EXPLORING WHAT'S POSSIBLE

APACHE CORPORATION

P.O.Box 1849
Eunice, NM 88231
Phone 575.394.3159

White Owl Battery

Closure Report

API 30-025-36689

Release Date: December 6, 2011

Unit Letter D, Section 2, Township 20S, Range 38E

Rice Environmental Consulting & Safety
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

November 9, 2012

Geoffrey Leking
New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau – District 1
1625 N. French Dr.
Hobbs, NM 88240-9273

RE: **TERMINATION REQUEST**
Apache – White Owl Battery AD
UL/D sec. 2 T20S R38E
API No. 30-025-36689

Mr. Leking:

Apache Corporation has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the site referenced above.

Background and Previous Work

The site is an accidental discharge of produced water and crude oil associated with the White Owl Battery. A fire tube gasket on a heater treater failed, releasing fluid into the bermed area and south of the bermed area, with overspray into pasture land to the south. An initial form C-141 was submitted by Apache Corporation on December 12th, 2011 (Appendix A). The site is located south of Hobbs, in unit letter 'D' of section 2, T20S, R38E in Lea County, New Mexico. According to the New Mexico Office of the State Engineer and the United States Geological Survey (USGS), depth to groundwater in the area approximated 48 ft bgs.

On December 6th, 2011, RECS personnel initiated work on the White Owl Battery (Figure 1). Surface soil samples were collected and field tested for chloride. Headspace measurements were also taken in the field using a Photo Ionization Detector (PID). The samples were submitted to a commercial laboratory for chloride and TPH (GRO/DRO) analyses (Appendix C). Chloride ranged from <16.0 mg/kg in the overspray area to 5,730 mg/kg within the bermed area. TPH ranged from <10.0 mg/kg in the overspray area to 13,080 mg/kg in the area immediately south of the berm.

The stain surrounding Pt.2 was scraped approximately 6 inches below ground surface (bgs). On December 12th, 2011, RECS personnel collected and field tested a representative composite sample from the bottom of the scrape (Figure 2). The sample was submitted to a laboratory for chloride and TPH analyses and contained 32.0 mg/kg chloride and 66.3 mg/kg TPH.

The stain within the berm was hand excavated 6 to 8 inches bgs. On December 13th, 2011, RECS personnel collected and field tested a sample from the bottom of the excavation at Pt. 1 (Figure 2). The sample was submitted to a laboratory for chloride and TPH analyses and contained 160 mg/kg chloride and 20.8 mg/kg TPH.

The stain surrounding Pt. 3 and Pt. 4 was also scraped. Impacted soils were removed from the excavations and transported to a NMOCD approved disposal facility. The berm area excavation was backfilled with clean caliche and leveled. See Appendix B for photographs of field activities.

Conclusion

Due to the removal of impacted soils relative to necessary groundwater depth, Apache submits the final C-141 (Appendix D) and respectfully requests the closure of the regulatory file for this site.

Apache Corporation appreciates the opportunity to work with you on this project. Please call the number below if you have any questions or comments.

Sincerely,

Bruce Baker

Bruce Baker
Project Manager
RECS
(575) 631-5157

Attachments:

Figure 1:	Site Plat with Initial Sampling Lab Data
Figure 2:	Site Plat with Final Excavations and Lab Data
Appendix A:	Initial Form C-141
Appendix B:	Site Photographs
Appendix C:	Laboratory Results
Appendix D:	Final Form C-141

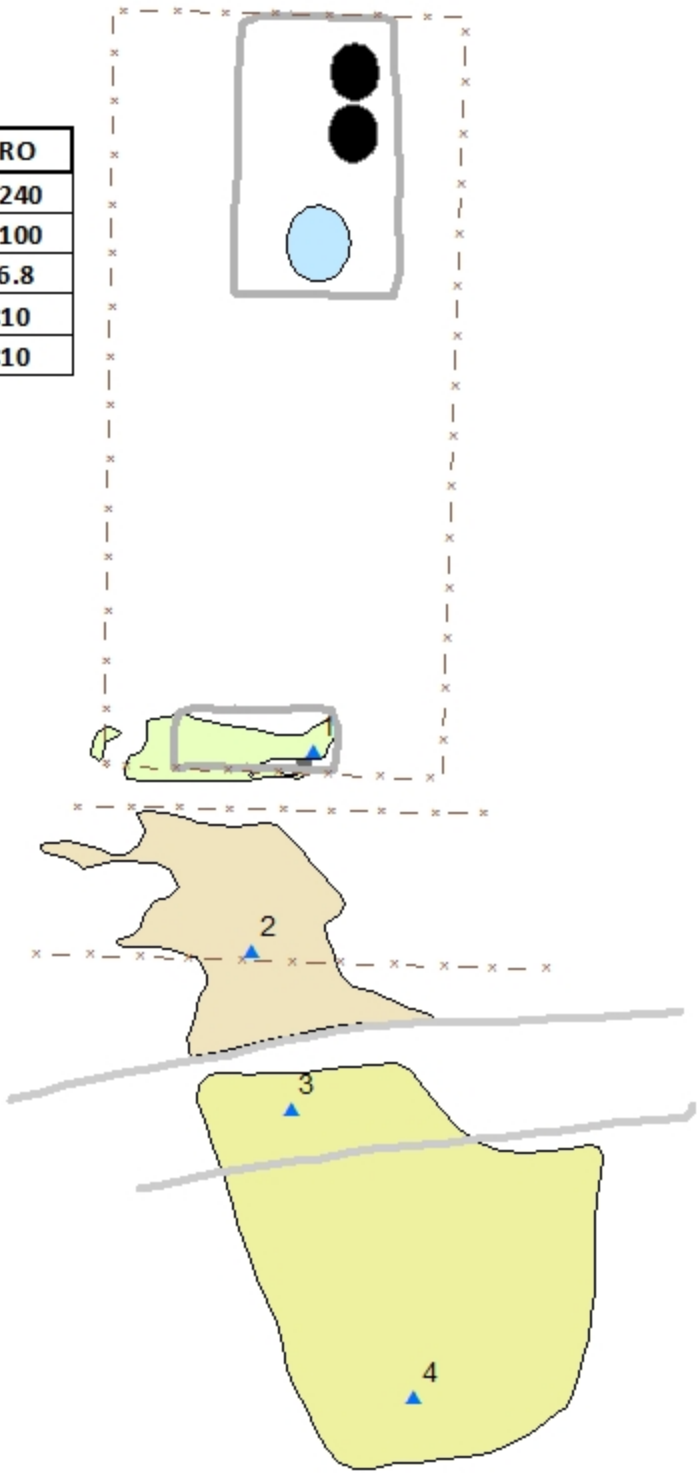
Figures

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

Site Plat

INITIAL SAMPLING LAB DATA

Sample Description	Cl-	GRO	DRO
PT1 surface	5,730	2,000	2,240
PT2 surface	1,170	5,980	7,100
PT3 surface	80	<10	26.8
PT3 @ 6"	96	<10	<10
PT4 surface	<16	<10	<10



