

### **APACHE CORPORATION**

P.O.Box 1849 Eunice, NM 88231 Phone 575,394,3159

### Warn State A/C 2 #19

### Closure Report

API 30-025-31927

Release Date: September 6, 2011

Unit Letter F, Section 6, Township 18S, Range 35E

### Rice Environmental Consulting & Safety

P.O. Box 5630 Hobbs, NM 88241 Phone 575.393.4411 Fax 575.393.0293

### May 1, 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 – Warn State A/C 2 #19 AD UL/F sec. 6 T18S R35E API No. 30-025-31927

### 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 fluids associated with the Warn State A/C 2 #19. A surface produced water flow line leaked, releasing mixed fluids onto pasture land. Fluids were recovered and an initial form C-141 was submitted by Apache Corporation on September 7, 2011 (Appendix A). The site is located west of Hobbs, in unit letter 'F' of section 6, T18S, R35E near NM Highway 238 in Lea County, New Mexico.

On September 7, 2011, RECS personnel initiated work on the Warn State A/C 2 #19 (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 11,000 ppm (parts per million or mg/kg) to 39,600 ppm. GRO ranged from <250 ppm to 7,670 ppm and DRO ranged from <250 ppm to 79,500 ppm.

On September 14, 2011, RECS personnel collected soil samples from the final excavation (Figure 2). Representative grab samples were collected from the excavation walls and the excavation floor, and were submitted to a commercial laboratory for chloride and TPH (GRO/DRO) analyses (Appendix C). Chloride did not exceed 272 ppm in the wall samples and 304 ppm in the floor samples. TPH was 233 ppm at the N Wall E End and <10.0 ppm in the remaining samples.

Impacted soils were removed to a NMOCD approved disposal facility. A small area beneath several steel and poly flow lines could not be fully excavated due to extreme soil compaction and

the inability of equipment to safely access the space between steel lines. The excavation was backfilled with clean soil and contoured to the surrounding area. See Appendix B for photographs of field activities.

### Conclusion

According to the New Mexico Office of the State Engineer and the United States Geological Survey (USGS), depth to groundwater in the area approximated 100 ft bgs (Appendix D). Due to the removal of the majority of impacted soils as was practicable relative to necessary groundwater depth, Apache submits the final C-141 (Appendix E) 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 Natalie Gladden (575) 390-4186 if you have any questions or comments.

Sincerely,

Bruce Baker Head Foreman

RECS

(575) 631-5157

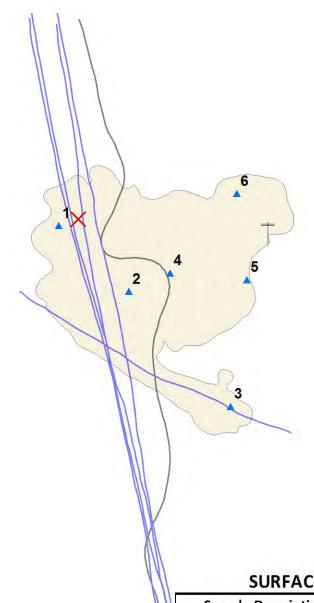
### Attachments:

Figure 1: Site Plat including Surface Sample Data
Figure 2: Site Plat including Final Excavation Data

Appendix A: Initial Form C-141 Appendix B: Site Photographs Appendix C: Laboratory Results Appendix D: Groundwater Study Appendix E: Final Form C-141

# Figures

### Site Plat



### Legend

POWER POLE

▲ SAMPLE POINT

X SOURCE

WELL

LEASE ROAD EDGE

- POLY LINE

STEEL LINE

STAIN

SURFACE	SAMPLE	LAB DATA
COLLINGE	O/ WIVII CL	L/ 10 0/11/1

Sample Description	CI-	GRO	DRO
Pt 1	11,000	7,670	79,500
Pt 2	26,800	<5000	41,900
Pt 3	22,400	<250	<250
Pt 4	27,200	4,530	32,700
Pt 5	26,000	<1250	10,200
Pt 6	39,600	<250	<250



### APACHE WARN STATE AC/2 #019 AD

UL/N SECTION 6 T-18-S R-35-E LEA COUNTY, NM

### Figure 1



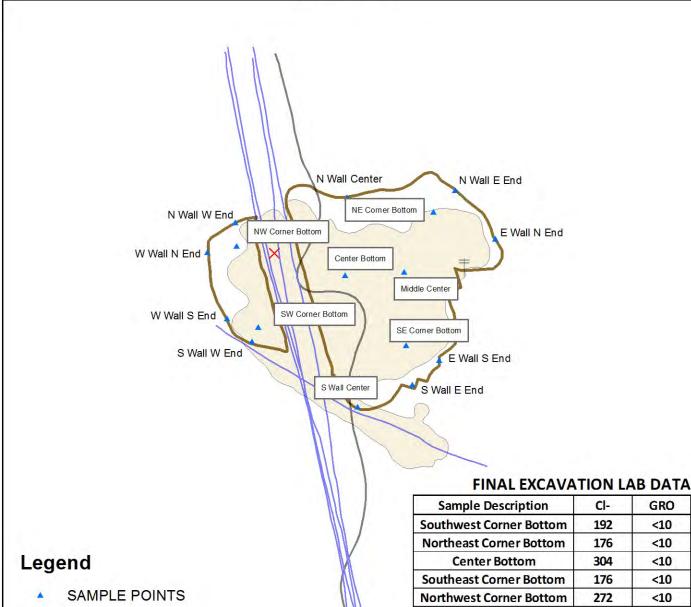
0 12.5 25

50 Feet

GPS date: 9/8/11 DH Drawing date: 9/9/11

Drafted by: T. Grieco, L. Weinheimer

### Site Plat



- **TELECTRICAL POLE**
- X SOURCE OF LEAK
- LEASE ROAD EDGE
- ---- POLY LINE
  - STEEL LINE
- FINAL EXCAVATION (4,557 sq ft)
  - LEAK AREA (4,825 sq ft)

Northeast Corner Bottom	176	<10	<10
Center Bottom	304	<10	<10
Southeast Corner Bottom	176	<10	<10
Northwest Corner Bottom	272	<10	<10
Middle Center	210	<10	<10
North Wall Center	176	<10	<10
North Wall East End	32	<50	233
North Wall West End	16	<10	<10
East Wall South End	80	<10	<10
South Wall Center	192	<10	<10
South Wall East End	112	<10	<10



