust Land | ■ NM State Park | |

GROUND WATER SEARCH

Linn Energy JL Keel B #24

UL: F

Sec: 6

T: 17S

R: 31E

Groundwater Depth: 236 ft.

● = NM Office of the State Engineer

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

✗ = Site Location

Date: 05/01/2014

By: Rebecca Pons

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