DAVID FEATHER
ENVIRONMENTAL SUPERVISOR
DIRECT: (432) 818-1615
E-MAIL: DAVID.FEATHER@APACHECORP.COM

1 PR-2056
NGRL0902749697

September 30, 2019

Mr. Bradford Billings
State of New Mexico Oil Conservation Division
1220 South St Francis Drive
Santa Fe, NM 87505

RE: 1 RP-2056 WBDU CTB

Mr. Billings,

In compliance with 19.15.29.15(B) NMAC and the agreement submitted by Apache Corporation on November 8, 2018, Apache Corporation is submitting information related to closure for the release occurring December 26, 2008. Apache is respectfully submitting the closure report based on remediation and studies occurring in 2009 that demonstrate the site meeting the requirements of the agency. Unless further information is requested by NMOCD, Apache Corporation considers this release closed.

If there are any questions, please feel free to contact me by telephone at 432-818-1615 or by e-mail at David.Feather@ApacheCorp.com.

Sincerely,

David Feather
Environmental Supervisor
Apache Corporation - Permian Basin Region

Attachment: Closure Report Dated September 27, 2019

Apache

Bruce Baker

WBDU

Site Remediation Plan

API # 30-025-38267

1RP-09-1-2056

Release Date: 12/26/2008

U/L D, Section 16, Township 21S, Range 37E

Lea County, New Mexico

September 27, 2019

Hungry Horse LLC
4024 Plains Highway
Lovington, NM 88260

August 27, 2019

RE: Closure Request for Apache Corporation – WBDU Central Tank Battery
API No. 30-025-38267
U/D E, Section 16, Township 21S, Range 37E

To Whom it May Concern,

On behalf of Apache Corporation, Hungry Horse LLC has prepared this Closure Report that demonstrates the release site associated with the WBDU Central Tank Battery was remediated sometime after February 2, 2009, with the RP # of 1RP-09.1.2056.

Background

This site is located in the southern part of Lea County near Eunice, New Mexico. On January 2nd, 2009 the C-141 for the Release Site was submitted to the NMOCD.

Ground Water Information

Hungry Horse has conducted a ground water study of the area. It has been determined that according to the New Mexico Office of the State Engineer, the average depth of ground water is 165'bgs (below ground surface), minimum depth is 18'bgs and maximum depth is 4374'bgs. The wells located closest to the WBDU Central Tank Battery that has been recorded is as follows:

CP 00554 POD: well is set at 80'bgs and the water level is 70'bgs, distance from the site is 1057'
CP 01026 POD1: well is set at 167'bgs, the water level is 95'bgs, distance from the site is 2052'
CP 01575 POD1: well is set at 40'bgs and the water level is 35'bgs, distance from the site is 2415'

This spill release was remediated under the old rule and therefore does not fall under the new standard 19.15.29 NMAC adopted on August 14, 2018.

Site Delineation and Remediation

Apache Corporation, Inc. began delineation/remediation of this site starting on or before February 2nd, 2009. All contained fluids were vacuumed up and taken to Sundance Disposal. 25 samples were taken and transported to Cardinal Laboratories.
Please see the Cardinal Laboratories Analysis Report detailed herein. The sample results are as follows:

SP1– <16 mg/kg chlorides
SP2– <16 mg/kg chlorides
SP3– <16 mg/kg chlorides
SP4– <16 mg/kg chlorides
SP5– 192 mg/kg chlorides
SP6– 32 mg/kg chlorides
SP7– <16 mg/kg chlorides
SP8– <16 mg/kg chlorides
SP9 – 48 mg/kg chlorides
SP10 – 32 mg/kg chlorides
SP11 – 32 mg/kg chlorides
SP12 – 32 mg/kg chlorides
SP13 – 32 mg/kg chlorides
SP14 – 32 mg/kg chlorides
SP15 – 32 mg/kg chlorides
SP16 – 32 mg/kg chlorides
SP17 – 32 mg/kg chlorides
SP18 – 32 mg/kg chlorides
SP19 – 32 mg/kg chlorides
SP20 – 32 mg/kg chlorides
SP21 – 32 mg/kg chlorides
SP22 – 32 mg/kg chlorides
SP23 – 32 mg/kg chlorides
SP24 – 32 mg/kg chlorides
SP25 – 32 mg/kg chlorides

Request for Closure

Apache Corporation in conjunction with Hungry Horse, LLC would like to request the closure of 1RP-09.1.2056 that occurred on December 26th, 2008. If you have any questions or concerns, please contact me at any time.