Legend

- SAMPLE POINT
- FENCE
- ROAD
- BERM
- CONTAMINATED AREA
- OIL TANK
- OVERSPRAY AREA
- SEPARATER
- STAIN
- WATER TANK

RICE ENVIRONMENTAL RECS CONSULTING & SAFETY, LLC

APACHE WHITE OWL BATTERY AD

UL/D SECTION 2
T-20-S R-38-E
LEA COUNTY, NM

Figure 1

N W E S

0 10 20 40 Feet

GPS date: 12/6/11 by JK
Drawing date: 12/7/11
Drafted by: TONY GRIECO

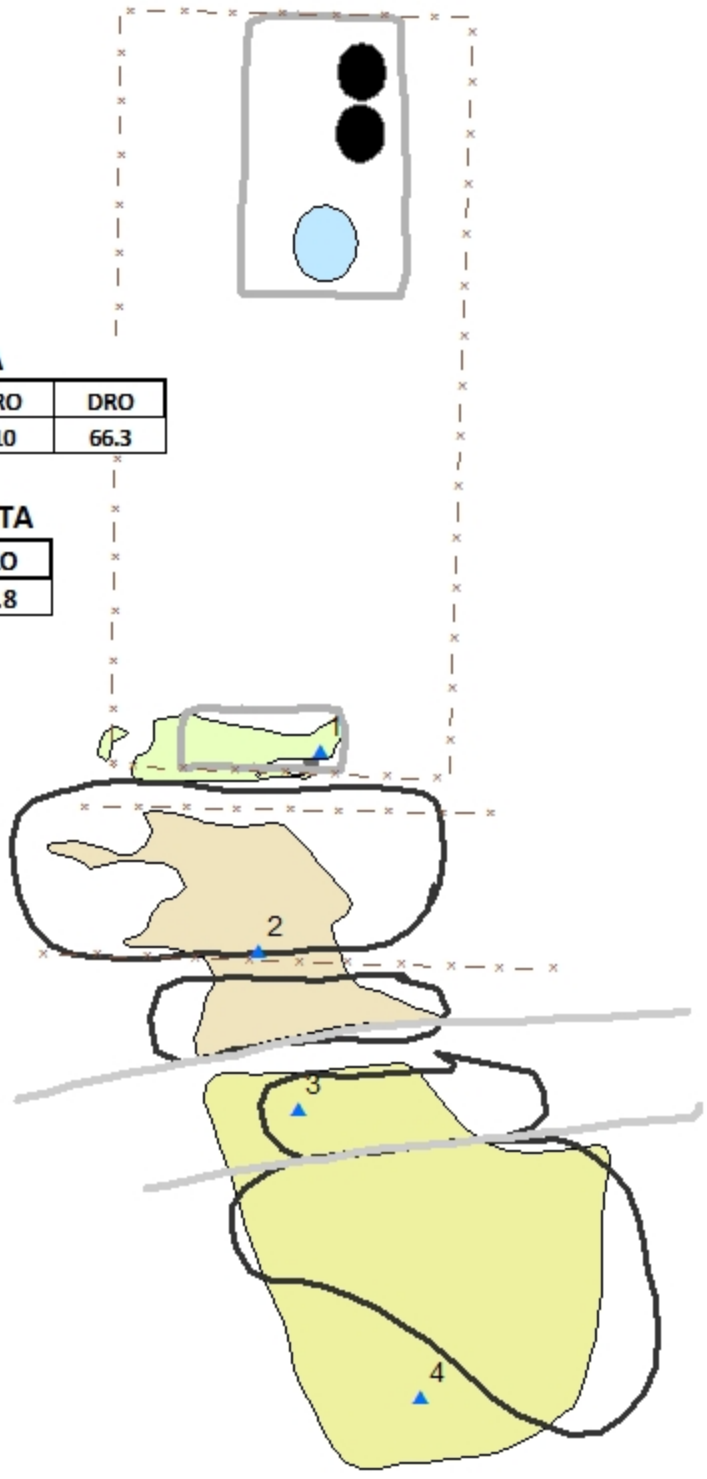
Site Plat

EXCAVATION AT PT. 2 LAB DATA

Sample Description	Cl-	GRO	DRO
S Scrape 6-8" 5 Pt Btm Comp	32	<10	66.3

EXCAVATION WITHIN BERM LAB DATA

Sample Description	Cl-	GRO	DRO
Pt 1 Inside Berm	160	<10	20.8



Legend

- SAMPLE POINT
- FENCE
- ROAD
- SCRAPE
- BERM
- CONTAMINATED AREA
- OIL TANK
- OVERSPRAY AREA
- SEPARATER
- STAIN
- WATER TANK

RICE ENVIRONMENTAL RECS CONSULTING & SAFETY, LLC

APACHE WHITE OWL BATTERY AD

UL/D SECTION 2
T-20-S R-38-E
LEA COUNTY, NM

Figure 2

N W E S

0 10 20 40
Feet

GPS date: 12/6/11 by JK
Drawing date: 12/7/11
Drafted by: TONY GRIECO

Appendix A
Initial Form C-141

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

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 Apache Corporation	Contact Natalie Gladden
Address PO Box 1849 Eunice, NM 88231	Telephone No. 575-390-4186
Facility Name White Owl Battery (nearest well #1)	Facility Type Production Facility

Surface Owner Unknown	Mineral Owner ST of NM	API No. 30-025-36689

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	2	20S	38E	582	FNL	330	FWL	Lea

Latitude_____ **Longitude**_____

NATURE OF RELEASE

Type of Release Oil/Water	Volume of Release 12	Volume Recovered 10
Source of Release Fire tube	Date and Hour of Occurrence 12/06/11	Date and Hour of Discovery 12/06/11
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom? Natalie Gladden	Date and Hour 12/7 1150am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Southern Union's gas compressor went down overnight and the heater treater pressured up resulting in a failure of the fire tube gasket. Spray area was backdragged immediately. Most of the fluid remained inside the bermed area, but did spray the pasture area.