### APACHE WARN STATE AC/2 #019 AD

UL/N SECTION 6 T-18-S R-35-E LEA COUNTY, NM

### Figure 2

East Wall North End

South Wall West End

West Wall North End

**West Wall South End** 



<10

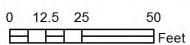
<10

<10

<10

DRO

<10



272

256

176

112

<10

<10

<10

<10

GPS date: 9/8/11 DH Drawing date: 9/9/11

Drafted by: T. Grieco, L. Weinheimer

# Appendix A Initial Form C-141

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

Form C-141 Revised August 8, 2011

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

### **Release Notification and Corrective Action**

pd						<b>OPERA</b>	ГOR		Initia	al Report		Final Repor
Name of Co							talie Gladden	· · · · · · · · · · · · · · · · · · ·				- Later Repor
<del></del>		9, Eunice N				Telephone 1	No. 575-390-41	86				
Facility Nar	ne Warn	State A/C #1	9			Facility Typ	e Production w	rell				
Surface Ow	ner			Mineral C	wner S	State of NM			API No	. 30-025-3	1927	
				LOCA	TION	OF REI	LEASE					
Unit Letter	Section	Township	Range	Feet from the		South Line	Feet from the	East/W	est Line	County	-	
F	6	18S	35E	2010	FNL		2230	FWL		Lea		
			La	titude		_ Longitud	e					
				NAT	URE	OF RELI	EASE					
Type of Rele	ase Produce	d Water		11111			Release 10		Volume R	Recovered 1		
Source of Re	lease Flow	line leak				Date and H	lour of Occurrenc			Hour of Dis	covery	
Was Immedia	te Notice (	Liven?				9/6/11	7771 0		9/6/11			
was minicula	ite ivolice (		Yes 🗵	No 🔲 Not Re	quired	If YES, To	Whom?					
By Whom?						Date and H	our	*****				
Was a Watero	cotirse Reac		Yes 🔯	No		If YES, Vo	lume Impacting the	he Water	course.			
If a Watercou	rse was Imi	nacted Descr	he Fully *	<b>k</b>							- man	
Describe Cau												
Flowline leak	. Fluid was	recovered an	d location	was backdragged	until the	e one-call is	cleared.					
												,
Describe Area					, <del>_</del>							
NMOCD Gui	delines will	be followed	o closure.									
I hereby certif	y that the in	nformation gi	ven above	is true and compl	ete to the	e best of my	knowledge and ur	nderstand	that purs	uant to NM(	CD ru	les and
public health	operators a	are required to	report an	d/or file certain re e of a C-141 repor	lease no	tifications an	d perform correct	tive actio	ns for rele	ases which	nay en	danger
SHOULD HIGH O	peramons m	ive failed to a	dequalery	investigate and re	mediate	contamination	on that nose a thre	at to oro	und water	surface wat	or hun	non boolth
or the environ	ment. m ac	iaition, NIMO	CD accep	tance of a C-141 r	eport do	es not relieve	the operator of re	esponsib	ility for co	mpliance w	ith any	other
federal, state,	or local law	s and/or regu	lations.				OH COM	TEN Y Z	mrozr			
/	h	b. 1. /	10	24-1.			OIL CONS	SERV A	ATTON	DIVISIO	N	
Signature:		uu (	TRU	Willen								
Printed Name	Natalie G	ladden			A	approved by I	Environmental Sp	ecialist:				
Title: EHS En	vironmenta	al Tech			A	pproval Date	:	Ех	xpiration I	Date:		
E-mail Addres	e notalia a	rladdon @arr	h									
E-mail Addres	ss. matane.g	зычисн <i>(а)</i> арас	necorp.co	DIII .	$ \mid$ $^{\rm C}$	conditions of	Approval:			Attached		
Date: 9/7/		Phone: 5		186								
Attach Additi	onal Sheet	ts If Necessa	rv			<del>-</del>				1		

# Appendix B Site Photographs

Phone 575.393.4411 Fax 575.393.0293

### Warn State A/C #19 AD

Unit Letter F, Section 6, T18S R35E



Initial release, facing north

9/7/2011



Excavating leak, facing east





Initial release, facing west

9/7/2011



Exporting soil, facing south

9/14/2011



Final excavation, facing north

9/14/2011



Site backfilled, facing west

6/22/2012



Final excavation, facing south

9/14/2011



Site backfilled, facing south

6/22/2012

# Appendix C Laboratory Results

Phone 575.393.4411 Fax 575.393.0293

09/07/2011

Cool & Intact

Jodi Henson

Soil

Sampling Date:

Sampling Type:

Sampling Condition:

Sample Received By:



### Analytical Results For:

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

Received: 09/08/2011

Reported: 09/13/2011
Project Name: WARN STATE A/C 2 #18

Project Number: NONE GIVEN

Project Location: NOT GIVEN

### Sample ID: PT. 1 (H101905-01)

Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11000	16.0	09/08/2011	ND	432	108	400	0.00	
TPH 8015M	mg/	'kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	7670	5000	09/09/2011	ND	180	89.9	200	0.0812	
DRO >C10-C28	79500	5000	09/09/2011	ND	176	88.1	200	0.377	

Surrogate: 1-Chlorooctane 129 % 55.5-154
Surrogate: 1-Chlorooctadecane 109 % 57.6-158

### Sample ID: PT. 2 (H101905-02)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	26800	16.0	09/08/2011	ND	432	108	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<5000	5000	09/09/2011	ND	180	89.9	200	0.0812	

Surrogate: 1-Chlorooctadecane 135 % 55.5-154
Surrogate: 1-Chlorooctadecane 126 % 57.6-158

Cardinal Laboratories \*=Accredited Analyte

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 client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

09/07/2011

Sampling Date:



### Analytical Results For:

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

Received: 09/08/2011 Reported: 09/13/2011

Reported: 09/13/2011 Sampling Type: Soil

Project Name: WARN STATE A/C 2 #18 Sampling Condition: Cool & Intact

Project Number: NONE GIVEN Sample Received By: Jodi Henson

Project Location: NOT GIVEN

### Sample ID: PT. 3 (H101905-03)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	22400	16.0	09/08/2011	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<250	250	09/09/2011	ND	180	89.9	200	0.0812	
DRO >C10-C28	<250	250	09/09/2011	ND	176	88.1	200	0.377	
Surrogate: 1-Chlorooctane	109	% 55.5-15	4						

Surrogate: 1-Chlorooctane 109 % 55.5-134
Surrogate: 1-Chlorooctadecane 108 % 57.6-158

### Sample ID: PT. 4 (H101905-04)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	27200	16.0	09/08/2011	ND	432	108	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	4530	1250	09/09/2011	ND	180	89.9	200	0.0812	
DRO >C10-C28	32700	1250	09/09/2011	ND	176	88.1	200	0.377	
Surrogate: 1-Chlorooctane	126	% 55.5-15							

Surrogate: 1-Chlorooctane 126 % 55.5-154
Surrogate: 1-Chlorooctadecane 111 % 57.6-158

Cardinal Laboratories \*=Accredited Analyte

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 client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



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

Received: 09/08/2011 Reported: 09/13/2011

Project Name: WARN STATE A/C 2 #18
Project Number: NONE GIVEN

Project Location: NOT GIVEN

Sampling Date: 09/07/2011

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

### Sample ID: PT. 5 (H101905-05)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	26000	16.0	09/08/2011	ND	432	108	400	0.00	
ТРН 8015М	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<1250	1250	09/12/2011	ND	180	89.9	200	0.0812	

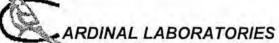
Surrogate: 1-Chlorooctane 122 % 55.5-154
Surrogate: 1-Chlorooctadecane 115 % 57.6-158