Sincerely,

Jerry Brian
Environmental Manager/Geologist/REM/REPA
4024 Plains Highway
Lovington, NM 88260
Cell: 970-630-6293
jbrian@hungry-horse.com

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 Corporation	Contact Natalie Gladden
Address P.O. Box 1849 Eunice NM 88231	Telephone No. 575-390-4186
Facility Name WBDU Central Battery	Facility Type Battery-Production
Near WBDU #63	

Surface Owner Deck	Mineral Owner State	Lease No. 30-025-38267

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	16	21S	37E	110	FNL	1195	FWL	Lea

Latitude _____ Longitude _____ UTR 25'

NATURE OF RELEASE

Type of Release Hydrocarbons/Produced Water	Volume of Release 45	Volume Recovered 30
Source of Release Frac tanks ran over	Date 12/26/08	Date 12/26/08
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Buddy Hill	
By Whom? Natalie Gladden	Date 12/26/08 1:05pm	
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.*
Frac Tanks ran over leaking inside the battery which is a lined battery. All hydrocarbon material was immediately picked up and hauled to Sundance Disposal.

Describe Area Affected and Cleanup Action Taken.*
Follow NMOCD Guidelines for remediation

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: ENVIRONMENTAL ENGINEER
Title: Eff&S Environmental Tech	Approval Date: 1.22.09 Expiration Date: 3.22.09
E-mail Address: natalie.gladden@apachecorp.com	Conditions of Approval: Attached ☐
Date: 1/2/09 Phone: 575-390-4186	IRP # 09.1.2056

* Attach Additional Sheets If Necessary

fGRL0902749252

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☑ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☑ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☑ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Bruce Baker Title: Environmental Tech Sr.

Signature: Bruce Baker Date: 9/30/19

email: larry.baker@apachecorp.com Telephone: 432-631-6982

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Bradford Billings Date: 05/22/2020

Printed Name: Bradford Billings Title: E.Spec.A

NOTE: Map of sample points is not clear, hoever, assume all taken inside berm area. If, consider site cloce, if not please submit a deatil of sample location, more defined

New Mexico Office of the State Engineer

Wells with Well Log Information

No wells found

UTMNAD83 Radius Search (in meters):