Describe Area Affected and Cleanup Action Taken.*
Clean up will follow the NMOCD 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: Natalie Gladden	OIL CONSERVATION DIVISION	
Printed Name: Natalie Gladden	Approved by Environmental Specialist:	
Title: EHS Environmental Tech	Approval Date:	Expiration Date:
E-mail Address: natalie.gladden@apachecorp.com	Conditions of Approval:	Attached ☐
Date: 12/12/11 Phone: 575-390-4186		

* Attach Additional Sheets If Necessary

Appendix B
Site Photographs

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

Apache White Owl Battery AD

Unit D, Section 2, T20S, R38E

Initial release, facing north 12/6/2011

Initial release, facing west 12/6/2011

Scraping leak, facing west 12/9/2011

Scraped overspray area, facing southeast 12/9/2011

Leak scraped, facing west 12/9/2011

Exporting soil, facing north 12/9/2011

Repairing berm, facing south 12/13/2011

Site complete, facing west 12/13/2011

Appendix C
Laboratory Results

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

CARDINAL Laboratories

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

Analytical Results For:

APACHE - EUNICE
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	12/07/2011	Sampling Date:	12/06/2011
Reported:	12/14/2011	Sampling Type:	Soil
Project Name:	WHITE OWL BATTERY AD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 1 @ SS (H102612-01)

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5730**	16.0	12/07/2011	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	**2000**	100	12/08/2011	ND	197	98.5	200	0.173	
DRO >C10-C28	**2240**	100	12/08/2011	ND	168	84.0	200	4.20	

Surrogate: 1-Chlorooctane	*108 %*	*55.5-154*
Surrogate: 1-Chlorooctadecane	*113 %*	*57.6-158*

Sample ID: PT. 2 @ SS (H102612-02)

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1170**	16.0	12/07/2011	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	**5980**	100	12/08/2011	ND	197	98.5	200	0.173	
DRO >C10-C28	**7100**	100	12/08/2011	ND	168	84.0	200	4.20	

Surrogate: 1-Chlorooctane	*170 %*	*55.5-154*
Surrogate: 1-Chlorooctadecane	*167 %*	*57.6-158*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

APACHE - EUNICE
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	12/07/2011	Sampling Date:	12/06/2011
Reported:	12/14/2011	Sampling Type:	Soil
Project Name:	WHITE OWL BATTERY AD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 3 @ SS (H102612-03)

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	12/07/2011	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	12/08/2011	ND	197	98.5	200	0.173	
DRO >C10-C28	**26.8**	10.0	12/08/2011	ND	168	84.0	200	4.20	

Surrogate: 1-Chlorooctane	*81.4 %*	*55.5-154*
Surrogate: 1-Chlorooctadecane	*72.0 %*	*57.6-158*

Sample ID: PT. 4 @ SS (H102612-04)

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/07/2011	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	12/08/2011	ND	197	98.5	200	0.173	
DRO >C10-C28	<10.0	10.0	12/08/2011	ND	168	84.0	200	4.20	

Surrogate: 1-Chlorooctane	*83.2 %*	*55.5-154*
Surrogate: 1-Chlorooctadecane	*73.0 %*	*57.6-158*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

APACHE - EUNICE
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	12/07/2011	Sampling Date:	12/06/2011
Reported:	12/14/2011	Sampling Type:	Soil
Project Name:	WHITE OWL BATTERY AD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 3 @ 6'' (H102612-05)

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	12/07/2011	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	12/08/2011	ND	177	88.7	200	3.39	
DRO >C10-C28	<10.0	10.0	12/08/2011	ND	157	78.7	200	5.35	

Surrogate: 1-Chlorooctane	*87.9 %*	*55.5-154*
Surrogate: 1-Chlorooctadecane	*73.7 %*	*57.6-158*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

Company Name:	Apache Corp.	**BILL TO**	
Project Manager:	Natalie Gladden	P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:	White Oak Battery AD	Phone #:	
Sampler Name:	JKemplon	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST										
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	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS					
†1D2612																									
1	Pit 1 @ 5S	G	1			✓					✓		12-6-11	4:15	✓	✓									
2	Pit 2 @ 5S	G	1			✓					✓		12-6-11	4:20	✓	✓									
3	Pit 3 @ 5S	G	1			✓					✓		12-6-11	4:25	✓	✓									
4	Pit 4 @ 5S	G	1			✓					✓		12-6-11	4:30	✓	✓									
5	Pit 3 @ 6"	G	1			✓					✓		12-6-11	4:35	✓	✓									

Relinquished By:	Date: 12-7-11	Received By:		Phone Result: ☐ Yes ☑ No	Add'l Phone #:
	Time: 7:30			Fax Result: ☐ Yes ☑ No	Add'l Fax #:
Relinquished By:	Date: 12/7/11	Received By: Jodi Henson		REMARKS:	
	Time: 8:03			email results natalie.gladden@apachecorp.com Zconder@rice-ecs.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com	
Delivered By: (Circle One)		Sample Condition Cool Intact	CHECKED BY: (Initials)		
Sampler - UPS - Bus - Other:	-3°	☑ Yes ☑ Yes ☐ No ☐ No			

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#26

CARDINAL Laboratories

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

Analytical Results For:

APACHE - EUNICE
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	12/12/2011	Sampling Date:	12/12/2011
Reported:	12/16/2011	Sampling Type:	Soil
Project Name:	WHITE OWL BATTERY AD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: S SCRAPE 6-8" 5 PT BTM COMP (H102653-01)

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	12/13/2011	ND	416	104	400	0.00	

TPH 8015M mg/kg **Analyzed By: ZZZ**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/14/2011	ND	183	91.4	200	9.64	
DRO >C10-C28	**66.3**	10.0	12/14/2011	ND	214	107	200	6.10	

Surrogate: 1-Chlorooctane	*101 %*	*55.5-154*
Surrogate: 1-Chlorooctadecane	*115 %*	*57.6-158*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apache Corporation		**BILL TO**
Project Manager: Natalie Gladden		P.O. #:
Address:		Company:
City: Hobbs	State: NM Zip: 88240	Attn:
Phone #:	Fax #:	Address:
Project #:	Project Owner:	City:
Project Name: A.D.		State: Zip:
Project Location: White Owl Battery		Phone #:
Sampler Name: Oscar Boyce		Fax #:

ANALYSIS REQUEST: Cl; TPH 8015M

Lab I.D. (FOR LAB USE ONLY)	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	Cl	TPH 8015M
H102653 1	South Scrape 6-8" 5 pt Bottom Comp	C	1			X							12-12-11	2:00	✓	✓

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: [signature]	Date: 12-12-11 Time: 2:37	Received By: Jodi Henson	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 5°c	Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials) JH	REMARKS: Natalie, Mark, Zach, Bruce, Lauren Email Everyone please

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#92

CARDINAL Laboratories

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

Analytical Results For:

APACHE - EUNICE
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	12/13/2011	Sampling Date:	12/13/2011
Reported:	12/16/2011	Sampling Type:	Soil
Project Name:	WHITE OWL BATTERY AD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT 1 INSIDE BERM (H102678-01)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	12/15/2011	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	12/15/2011	ND	221	110	200	9.35	
DRO >C10-C28	**20.8**	10.0	12/15/2011	ND	242	121	200	17.3	

Surrogate: 1-Chlorooctane	*97.1 %*	*55.5-154*
Surrogate: 1-Chlorooctadecane	*112 %*	*57.6-158*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

Company Name:	Apache	**BILL TO**	
Project Manager:	Natalie Gladden	*P.O. #:*	
Address:		**Company:**	
City:	**State:** NM **Zip:**	**Attn:**	
Phone #:	**Fax #:**	**Address:**	
Project #:	**Project Owner:**	**City:**	
Project Name:	White Owl Battery #2	**State:** **Zip:**	
Project Location:		**Phone #:**	
Sampler Name:	Dak Harris	**Fax #:**	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST										
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	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS					
#102678																									
1	PT 1 Inside Berm	C	1			✓					✓		12/12/11	2:30	✓	✓									