### Sample ID: PT. 6 (H101905-06)

Chloride, SM4500CI-B	mg/	kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<b>39600</b> 16.0		09/08/2011	ND	432	108	400	0.00	
TPH 8015M	mg/	'kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<250	250	09/12/2011	ND	180	89.9	200	0.0812	
DRO >C10-C28	<250	250	09/12/2011	ND	176	88.1	200	0.377	
Surrogate: 1-Chlorooctane	102 9	% 55.5-15	i.4						
Surrogate: 1-Chlorooctadecane	95.9	% 57.6-15	18						

Cardinal Laboratories \*=Accredited Analyte

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 client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results related only to the samples identified above. This report shall not be reproduced except in full with written approval of 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 ANALYSIS REQUEST														
Project Manager:							P.	0. #:													
Address:							Co	mpa	any:								S				
City:	State: NM	Zij	:				At	tn:									o			1 1	
Phone #:	Fax #:						Ac	dres	ss:								Cations/Anions			1 1	
Project #:	Project Own	er:					Ci	ty:					1,0	Σ		I	1/S			1 1	
Project Name: Dic	nn stak A/Ca#	18					St	ate:		Zip:			Chlorides	TPH 8015 M	×	Texas TPH	LC.				
Project Location:							Ph	one	#:				1:2	00	E	S	atic	TDS		1	
Sampler Name: (	1945-ton Harris						Fa	x #:					1은	8	BTEX	(ä	Ö	E		1 1	
FOR LAB USE ONLY			T	-	MA	TRIX		PRE	SER	RV. SAN	MPL	NG	Ü	立		e	te			1 1	
Lab I.D. H101905	Sample I.D.	(G)RAB OR (C)OMP.	A	GROUNDWATER	SOIL	OIL	OTHER:	ACID/BASE:	ICE / COOL	ADD DA	TE	TIME					Complete				
	T./	6	1		V			- 1	V	9-7-1	1	11:00	1	V							
-2 87	:2	6	1		V				1	9-7-11	-	11:05	V	V		1					-1
3 0	7.3.	6	1		V				/	9-7-1		11:10	1	V		7.4					
4 8	7.4	6	1		V		11.7		1	9-2-1		11:15	V	V							
3 P	7.5	6	1		V				1	9-7-1	/	11:20	V	V						1	
6 P	Ti&	G	1		1				-	9-7-1	/	11:25	V								
	mages. Curdinat's kutikly and client's exclusive remedy for sealingence and any other cause whatscever shall													bla							
service. In no event shall Cardina	al be liable for incidental or consequental damages, included of or related to the performance of services hereunder by	fing witho	ut limit	ation, bus	iness in	terruptlor	s, loss	of use,	or loss	of profits incum	ed by c	client, its subsides	ilaries Vise,								
Relinguished By:	Date: 2/c/11	-	_	ved B		(		-	_			Phone Re Fax Resu REMARK	ult:	□ Ye		No No	Add'l	Phone #: Fax #:			
Relinquished By:	Dete: 6/11 Time: 20	R	ecei	ved B Al	y:	h	lev	دلما	01	1			lie.G	ladd				checor	p.com; rice-ecs.c	com:	
Delivered By:	Circle One) Bus - Other:	-9	5	C	loo	Intact			CHE	CKED BY									ner@rice		om

<sup>†</sup> Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476



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

Received: 09/15/2011 Sampling Date: 09/14/2011

Reported: 09/22/2011 Sampling Type: Soil

Project Name: WARN STATE AC 2 #19 A.D. Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Project Location: NOT GIVEN

### Sample ID: N. WALL CENTER (H101958-01)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	09/15/2011	ND	448	112	400	0.00	
TPH 8015M	H 8015M mg/kg		Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/18/2011	ND	176	88.1	200	1.38	
DRO >C10-C28	<10.0	10.0	09/18/2011	ND	177	88.7	200	1.97	
Surrogate: 1-Chlorooctane	128	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	125	% 57.6-15	8						

### Sample ID: N. WALL E. END (H101958-02)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/16/2011	ND	448	112	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	09/18/2011	ND	176	88.1	200	1.38	
DRO >C10-C28	233	50.0	09/18/2011	ND	177	88.7	200	1.97	
Surrogate: 1-Chlorooctane	123	% 55 5-15	:4						

Surrogate: 1-Chlorooctane 123 % 55.5-154
Surrogate: 1-Chlorooctadecane 118 % 57.6-158

Cardinal Laboratories \*=Accredited Analyte

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 client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



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

Received: 09/15/2011 Sampling Date: 09/14/2011

Reported: 09/22/2011 Sampling Type: Soil

Project Name: WARN STATE AC 2 #19 A.D. Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Project Location: NOT GIVEN

### Sample ID: N. WALL W. END (H101958-03)

		/							
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	09/15/2011	ND	448	112	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/18/2011	ND	176	88.1	200	1.38	
DRO >C10-C28	<10.0	10.0	09/18/2011	ND	177	88.7	200	1.97	
Surrogate: 1-Chlorooctane	120	% 55.5-15	······································						

Surrogate: 1-Chlorooctane 120 % 55.5-154
Surrogate: 1-Chlorooctadecane 112 % 57.6-158

114%

57.6-158

### Sample ID: E. WALL S. END (H101958-04)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	09/15/2011	ND	448	112	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/18/2011	ND	176	88.1	200	1.38	
DRO >C10-C28	<10.0	10.0	09/18/2011	ND	177	88.7	200	1.97	
Surrogate: 1-Chlorooctane	124	% 55.5-15	74						

Cardinal Laboratories \*=Accredited Analyte

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 client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keine

Surrogate: 1-Chlorooctadecane



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

Received: 09/15/2011 Sampling Date: 09/14/2011

Reported: 09/22/2011 Sampling Type: Soil

Project Name: WARN STATE AC 2 #19 A.D. Sampling Condition: Cool & Intact Sample Received By: Project Number: NONE GIVEN Jodi Henson

Project Location: **NOT GIVEN** 

### Sample ID: S. WALL CENTER (H101958-05)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	09/15/2011	ND	448	112	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/18/2011	ND	176	88.1	200	1.38	
DRO >C10-C28	<10.0	10.0	09/18/2011	ND	177	88.7	200	1.97	
Surrogate: 1-Chlorooctane	118	% 55.5-15	4						

Surrogate: 1-Chlorooctadecane 111 % 57.6-158

### Sample ID: S. WALL E. END (H101958-06)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	09/15/2011	ND	448	112	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/18/2011	ND	176	88.1	200	1.38	
DRO >C10-C28	<10.0	10.0	09/18/2011	ND	177	88.7	200	1.97	
Surrogate: 1-Chlorooctane	118	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	117	% 57.6-15	8						

Cardinal Laboratories \*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keine



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

Received: 09/15/2011 Sampling Date: 09/14/2011

Reported: 09/22/2011 Sampling Type: Soil

Project Name: WARN STATE AC 2 #19 A.D. Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Project Location: NOT GIVEN

### Sample ID: E. WALL N. END (H101958-07)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	09/15/2011	ND	448	112	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/18/2011	ND	176	88.1	200	1.38	
DRO >C10-C28	<10.0	10.0	09/18/2011	ND	177	88.7	200	1.97	
Surrogate: 1-Chlorooctane	114	% 55.5-15	4						