Easting (X): 671694.23 Northing (Y): 3595766.91 Radius: 1000

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	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
CP 00554		CP	LE		2	2	16	21S	37E	672744	3595610*	1057	80	70	10
CP 00729 POD1		CP	LE	4	1	3	15	21S	37E	673259	3594711*	1881	8015		
CP 01026 POD1		CP	LE	1	1	3	17	21S	37E	669809	3594958	2052	167	95	72
CP 01141 POD3		CP	LE				15	21S	37E	673520	3594272	2353	40		
CP 01141 POD2		CP	LE				15	21S	37E	673543	3594250	2385	40		
CP 01141 POD4		CP	LE				15	21S	37E	673556	3594239	2402	45		
CP 01575 POD1		CP	LE	1	2	1	22	21S	37E	673544	3594204	2415	40	35	5
CP 00447 POD1		CP	LE	2	4	4	18	21S	37E	669647	3594451*	2434	95		
CP 00448 POD1		CP	LE	2	4	4	18	21S	37E	669647	3594451*	2434	100		
CP 00552		CP	LE		2	4	04	21S	37E	672700	3598022*	2472	90	75	15
CP 00553		CP	LE		2	4	04	21S	37E	672700	3598022*	2472	90	75	15
CP 01575 POD2		CP	LE	2	2	1	22	21S	37E	673615	3594181	2484	35	35	0
CP 00895		CP	LE		1	1	20	21S	37E	669957	3593956*	2508	163		
CP 00731 POD1		CP	LE		2	1	22	21S	37E	673577	3594015*	2565	8130		
CP 00676		CP	LE		4	4	18	21S	37E	669548	3594352*	2571	140	106	34
CP 00286 POD1		CP	LE	2	1	2	10	21S	37E	674019	3597338*	2805	70		
CP 00732 POD1		CP	LE		4	1	22	21S	37E	673584	3593613*	2859	6633		
CP 01794 POD2		CP	LE	3	3	1	14	21S	37E	674594	3595204	2949	198		
CP 01794 POD5		CP	LE	3	3	1	14	21S	37E	674606	3595176	2966	30	22	8
CP 01741 POD1		CP	LE	1	3	4	03	21S	37E	673895	3597759	2969	45		
CP 01794 POD6		CP	LE	3	3	1	14	21S	37E	674624	3595194	2980	104		
CP 01794 POD3		CP	LE	3	3	1	14	21S	37E	674623	3595163	2985	34		
CP 01794 POD1		CP	LE	3	3	1	14	21S	37E	674646	3595143	3012	34	18	16
CP 01794 POD4		CP	LE	3	3	1	14	21S	37E	674662	3595126	3031	28	19	9
CP 00986 POD1		CP	LE	4	3	4	06	21S	37E	669110	3597437	3082	154		
CP 01574 POD1		CP	LE	2	4	4	15	21S	37E	674559	3594598	3088	68	57	11
CP 01185 POD1		CP	LE		1	3	14	21S	37E	674598	3594689	3092	70		
CP 01110 POD1		CP	LE		1	3	14	21S	37E	674586	3594648	3094	70		
CP 01110 POD2		CP	LE		1	3	14	21S	37E	674586	3594648	3094	70		
CP 01110 POD3		CP	LE		1	3	14	21S	37E	674586	3594648	3094	70		

CP 01110 POD4	CP	LE		1	3	14	21S	37E	674586	3594648		3094	20		
CP 01110 POD5	CP	LE		1	3	14	21S	37E	674586	3594648		3094	20		
CP 01185 POD3	CP	LE		1	3	14	21S	37E	674592	3594620		3111	70		
CP 01185 POD2	CP	LE		1	3	14	21S	37E	674623	3594674		3121	70		
CP 00985 POD1	CP	LE	4	4	2	19	21S	37E	669595	3593453		3122	160		
CP 01185 POD4	CP	LE		1	3	14	21S	37E	674633	3594610		3152	70		
CP 01574 POD2	CP	LE	1	3	3	14	21S	37E	674666	3594578		3195	68	57	11
CP 01245 POD1	CP	LE			4	18	21S	37E	668676	3594411		3310	220		
CP 00733 POD1	CP	LE		3	3	22	21S	37E	673196	3592801*		3318	7864		
CP 00235 POD3	CP	LE	1	1	1	23	21S	37E	674681	3594137*		3396	90	61	29
CP 00235 POD7	CP	LE	3	1	1	23	21S	37E	674681	3593937*		3496	85	65	20
CC 01999 POD1	CU	CU	3	3	2	29	03N	36E	670385	3592502		3514	415	372	43
CP 00235 POD6	CP	LE	2	1	1	23	21S	37E	674881	3594137*		3573	85	65	20
CP 01486 POD1	CP	LE	4	2	1	05	21S	37E	670333	3599085		3592	140	52	88
CP 00235 POD4	CP	LE	1	3	1	23	21S	37E	674688	3593735*		3612	100	80	20
CP 00877	CP	LE				06	21S	37E	668920	3598153*		3665	150	73	77
CP 00711	CP	LE	4	2	2	28	21S	37E	672900	3592291*		3673	100	65	35
CP 00251 POD1	CP	LE	2	3	4	22	21S	37E	674099	3592915*		3724	103		
CP 00235 POD2	CP	LE	1	2	1	23	21S	37E	675083	3594144*		3751	96	65	31
CP 01636 POD2	CP	LE	2	3	2	28	21S	37E	672430	3592065		3768	108		
CP 00252 POD1	CP	LE	4	2	4	22	21S	37E	674493	3593125*		3842	106	78	28
CP 01636 POD3	CP	LE	2	2	1	27	21S	37E	673782	3592501		3869	96		
CP 00294 POD1	CP	LE	1	3	1	27	21S	37E	673110	3592096*		3928			
CP 00235 POD1	CP	LE	2	2	1	23	21S	37E	675283	3594144*		3933	81		
CP 00235 POD5	CP	LE	1	4	1	23	21S	37E	675090	3593742*		3947	90	70	20
CP 00881	CP	LE		4	4	22	21S	37E	674402	3592824*		3992	95	53	42
CP 00242 POD1	CP	LE	3	4	2	28	21S	37E	672708	3591889*		4002			
CP 00240 POD1	CP	LE	4	2	1	23	21S	37E	675283	3593944*		4019			
CP 00241 POD1	CP	LE	4	2	1	23	21S	37E	675283	3593944*		4019	79		
CP 00017 POD1	CP	LE	2	1	2	27	21S	37E	674106	3592513*		4044	101		
CP 00235 POD9	CP	LE	3	4	1	23	21S	37E	675090	3593542*		4053	94	58	36
CP 00446 POD1	CP	LE	1	4	4	13	21S	36E	667871	3594424*		4054	185	148	37
CP 00446 POD2	CP	LE	1	4	4	13	21S	36E	667871	3594424*		4054	200	151	49
CP 00736	CP	LE		3	1	27	21S	37E	673211	3591997*		4057	120	76	44
CP 00285 POD1	CP	LE	3	1	2	27	21S	37E	673906	3592313*		4095	80		
CP 00239 POD1	CP	LE	1	1	2	23	21S	37E	675485	3594152*		4115	89	61	28
CP 00293 POD1	CP	LE	2	4	1	27	21S	37E	673711	3592104*		4175	80		
CP 00235 POD8	CP	LE	3	1	2	23	21S	37E	675485	3593952*		4197	94	58	36
CP 00236 POD1	CP	LE	3	1	2	23	21S	37E	675485	3593952*		4197	83		