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 consequental 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:	**Date:** 12/13/11	**Received By:**	Phone Result: ☐ Yes ☑ No Add'l Phone #:
	Time: 9:33	Jade Henson	Fax Result: ☐ Yes ☑ No Add'l Fax #:
Relinquished By:	**Date:**	**Received By:**	**REMARKS:**
	Time:		email results Natalie.Gladden@usa.apachecorp.com; Zconder@rice-ecs.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com

Delivered By: (Circle One) Sampler - UPS - Bus - Other: 4°C

Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials)

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

Appendix D
Groundwater Study

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

Apache
Company

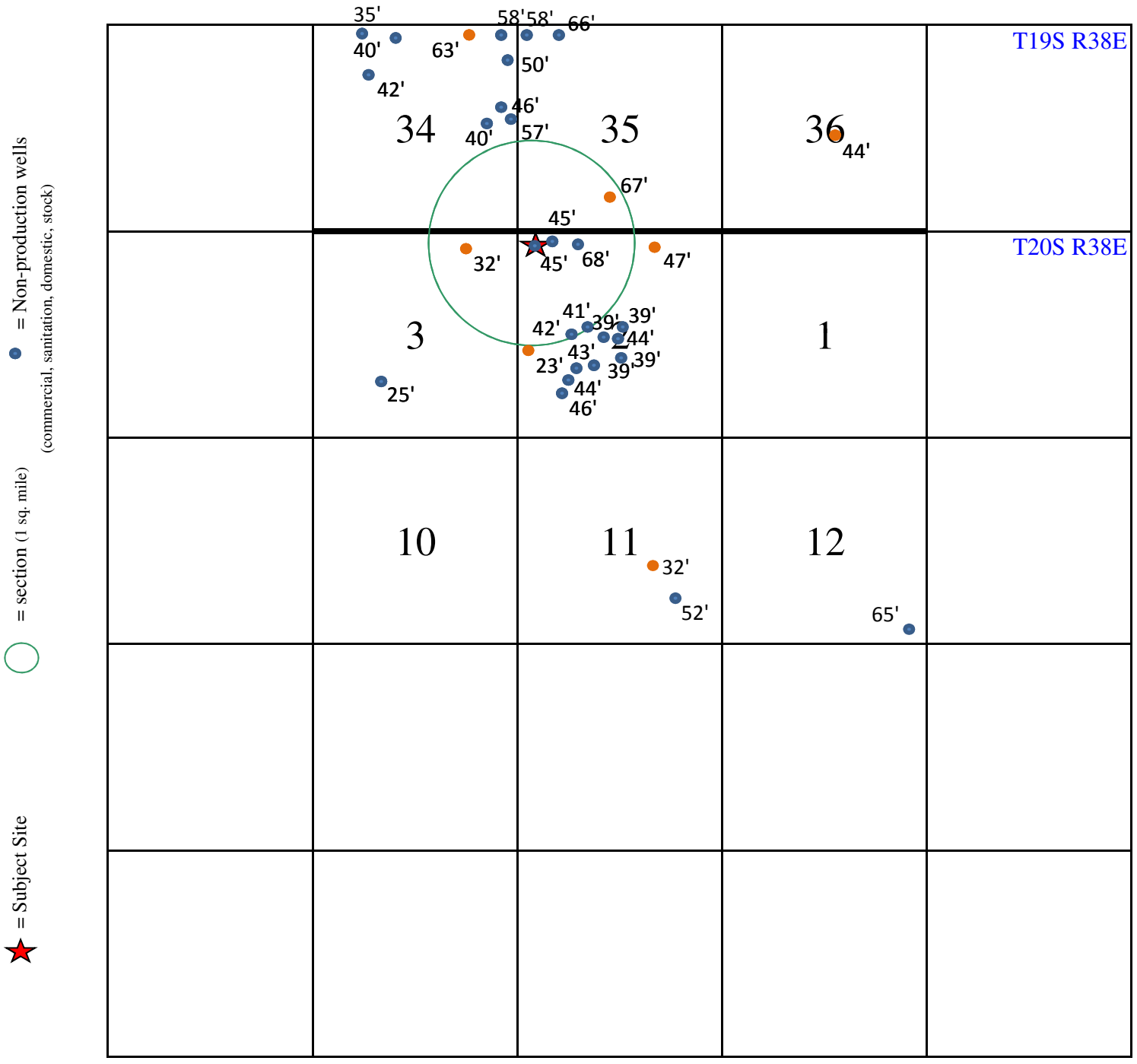
White Owl Battery AD
site name

D	2	T20S	R38E
Unit Letter	Section	Township	Range

Groundwater Depth: 48 ft

Compiled by: Lara Weinheimer Date: 12/14/2011

Comments:



National Water Information System: Web Interface

News updated Nov, 2011

Groundwater levels for New Mexico

Search Results -- 1 sites found

Search Criteria

Agency code = usgs
site_no list =
- 323613103070101

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

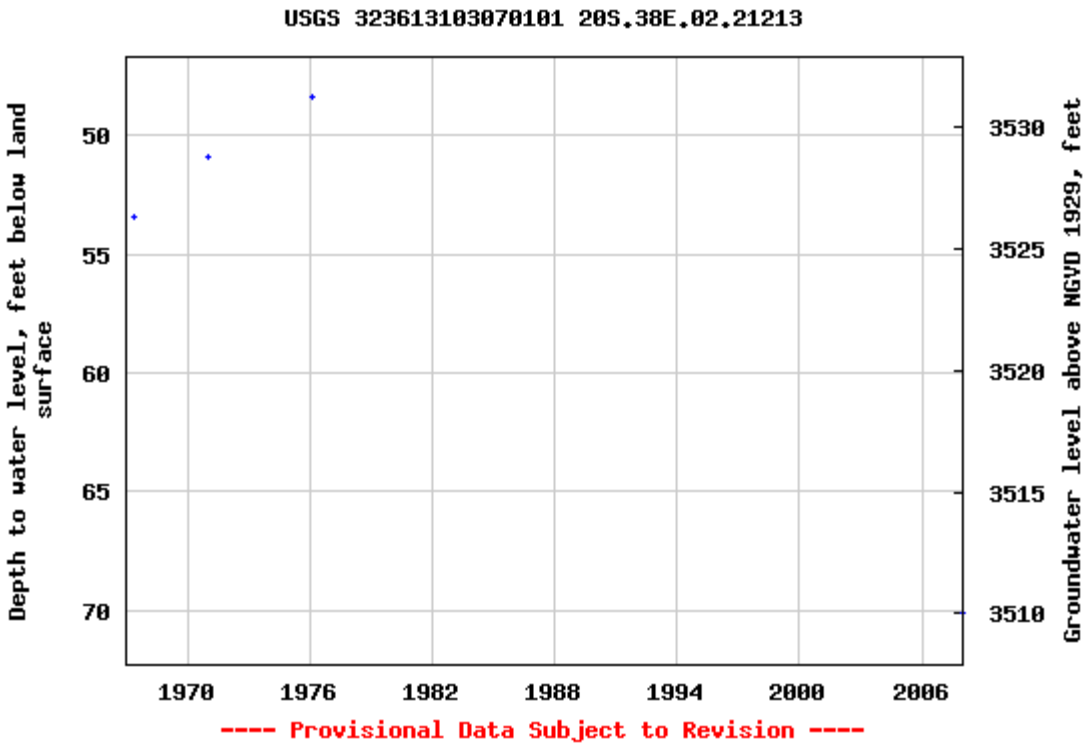
USGS 323613103070101 20S.38E.02.21213

Available data for this site: Groundwater: Field measurements GO

Lea County, New Mexico
Hydrologic Unit Code 12080003
Latitude 32°36'33.3", Longitude 103°06'57.9" NAD83
Land-surface elevation 3,579.90 feet above NGVD29
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