Surrogate: 1-Chlorooctane 114 % 55.5-154
Surrogate: 1-Chlorooctadecane 109 % 57.6-158

116%

57.6-158

### Sample ID: S. WALL W. END (H101958-08)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	09/15/2011	ND	448	112	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/18/2011	ND	176	88.1	200	1.38	
DRO >C10-C28	<10.0	10.0	09/18/2011	ND	177	88.7	200	1.97	
Surrogate: 1-Chlorooctane	120	% 55.5-15	4						

Cardinal Laboratories \*=Accredited Analyte

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 client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keine

Surrogate: 1-Chlorooctadecane



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

Received: 09/15/2011 Sampling Date: 09/14/2011

Reported: 09/22/2011 Sampling Type: Soil

Project Name: WARN STATE AC 2 #19 A.D. Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Project Location: NOT GIVEN

### Sample ID: W. WALL N. END (H101958-09)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	09/15/2011	ND	448	112	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/18/2011	ND	176	88.1	200	1.38	
DRO >C10-C28	<10.0	10.0	09/18/2011	ND	177	88.7	200	1.97	
Surrogate: 1-Chlorooctane	122	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	119	% 57.6-15	8						

### Sample ID: W. WALL S. END (H101958-10)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	09/15/2011	ND	448	112	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/18/2011	ND	176	88.1	200	1.38	
DRO >C10-C28	<10.0	10.0	09/18/2011	ND	177	88.7	200	1.97	
Surrogate: 1-Chlorooctane	127	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	120	% 57.6-15	8						

Cardinal Laboratories \*=Accredited Analyte

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 client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

## ARDINAL LABORATORIES

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603 (505) 303-3326 EAV (505) 303-3476 (335) 673-7004 EAV (335)673-7030

	(303) 333-2326 FAX (303) 393-	2470	102	3) 073-7001 17	אר נט	20)	J1 U-	7020										 	
Company Name	Apacito						BII	LL TO					-	ANAI	_YSIS	REC	QUEST		
Project Manage	r: Natalie Gladden				P.O.	#:													
Address:					Com	pany	<i>y</i> :							S		. 1			
City:	State: NM	Zip:			Attn:									Ö					
Phone #:	• Fax #:				Addr	ess:				1				Ē					
Project #:	Project Own	er:			City:						Σ		, <del></del> -	\\\ \\\					
Project Name:	vann state, AC2 # 18	A10	) ,		State			Zip:		es	2		ТРН	) US					
Project Location	Varn 5-fate AC2 # 189		<i></i>	A	Phor	ne #:				Chlorides	801	BTEX	3.1	Cations/Anions	TDS				
Sampler Name:	7) .) 1/ .				Fax #					은		3	exas	ပ္ပိ					
FOR LAB USE ONLY		ТТ	T	MATRIX		RESE	RV.	SAMPL	ING	づ	F		œ	e		.			
Lab I.D. HIDP53	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER:	ICE / COOL	OTHER:	DATE	TIME		F		L	Complete					
- [	N. Wall Center	5	1	V		V		9-14-11	9:00	1	V								
2	N. Wall E. End	6	1			V		9-14-11	9:05	V	V								
3	N. Wall W. EnD	G	1	V		V			9:10	V	V								
4	E. Wall S. EnD	6	1	V		1		9-14-11	9:15	V	V								
	5. Wall Center	6	4	V		V		9-14-11	9:20	V	V								
	5, Wall E. EnD	6-	/	V		V		9-14-11	9:25	V	1								
	E, Wall N. END	G	1	V		1		9-14-11	9:30	V	1/								
	5, Wall W. END	G	1	V		V		9-14-11	9:35	V	V								
	W. Wall N. END	6		1		V		9-14-11	9:40	V	1	,							
	W.Wall S. END	6	Ц			V		9-14-11	9:45	1	1								
	d Damages. Cardinal's liability and client's exclusive remedy for ng those for negligence and any other cause whatsoever shall b										ble								

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 becomes by Cardinal, recardless of whether such claim is based to or related to the performance of services because of the profits and the performance of services because of the performance of the perfor

annates of deceasors arising dat of of feliated to the periornighted	e of services frequences by Cardinal, regardless of whether such claims based upon any of the above stated t	BRSUIIS OF OUTSTAINS.
Relinguished By:	Date:Q-[5-1] Received By:	Phone Result: ☐ Yes ☑ No Add'l Phone #:
	10 22 10	Fax-Result: ☐ Yes ☑ No Add'I Fax #:
1 / K/ M	Time:	REMARKS:
100/7000	2,30   / / / / / / / / / / / / / / / / / /	
Relinquished By:	Detel Received By:	Temail results
	+97/5/// 1 A	· ·
	Times. 70 MOUNTAIN	Natalie.Gladden@usa.apachecorp.com;
1 / 42 /	Times: 20 May Stenson	
Delivered By: (Circle One)	Sample Condition CHECKED BY:	Zconder@rice-ecs.com; Bbaker@rice-ecs.com;
2511.000.00	Cool Intact (Injtjals)	hconder@rice-ecs.com; Lweinheimer@rice-ecs.com
Sampler - UPS - Bus - Other:	# 7 Tayon Tayon   / 1 / 1	
Campion of C Das Chief,	- 5° Tyes Tyes	It from name chanced as an Natalie.
	972111011110 771	The first the state of the stat
† Cardinal cannot accept verbal	changes. Please fax written changes to 505-393-2476	0/20/1/2
·	+17/2	9/20/11-
		· · · · · · · · · · · · · · · · · · ·



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

Received: 09/15/2011 Sampling Date: 09/14/2011

Reported: 09/22/2011 Sampling Type: Soil

Project Name: WARN STATE AC 2 #19 A.D. Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Project Location: NOT GIVEN

### Sample ID: S. W. CORNER BTTM (H101964-01)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	09/16/2011	ND	448	112	400	3.64	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/19/2011	ND	177	88.7	200	2.85	

Surrogate: 1-Chlorooctane 113 % 55.5-154
Surrogate: 1-Chlorooctadecane 104 % 57.6-158

### Sample ID: N. E. CORNER BTTM (H101964-02)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	09/16/2011	ND	448	112	400	3.64	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/19/2011	ND	177	88.7	200	2.85	
DRO >C10-C28	<10.0	10.0	09/19/2011	ND	177	88.7	200	3.47	
Surrogate: 1-Chlorooctane	119	% 55 5-15	· · · · · · · · · · · · · · · · · · ·						

Surrogate: 1-Chlorooctane 119 % 55.5-154
Surrogate: 1-Chlorooctadecane 115 % 57.6-158

Cardinal Laboratories \*=Accredited Analyte

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 client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



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

Received: 09/15/2011 Sampling Date: 09/14/2011

Reported: 09/22/2011 Sampling Type: Soil

Project Name: WARN STATE AC 2 #19 A.D. Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Project Location: NOT GIVEN

### Sample ID: CENTER BTTM (H101964-03)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	09/16/2011	ND	448	112	400	3.64	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/19/2011	ND	177	88.7	200	2.85	
DRO >C10-C28	<10.0	10.0	09/19/2011	ND	177	88.7	200	3.47	