CP 01095 POD1		CP	LE	2	2	4	28	21S	37E	672859	3591714		4210	108	48	60
CP 01095 POD2		CP	LE	2	2	4	28	21S	37E	672876	3591714		4215	109	48	61
CP 01096 POD1		CP	LE	2	2	4	28	21S	37E	672861	3591708		4217	108	48	60
CP 01096 POD2		CP	LE	2	2	4	28	21S	37E	672976	3591731		4228	98	48	50
CP 00235 POD10		CP	LE	1	3	2	23	21S	37E	675492	3593749*		4294	92	60	32
CP 00235 POD11		CP	LE	1	3	2	23	21S	37E	675492	3593749*		4294	97	60	37
CP 00237 POD1		CP	LE	1	3	2	23	21S	37E	675492	3593749*		4294	84		
CP 00513 POD1		CP	LE	3	1	3	28	21S	37E	671508	3591467*		4299	5000	4374	626
CP 00735		CP	LE		2	4	28	21S	37E	672816	3591588*		4321	105		
CP 00249 POD1		CP	LE	2	3	2	27	21S	37E	674113	3592111*		4377	102		
CP 00250 POD1		CP	LE	2	3	2	27	21S	37E	674113	3592111*		4377	101		
CP 00238 POD1		CP	LE	3	3	2	23	21S	37E	675492	3593549*		4392	81		
CP 00322		CP	LE			3	28	21S	37E	671818	3591366*		4397	138	73	65
CP 00966 POD1		CP	LE	1	3	4	28	21S	37E	672306	3591367		4436	154		
CP 00965 POD1	R	CP	LE	1	3	4	28	21S	37E	672333	3591346		4460	123	60	63
CP 00965 POD2		CP	LE	1	3	4	28	21S	37E	672273	3591336		4462	135		
CP 00562		CP	LE	1	2	2	23	21S	37E	675887	3594159*		4485	136	65	71
CP 00749		CP	LE	2	4	3	28	21S	37E	672118	3591271*		4510	123	75	48
CP 00700		CP	LE			2	23	21S	37E	675794	3593851*		4519	75	65	10
CP 00253 POD1		CP	LE	3	4	2	27	21S	37E	674315	3591918*		4650	101		
CP 01301 POD1		CP	LE	3	4	3	28	21S	37E	671871	3591110		4654	130	35	95
CP 01302 POD1		CP	LE	1	1	1	33	21S	37E	671454	3591072		4695	162	100	62
CP 01178 POD1		CP	LE	3	3	3	29	21S	37E	671403	3590979		4791	145	85	60
CP 00134 POD1		CP	LE	1	1	1	24	21S	37E	676289	3594166*		4860	85		
CP 01077 POD1		CP	LE	1	2	2	33	21S	37E	672710	3590940		4926	80	45	35