- Table of data
- Tab-separated data
- Graph of data
- Reselect period



Breaks in the plot represent a gap of at least one year between field measurements.
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U.S. Department of the Interior | U.S. Geological Survey
Title: Groundwater for New Mexico: Water Levels
URL: http://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?

Page Contact Information: New Mexico Water Data Maintainer
Page Last Modified: 2011-12-14 12:35:00 EST
0.27 0.23 nadww01

National Water Information System: Web Interface

News updated Nov, 2011

Groundwater levels for New Mexico

Search Results -- 1 sites found

Search Criteria

Agency code = usgs
site_no list =
- 323611103074701

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

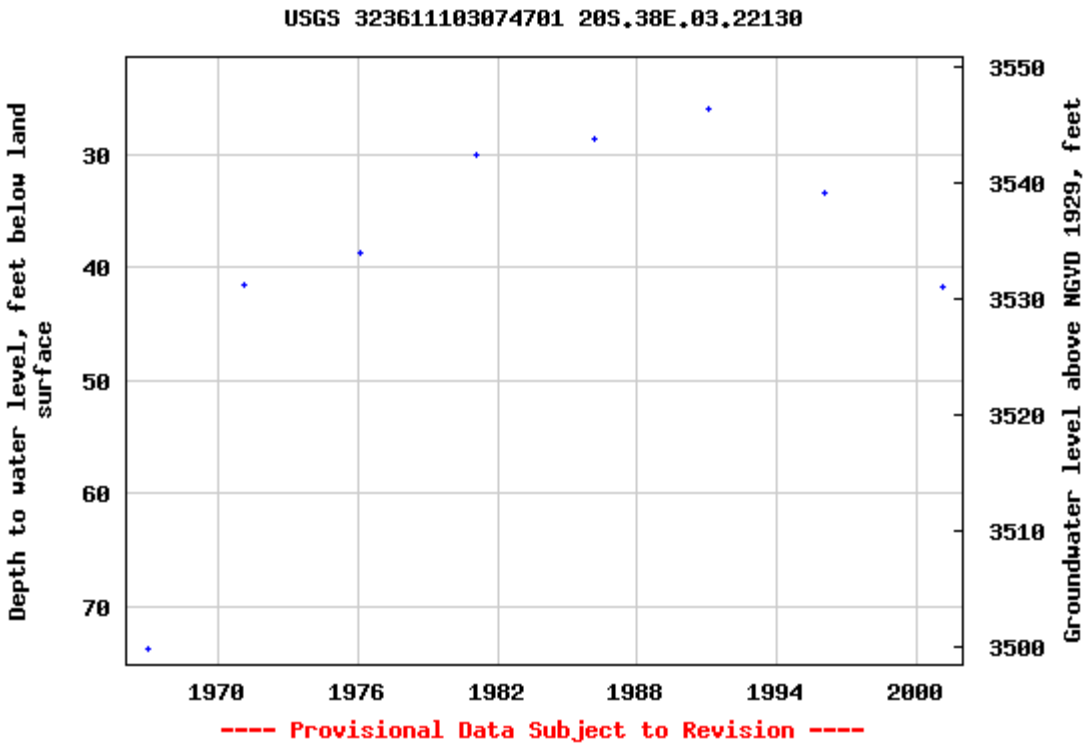
USGS 323611103074701 20S.38E.03.22130

Available data for this site: Groundwater: Field measurements GO

Lea County, New Mexico
Hydrologic Unit Code 12080003
Latitude 32°36'29", Longitude 103°07'53" NAD27
Land-surface elevation 3,572.90 feet above NGVD29
The depth of the well is 90 feet below land surface.
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

- Table of data
- Tab-separated data
- Graph of data
- Reselect period



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URL: http://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?

Page Contact Information: New Mexico Water Data Maintainer
Page Last Modified: 2011-12-14 12:36:22 EST
0.25 0.23 nadww01