Surrogate: 1-Chlorooctane 116 % 55.5-154
Surrogate: 1-Chlorooctadecane 114 % 57.6-158

### Sample ID: S. E. CORNER BTTM (H101964-04)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	09/16/2011	ND	448	112	400	3.64	
TPH 8015M	mg,	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/19/2011	ND	177	88.7	200	2.85	
DRO >C10-C28	<10.0	10.0	09/19/2011	ND	177	88.7	200	3.47	
Surrogate: 1-Chlorooctane	132	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	125	% 57.6-15	8						

Cardinal Laboratories \*=Accredited Analyte

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 client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



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

Received: 09/15/2011 Sampling Date: 09/14/2011

Reported: 09/22/2011 Sampling Type: Soil

Project Name: WARN STATE AC 2 #19 A.D. Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Project Location: NOT GIVEN

### Sample ID: N. W. CORNER BTTM (H101964-05)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	09/16/2011	ND	448	112	400	3.64	
TPH 8015M	mg,	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/19/2011	ND	177	88.7	200	2.85	
DRO >C10-C28	<10.0	10.0	09/19/2011	ND	177	88.7	200	3.47	
Surrogate: 1-Chlorooctane		% 55.5-15	4						

Surrogate: 1-Chlorooctadecane 117 % 57.6-158

### Sample ID: MIDDLE CENTER (H101964-06)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	210	16.0	09/16/2011	ND	448	112	400	0.00	
TPH 8015M			Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/19/2011	ND	177	88.7	200	2.85	
DRO >C10-C28	<10.0	10.0	09/19/2011	ND	177	88.7	200	3.47	
Surrogate: 1-Chlorooctane	142	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	136	% 57.6-15	8						

Cardinal Laboratories \*=Accredited Analyte

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 client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

# RDINAL 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	Apacile	<u> </u>			نب					BI	LL TO						ANAL	YSIS	REQ	UEST			
Project Manage	r: Natalie Gladden							P.	O. #:											T			
Address:								C	ompa	ny:							ıs						
City:		State: NM	Zip	:				At	tn:								<u>0</u>						
Phone #:		Fax #:					-4	A	ddres	s:			]				\rac{1}{2}						
Project #:		Project Owner						Ci	ty:				(0	Σ		エ	1/8						
Project Name:	Warn State Ac	2#18 A	D.					St	ate:		Zip:		Chlorides	8015	×	Texas TPH	on						
Project Location		19		7	*			PI	none	#:			ΙË	ò	BTEX	S	ati	TDS					
Sampler Name:	/ Jaf Harnis							Fa	x#:				]은	~	BI	Xa	Ü	一					
FOR LAB USE ONLY						MA	TRIX		PRE	SERV	SAMPL	ING	10	TPH		<u>6</u>	te						
Lab I.D.  H101914 -2 -3 -4 -5 -6	Sample I.  5. W. Corner Bt.  N.E. Corner Bt.  Center Btty  S.E. Corner Btt.  N.W. Corner Btt.  Midale Cent		PPPPOPPOMP		GROUNDWATER	V V V V Solt	OIL	SLUDGE OTHER:		OTHER:	DATE 9-14-11 9-14-11 9-14-11 9-14-11 9 14/11	TIME 11:00 11:05 11:10 11:15 11:25	V V V V V V				Complete Cations/Anions						
			<u> </u>	_	<u> </u>	-		4-	$\bot$											-			-
			-	_		-		+	$\longrightarrow$	-		-			<u> </u>							_	
			-	-	_	+-	$\vdash$	+		_			<b>-</b>		<del> </del>					$\dashv$		+	
analyses. All claims includir service. In no event shall C	aris	cause whatsoever shall be d quental damages, including	withou ardinal Re	waive t limita regar	d unless tion, busi	made in ness int hether	n writing a terruption	and rece s, loss	eived by ( of use, or	Cardinal v	within 30 days aft rofits incurred by	er completion of ti client, its subsidia	he applica aries se. sult: lt: S:	□ Ye		No No	Add'l Add'l I	hone # ax #:	:				
Delivered By: Sampler - UPS	(Circle One) - Bus - Other:	Time:		30	Sa Co	mple ool Yes No	Cond Intact	es No			(ED BY:	Natal Zcond hcond	ie.G ler@	ladd rice	-ecs	.com	; Bb	aker	@rice	e-ecs			اد
† Cardinal	cannot accept verbal o	hanges. Please	fax	wri	tten c	hang	ges to	_	-393- 				٧					•		•	9	120,	/11.

# Appendix D Groundwater Study

Phone 575.393.4411 Fax 575.393.0293

site name

	F	6	18S	35E	
-	Unit Letter	Section	Township	Range	_

Groundwater Depth: 100

Compiled by: Amy C. Ruth 5/1/2012 Date:

Γ17S R34E	123		<b>86</b> '	T17S R35E
	• <sub>123</sub> , 36	31	32	
T18S R34E	116'	6° 104' 79'	5_66'	T18S R35E
	12	7 • 98' • 87'	8	



(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)

Maximum Depth: 117 feet

	2 0 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2										3.000	
POD Number	POD Code Subbasin	County	Q Q			Tws	Rng	x	Y		The second second	Water
L 04247 POD5	L	LE	1	3	31	175	35E	640156	3628964*		95	
L 04247 POD6	L.	LE	2 1	3	31	178	35E	640255	3629063*	232	117	115
L 07695	L	LE	3	4	32	175	35E	642554	3628586*	198	85	113
								Avera	age Depth t	o Water	: 99	feet
									Minimur	n Depth	: 85	feet

Record Count: 3

PLSS Search:

Section(s): 31, 32

Township: 17S

Range: 35E



# New Mexico Office of the State Engineer

# **Currently Active Points of Diversion**

(with Ownership Information)

	(acre ft	(acre ft per annum)				(quarters are smallest to largest) (NAD83 UTM in meters)	e smalle	st to large	st) (NAD	83 UTM :	n meters)
		Sub				0	666				
US	se Dive	arsion Owner	County P	County POD Number	Grant	Source 6416 4 Sec Tws Rng	1164 S	C TWS F	Rng	×	*
S	30	0 TEXACO, INC.	I BI	L 04247			1.1.30	0 178		640119	3631386*
			LE L	L 04247 X			3 1 30	178	35E 6	640125	3630983*
			LE L	L 04247 X3			3 3 30	0 17S 35E		640138	3630176*
Z	QNI	1400 INTREPID MINING NM LLC	7 37	L 04247 POD5		Shallow	1 3 31	1 17S 35E		640156	3628964*
			רב ר	L 04247 POD6		Shallow 2 1 3 31	1 3 3	175	35E 6	640255	3629063*
PUB	JB	0 LEA COUNTY	וב ר	L 04247 POD5		Shallow	13 31	175	35E 6	640156	3628964*

Record Count: 6

POD Search:

POD Number: L 04247

Sorted by: File Number

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data, 5/1/12 1:58 PM



(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		Q	Q	Q						Depth	Depth	Water
POD Number	Code Subbasin	County	64	16	4	Sec	Tws	Rng	X	Y			Column
L 04250	L	LE				05	185	35E	642378	3627565*	112	60	52
L 04591	L	LE		4	2	05	185	35E	642970	3627785*	130	75	55
L 04664	L	LE		2	3	05	185	35E	642171	3627371*	140	70	70
L 04777	L	LE	1	2	2	07	185	35E	641279	3626653*	145	85	60
L 04778	L	LE		2	1	07	185	35E	640575	3626545*	150	75	75
L 04794	L	LE			4	07	188	35E	641200	3625540*	150	95	55
L 04796	L	LE	4	4	3	06	185	35E	640667	3626847*	150	95	55
L 04906	L	LE			3	07	185	35E	640415	3625532*	155	87	68
L 04975	L	LE	2	2	3	07	185	35E	640688	3625837*	152	105	47
L 07119	L	LE	1	1	1	06	185	35E	640068	3628255*	233	95	138
L 07119 S	L	LE	1	2	1	06	185	35E	640445	3628259*	233	95	138
									Avera	age Depth to	Water	: 85	feet
										Minimun	Depth	. 60	feet

Maximum Depth:

105 feet

Record Count: 11

PLSS Search:

Section(s): 5, 6, 7, 8

Township: 18S

Range: 35E

<sup>\*</sup>UTM location was derived from PLSS - see Help



(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)

Maximum Depth: 100 feet

POD Number	POD Code Subbasin	County	Q Q 64 16	6	Sec	Tws	Rng	x	Y		100000000	Water Column
L 04160	L	LE	3	3	01	185	34E	638585	3626911*	165	100	65
L 04851	L	LE	4	2	12	185	34E	639801	3626130*	155	95	60
L 05079	L	LE	1	3	12	185	34E	638604	3625702*	159	76	83
								Aver	age Depth t	o Water	90	feet
									Minimur	n Depth	: 76	feet

Record Count: 3

PLSS Search:

Section(s): 1, 12

Township: 18S

Range: 34E



(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a (R=POD has been replaced, O=orphaned,

C=the file is

closed)

& no longer serves a water right file.)

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

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

(In feet)

 POD
 Q Q Q
 Depth Depth Water

 POD Number
 Code Subbasin County 64 16 4 Sec Tws Rng
 X
 Y Well Water Column

 L 05003
 L LE
 1 36 17S 34E 638742 3629538\* 135 105 30

Average Depth to Water: 105 feet

Minimum Depth: 105 feet

Maximum Depth: 105 feet

Record Count: 1

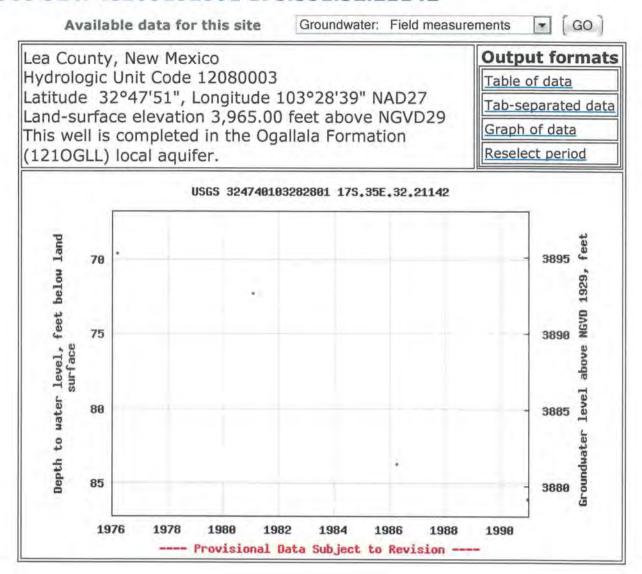
PLSS Search:

Section(s): 36

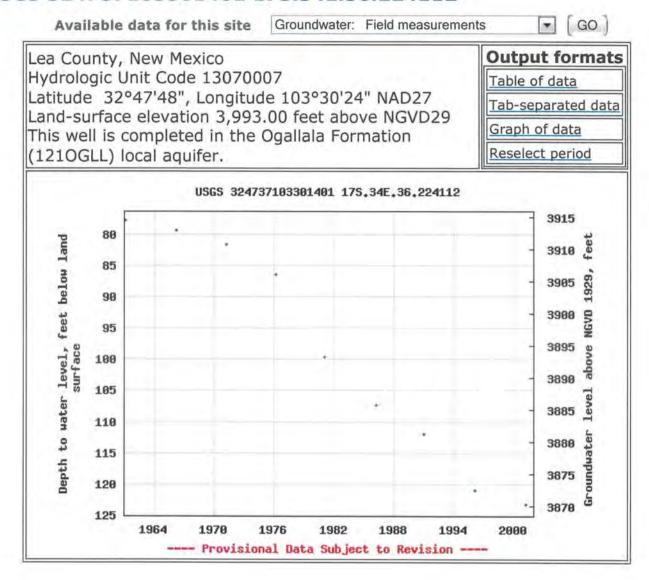
Township: 17S

Range: 34E

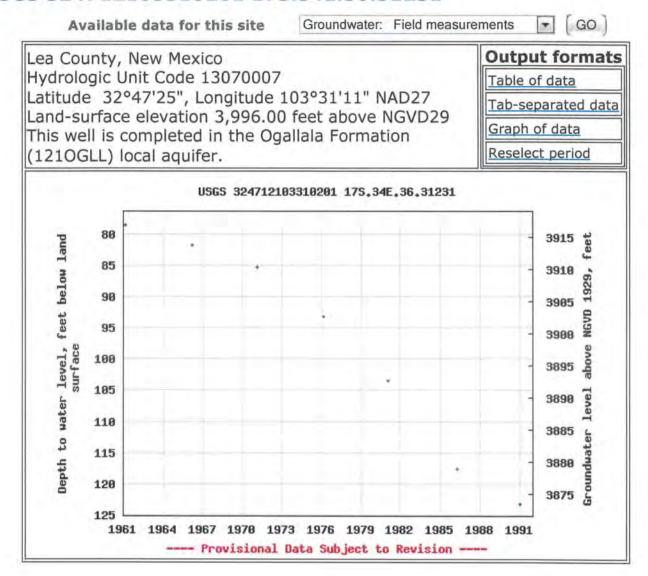
### USGS 324740103282801 17S.35E.32.21142



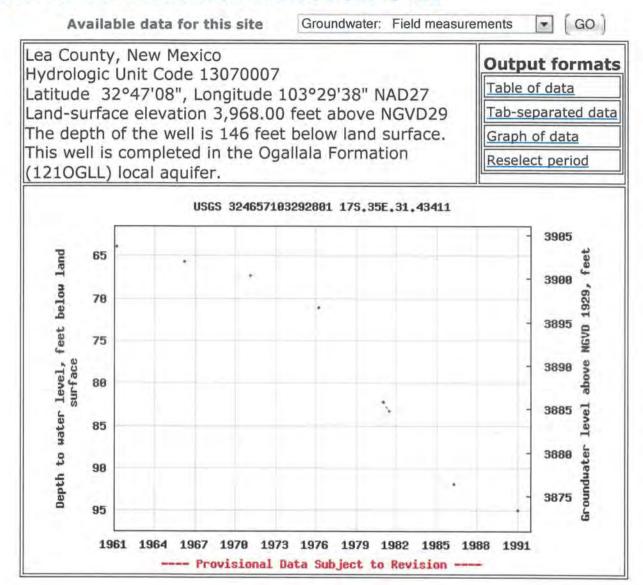
### USGS 324737103301401 17S.34E.36.224112