Average Depth to Water: **165 feet**

Minimum Depth: **18 feet**

Maximum Depth: **4374 feet**

Record Count: 94

UTMNAD83 Radius Search (in meters):

Easting (X): 671697.98 **Northing (Y):** 3595761.98 **Radius:** 5000

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

9/25/19 12:01 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

New Mexico Office of the State Engineer
Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	CP 01575 POD1	1	2	1	22	21S	37E	673544	3594204

Driller License:	1456	**Driller Company:**	WHITE DRILLING COMPANY		
Driller Name:	WHITE, JOHN W				
Drill Start Date:	12/15/2015	**Drill Finish Date:**	12/16/2015	**Plug Date:**	
Log File Date:	12/30/2015	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	2.00	**Depth Well:**	40 feet	**Depth Water:**	35 feet

Water Bearing Stratifications:	Top	Bottom	Description
	23	38	Sandstone/Gravel/Conglomerate
	38	40	Shale/Mudstone/Siltstone

Casing Perforations:	Top	Bottom
	30	40

New Mexico Office of the State Engineer
Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Twn	Rng	(NAD83 UTM in meters) X	Y
	CP 00554	2	2	16	21S	37E		672744	3595610*

Driller License:	208	**Driller Company:**	VAN NOY, W.L.		
Driller Name:	VAN NOY, W.L.				
Drill Start Date:	06/01/1976	**Drill Finish Date:**	06/05/1976	**Plug Date:**	
Log File Date:	04/05/1977	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	5.00	**Depth Well:**	80 feet	**Depth Water:**	70 feet

Water Bearing Stratifications:	Top	Bottom	Description
	75	80	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	64	80