National Water Information System: Web Interface

News updated Nov, 2011

Groundwater levels for New Mexico

Search Results -- 1 sites found

Search Criteria

Agency code = usgs
site_no list =
- 323608103073501

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

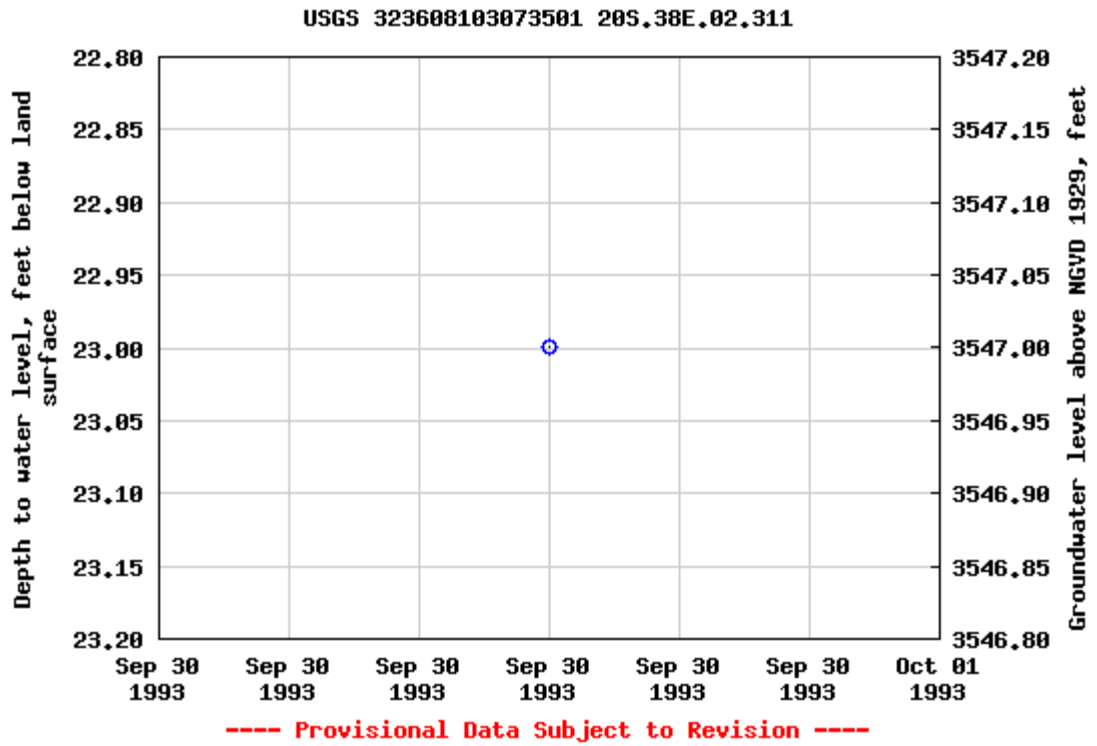
USGS 323608103073501 20S.38E.02.311

Available data for this site: Groundwater: Field measurements GO

Lea County, New Mexico
Hydrologic Unit Code 12080003
Latitude 32°36'08", Longitude 103°07'35" NAD27
Land-surface elevation 3,570 feet above NGVD29
The depth of the well is 101 feet below land surface.
The depth of the hole is 101 feet below land surface.
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

- Table of data
- Tab-separated data
- Graph of data
- Reselect period



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U.S. Department of the Interior | U.S. Geological Survey

Title: Groundwater for New Mexico: Water Levels
URL: http://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?

Page Contact Information: New Mexico Water Data Maintainer
Page Last Modified: 2011-12-14 12:38:04 EST
0.24 0.23 nadww01

National Water Information System: Web Interface

News updated Nov, 2011

Groundwater levels for New Mexico

Search Results -- 1 sites found

Search Criteria

Agency code = usgs
site_no list =
- 323454103065001

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

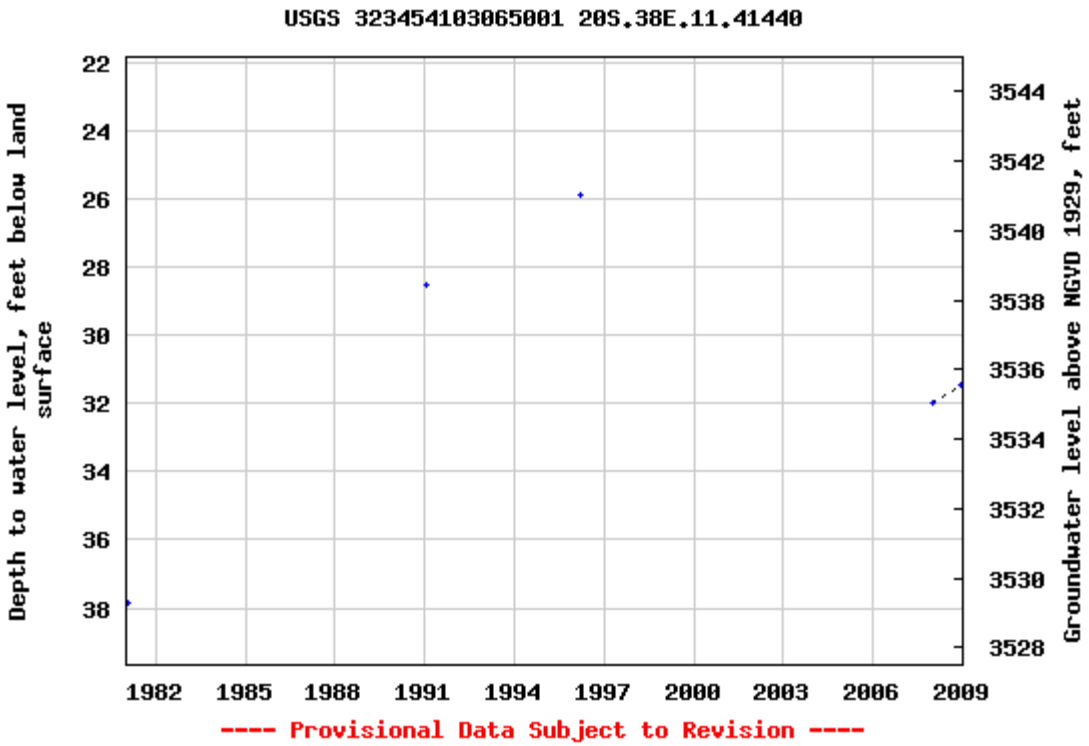
USGS 323454103065001 20S.38E.11.41440

Available data for this site: Groundwater: Field measurements GO

Lea County, New Mexico
Hydrologic Unit Code 12080003
Latitude 32°35'03.6", Longitude 103°06'54.7" NAD83
Land-surface elevation 3,567.00 feet above NGVD29
The depth of the well is 43 feet below land surface.
This well is completed in the High Plains aquifer (N100HGHPLN) national aquifer.
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

- Table of data
- Tab-separated data
- Graph of data
- Reselect period



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Title: Groundwater for New Mexico: Water Levels
URL: http://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?

Page Contact Information: New Mexico Water Data Maintainer
Page Last Modified: 2011-12-14 12:38:37 EST
0.46 0.23 nadww01