### USGS 324712103310201 17S.34E.36.31231



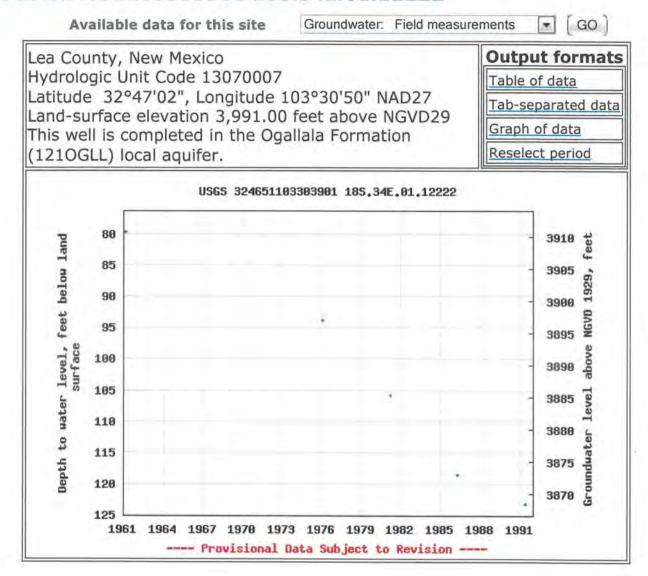
#### USGS 324657103292801 17S.35E.31.43411



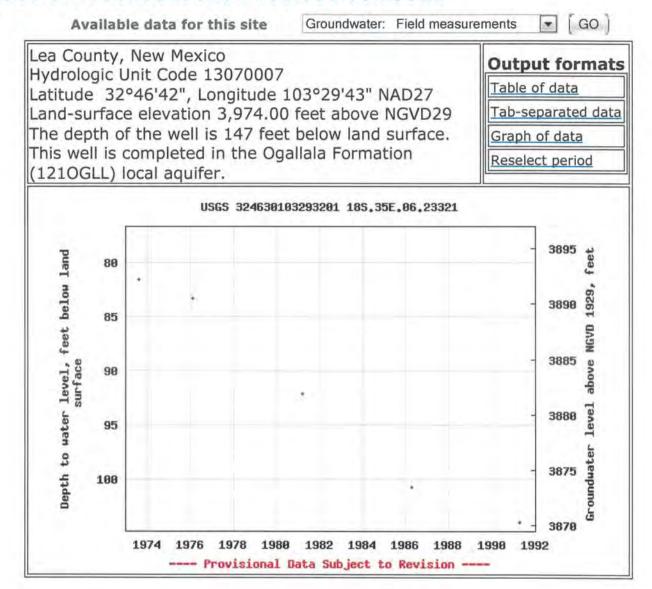
### USGS 324650103310801 17S.34E.36.333323

GO Available data for this site Groundwater: Field measurements Lea County, New Mexico **Output formats** Hydrologic Unit Code --Table of data Latitude 32°47'05", Longitude 103°31'17" NAD27 Land-surface elevation 4,004.60 feet above NGVD29 Tab-separated data The depth of the well is 230 feet below land surface. Graph of data This well is completed in the Ogallala Formation Reselect period (1210GLL) local aquifer. USGS 324650103310801 175,34E,36,333323 Depth to water level, feet below land surface 108.0 3896.0 110.0 3894.0 112.0 3892.0 114.0 3890.0 116.8 3888.0 Jan Jul Jan Jul Jan Jul Jan Jul Jul Jan Jan 1977 1977 1978 1979 1978 1979 1980 1980 1981 1981 Provisional Data Subject to Revision

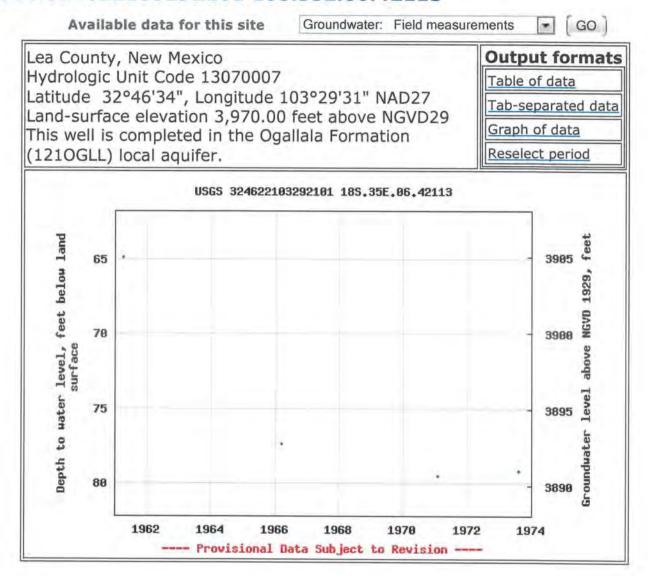
### USGS 324651103303901 18S.34E.01.12222



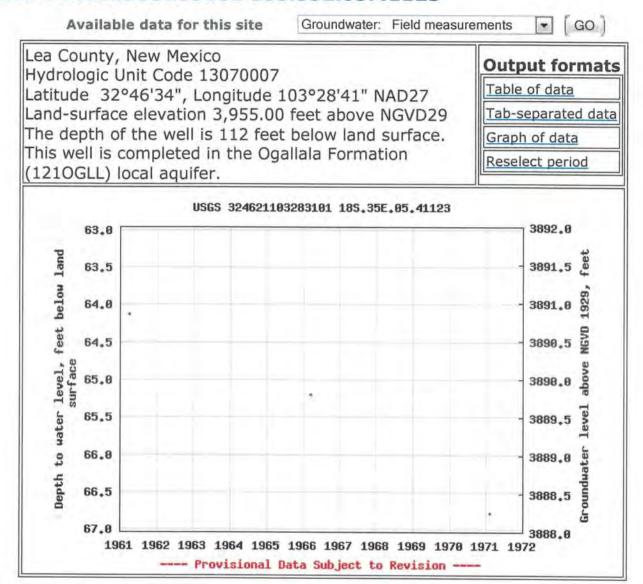
#### USGS 324630103293201 18S.35E.06.23321