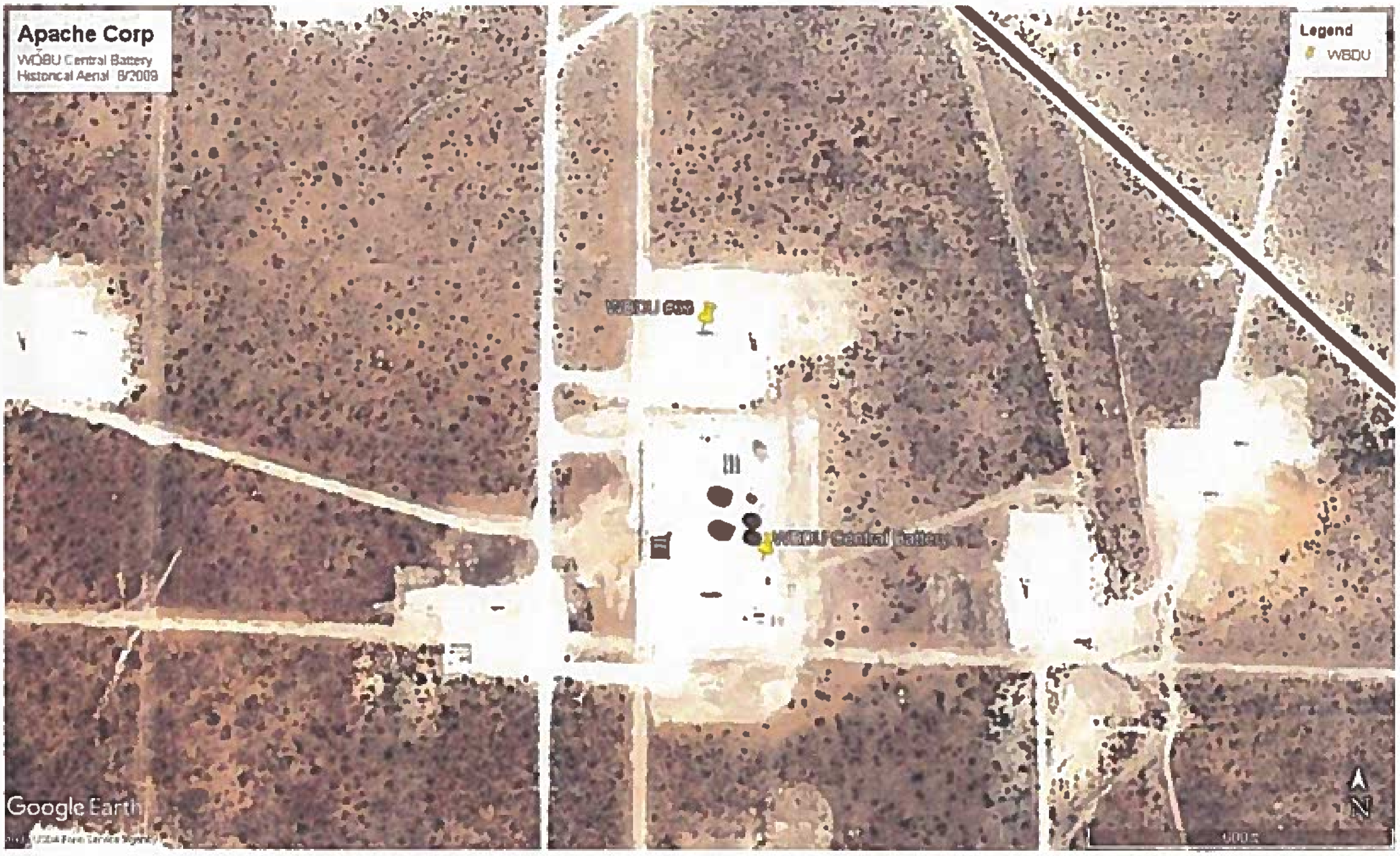
***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer
Point of Diversion Summary

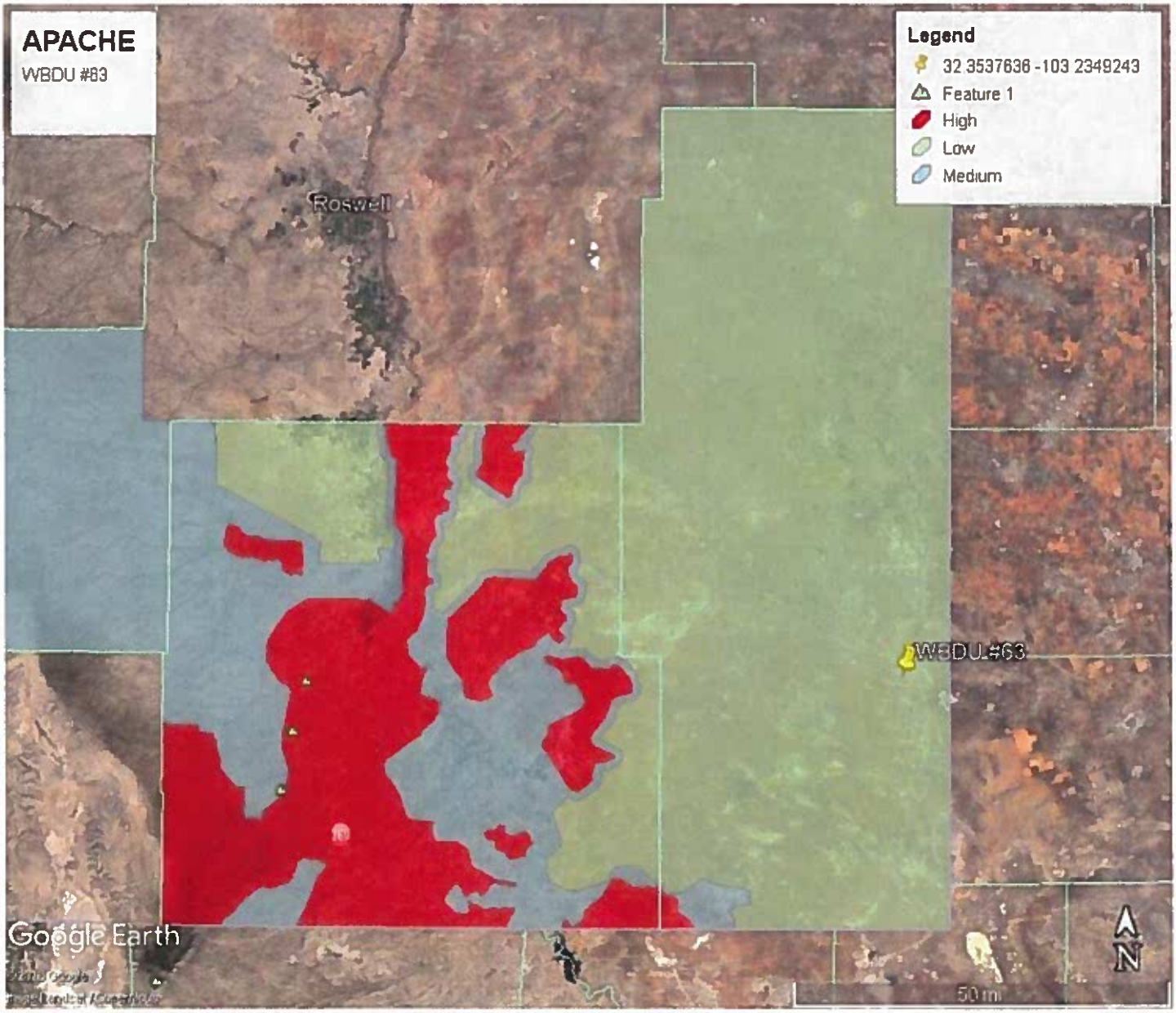
Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Tws	Rng	(NAD83 UTM in meters) X	Y
	CP 01026 POD1	1	1	3	17	21S	37E	669809	3594958