Groundwater levels for New Mexico

Search Results -- 1 sites found

Search Criteria

Agency code = usgs
site_no list =
- 323735103075001

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

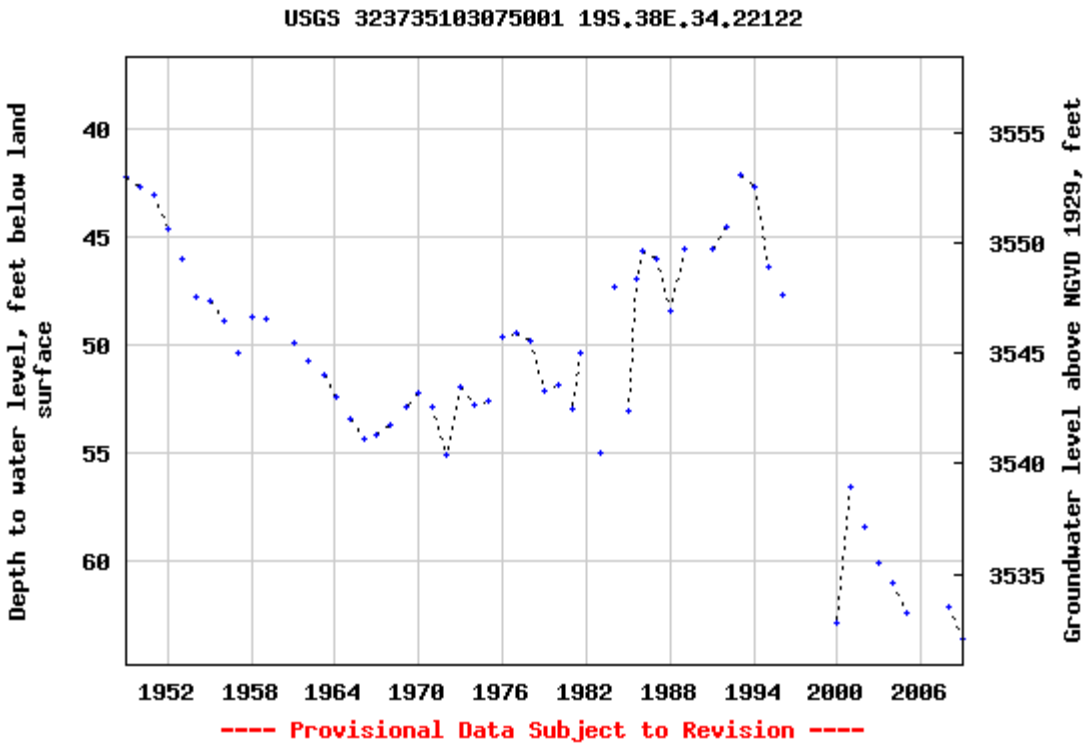
USGS 323735103075001 19S.38E.34.22122

Available data for this site: Groundwater: Field measurements GO

Lea County, New Mexico
Hydrologic Unit Code 12080003
Latitude 32°37'25.9", Longitude 103°07'48.4" NAD83
Land-surface elevation 3,595.40 feet above NGVD29
The depth of the well is 120 feet below land surface.
This well is completed in the High Plains aquifer (N100HGHPLN) national aquifer.
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

- Table of data
- Tab-separated data
- Graph of data
- Reselect period



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URL: http://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?

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USGS Water Resources

Data Category: Groundwater | Geographic Area: New Mexico | GO

News updated Nov, 2011

Groundwater levels for New Mexico

Search Results -- 1 sites found

Search Criteria

Agency code = usgs
site_no list =
- 323641103060801

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

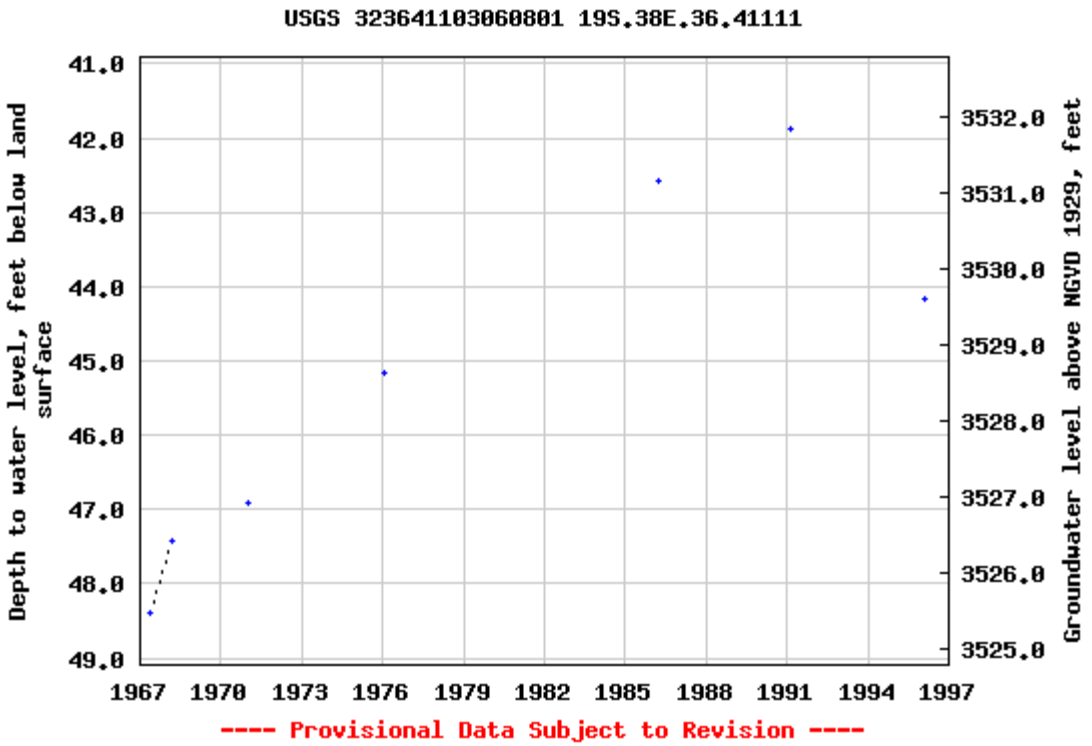
USGS 323641103060801 19S.38E.36.41111

Available data for this site | Groundwater: Field measurements | GO

Lea County, New Mexico
Hydrologic Unit Code 12080003
Latitude 32°37'00", Longitude 103°06'07" NAD27
Land-surface elevation 3,573.80 feet above NGVD29
The depth of the well is 101 feet below land surface.
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

- Table of data
- Tab-separated data
- Graph of data
- Reselect period



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Title: Groundwater for New Mexico: Water Levels
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Page Contact Information: New Mexico Water Data Maintainer
Page Last Modified: 2011-12-14 12:40:22 EST
0.24 0.23 nadww01

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USGS Water Resources

Data Category: Groundwater | Geographic Area: New Mexico | GO

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Groundwater levels for New Mexico