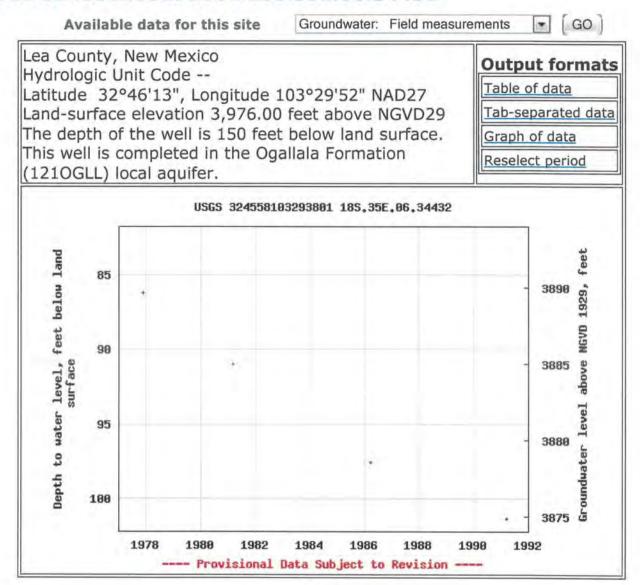
### USGS 324622103292101 18S.35E.06.42113



# USGS 324621103283101 18S.35E.05.41123



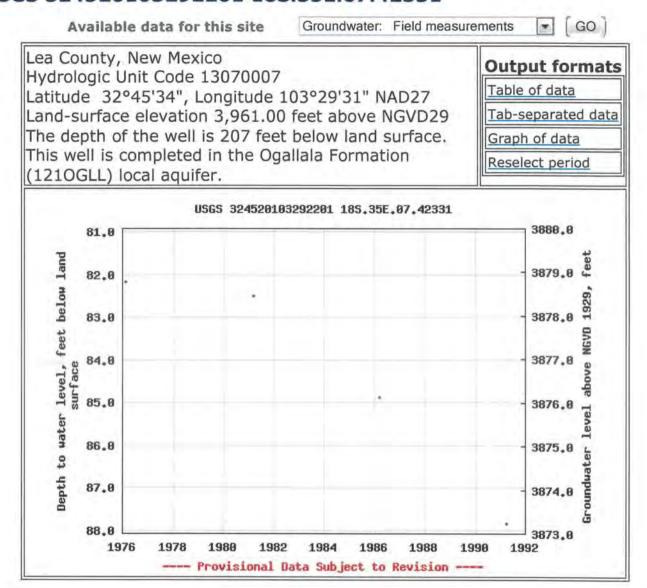
### USGS 324558103293801 18S.35E.06.34432



### USGS 324522103300801 18S.35E.07.313114

- GO Available data for this site Groundwater: Field measurements Lea County, New Mexico **Output formats** Hydrologic Unit Code 13070007 Table of data Latitude 32°45'37", Longitude 103°30'17" NAD27 Land-surface elevation 3,972.00 feet above NGVD29 Tab-separated data The depth of the well is 212 feet below land surface. Graph of data This well is completed in the Ogallala Formation Reselect period (1210GLL) local aquifer. USGS 324522103300801 185.35E.07.313114 20 3950 Depth to water level, feet below land surface 30 3940 40 3930 50 3920 60 3910 70 3900 80 Groundwat 3890 90 3880 100 1967 1970 1973 1976 1979 1982 1985 1988 1991 - Provisional Data Subject to Revision -

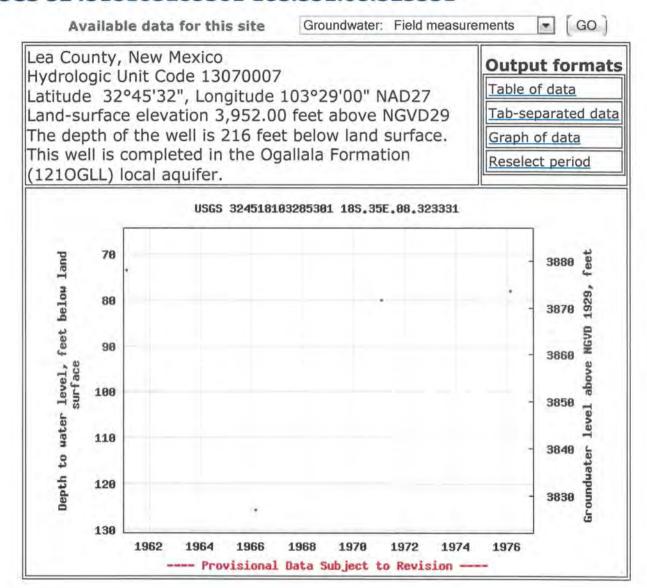
## USGS 324520103292201 18S.35E.07.42331



# USGS 324519103302301 18S.34E.12.41444

- [GO] Groundwater: Field measurements Available data for this site Lea County, New Mexico **Output formats** Hydrologic Unit Code 13070007 Table of data Latitude 32°45'32", Longitude 103°30'34" NAD27 Land-surface elevation 3,982.00 feet above NGVD29 Tab-separated data The depth of the well is 204 feet below land surface. Graph of data This well is completed in the Ogallala Formation Reselect period (1210GLL) local aquifer. USGS 324519103302301 185.34E.12.41444 3875 Depth to water level, feet below land surface 110 3870 115 3865 above 120 3860 level 125 Groundwater 3855 130 3850 Jul Jan Jul Jan Jul Jan Jul Jan Jan Jul Jan Jul Jan 1966 1966 1967 1967 1968 1968 1969 1969 1970 1970 1971 1971 1972 --- Provisional Data Subject to Revision --

#### USGS 324518103285301 18S.35E.08.323331



# Appendix E Final Form C-141

Phone 575.393.4411 Fax 575.393.0293

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 District II 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**

					<b>OPERA</b>	TOR .	[	☐ 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 Nar	ne Wa	rn State A/C	C #1 <b>9</b>			Facility Type Production Well							
Surface Owner Mineral Owner						State of NM			Lease No. 30-025-31927				
LOCATION OF RELEASE													
Unit Letter	Section	Township	Range	Feet from the	North	South Line	Feet from the	East/W	est Line	County			
F	6	18S	35E	2010	FNL		2230	FWL		Lea			
Latitude						Longitude							
NATURE OF RELEASE													
Type of Relea	ase Prod	uced Water	Volume of Release 10 bbl Volume Recover					bbl					
Source of Release Flow line leak						Date and Hour of Occurrence			Date and Hour of Discovery				
						09/6/11			09/6/11				
Was Immedia	ate Notice C	fiven?	No □ Not Re	quired	If YES, To Whom?								
By Whom?						Date and Hour							
Was a Watercourse Reached?						If YES, Volume Impacting the Watercourse.							
			No										
If a Watercourse was Impacted, Describe Fully.*													
Describe Cause of Problem and Remedial Action Taken.*  Flow line leak. Fluid was recovered and location back-dragged until one-call cleared.													
Describe Area Affected and Cleanup Action Taken.*													
The leak affected an area of pasture land. Impacted soils were removed to a NMOCD approved disposal facility. Representative soil samples were collected from the excavation and sent to a commercial laboratory for chloride and TPH confirmation. The excavation was backfilled with clean soil and													
contoured to the surrounding area.													
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.							OIL CONCEDUATION DIVISION						
Signature: atalu pladdu						OIL CONSERVATION DIVISION							
						Approved by District Supervisor:							
Printed Name	: Nătalie	Gladden											
Title: EH&S Environmental Tech						Approval Date: Expiration Date:							
E-mail Address: Natalie.gladden@apachecorp.com						Conditions of Approval:							
Date: (	9/12							Attached					
Attach Addit				(575) 390-4186							-		