Driller License:	1626	**Driller Company:**	TAYLOR, ROY ALLEN		
Driller Name:	TAYLOR, ROY ALLEN				
Drill Start Date:	10/12/2009	**Drill Finish Date:**	10/14/2009	**Plug Date:**	
Log File Date:	10/23/2009	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	25 GPM
Casing Size:	5.14	**Depth Well:**	167 feet	**Depth Water:**	95 feet

Water Bearing Stratifications:	Top	Bottom	Description
	95	167	Sandstone/Gravel/Conglomerate



Apache Corp
WDBU Central Battery
Historical Aerial 8/2009
Legend
WBDU
Google Earth


APACHE
WBDU #83
Legend
32.3537636 -103.2349243
Feature 1
High
Low
Medium
Roswell
WBDU #83
Google Earth
50 mi
N

CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
APACHE CORPORATION
ATTN: NATALIE GLADDEN
P.O. BOX 1849
EUNICE, NM 88231

Receiving Date: 02/02/09
Reporting Date: 02/03/09
Project Number: NOT GIVEN
Project Name: INJECTION LEAK
Project Location: WBDU BTY

Analysis Date: 02/03/09
Sampling Date: 01/09/09
Sample Type: SOIL
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl^- (mg/kg)
H16798-1	SP 1	< 16
H16798-2	SP 2	< 16
H16798-3	SP 3	< 16
H16798-4	SP 4	< 16
H16798-5	SP 5	192
H16798-6	SP 6	32
H16798-7	SP 7	< 16
H16798-8	SP 8	< 16
H16798-9	SP 9	48
H16798-10	SP 10	32
H16798-11	SP 11	32
H16798-12	SP 12	32
H16798-13	SP 13	32
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-ClB

Analyses performed on 1:4 w:v aqueous extracts.