Search Results -- 1 sites found

Search Criteria

Agency code = usgs
site_no list =
- 323621103071101

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

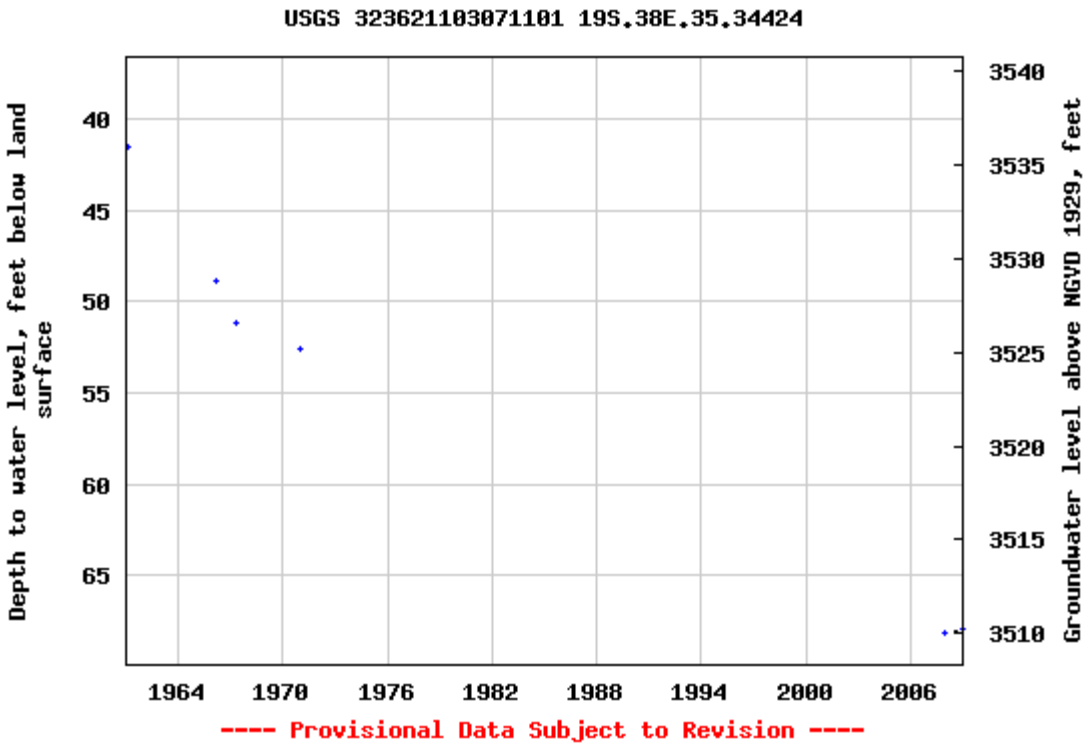
USGS 323621103071101 19S.38E.35.34424

Available data for this site: Groundwater: Field measurements | GO

Lea County, New Mexico
Hydrologic Unit Code 12080003
Latitude 32°36'52.2", Longitude 103°07'10.0" NAD83
Land-surface elevation 3,577.80 feet above NGVD29
The depth of the well is 100 feet below land surface.
This well is completed in the High Plains aquifer (N100HGHPLN) national aquifer.
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

- Table of data
- Tab-separated data
- Graph of data
- Reselect period



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Title: Groundwater for New Mexico: Water Levels
URL: http://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?

Page Contact Information: New Mexico Water Data Maintainer
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0.25 0.23 nadww01

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 Code	Subbasin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
L 02735		L	LE	4	4	4	12	20S	38E	678836	3606463*	90	65	25
L 03107		L	LE				03	20S	38E	674886	3608704*	80	25	55
L 03125		L	LE	1	4	4	11	20S	38E	677025	3606635*	52	52	0
L 07559 POD1		L	LE	4	2	3	02	20S	38E	676385	3608438*	80	39	41
L 07559 POD10		L	LE	2	2	3	02	20S	38E	676385	3608638*	75	46	29
L 07559 POD11		L	LE	1	2	3	02	20S	38E	676185	3608638*	75	42	33
L 07559 POD2		L	LE	4	2	3	02	20S	38E	676385	3608438*	70	43	27
L 07559 POD3		L	LE	2	2	3	02	20S	38E	676385	3608638*	71	39	32
L 07559 POD4		L	LE	2	2	3	02	20S	38E	676385	3608638*	75	44	31
L 07559 POD5		L	LE	1	2	3	02	20S	38E	676185	3608638*	75	41	34
L 07559 POD6		L	LE	2	1	3	02	20S	38E	675983	3608632*	80	44	36
L 07559 POD7		L	LE	4	2	3	02	20S	38E	676385	3608438*	75		
L 07559 POD8		L	LE	4	2	3	02	20S	38E	676385	3608438*	75	39	36
L 07559 POD9		L	LE	2	2	3	02	20S	38E	676385	3608638*	70	39	31
L 11862 POD1		L	LE	1	1	1	02	20S	38E	675768	3609437*	95	45	50
L 12050 POD1		L	LE		1	1	02	20S	38E	675785	3609291	95	45	50
L 12455 POD1		L	LE	2	1	2	02	20S	38E	676854	3609504	100	68	32

Average Depth to Water: **44 feet**

Minimum Depth: **25 feet**

Maximum Depth: **68 feet**

Record Count: 17

PLSS Search:

Section(s): 1, 2, 3, 10, 11, 12 **Township:** 20S **Range:** 38E

***UTM location was derived from PLSS - see Help**

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 Code	Subbasin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
L 01034		L	LE		4	2	34	19S	38E	675447	3610536*	80		
L 01130 POD1		L	LE		4	2	34	19S	38E	675447	3610536*	80	46	34
L 01144 POD 1		L	LE	4	2	2	34	19S	38E			76	50	26
L 01463		L	LE	1	1	1	35	19S	38E	675742	3611044*	85	58	27
L 01687 POD1		L	LE	2	2	1	34	19S	38E	674736	3611024*	50	40	10
L 02477		L	LE	4	4	2	34	19S	38E	675546	3610435*	80	46	34
L 02582		L	LE	4	4	2	34	19S	38E	675546	3610435*	80	57	23
L 02625		L	LE	3	4	2	34	19S	38E	675346	3610435*	60	40	20
L 02829		L	LE	2	1	1	34	19S	38E	674334	3611017*	68	35	33
L 03955		L	LE	2	2	2	34	19S	38E	675540	3611037*	100	58	42
L 04532 A		L	LE	3	2	1	35	19S	38E	676145	3610851*	12		
L 06985		L	LE	2	1	1	35	19S	38E	675942	3611044*	98	66	32
L 12343 POD1		L	LE	4	1	1	34	19S	38E	674434	3610730	66	42	24
L 12419 POD1		L	LE	1	1	1	35	19S	38E	675678	3611134	136		
L 12543 POD1		L	LE	2	1	3	35	19S	38E	676021	3610151	110		

Average Depth to Water: **48 feet**

Minimum Depth: **35 feet**

Maximum Depth: **66 feet**

Record Count: 15

PLSS Search:

Section(s): 34, 35, 36 **Township:** 19S **Range:** 38E

***UTM location was derived from PLSS - see Help**

Appendix E

Final Form C-141

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

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

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Apache Corp.	Contact Natalie Gladden
Address P.O. Box 1849, Eunice, NM, 88231	Telephone No. (575) 390-4186
Facility Name White Owl Battery (nearest well #1)	Facility Type Production Facility

Surface Owner Unknown	Mineral Owner State of NM	Lease No. 30-025-36689

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	2	20S	38E	582	FNL	330	FWL	Lea

Latitude_____ **Longitude**_____

NATURE OF RELEASE

Type of Release Oil/Produced Water	Volume of Release 12 bbl	Volume Recovered 10 bbl
Source of Release Fire Tube	Date and Hour of Occurrence 12/06/11	Date and Hour of Discovery 12/06/11
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Southern Union's gas compressor went down overnight and the heater treater pressured up resulting in a failure of the fire tube gasket. Spray area was back-dragged immediately. Most of the fluid remained inside the bermed area, but did spray the pasture area.

Describe Area Affected and Cleanup Action Taken.*
The leak affected the bermed containment and an area to the south of the berm, including overspray into pasture land. Impacted soils were removed to a NMOCD approved disposal facility. Representative soil samples were collected from the excavations and sent to a commercial laboratory for chloride and TPH confirmation. The excavations were backfilled with clean soils and leveled.

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: Natalie Gladden	OIL CONSERVATION DIVISION	
Printed Name: Natalie Gladden	Approved by District Supervisor:	
Title: EH&S Environmental Tech	Approval Date:	Expiration Date:
E-mail Address: Natalie.gladden@apachecorp.com	Conditions of Approval:	Attached ☐
Date: 11/9/12 Phone: (575) 390-4186		

* Attach Additional Sheets If Necessary