Chemist

02/03/09
Date

CARDINAL LABORATORIES

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ANALYTICAL RESULTS FOR
APACHE CORPORATION
ATTN: NATALIE GLADDEN
P.O. BOX 1849
EUNICE, NM 88231

Receiving Date: 02/02/09
Reporting Date: 02/03/09
Project Number: NOT GIVEN
Project Name: NOT GIVEN
Project Location: NEDU #150

Analysis Date: 02/03/09
Sampling Date: 01/22/09
Sample Type: SOIL
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl (mg/kg)
H16798-14	SP 14	32
H16798-15	SP 15	32
H16798-16	SP 16	32
H16798-17	SP 17	32
H16798-18	SP 18	32
H16798-19	SP 19	32
H16798-20	SP 20	32
H16798-21	SP 21	32
H16798-22	SP 22	32
H16798-23	SP 23	32
H16798-24	SP 24	32
H16798-25	SP 25	32
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-ClB

Analyses performed on 1:4 w:v aqueous extracts.

Chemist

02/03/09
Date

CARDINAL LABORATORIES

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

Company Name:	Apache Corp
Project Manager:	Natalie Gladden
Address:	P.O. Box 1849
City:	Eunice State: NM Zip: 88231
Phone #:	390-4186 Fax #:
Project #:	Project Owner:
Project Name:	Interstate Leak
Project Location:	WBDU Blk
Sampler Name:	Natalie Gladden

BILL TO

P.O. #:	
Company:	
Attn:	
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

Chlorides

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	PRESERV: ACID/BASE	ICE / COOL	OTHER	SAMPLING: DATE	TIME
H16798-1	SP1					X							1/6/07	
-2	SP2													
-3	SP3													
-4	SP4													
-5	SP5													
-6	SP6													
-7	SP7													
-8	SP8													
-9	SP9													
-10	SP10													

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Sampler Relinquished: Natalie Gladden	Date: 2-2-07	Received By:	
	Time: 1:40		
Relinquished By:	Date:	Received By:	
	Time:		

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS: email

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

Temp.	Sample Condition: Cool ☐ Yes ☐ No	Intact ☐ Yes ☐ No	CHECKED BY: (Initials)

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.

CARDINAL LABORATORIES

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

Company Name:	Apache Corp	BILL TO	
Project Manager:	Natalie Gladden	P.O. #:	
Address:	PO Box 1845	Company:	
City:	Eunice State: NM Zip: 88231	Attn:	
Phone #:	390-4180 Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:	Injection Lease	State: Zip:	
Project Location:	Lusk Bty	Phone #:	
Sampler Name:	Natalie Gladden	Fax #:	

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	PRESERV: ACID/BASE	ICE / COOL	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX
H16778-11	SP 11												1/9/09		
-12	SP 12														
-13	SP 13														
-14	SP 14														
-15	SP 15														
-16	SP 16														
-17	SP 17														
-18	SP 18														
-19	SP 19														
-20	SP 20														

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Relinquished By:	Natalie Gladden	Date: 7-2-09	Received By:	Phone Result: ☐ Yes ☐ No	Add'l Phone #:
Relinquished By:		Time: 1:40	Received By:	Fax Result: ☐ Yes ☐ No	Add'l Fax #:
		Date:		REMARKS: email	
		Time:			

Delivered By: (Circle One)	Temp.	Sample Condition: Cool (Yes / No) Intact (Yes / No)	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:			

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.

CARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240
(575) 393-2326 Fax (575) 393-2476

Company Name:	Apache Corp
Project Manager:	Natalie Gladden
Address:	P.O. Box 1849
City:	Eunice
State:	NM
Zip:	88231
Phone #:	390-4180
Fax #:	
Project #:	
Project Owner:	
Project Name:	Injection Lease
Project Location:	Lea Co, NM
Sampler Name:	Natalie Gladden

BILL TO

P.O. #:	
Company:	
Attn:	
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

Chlorides

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	PRESERV: ACID/BASE	ICE / COOL	OTHER	SAMPLING: DATE	TIME
H16798-21	SP21					X							7/6/05	
-22	SP 22					X								
-23	SP 23					X								
-24	SP 24					X								
-25	SP 25					X								

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Sampler Relinquished:	Natalie Gladden	Date:	7-7-05
		Time:	1:40
Relinquished By:		Date:	
		Time:	
Received By:			
Received By:			
Delivered By: (Circle One)	Sampler - UPS - Bus - Other:	Temp.	
Sample Condition	Cool: Yes / No	Intact: Yes / No	
CHECKED BY: (Initials)			

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS: email

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.